

Learning to Grow from Peers

Experimental Evidence from Small Retailers in Indonesia

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WORLD BANK GROUP

Development Economics
Development Research Group
July 2019

Abstract

Business practices and performance vary widely among local peers. This paper identifies key determinants of such heterogeneity among a sample of small urban retail shops in Indonesia, and experimentally tests whether learning about the best practices of local peers is valuable for business growth. Through extensive baseline quantitative and qualitative fieldwork, the study develops a handbook that associates specific business practices with performance and provides detailed implementation guidance informed by exemplary local shop owners. Instead of offering formal training or in-depth counseling, this handbook is simply distributed to a randomly selected sample of shop owners and complemented with three experiential learning modules: one group is invited to watch a documentary video

on experiences of highly successful peers, another is offered light in-shop assistance on the implementation of the handbook, and a third group is offered both. Eighteen months after the intervention, the study finds no effect of offering the handbook alone, but significant impact on practice adoption when the handbook is coupled with experiential learning. On business performance, the study finds sizable and significant improvements as well, up to an increase of 35 percent in profits and an increase of 16.7 percent in revenues. The types of practices adopted map these performance improvements to efficiency gains rather than other channels. The analysis suggests that these interventions are simple, scalable, and highly cost-effective.

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Learning to Grow from Peers: Experimental Evidence from Small Retailers in Indonesia*

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Keywords: Business Growth; Efficiency Gains; Small-scale Enterprises; Peer Knowledge; Self-Learning; Social Learning.

JEL Codes: O12; L26; M20; O31; O33; O35; O17; M50

*We thank the Abdul Latif Jameel Poverty Action Lab (J-PAL) for hosting our study, in particular Ni Luh Putu Satyaning Pradnya Paramita, Dwitri Amalia, Raisa Annisa, and Lukman Edwindra for excellent research assistance. We also thank participants at the 8th Wageningen-Lucerne-Tilburg Development Economics workshop, IPA 8th SME Working Group Meeting at MIT Sloan, 9th Tilburg-Wageningen Development Economics Workshop, ENTER-Jamboree 2018 in Toulouse School of Economics, UCPH Field Days Conference at U. of Copenhagen, NBER 2018 Entrepreneurship Working Group in Boston, SEU 2018 at U. de Montevideo, Innovation Growth Lab 2019 Global Conference in Berlin, and Economics Seminars at EBRD, Radboud Nijmegen, UC Louvain, Stanford, Tilburg, U. Torcuato Di Tella, U. of Glasgow, U. of Göttingen and U. of Florence. Special thanks to Thorsten Beck, Erwin Bulte, David McKenzie, Michelle Brock, Karen Macours, Menno Pradhan, Sarada, Antoinette Schoar, Daan van Soest, and Ben Vollaard for helpful discussions and comments. This paper was produced under the framework of the “Enabling Innovation and Productivity Growth in Low Income Countries (EIP-LIC/PO5639)” project, funded by the Department for International Development (DFID) of the United Kingdom and implemented by Tilburg University. Additional funding was received from the World Bank Strategic Research Program (SRP) and the Tilburg Economics Department. Research on the ground was conducted in collaboration with J-PAL South-East Asia and SurveyMETER. AEA RCT Registry ID: 0001175.

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I Introduction

Micro and small enterprises (MSEs) are a primary source of employment in the developing world, where typically more than half the workforce is self-employed (Gollin, 2008; Maloney, 2004; Nichter and Goldmark, 2009).¹ Understanding the factors and policies fostering the efficiency and growth of MSEs is, therefore, a main research and policy goal.

One important aspect of MSEs in such contexts is their remarkable heterogeneity in business practices and performance across a distribution of similar local businesses (e.g. see (de Mel et al., 2009)). In fact, Bloom et al. (2019) find substantial dispersion in management practices even among larger manufacturing plants of the same firm in the United States. They show that these practices account for more than 20% of variation in productivity, which matches or exceeds the variation due to differences in Research & Development (R & D), Information & Communication Technology (ICT), or human capital. Past research on improving business performance through various managerial training programs (e.g. see (McKenzie and Woodruff, 2017) for an overview) has largely ignored this underlying variation in the design and dissemination of their training content. Unsurprisingly, many of these studies find small and statistically insignificant effects of managerial training on sales and profits (Fairlie et al., 2015) and on the adoption of business practices (McKenzie and Woodruff, 2017). We posit that a plausible reason for this lack of success is that past research has used very little insight about locally useful best practices.

This paper makes the underlying heterogeneity in business practices central to the research design by making productive use of this local variation to identify business practices associated with successful performance outcomes. Instead of teaching externally designed set courses or offering intensive consultancy services, the study design focuses on helping businesses learn the best practices of their successful peers with very light touch interventions. We do so by developing a handbook of local best practices that utilizes detailed qualitative interviews with local business peers to understand their practices and implementation norms, followed by quantitative association of business practices with profits and sales with baseline data. By matching the findings from these qualitative and quantitative analyses, we characterize best practices in five distinct categories: record-keeping, financial planning, stocking-up, marketing, and joint decision-making. We also learn about local beliefs regarding each selected practice (e.g. whether they are complicated, necessary, etc.), and the relevant constraints and norms in implementing them. We then process and aggregate this information in a professionally produced handbook and disseminate it among random sub-sets of firms through four separate and testable communication channels: pure information, information plus emotional learning, information plus individual assistance, and all three together (information, emotional learning, and assistance).

The field experiment design constitutes 1,301 urban retail shop owners in the Indonesian capital, Jakarta, 1,040 of which are offered a free copy of the handbook while the remaining 261 serve as the control group (hereafter *Control*). We interpret the handbook treatment (hereafter *Handbook*) as a pure information shock on (i) best local business practices and (ii) implementation know-how. We interact the handbook treatment with two simple and orthogonal experiential-learning modules. First, a sub-set of handbook recipients is directly exposed to the experiences of successful peers from the local retail sector, who in a documentary video describe their own trajectory of

¹In Indonesia, MSEs represent more than 99% of all firms and about 94.5% of employment (Indonesian Ministry of Cooperatives and SMEs Indonesia, 2011).

business growth after having implemented some of the best practices included in the handbook. This treatment (hereafter *Documentary*) targets the psychological and emotional influences that are triggered through observing the successful experience of similar others (see La Ferrara, 2016, for a review). A second sub-set of handbook recipients is offered light implementation assistance in the form of two 30-minute shop visits by trained facilitators (hereafter *Assistance*). These helpers provide one-on-one implementation guidance and troubleshooting for the business practices highlighted in the handbook, hence facilitating learning through own experience (Kolb, 1984). Finally, to account for complementarities we offer a third sub-set of handbook recipients both *Documentary* and *Assistance* (hereafter *All Three*). Overall, this study design allows us to test simple channels of disseminating relevant local business information, as well as test the subsequent impacts of adopting these business practices on performance outcomes.

The analysis presented in this paper is based on pooled estimates from two follow-up surveys, six and eighteen months after the intervention. While attrition in either survey is low (less than 20% in second endline) and uncorrelated with treatment status, the take-up rates especially for the *Documentary* and *All Three* groups are also low at 52% and 47%, respectively. Therefore, we present both intent-to-treat as well as treatment-on-treated results in the analysis. First, we find underwhelming evidence for the effectiveness of the *Handbook* alone, with this pure information shock resulting in no significant improvements in the adoption of business practices. By contrast, we find strong and statistically significant impacts when pure information is complemented with experiential learning. After correcting for multiple-hypothesis testing, we find that adding either emotional learning, simple hands-on assistance, or both results in up to a 6.5 percentage point improvement in relevant record-keeping practices covered in the handbook – a 33% improvement over the control group. In fact, these coefficients reflect statistically significant improvements over providing the *Handbook* alone. For the *All Three* group, we further find statistically significant improvements in the adoption of relevant practices related to planning (6.8 percentage points), stocking up (5.3 percentage points), marketing (6.1 percentage points), and joint decision-making (5.9 percentage points).

On business performance, we find these practice effects translate to improvements in profits and sales. Moreover, we find significant and economically meaningful impacts for firms assigned to *Assistance* and *All Three*, with intent-to-treat analysis showing an increase in profits of 35% (0.28 standard deviation improvement) and 21% (0.17 standard deviation improvement), respectively. Given the uneven and low take-up rates, the increase in profits for businesses who adopted either treatment (i.e. the treatment-on-treated) shows larger effects, with an increase of 42.7% (0.34 standard deviation improvement) and 41.5% (0.33 standard deviation improvement), respectively. Likewise, the analysis finds statistically significant improvements in sales, representing a 16.7% (ITT) and 20.6% (ToT) improvement for *Assistance*; and a 16.2% (ITT) and 31.2% (ToT) increase for *All Three*. Businesses assigned to *Documentary* also increase their profits and sales with respect to *Control*, but the effects are not statistically significant, most likely due to low take-up.² Following the null effects on practices, we find no significant effects on sales and profits of offering the *Handbook* alone. In fact, the F-tests of differences in coefficients show that the three experiential learning groups significantly outperform the *Handbook* group on both profits and sales.

²The treatment-on-treated coefficients do scale up, but standard errors also increase so the p-values remain insignificant

Next, we turn to mechanisms of impact to understand the pathways for achieving these performance gains. We find no significant increase in the number of customers, total expenses, shop size, number of employees, or credit for any of the treated businesses. Unpacking the improvements in practices, we find the increase in profits and sales are driven by statistically significant improvements in itemizing business revenues and costs, anticipating budgetary needs, comparing target and actual sales, adjusting stocks based on product profitability, soliciting client feedback, and making joint decisions with business partners. These practices represent gains in response and process efficiency rather than direct business expansion. The impact of these practices on business performance is further confirmed by formal causal mediation analysis. Furthermore, we measure and study an important alternative channel – improvements in business aspirations due to the handbook and experiential learning – but find no significant improvements in aspirations for growth in business size, employees, customers, or sales. We also find no significant improvements in business practices that were not covered in the handbook.

Overall, these findings show that efficiency gains and business growth can be achieved by matching self-learning with simple experiential modules, which utilizes locally available knowledge in a cost-effective and scalable manner. In fact, a simple cost-benefit analysis shows that the increase in monthly profits more than double the per capita cost of the program. The natural question that arises is why shop owners did not adopt these profitable and locally available practices on their own before this intervention. Our study sheds light on some plausible reasons. First, it takes time and effort to identify, process, and organize useful business knowledge in an accessible way. As highlighted by Cai and Szeidl (2018) and Fafchamps and Quinn (2018), local business practices, regardless of how widely applied they might be, do not exhibit a public good characteristic. Second, the results of this study show that organized form of local knowledge (i.e. self-learning through the handbook alone) by itself is not enough to stimulate business growth. Instead, businesses require small experiential learning add-ons in order to benefit from the local knowledge. This suggests that some light external assistance is necessary to facilitate self-learning from business peers, a role well suited for policy makers and practitioners.

Our findings are related to the recent literature on mobilizing peer learning to stimulate business growth (Brooks et al. (2018), Cai and Szeidl (2018), Fafchamps and Quinn (2018) and Lafortune et al. (2018)), though there are some distinct differences. In our design, local knowledge is identified, processed, aggregated, and diffused in an anonymous way by us who act as *intermediaries* of the firms. By contrast, in Cai and Szeidl (2018), Fafchamps and Quinn (2018) and Brooks et al. (2018) the local knowledge is shared directly and personally by the firm owners who are encouraged to meet up regularly.³ This not only makes the interventions more costly, but also has the disadvantage that firm owners may choose who they want to share their best practices with and to what extent.⁴ In Lafortune et al. (2018) it is former alumni of a formal business training program who share their experiences with peers after having attended the program. In their set-up, the mentors can also choose the extent and type of information they want to share with the current trainees. These concerns are absent in our study by design, because we intermediate the transfer of the idiosyncratic business knowledge. This difference may partly explain why we capture larger treatment effects

³The information that experienced mentors typically share in Brooks et al. (2018) does not necessarily concern managerial practices of the local context but mostly relate to current information about local market conditions.

⁴This drawback has also been highlighted in another recent experimental set-up by Hardy Morgan and McCasland (2016).

both on the adoption of practices in the long run and on business performance.⁵

More broadly, our paper relates to the literature that recognizes social learning nudges as a practical tool in stimulating economic welfare through various channels, such as the adoption of new technologies in the agricultural sector (Foster and Rosenzweig, 1995; Munshi, 2004; Bandiera and Rasul, 2006; Conley and Udry, 2010; Beaman et al., 2018), retirement savings (Beshears et al., 2015), charitable giving (Frey and Meier, 2004), water conservation (Bernedo et al., 2014), and energy use (Allcott, 2011; Costa and Kahn, 2013).⁶ In this paper, we broaden this line of research studying social learning of best practices among urban shop owners. We acknowledge that the concept of socializing the expected returns to a particular investment is not new. Nguyen (2008) and Jensen (2010), for instance, provide statistical information on returns to education using estimates from a general population, the former also using a role model. Our approach is different in two ways. First, we not only provide information on the returns associated with specific practices, but also highlight local implementation norms and customs that have been tested and used by successful peers. Second, the source of the information we use to estimate the association of practices with profits is not a general population, but local business owners in the same sector.

Finally, our paper is related to the growing literature on business and managerial training and consultancy (e.g. (Bloom et al., 2013; Bruhn and Zia, 2013; Drexler et al., 2014; Bruhn et al., 2018; Anderson et al., 2018)). We differ from these studies in two distinct ways: the content of the information and its delivery. Nearly all business training curricula involve teaching standardized courses that cover a plethora of business knowledge and practices. By contrast, the handbook used in this study is streamlined and exclusively focused on the set of practices that are most relevant, applicable, and profitable for the local context. As such, the handbook offers focused and locally proven advice on how to grow a business rather than training on all business practices.⁷ The second key difference is in the delivery: most training studies are offered in classrooms over several days or weeks, often costing a fortune to deliver. By contrast, the handbook by design focuses on self-learning and is supplemented with short, simple, and targeted experiential learning modules that are highly cost-effective and time-efficient.

The remainder of the paper is organized as follows. Section II explains the framework and research design. Section III describes the data and Section IV presents the main results. Section V discusses mechanisms and robustness, and Section VI concludes.

II Framework and Research Design

A Framework

The specific research arms in our experimental design build upon several additional insights from the existing literature. While the handbook forms the basis of all experimental groups, we vary complementary interventions in order to test whether stronger peer influence through *Documentary* or stronger individualized attention through implementation *Assistance* can facilitate the adoption

⁵Additionally, the business training program in Lafortune et al. (2018) does not rely on local business knowledge.

⁶Thinking and learning socially has been highlighted as an important tool to promote economic development in the 2015 World Development Report (Ch. 2) (World Bank, 2015).

⁷Regarding simplifying knowledge on local practices, our design shares the approach initiated by (Drexler et al., 2014), who show that simple rule-of-thumb training is more effective than standard financial training.

of successful practices. We hypothesize that these two facilitation methods work through different channels.

The *Documentary* treatment relies on observing and learning from the successful experience of others. An emerging literature highlights the importance of role models in promoting positive behavior changes, especially among poor populations in the developing world (for a review, see La Ferrara, 2016). Similarly, Munshi (2004) highlights the importance of observing similar others for social learning in the context of the Indian Green Revolution. As Ray (2006, p.2) states directly: “Looking at the experiences of individuals similar to me is like running an experiment with better controls, and therefore has better content in informing my decisions.” Not surprisingly, exposure to (successful) role models has been found to affect fertility and divorce in Brazil (Chong and La Ferrara, 2009; La Ferrara et al., 2012), financial knowledge and financial behavior of households in South Africa (Berg and Zia, 2017), aspirations and forward-looking behavior in rural Ethiopia (Bernard et al., 2014), and students’ exam performance in Uganda (Riley, 2017). In this study, we specifically test whether successful peers can facilitate the adoption of profitable business practices among urban business owners by unlocking this emotional channel of learning.

In comparison, the *Assistance* treatment relies on learning by doing and facilitation by a trained enumerator on the content of the handbook. The local and light touch nature of the facilitation differentiates us from Bruhn et al. (2010) who find significant positive effects of formal management consulting on productivity and profits among Mexican small and medium enterprises, and corresponding improvements in financial and accounting practices. Our work is further related to Carpena et al. (2017), Brooks et al. (2018), and Lafortune et al. (2018), who make use of counseling to complement financial education among households and find positive impacts on financial decision-making.

B Study Setting

This study is based in Jakarta, Indonesia. With a population of 10.1 million in inner Jakarta and an urban area of around 30 million (“DKI Jakarta”), Jakarta is the largest city in South-East Asia and the economic center of Indonesia. In 2015, the city generated a nominal GDP of almost one-sixth of the total nominal GDP of Indonesia (Statistics Indonesia, 2016).

Our sample consists of traditional retail shops in Jakarta, locally called *Warung* or *Toko Kelontong*. Most of the shop owners in our sample are situated in residential areas or adjacent to “wet markets” for meat, fish, and vegetables.⁸ Our baseline analysis shows a spread of 24 different product categories offered by shop owners and the average shop owner selling a variety of them. 71% of the sample lists tobacco and cigarettes as their top 3 most sold product and 50% lists this category as their top selling product. Out of the shops that do not sell tobacco and cigarettes; rice, gas and petrol, and soft drinks are the main products on sale. Less than 5% of shops list fruits and vegetables or meat and fish as their top 3 main selling products. 9% of the sample list eggs in their top 3, but only 2.5% list it as their top product. We focus on these types of shop owners because they are ubiquitous in Indonesia as well as in other developing countries. Furthermore, such retail businesses make up a large fraction of all MSEs in Indonesia: about 22% of all employees in MSEs work in retail and hospitality which makes it the second largest sector after agriculture (Indonesian Ministry of Cooperatives and SMEs Indonesia, 2011).

⁸Appendix Figure 1 shows pictures of two typical shops in our sample, representative in both size and appearance.

C Sampling

The city of Jakarta comprises 144 districts ('Kelurahan'), which include the urban area of Jakarta proper as well as some agglomerations in the wider Jabodetabek metropolitan area. We restricted the sampling base for this study to the 112 districts in South, East and West urban Jakarta.⁹ As a first step, 29 of the 112 districts were randomly selected to be included in the study.¹⁰ Across the 29 selected districts, we first conducted a listing exercise of small retail shop owners that met the following three inclusion criteria: (1) the shop is at least $4m^2$ in size; (2) the shop offers at least two different product categories; and (3) the shop is at least 30 meters away from other shops in the listing. In addition, we excluded movable establishments, franchise businesses of larger retail chains, and shops located in densely populated marketplaces.

These listing criteria were chosen to ensure the sample would consist of business owners with an established store, who sold a variety of products, and where spillovers were minimized by design. Out of the 2,042 businesses listed through this method, we randomly selected 1,301 to be part of this study.

D Experimental Design and Timeline

The 1,301 shops in the sample were randomly divided into a handbook treatment group ($N = 1040$) and a pure control group ($N = 261$), stratified by district, gender, shop size (below $6m^2$, between 6 and $10m^2$, or above $10m^2$), and a composite score of business practices (above and below the median). Among handbook recipients, we implemented two additional and orthogonal treatments: a screening of a documentary movie in which successful peers explained their own trajectory of growth adopting the best practices described in the handbook; and two individualized business assistance visits by a trained enumerator providing specific help on the adoption of business practices. Appendix Figure 2(a) maps the spatial distribution of our study sample across Jakarta and Appendix Figure 2(b) illustrates the spatial distribution in one sample district.

Overall, the study design consists of four experimental treatment arms of 260 firms each: handbook only (*Handbook* group), handbook and an invitation to the movie screening (*Documentary* group), handbook and two assistance visits (*Assistance* group), and all three interventions (*All Three* group).¹¹

The timing was as follows.¹² In January 2016 we sampled the 2042 businesses. In March and April 2016 we administered the baseline survey and registered the trial of the study at the American Economic Association's Randomized-Controlled-Trial Registry website.¹³ Interventions took place in October and November 2016 and were followed by a midline survey held in April and May 2017 and then an endline survey held in May 2018.

⁹We excluded all 32 villages of North Jakarta due to a MSE training program being run concurrently in that area by a local retail chain.

¹⁰We initially selected 30 districts, however, in one of these districts only five businesses were identified and they differed markedly from the remaining sample. Hence, they were dropped from the sample.

¹¹Among the 1,040 handbooks, 520 had the economic returns to the adoption of each business practice described as gains and 520 had them described as losses. Since the focus of this paper is on social learning of local practices, we leave the analysis of eventual framing effects out of the scope of this paper and pool the two framing conditions. Appendix Figure 3 tabulates the various treatment arms of this study.

¹²See Appendix Figure 4 for a detailed timeline.

¹³<https://www.socialscienceregistry.org/trials/1175>.

D.1 Handbook

The content of the handbook was developed through primary qualitative and quantitative assessment of best practices among local business peers. First, prior to the start of quantitative fieldwork, we conducted detailed qualitative interviews with a sample of 102 shop owners chosen from two comparable urban markets outside our study area. The goal of these semi-structured interviews was to understand the most common and successful local business practices from the perspective of business owners, and to familiarize ourselves with the various implementation processes, norms, and constraints to adoption. To this end, we asked a number of open ended questions in the format of a conversation, and responses were recorded and later transcribed.

The analysis of these interviews allowed us to identify the following five categories of locally relevant business practices: record-keeping, financial planning, stocking-up, marketing, and joint decision-making. In the next stage, these categories directly fed into the quantitative baseline survey, from which we were able to associate the contribution of within-category individual practices to profits, sales, and number of customers. Specifically, for each category we estimated linear regressions of profits, sales, and number of customers on individual practices and a set of firm-level controls. The findings from these quantitative assessments were then matched with the qualitative fieldwork to arrive at the final set of locally relevant best practices to be included in the handbook.

With this information and the help of a local NGO, we developed a handbook of best practices used by peers. The handbook consists of five chapters: keeping business records, calculating profits, making stock-up decisions, attracting customers, and cooperation in business decisions, in this order. Although there is no chapter exclusively on financial planning, practices such as reviewing financial performance, analyzing where there are areas for improvement, and comparing sales with targets are natural consequences of implementing the best practices suggested in the handbook. Appendix Table A10 lists all the practices measured in this formative stage of the study, and Appendix Table A11 presents a summary of the information on beliefs, reasons to adopt practices, step-by-step implementation guidance, and tips presented in each of the five chapters of the handbook.¹⁴

Each chapter is structured as follows. First, it confronts common false beliefs and misconceptions held by shop owners about the usefulness of implementing the different practices. These misconceptions are based on sentences that were heard repeatedly during the qualitative interviews. For example, one common thought by shop owners was that keeping records is hard for people without higher education, or that it is complicated. The handbook emphasizes that this is not the case, and that we have observed shop owners from different educational backgrounds keeping records. Likewise, to confront the belief that keeping records is complicated, the handbook provides simple step-by-step guidance on how to make record-keeping an easy routine to follow, also learned from peers.

Second, it presents arguments for why it is important to implement the practices, providing locally relevant evidence-based reasons. To this end, the handbook reports regression coefficients associating some of the practices with profits and sales using data from the quantitative baseline survey, and also provides an approximation to the monetary value of implementing each practice, both for a “typical” size shop and for “larger” shops. The following is an illustrative example: “From the survey we know that shops that use discounts to attract new and retain loyal customers have monthly sales that are 40% higher than the sales of shops which do not give discounts. Also, their

¹⁴The full handbook can be found here.

monthly profits are 29% higher.” And this is the monetary value: “For a typical shop with IDR 15 million in monthly sales, shop that offered discounts earned IDR 21 million in sales. For a bigger one with sales of IDR 30 million per month, it would mean IDR 42 million in monthly sales.” The handbook also suggests other reasons to implement the practices. For instance, it suggests that profit-calculation “is useful to plan finances and save up money” and record-keeping is necessary to “compare your sales with a benchmark you have” or to “be better able to save up and withstand unexpected events’, or “unless you keep proper records, there is no good way of knowing how much cash you have on your hands or how much to save. And without savings, unexpected events can hit you and your family hard.”

Third, the handbook provides clear, step-by-step implementation guidance illustrated by idiosyncratic practical examples taken from exemplary shop owners. For example, record-keeping involves nine specific steps, stocking-up seven steps, and marketing three steps. Here is a hypothetical example used to introduce the practice of joint decision-making: “Imagine you are in the back of the shop making a list of items to stock up while your spouse is serving customers in front. It can only be beneficial to receive inputs from your spouse regarding popular items. That way, you will know better what exactly to stock up on and by how much.”

Fourth, the handbook offers several tips and tricks to facilitate the adoption of included practices, also learned during the interviews with shop owners. For example, regarding marketing practices, one tip is to take advantage of the fact that suppliers may want to leave a new product in the shop without charging for it right away. “Remember that the suppliers also want to find out how well the new product sells in the market.” Here is a tip used in the handbook to induce joint-decision making: “by including your co-worker or spouse in the process of making decisions about the shop, chances are they will become more involved and thus be of even greater use.” For record-keeping, the handbook recommends using different colors for household expenses, family “loans”, monthly expenses (e.g. bills, stock up, etc.), and brackets for stalled payments. For stocking up, the handbook suggests using tallies.

D.1.1 Handbook vs Standard Business Training

There are several key differences between our handbook and a standard business training module. The most common and well-established formal business training course is the International Labor Organization’s (ILO) Start and Improve your Business (SIYB) program, which has an estimated outreach of 6 million trainees and a network of over 17,000 trainers over the last 30 years.¹⁵

The SIYB implementation plan involves capacity building through comprehensive training-of-trainer modules and certification of master trainers. The average cost of these training ranges between 50,000 USD – 150,000 USD, and the master trainer development process can take up to 2 years. Moreover, these costs do not include delivery to beneficiaries, rather are the fixed upfront costs of building capacity of the trainers. Given that the focus of the SIYB program is on providing classroom training and on-site individual consulting, the marginal costs for beneficiary training are substantial. Furthermore, prior research has shown that interest and attendance in classroom training can be exceedingly low (see for example, (Bruhn and McKenzie, 2014)). By contrast, the handbook relies exclusively on self-learning with no classroom training involved, and the experiential learning modules discussed in the next sub-sections offer very light add-ons to the handbook. As

¹⁵Information about the SIYB program can be found here.

such, the cost of delivery is comparatively very low.

While the SIYB program covers some of the same aggregate dimensions of business operation, such as record-keeping, stocking-up, marketing, and planning, the main difference with the handbook is that the latter provides locally relevant ordering of business practices within these broader categories. For instance, while the SIYB syllabus emphasizes all business practices associated with record-keeping as being important, the handbook selects and highlights only those record-keeping practices that have been shown (through the qualitative and quantitative process) to be profitable and locally relevant. Hence, rather than overwhelming business owners with a plethora of business practices that they should adopt, the handbook offers streamlined information on the most profitable practices for their local context.¹⁶ In addition, the handbook offers locally relevant implementation norms and tips derived from the experiences of successful peers, and does so by using language and terminology that is native to the local context. By contrast, the SIYB curriculum is highly focused on standardized content and professional language, which may lead to a large disconnect with many beneficiaries.

D.2 Documentary Movie

The documentary movie used in this study provides emotional support and guidance to retail shop owners from a local set of highly successful business peers. These peers were selected from the initial pool of 102 qualitative survey participants. At the time of these interviews, we shortlisted nine local business owners who were ostensibly successful, had an organized shop and books, and employed the largest number of business practices in our study. Subsequently and in conjunction with the production of the handbook, we conducted further in-depth interviews with these owners about their personal business trajectory and about business practices and implementation advice they regarded as crucial to achieving business growth. We also wanted diversity in gender, age, and ethnicity to appeal to the different business owners in our sample. This heterogeneity is important since similarity cues based on these factors have been shown to facilitate social learning besides cues of success, competence, skill, and knowledge (see, e.g., Rendell et al., 2011; Efferson et al., 2008; Chudek et al., 2013; Henrich and Gil-White, 2001; Corriveau and Harris, 2009; McElreath et al., 2008).

This exercise resulted in a final set of five shop owners representing the local frontier of best practices in each business domain. Moreover, these shop owners regularly employed the practices in the same way featured in the handbook and agreed to describe their implementation methods and paths to success in a documentary. The movie featuring these five successful business owners was filmed on shop sites and edited in post-production by a professional media company hired by us. We were involved at each stage of implementation, including script development, test runs, filming, and post production. The end product was a 25 minute documentary movie.¹⁷

This documentary movie was publicly screened in each of the 29 districts at a local school or other public space. All screening locations were central and accessible to all invited businesses. In order to increase attendance, shop owners were offered IDR 100,000 (USD 24.68 PPP) as a show-up fee and to compensate them for their time and transport expenses. In addition, we offered two

¹⁶As an illustration of the difference in terms of amount of information provided, the handbook covers 60 pages while the SIYB manual has more than 600 pages.

¹⁷The documentary can be accessed from here.

alternative screening dates in each district and sent individual text message reminders the day prior to each screening. Each screening was followed by a facilitation session by a trained counselor who clarified any doubts and answered questions from the audience. The screening ended with a short feedback survey and payment of the show-up fee.

D.3 Implementation Assistance

For implementation assistance, we trained a set of local facilitators ourselves based on the content of the handbook. These individuals were required to have a bachelor's degree in a related field and some experience interacting with businesses similar to those in our study. Most facilitators were fieldwork enumerators who expressed interest and had previous experience conducting business interviews, but were not the enumerators used to conduct surveys for this study. The training was conducted over three days and included classroom lectures, role play exercises, and pilot visits to retail businesses in districts external to the study. The 20 facilitators trained through this process were then randomly assigned to businesses in our study and were supervised by senior field staff.

The protocol for each shop visit was as follows. The facilitator first confirmed the identity of the business owner and then asked which aspects of the handbook needed clarification. Based on the owner's response, the facilitator chose one of three options. First, if the entrepreneur had started implementing a practice but encountered problems along the way, the facilitator would document the issues and start giving standardized implementation advice. Second, if the entrepreneur had not started implementing any practice but had made progress reading the handbook, the facilitator would document any issues with the material and then give implementation advice. Once all issues were dealt with, the facilitator would encourage the entrepreneur to go through the rest of the chapter following the guidance. Third, if the entrepreneur had not even started reading the handbook, the facilitator would elicit their priorities among the practices and start introducing the chapter corresponding to the most relevant practice. Each shop visit lasted approximately 30 minutes. At the end of the first visit, the shop owner was asked to establish goals for the implementation of a practice covered during the visit and for the study of selected material. A second visit was scheduled two weeks after the first and at the convenience of the shop owner. This second visit followed the same protocol as the first with the difference that the starting point was determined by the work left from the first session and the entrepreneur's priorities elicited during that visit.

There are several features that make these sessions unique. First, the assistance was provided on-site rather than in an outside venue, which allowed shop owners to tend to their business matters with only minor interruption. Second, the assistance sessions involved direct one-to-one interaction on topic areas that were elicited prior to each session. As a result, although the sessions were only 30 minutes each, they were intense in engagement and content. Finally, the sessions were led by trained facilitators who themselves came from similar backgrounds as the shop owners. Hence, the social distance between the assistance providers and receivers was quite small.

Appendix Table A1 uses data recorded by the facilitators to summarize several key features of these assistance sessions. First, on a descending scale of 1-5 (1=most interested; 5=least interested), shop owners on average expressed the most interest in learning about marketing practices, though the table shows considerable heterogeneity in interest across all practice areas of the handbook. Second, up to 47.5% of shop owners had already started reading a chapter and over 50% had tried to implement a suggested practice. Finally, up to 42.5% had encountered a problem in implementation,

which is what these assistance sessions were designed to alleviate.

III Data

Firm-level data were collected at baseline, mid-line (6 months after the intervention), and end-line (18 months after the intervention). The baseline assessed business owner background characteristics, business characteristics, and the use of business practices.¹⁸

A Summary Statistics

Summary statistics from the baseline survey are presented in Table 1. Columns (1)-(2) provide mean and standard-deviation values for the total sample of 1301 business, while columns (3)-(7) present the mean separately for businesses assigned to control and each of the four treatment groups. The last four columns of Table 1 present the p-values for tests of differences in means between each of the treatment groups and control group. Most (66 out of 68) p-values are large (well above 0.10). We also run a Multinomial Logit specification regressing assignment to treatment on baseline characteristics and test for joint orthogonality with a Chi-Square test. The p-value of this test is 0.857, which also suggests that the randomization was effective.

According to the statistics in Table 1, shop owners in our sample are mostly female (71%) and are 45.27 years old on average. Educational backgrounds are mixed, with the mean educational attainment of 9 years of schooling. The average entrepreneur is risk averse, and is neither patient nor impatient.¹⁹ The average firm has a size of 13.22 sq. mts, 13.6 years of age, employs two workers, receives about 50 customers per day and has monthly sales of 4786.16 USD PPP and monthly profits of 907.73 USD PPP.²⁰ Only 20% of the businesses report having a tax ID and 18% has applied for a loan in the last 12 months. Finally, the average adoption rate of business practices included in the handbook is 35% at baseline, compared to 18% for practices not covered in the handbook.

B Survey Attrition

There were two sources of survey attrition. Some shops closed down and a few others refused to be part of the midline or endline survey. Table 2 presents regression analysis on survey attrition. Columns (1) and (2) study differential attrition based on refusals both at midline and endline, respectively. Columns (3) and (4) repeat the analysis for attrition based on the shop being closed, also at midline and endline.

Overall, attrition is very low. We were able to reach 92% of the sample at midline and 81% of the sample at endline, and the small attrition rates are not correlated with treatment status. Moreover, columns (1) and (2) show that there was no differential attrition by treatment, as all the

¹⁸Appendix Table A10 shows the list of the business practices measured in the surveys.

¹⁹Risk attitude is measured with the answer to the question: “Some people usually avoid taking any risk, others are generally fully prepared to take risks. Please imagine a yard stick from 0 to 10. This time 0 means you usually avoid taking any risk and 10 means you are generally fully prepared to take risks.” Time preferences are measured in a similar way: “Some people usually want to have things now rather than later, others are generally willing to wait a long time. Now, please imagine a yardstick from 0 to 10. 0 means you usually want things now rather than later and 10 means you are generally willing to wait.”

²⁰The profit and sales figures are winsorized at 5% on both tails. Profits are calculated by aggregating all costs up and then calculating sales minus total costs. This applies some of the suggestions on how to calculate more accurate profits from (Anderson et al., 2019)

coefficients of the treatment dummies are close to zero and not statistically significant. Columns (3) and (4) further show that most businesses remained open through the study period, with only 5.4% of businesses closed by midline and 12.6% by endline; and that this movement on the extensive margin was uncorrelated with any treatment status.

C Treatment Compliance

Table 3a presents the documentary movie compliance and assessment. Out of the 520 shop owners invited to the movie screening, 260 showed up at the venue for the film screening session. This is in line with previous experiences of low take-up rates for interventions requiring attendance. In particular, evaluations of business training interventions have been fraught with weak attendance (for a review, see McKenzie and Woodruff, 2014). Drexler et al. (2014) report take-up rates comparable to ours for both a standard business training and a more intuitive rule-of-thumb based approach. Giné and Mansuri (2014) and Bruhn et al. (2018) document problems equivalent in magnitude. Bruhn and Zia (2013) observes even lower attendance, of below 40% of invitees. Calderón et al. (2013) and Premand et al. (2016) report attendance below 70%. With the exception of the interventions by Drexler et al. (2014), costs per participant for either of these interventions are typically many times higher than the expenses per person of this study. Table 3a also shows that the feedback from the documentary movie screening was quite positive. The shop owners who attended reported having learned something new, and feeling inspired and hopeful after watching the movie.

Table 3b presents the assistance take up and its assessment. Out of the 520 shop owners offered personalized assistance sessions, 77% received the assistance once and 68% received it twice. This higher participation rate may be due to the fact that the assistance was conducted on the premise of the entrepreneur whilst allowing for business transactions to take place. Moreover, the assistants would visit the premise on a pre-arranged day and time that was most convenient for the shop owner. The feedback from the assistance sessions was overall quite positive as well.

Finally, Table 4 presents additional regression analysis to study whether people who complied with the treatment offered differ from those who refused to take part of the treatment, based on observable characteristics at baseline. We included variables characterizing both the entrepreneur (age, gender, education, risk, and time preferences) and the business itself (size, number of employees, profits, sales, formality, and business practices used). The results in Table 4 show that there is no discernable pattern of selection on observable characteristics for any of the treatment groups, with the exception that firms who actually accepted the handbook are more formal, those who make use of the assistance are older, and those who comply with both movie and assistance have slightly lower profits. Also, entrepreneurs who attended the movie are slightly more educated (1.8%) than those who did not attend.

Finally, note from Table 4 that 90% of the shop owners did not refuse the handbook offered. Also note that the take-up rate is lowest for the *All Three* treatment (46.9%). The low and uneven take-up rates across treatment arms influence the choice of estimation specifications we use for the analysis. We describe these choices and present results in the next section.

IV Main Results

A Estimation Strategy

This section focuses on primary treatment effects on business practices and performance. For each outcome, there are two level effects of interest: the average effect of being assigned to a treatment group (intent-to-treat effect - ITT), and the average effect for those who took up the treatment (the treatment-on-treated effect - ToT), where the ToT uses assignment to treatment as an instrument for take-up. We report ToT alongside ITT because the take-up for the documentary movie was relatively low compared to the implementation assistance, and reporting both ITT and ToT results allows us to have a fair comparison of the economic effects of the interventions.

We estimate the ITT effect on a given outcome Y using the following ANCOVA regression specification:

$$Y_{2i} = \alpha + \sum_{m=1}^4 \beta_m T_{mi} + \gamma X_{1i} + \delta V + \theta M + \zeta Y_{1i} + \epsilon_i, \quad (1)$$

where Y_{2i} is the outcome for business i at midline $t = 2$ and endline $t = 3$ stacked up together. In the regression specification T is a firm-level dummy variable which is equal to one if enterprise i was assigned to a particular treatment group, while $m = 1$ to 4 represent the four types of interventions that we conducted. Since the randomization was done after stratifying by gender, shop size (micro, small, or mid-sized), and a median split of a business practice composite score, we follow Bruhn and McKenzie (2009) and include the strata dummies represented by the vector X . V represents district fixed effects, while M is a dummy variable for the midline survey round. Y_{1i} is the baseline value of the outcome of interest. ϵ_i is a firm-level clustered error term.²¹

B Business Practices

We first analyze primary treatment impacts on business practices that were covered in the handbook. Since there are several business practice outcomes, we correct for multiple hypothesis testing (mht) in two steps. First, we aggregate practices within a category la (Kling et al., 2007) and produce an index score for record keeping, planning, stocking up, marketing, and joint decision-making. Second, given that we have multiple treatment arms, we additionally correct p-values of these indices for false discovery rates using the q-value simes correction ((Benjamini and Hochberg, 1995)) which adjusts for the multiple hypotheses being tested.

In Table 5a we report ITT results for the five dimensions of business practices, with mht-corrected p-values reported in square brackets. First, the table shows that providing the *Handbook* alone leads to no significant improvement in the adoption of business practices in any category. The point estimates are also very low and close to zero. By contrast, we find strong and statistically significant impacts when this pure information treatment is combined with the experiential additions. Specifically, we find that adding either the documentary movie, simple hands-on assistance,

²¹This ANCOVA specification allows the regression model to determine the structure of the relationship between the baseline and endline levels of the outcome, rather than imposing it by using differences. ANCOVA regression models of this kind are thus more efficient than difference-in-differences estimators in determining treatment effects with noisy outcome measures (McKenzie, 2012).

or both results in statistically significant improvements in record-keeping practices. Compared to an adoption rate of 19.6% in the control group, the *Documentary* leads to an additional 5.7% adoption; the *Assistance* an additional 6.5% adoption; and *All Three* an additional 5.4% adoption. All three coefficients are statistically significant at the 1% level. These are economically sizable effects, representing up to a 33% improvement in the adoption of record keeping practices over the control group. Furthermore, these coefficients are statistically larger than providing the *Handbook* alone, as represented by significant F-test p-values at the bottom of column (1).

The results also show that the *All Three* intervention significantly stimulates the adoption of business practices in all other dimensions of the handbook. Specifically, we find statistically significant impacts on relevant practices related to planning (6.8 percentage points), stocking up (5.3 percentage points), marketing (6.1 percentage points), and joint decision-making (5.9 percentage points). These effects correspond to 16.9% (planning), 11.3% (stocking up), 24.4% (marketing) and 21.9% (joint decision-making) improvements relative to the control group. While the point estimates for *Documentary* and *Assistance* are comparable in magnitude and direction, they are not statistically significant at conventional levels after the mht correction.

The ToT analysis presented in Table 5b shows similar results with scaled up coefficients especially for *Documentary* and *All Three* where the take-up of the movie was lowest. The results show marginal treatment effects for businesses that adopted *All Three* of 10.5 percentage points in record-keeping practices, 13.3 percentage points in planning practices, 10.4 percentage points in stocking up practices, 11.9 percentage points in marketing practices, and 11.3 percentage points in joint decision making practices. The coefficients for *Documentary* also scale up and show a sizable and weakly statistically significant effect on planning score (a 7.7 percentage point increase), even after correcting for multiple hypothesis testing.

C Profits

Next we turn to real performance impacts of the handbook and experiential learning add-ons, starting with profits. First, Figure 1(a) plots the cumulative density functions (CDFs) for profits and shows improvements along the CDF for both *Assistance* and *All Three*. Regression analysis is presented in Table 6, where column (1) presents ITT results for the level of monthly profits (winsorized on both tails at the 5% level); and column (2) the inverse hyperbolic sine transformation (IHS) of monthly profits, which is used instead of log of profits to account for negative and zero values. Columns (3) and (4) report ToT results for winsorized profits and IHS transformation of profits, respectively.

Table 6 shows statistically and economically significant treatment effects on business profits resulting from offering *Assistance* and *All Three*. Compared to the control group, businesses assigned to *Assistance* improve profits by 35% (Column 1). This effect is statistically significant at the 1% level and represents a 0.28 standard deviation increase with respect to the control group. Similarly, businesses assigned to *All Three* improve profits by 21% compared to the average profits of the control group (0.17 standard deviation improvement), an effect that is statistically significant at the 5% level. In monetary terms, these effects are sizable and translate to USD PPP 310 more profits per month due to *Assistance*, and USD PPP 191 due to *All Three*. Columns (1) and (2) also illustrate that businesses assigned to the *Documentary* improve profits by 12% over the control group, but this effect is not statistically significant. The lack of statistical significance is in part due to the relatively low take-up of the documentary movie.

The ToT results in columns (3) and (4) present stronger results for those businesses who adopted the treatments. In particular, the treatment effects for *All Three* scale up markedly from the ITT results, representing an increase in profits of 41.5% over the control group (0.33 standard deviation improvement). The coefficients for *Documentary* also scale up, but remain statistically insignificant.

Finally, Table 6 shows that the *Handbook* alone does not have any significant impact on profits; in fact, the coefficients are slightly negative and statistically lower than the other three treatment groups, as confirmed by the significant F-test p-values in the bottom half of the table. This finding suggests that the business knowledge provided in the handbook evolves into a business practice (and skill) only after the pure information shock is accompanied with an experiential add-on in the form of light implementation assistance or both implementation and emotional support.

D Sales and Customers

Figure 1(b) presents the CDFs for sales and shows similar improvements as profits. Next, Table 7 reports regression analyses on sales and customers. Column (1) presents the ITT results and shows similar impacts as profits. Specifically, both the *Assistance* and *All Three* treatments show sizable and statistically significant improvements in monthly sales. Compared to the control group, the sales in these two groups increase by 16.7% and 16.2% (0.15 and 0.14 standard deviations), respectively. The impact of the *Documentary* is positive but not statistically significant.

The ToT analysis in column (2) confirms stronger results with *All Three* resulting in a 31.2% increase (0.28 standard deviation improvement) over the control group. Also similar to profits, the *Handbook* alone does not affect business sales with negative and statistically insignificant regression coefficients. Furthermore, as confirmed by the F-test p-values, the coefficients on *Documentary*, *Assistance*, and *All Three* are all statistically larger than *Handbook* alone.

Columns (3)-(5) present results for number of customers in order to understand whether the higher sales are achieved by attracting more loyal and/or general customers. Although the coefficients for corresponding treatments are positive, they are not statistically significant for any class of customers. These results imply that the increase in sales is due to higher sales to existing rather than new customers. In section V, we explore the mechanisms of impact and tag these improvements as efficiency gains.

E Expenses, Size, and Credit

Table 8 reports findings on business expenses and size, and Table 9 focuses on business credit. Across both tables, we find no significant effects of any of the treatments on total business expenses, size of the shop, number of employees, or business credit.²² The coefficients are positive and directionally consistent, but the standard errors are large. Nevertheless, column (1) of Table 8 shows that total expenses in *All Three* are significantly larger than *Handbook*, with a p-value of 0.09 in an equal coefficients F-test.

These findings further confirm that the gains in sales and profits are not achieved through shop expansion, hiring, or obtaining business credit.

²²Appendix Table A2 presents regressions for individual expenses and likewise finds no significant treatment effects.

F Subjective Well-Being

Before turning to mechanisms of impact, we present results on two measures of subjective well-being. Indeed, improvements in sales and profits do not necessarily imply greater satisfaction as they may have incurred other subjective costs. To address this concern, we included two endline questions from the World Values Survey to elicit subjective well-being: (1) “How satisfied are you with the financial situation of your household?” and (2) “How satisfied are you with your life at this point?” (see, Inglehart et al., 2014).²³ Table 10 shows results from regressing these two measures of subjective-wellbeing on treatment assignment. While we do not detect significant treatment effects for satisfaction with life, the results show a positive and statistically significant effect of being assigned to *All Three* on satisfaction with finances. Specifically, these shop owners are 4.5 percentage points (7.1%) more satisfied with their finances than those assigned to the control group. Shop owners assigned to other groups show a slight increase in both measures of well-being, but the effects are not statistically significant.

V Mechanisms

We now turn to the mechanisms behind the increase in sales and profits identified in the previous section. The experiment design of this paper implies a strong causal link between improved business practices and better performance outcomes. This link is especially merited given the handbook and its accompanying experiential learning add-ons are precisely based on the business practices for which we identify treatment effects. In this section, we delve more deeply into the details of these practices and how they relate to gains in efficiency rather than other mechanisms. We also study possible alternative explanations for the performance improvement.

A Efficiency Gains or Just Better Record-Keeping?

In this subsection, we unpack the individual practices underlying the aggregate indices to shed light on the mechanisms of impact. This exercise also helps address the concern that the performance gains we identify are simply the result of shop owners being able to record sales and profits better without any real improvements in the business.

First, while record-keeping practices do improve as a result of treatment, it is important to note that shop owners improve other key handbook practices as well. In particular, they adopt practices that are bound to make the business more efficient. For instance, businesses assigned to *All Three* “adjust stocks based on product profitability” and “negotiate lower prices with suppliers” (Appendix Table A3c); “consult with former customers” and “offer discounts” (Appendix Table A3d); “make joint decisions” and “draft agreements to make joint decisions” with a business partner (Appendix Table A3e). These practices are expected to either lower average unit cost of the shop owner (vis-a-vis suppliers) or lower frictions when reaching customers and improve business efficiency. Additionally, we observe a substantial positive impact on practices related to financial planning (Appendix Table A3b), such as “reviewing financial performance to identify channels of improvement”, “making anticipated budget for upcoming costs” and “comparing target vs actual sales”. Combined, these

²³ Respondents were instructed to answer on a scale from 1 to 10, where 1 indicates “very dissatisfied” and 10 indicates “very satisfied”.

practices strongly suggest gains in efficiency as a primary mechanism for improvement in profits and sales.

Second, as a direct test of the record-keeping concern, we check whether the variance of profits changes with treatment status. If the only effect of the treatments was better reporting of profits (without any real outcome implications), we would expect treated shops to converge on profits. As Appendix Table A4 shows, the variance in profits among the treated businesses does not converge. If anything, we find the opposite, i.e. the variance gets larger among treated groups compared to the control group. This result provides another piece of evidence against the argument that all the treatments did was induce businesses to record profits better.

Finally, we apply formal causal mediation analysis to investigate the proportion of the treatment effects on sales and profits in *All Three* that can be attributed to each dimension of practices. Specifically, we follow the decomposition framework outlined in (Carpena and Zia, 2018) and motivated by (Imai et al., 2011), which separates the average treatment effect on sales and profits into an Average Causal Mediation Effect (ACME) and an Average Direct Effect (ADE). The ACME isolates the impact of a particular intermediary channel (e.g. marketing practices), while the ADE represents all other pathways. Empirically, these effects are estimated using coefficients from two regressions: one for the effect of the treatment on the mediator (i.e. practice score); and the other for the effect of the mediator on the outcome conditional on the treatment. The product of these two coefficients, the ACME, captures the portion of the average treatment effect that can be attributed to the mediating practice.²⁴

Appendix Table A5 presents the ACME analysis for sales and profits in *All Three*. With a focus on relative rather than absolute coefficients, the results suggest that record keeping is in fact not the most important mediator of performance, rather stocking up and marketing practices contribute the most to sales and where the mediation effects are largest and statistically significant. Likewise, for profits, the mediation effects are strongest and statistically significant for marketing practices.

B Knowledge or Aspirations?

In this paper, we posit that it is improvements in knowledge of business practices that leads to adoption and eventual improvements in performance. Yet, the interventions we study could potentially increase business performance and practice adoption through another distinctive channel – business aspirations. On the one hand, the information on best practices aims to directly improve business knowledge, and through the application of this new knowledge shop owners can improve their business performance. Indeed, the analysis in the previous section identifies an improvement in business practices suggesting that this channel is valid and strong. On the other hand, the interventions we study have an inspirational aspect to them as well, since the practices belong to successful peers

²⁴As highlighted in (Carpena and Zia, 2018) and (Imai et al., 2010), there are two important assumptions needed to identify the ACME and ADE. First is that treatment assignment is independent of the outcomes, which is satisfied in our study because treatment status is randomly assigned. Second, conditional on treatment status, the mediator is also independent of the outcomes. This second assumption may be violated if there are any unobservables that affect both the mediator and the outcome variables. For example, if shop owners with high ability or managerial quality also have both higher practice scores and better performance outcomes; and ability or managerial quality affect performance through channels other than business practices, then this assumption will be violated. In this paper, our focus is on the relative contribution of different classes of business practices as we are interested in knowing whether record-keeping alone contributes to performance improvements. Hence, our focus is on relative rather than absolute magnitudes for the ACME coefficients. Nevertheless, (Imai et al., 2010) recommend specific sensitivity analyses for robustness of ACME coefficients, which (Carpena and Zia, 2018) perform but is beyond the scope of this paper.

from a similar background, instead of coming from an unrelated population or an anonymous source like a standardized business training course. Indeed, Appadurai (2004) and Ray (2006) argue that aspirations are influenced by social comparisons with the achievements of others who are similar in spatial and socio-economic backgrounds. Similarly, Dalton et al. (2016) and Genicot and Ray (2017) show how aspirations can determine individual investment in future betterment. Moreover, recent empirical evidence confirms that aspirations and outcomes can be raised by exposing individuals to successful experiences of similar others (see e.g. (Bernard et al., 2014)) or potential role models (see e.g. (Beaman et al., 2012), (Riley, 2017)), and that the increase in aspirations is associated with an increase in behaviors leading to a better future. In our setting, learning about what successful shop owners from a similar background do could have increased business aspirations within our sample, and through this channel improved business performance.

To assess whether this channel is valid in our study, we directly measure business aspirations at baseline, midline, and endline for all shop owners in the sample. We elicit aspirations on various business dimensions, specifically we ask: “Please imagine your business a year from now. How large do you imagine your business premises to be? How many people will work there? How many customers will come by on a normal day? What are the daily sales you aspire to have?” On each dimension, responses were primed by reminding respondents of their current levels. Respondents answered with estimates in square meters, numbers of employees and customers, and amounts of daily sales in Indonesian Rupiah.

Appendix Table A6 shows treatment effects on these various dimensions of business aspirations. We find that shop owners in any of the treated groups do not increase their aspirations on any business dimension. These results rule out the possibility that the treatment effects we observe on sales and profits are driven by an increase in businesses aspirations.

C Real Adoption of Practices or Self-Reporting Bias?

One possible additional concern is related to social desirability bias or experimenter demand effects. Specifically, the concern relates to treated shop owners simply misreporting higher adoption rates. First, if the results were influenced by experimenter demand effects, we would observe significant effects for the handbook treatment as well, which we do not. Second, such misreporting would affect all business practices and not just the ones included in the handbook. As a direct test, we run placebo regressions to assess treatment effects on practices that were not mentioned in the handbook. Appendix Table A7 confirms that the treatments did not have any significant impact on these placebo practices, which supports the argument that the impacts on business practice adoption are legitimate effects.

We also use data on “objective” measures gathered by the survey team. At the end of the baseline and endline surveys, enumerators were instructed to report their own views on shop appearance. For instance, they were asked to record whether the shop appeared clean, well-stocked, and whether prices were clearly marked. While these measures do not directly indicate or confirm the use of specific business practices, they do provide a rough indication of whether the shop is better “organized”. As Appendix Table A8 shows, we do see improvements on some of these measures in shop owners assigned to *Documentary* and *Assistance*. Even though shop owners assigned to *All Three* do not show significant changes in these measures, the sign of the coefficients go in the right direction.

D Do Treated Businesses Improve Performance at the Expense of the Control Group?

A final concern relates to how the gains in sales and profits are achieved. Specifically, are these gains achieved at the expense of the control group? In order to allay this concern, we present two key pieces of evidence. First, a simple comparison of sales and profits for the control group between baseline and endline shows that trends in both these variables are flat. Table 1 shows baseline sales and profits of USD PPP 4,454 and USD PPP 890, respectively. In comparison, Tables 6 and 7 show control group average profits and sales across the endline period of USD PPP 4,999 and USD PPP 895, respectively. Neither of these performance variables are statistically different from baseline to endline, confirming a flat rather than declining growth trajectory.

Second, we use GPS data to directly measure linear distance from each shop in the control group to its nearest shop in the treatment group. If treated shop owners were achieving gains in sales and profits at the expense of the control group, then shops closer by would arguably suffer bigger losses in performance than shops further away. Appendix Table A9 presents a simple regression of sales and profits on this distance measure, with all standard baseline regression controls. The coefficients on both variables are in fact negative and not even close to statistically significant – standard errors are larger than the coefficients for both variables.

Both these pieces of evidence suggest that the gains in performance were, in fact, not achieved at the expense of the control group.²⁵

VI Conclusion

This paper shows that it is possible to stimulate efficiency and growth among small firms by sharing information on the best practices of successful local business peers. The analysis finds that the delivery channel of this information is critical – pure information alone does not have an impact on the adoption of business practices or on performance, but combining it with simple and inexpensive experiential add-ons results in sizable and significant improvements on both dimensions. These effects persist up to 18 months after the interventions, which is indicative of their long-term durability.

This study is remarkable in terms of cost-effectiveness, scalability, and replicability. First, the cost per firm of the *Handbook* intervention is approximately USD 100 and the *Documentary* and *Assistance* cost an additional USD 25 each; the benefits are up to USD 310 **per month** in profits, along with a high adoption rate of efficient business practices. Second, because of the low cost of the interventions, this study is easily scalable. Much of the cost is fixed and sunk, particularly the cost of developing the handbook. For any scale-up, the costs would therefore be considerably lower. Third, the concept of learning, processing, and sharing best practices can easily be replicated to other businesses in other countries, and it can also be applied to any other sector where best practices can be helpful, such as in education, health, government, or academia.

Finally, we pose an open and provocative question for future research: can learning local best practices from peers complement or substitute for formal business training? Clearly, we do not have experimental variation in our study to address this question, but we hypothesize that the answer may vary depending on the stage of business development. For example, relatively young

²⁵Note that we do not have data on all firms in the study area so cannot rule out general equilibrium effects elsewhere. As in most field studies of this type, we acknowledge that our results represent a partial equilibrium.

businesses may exhibit high marginal returns from learning about best practices of their successful peers and may find formal business training too advanced or even unnecessary. However, as they transition to becoming larger firms, they may need formal business training in order to unlock higher levels of growth (e.g. moving to computerized accounting from handwritten records). As such, the relationship between learning from peers and formal training may ultimately be complementary along the growth trajectory of a firm.

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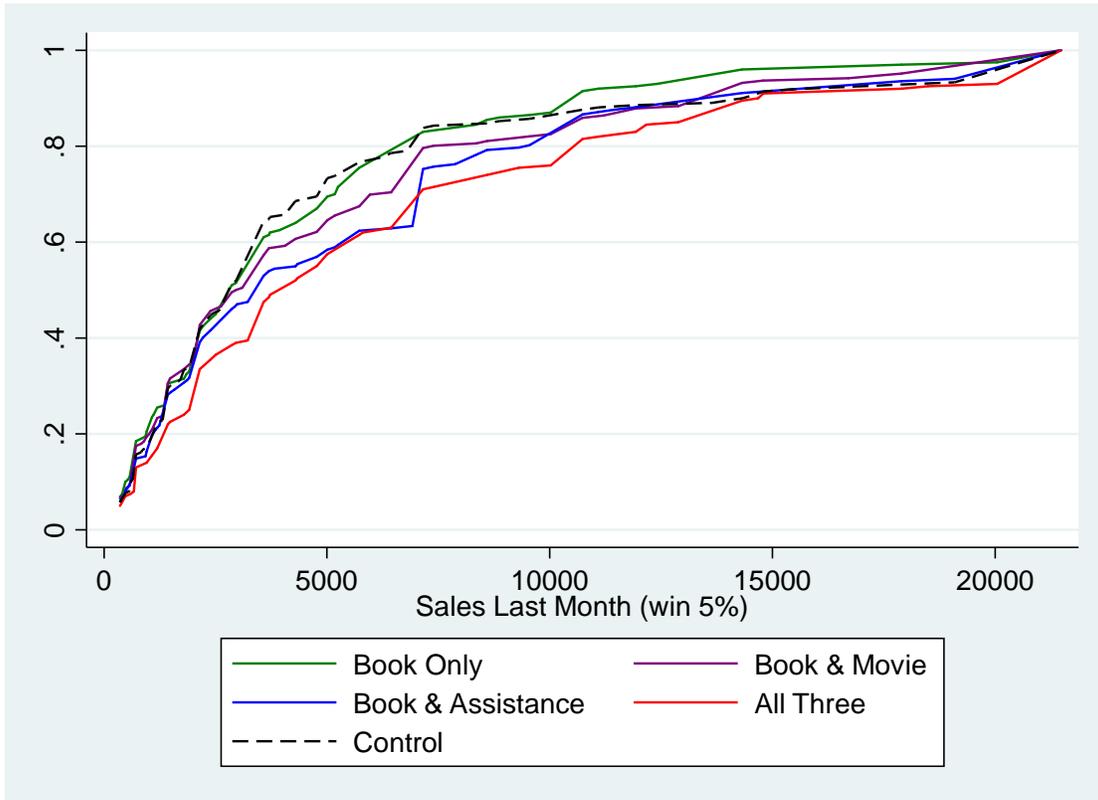
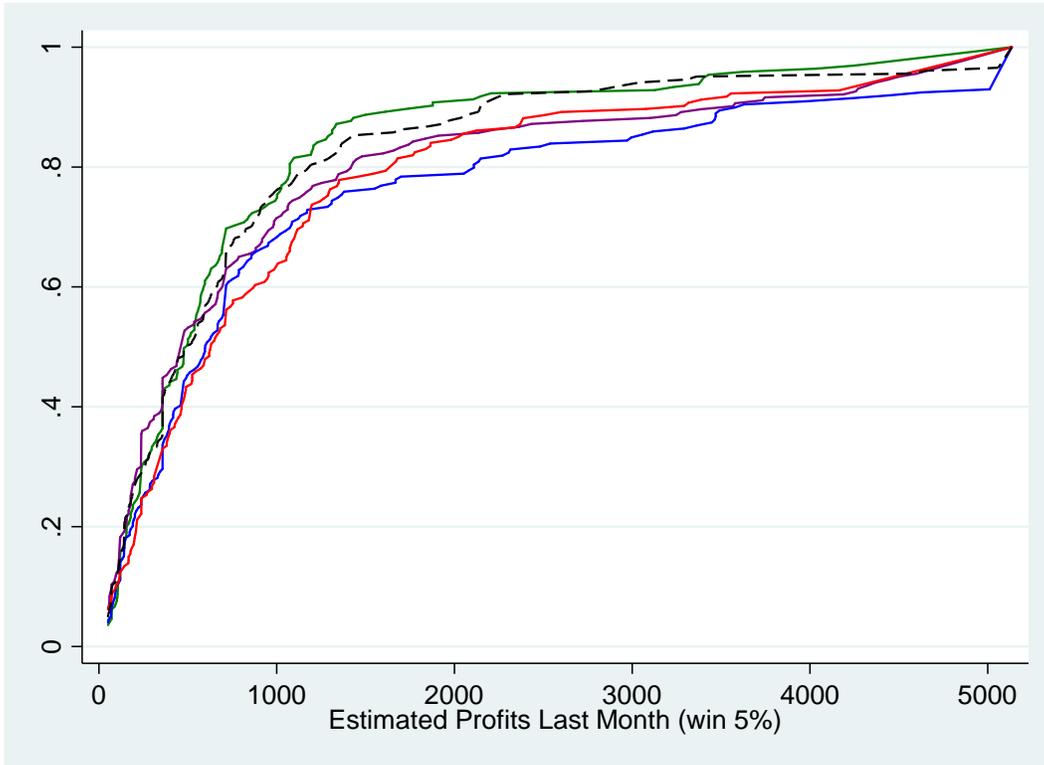
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Figure 1: CDFs of (a) Profits and (b) Sales



This figure plots the cumulative density functions for profits and sales from the final follow-up survey, 18 months after the intervention. Both estimates are winsorized at the 5% level.

Table 1: Summary Statistics and Tests of Randomization

<i>Variable</i>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Full Sample Mean	Full Sample SD	Control Group (A)	Handbook Only (B)	Handook and Movie (C)	Handbook and Assistance (D)	Handbook, Movie, and Assistance (E)	P-value (A=B)	P-value (A=C)	P-value (A=D)	P-value (A=E)
Respondent is Male	0.29		0.28	0.3	0.29	0.3	0.28	0.611	0.825	0.68	0.867
Respondent Age	45.27	11.31	45.22	45.27	45.28	45.16	45.38	0.959	0.951	0.951	0.866
Respondent Years of Education	9.39	3.78	9.1	9.52	9.36	9.42	9.55	0.185	0.446	0.327	0.174
Respondent Risk Preference Score	3.73	2.09	3.74	3.76	3.88	3.6	3.68	0.902	0.451	0.453	0.739
Respondent Time Preference Score	5.18	2.26	5.19	5.07	5.21	5.25	5.2	0.542	0.924	0.742	0.94
Shop Size (Sq. Meters)	13.22	12.34	12.67	12.77	12.84	13.82	14.03	0.908	0.851	0.248	0.287
Age of Firm	13.6	11.79	12.76	13.77	14.03	13.98	13.47	0.313	0.222	0.236	0.478
Firm has Tax ID	0.19		0.2	0.21	0.2	0.15	0.18	0.811	0.878	0.145	0.516
Total Number of Employees	2	1.22	2.03	2.05	1.9	1.99	2.04	0.837	0.218	0.708	0.919
Number of Customers on a Normal Day	49.33	43.32	45.77	50.1	47.22	51.8	51.79	0.253	0.602	0.085	0.099
Total Sales Last Month (USD PPP)	4786.16	4853.48	4454.37	4730.64	4840.55	4761.4	5139	0.5	0.371	0.467	0.114
Total Profits Last Month (USD PPP)	907.73	1185.09	889.58	961.1	926.78	825.25	934.66	0.496	0.723	0.524	0.674
Applied for Business Loan in Last 12 Months	0.18		0.2	0.17	0.15	0.22	0.17	0.374	0.171	0.438	0.374
Obtained Business Loan in Last 12 Months	0.16		0.18	0.15	0.14	0.18	0.14	0.3	0.2	0.926	0.2
Aggregate Score for Practices Covered in Handbook	0.35	0.18	0.36	0.35	0.36	0.34	0.36	0.383	0.884	0.243	0.99
Aggregate Score for Practices Not Covered in Handbook	0.18	0.13	0.18	0.17	0.17	0.18	0.19	0.254	0.445	0.681	0.757

Chi-Square Test of Joint Orthogonality from Multinomial Logit (P-value): 0.857

Notes: This table presents summary statistics for the baseline survey data. Columns 1 and 2 present mean and standard deviations for the full sample. Column 3 provides average values for the control group and columns 4-7 present average values by treatment status. Columns 8-11 present p-values for equality of means tests between a particular treatment group and the control group.

Table 2: Attrition Analysis

	(1)	(2)	(3)	(4)
	Completed Midline Survey	Completed Endline Survey	Business Closed at Midline Survey	Business Closed at Endline Survey
Assigned Handbook	-0.022 (0.024)	-0.035 (0.035)	0.011 (0.020)	0.005 (0.029)
Assigned Handbook & Movie	-0.028 (0.025)	-0.008 (0.035)	-0.003 (0.019)	-0.003 (0.029)
Assigned Handbook & Assistance	-0.021 (0.024)	-0.021 (0.035)	0.009 (0.020)	-0.001 (0.028)
Assigned All Three	-0.034 (0.025)	-0.033 (0.035)	-0.005 (0.019)	-0.009 (0.028)
R-squared	0.032	0.043	0.034	0.043
N	1301	1301	1301	1301
Dependent Variable Mean in Control Group	0.927	0.805	0.054	0.126
F-test (p-value): Book = Book & Movie	0.822	0.452	0.499	0.805
F-test (p-value): Book = Book & Assistance	0.982	0.702	0.947	0.843
F-test (p-value): Book = Book & Movie & Assistance	0.642	0.952	0.444	0.643

Notes: This table shows OLS regression results for the relationship between completing the midline (columns 1) & endline (columns 2) surveys and assignment to different treatment arms. The table also presents the association between business closures at midline (column 3) and endline (column 4) and treatment assignments. All specifications include stratification controls.

Table 3a: Takeup of Documentary Video

<i>Variable</i>	(1) Handbook and Movie (A)	(2) Handbook, Movie, and Assistance (B)	(3) P-value (A=B)
Anyone in shop attended film screening	0.52	0.49	0.54
Evaluation: learned something new	3.34	3.21	0.18
Evaluation: feeling inspired	3.31	3.3	0.941
Evaluation: feeling hopeful	3.6	3.42	0.043**
Evaluation: feeling bored	0.83	0.97	0.43

Notes: This table presents the take-up of the documentary video treatment among those who were assigned to *Documentary* (column 1) and *All Three* (column 2) treatment arms. Column 3 presents p-values for equality of means tests across the two treatment arms. The table also documents the average evaluations of movie attendees over four dimensions and respective p-values for equality of means across treatments associated with these evaluations. Statistically significant p-values are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level).

Table 3b: Takeup of Assistance

	(1)	(2)	(3)
<i>Variable</i>	Handbook and Assistance (A)	Handbook, Movie, and Assistance (B)	P-value (A=B)
Anyone in shop received 1st assistance session	0.77	0.78	0.752
Anyone in the shop received 2nd assistance session	0.68	0.68	0.925
Evaluation: understood something new	2.88	2.89	0.908
Evaluation: feeling inspired	2.76	2.83	0.422
Evaluation: feeling hopeful	2.88	2.97	0.312
Evaluation: feeling bored	0.59	0.43	0.118

Notes: This table presents the take-up of the implementation assistance treatment associated with receiving the 1st and 2nd assistance visit among those who were assigned to *Assistance* (column 1) and *All Three* (column 2) treatment arms. Column 3 presents p-values for equality of means tests across two treatment arms. The table also documents the average evaluations of those retailers who received the assistance and respective p-values for equality of means across treatments associated with these evaluations. Statistically significant p-values are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level).

Table 4: Selection into Treatment

	(1)	(2)	(3)	(4)
	Received Handbook	Received Handbook & Movie	Received Handbook & Assistance	Received All Three
Respondent is Male	-0.014 (0.037)	-0.047 (0.083)	0.001 (0.064)	-0.111 (0.084)
Respondent Age	0.001 (0.001)	0.002 (0.004)	-0.002 (0.003)	0.004 (0.004)
Respondent Years of Education	-0.003 (0.005)	0.018* (0.010)	-0.002 (0.008)	0.008 (0.010)
Respondent Risk Preference Score	0.007 (0.008)	0.001 (0.017)	-0.006 (0.015)	-0.012 (0.018)
Respondent Time Preference Score	-0.006 (0.007)	0.002 (0.016)	0.000 (0.014)	0.002 (0.015)
Shop size (Sq. Meters)	0.000 (0.002)	0.002 (0.003)	-0.000 (0.002)	-0.002 (0.002)
Age of Firm	0.000 (0.001)	-0.002 (0.003)	0.006** (0.003)	0.004 (0.003)
Firm has Tax ID	0.112** (0.046)	0.036 (0.107)	-0.066 (0.109)	0.010 (0.108)
Total Number of Employees	0.013 (0.011)	-0.000 (0.032)	-0.009 (0.030)	0.030 (0.025)
Total Sales Last Month (Log)	-0.003 (0.014)	0.016 (0.043)	0.024 (0.033)	-0.006 (0.039)
Total Profits Last Month (IHS Transformation)	-0.004 (0.015)	-0.021 (0.037)	-0.010 (0.030)	-0.081** (0.040)
Management Practices Aggregate Score	0.003 (0.090)	-0.214 (0.192)	0.068 (0.173)	0.090 (0.181)
R-squared	0.168	0.189	0.194	0.272
N	233	228	228	228
Dependent Variable Mean	0.904	0.515	0.773	0.469

Notes: This table presents OLS regressions to investigate whether baseline shop and shop owner characteristics correlate with selection to the different treatment arms; namely, *Handbook* (column 1), *Documentary* (column 2), *Assistance* (column 3), and *All Three* (column 4). Statistically significant p-values are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level).

Table 5a: Impact on Business Practices (ITT)

	(1)	(2)	(3)	(4)	(5)
	Record Keeping	Planning	Stocking Up	Marketing	Joint Decision Making
Assigned Handbook	0.025 (0.017) [0.209]	0.027 (0.022) [0.273]	0.007 (0.019) [0.694]	-0.011 (0.022) [0.694]	0.011 (0.027) [0.694]
Assigned Handbook & Movie	0.057*** (0.017) [0.009]	0.043 (0.021) [0.107]	0.038 (0.020) [0.117]	0.040 (0.023) [0.166]	0.040 (0.028) [0.217]
Assigned Handbook & Assistance	0.065*** (0.018) [0.004]	0.034 (0.021) [0.166]	0.011 (0.019) [0.664]	0.039 (0.023) [0.166]	0.037 (0.027) [0.239]
Assigned All Three	0.054*** (0.017) [0.009]	0.068*** (0.022) [0.009]	0.053** (0.019) [0.020]	0.061** (0.024) [0.032]	0.059* (0.027) [0.094]
R-squared	0.204	0.192	0.187	0.150	0.120
N	2205	2204	2205	2205	2205
Dependent Variable Mean in Control Group	0.196	0.402	0.471	0.250	0.269
Dependent Variable SD in Control Group	0.252	0.310	0.270	0.320	0.420
F-test (p-value): Book = Book & Movie	0.069	0.487	0.014	0.028	0.300
F-test (p-value): Book = Book & Assistance	0.025	0.754	0.304	0.030	0.348
F-test (p-value): Book = All Three	0.096	0.073	0.001	0.002	0.082

Notes: This table presents Intent-to-Treat impact analysis for aggregate business practice indices of record keeping (column 1), planning (column 2), stocking-up (column 3), marketing (column 4), and joint decision making (column 5). The sample is pooled across two follow-up survey rounds, a midline at 6 months and endline at 18 months after the intervention. All regression specifications control for a midline survey round dummy, baseline value of the outcome variable, as well as stratification controls. Standard errors in parentheses are clustered at the retail shop level. In all regressions, practice outcomes are corrected for multiple hypothesis testing and corrected p-values are reported in square brackets. Significance stars have been adjusted accordingly. Statistically significant p-values are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level). Details on individual business practices can be found in Appendix Table A10.

Table 5b: Impact on Business Practices (TOT)

	(1)	(2)	(3)	(4)	(5)
	Record Keeping	Planning	Stocking Up	Marketing	Joint Decision Making
Received Handbook	0.026 (0.017) [0.206]	0.029 (0.023) [0.265]	-0.008 (0.020) [0.696]	-0.011 (0.023) [0.694]	0.012 (0.028) [0.696]
Received Handbook & Movie	0.103*** (0.031) [0.008]	0.077* (0.037) [0.099]	0.069 (0.035) [0.109]	0.072 (0.041) [0.156]	0.071 (0.050) [0.215]
Received Handbook & Assistance	0.080*** (0.021) [0.004]	0.042 (0.025) [0.156]	0.014 (0.023) [0.643]	0.048 (0.028) [0.156]	0.045 (0.033) [0.230]
Received All Three	0.105*** (0.033) [0.008]	0.133*** (0.042) [0.008]	0.104** (0.037) [0.021]	0.119** (0.046) [0.032]	0.113* (0.053) [0.094]
R-squared	0.205	0.188	0.179	0.146	0.113
N	2205	2204	2205	2205	2205
Dependent Variable Mean in Control Group	0.196	0.402	0.471	0.250	0.269
Dependent Variable SD in Control Group	0.252	0.310	0.270	0.320	0.420
F-test (p-value): Book = Book & Movie	0.005	0.149	0.009	0.022	0.169
F-test (p-value): Book = Book & Assistance	0.009	0.576	0.288	0.024	0.280
F-test (p-value): Book = All Three	0.008	0.006	0.000	0.001	0.028

Notes: This table presents Treatment-on-Treated impact analysis for aggregate business practice indices of record keeping (column 1), planning (column 2), stocking-up (column 3), marketing (column 4), and joint decision making (column 5). The TOT is estimated using an instrumental variable strategy where take-up of each treatment is instrumented by its assignment. The sample is pooled across two follow-up survey rounds, a midline at 6 months and endline at 18 months after the intervention. All regression specifications control for a midline survey round dummy, baseline value of the outcome variable, as well as stratification controls. Standard errors in parentheses are clustered at the retail shop level. In all regressions practice outcomes are corrected for multiple hypothesis testing and corrected p-values are reported in square brackets. Significance stars have been adjusted accordingly. Statistically significant p-values are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level). Details on individual business practices can be found in Appendix Tables A10.

Table 6: Impact on Profits (ITT and TOT)

	<u>ITT</u>		<u>TOT</u>	
	(1)	(2)	(3)	(4)
	Estimated Profits Last Month (win 5%)	Estimated Profits Last Month (IHS Transformation)	Estimated Profits Last Month (win 5%)	Estimated Profits Last Month (IHS Transformation)
Assigned/Received Handbook	-91.307 (78.400)	-0.067 (0.088)	-95.827 (82.059)	-0.071 (0.092)
Assigned/Received Handbook & Movie	110.378 (86.841)	0.055 (0.092)	198.095 (155.912)	0.099 (0.164)
Assigned/Received Handbook & Assistance	310.455*** (89.488)	0.261*** (0.096)	381.745*** (109.677)	0.321*** (0.117)
Assigned/Received All Three	191.088** (84.662)	0.199** (0.094)	371.558** (166.053)	0.386** (0.182)
R-squared	0.179	0.211	0.166	0.206
N	2172	2172	2172	2172
Dependent Variable Mean in Control Group	894.544	6.817	894.544	6.817
Dependent Variable SD in Control Group	1127.783	1.348	1127.783	1.348
F-test (p-value): Book = Book & Movie	0.020	0.167	0.035	0.227
F-test (p-value): Book = Book & Assistance	0.000	0.000	0.000	0.000
F-test (p-value): Book = All Three	0.001	0.003	0.002	0.004

Notes: This table presents Intent-to-Treat and Treatment-on-Treated impact analysis for business profits. Columns (1) and (3) present ITT and TOT for profit levels, respectively, where the profits variable is winsorized at 5% on both tails. Columns (2) and (4) present corresponding results for the Inverse-Hyperbolic-Sine Transformation of profits. The sample is pooled across two follow-up survey rounds, a midline at 6 months and endline at 18 months after the intervention. The regressions include a midline survey round dummy, baseline value of the outcome variable, as well as stratification controls. Standard errors are clustered at retail shop level. Statistically significant p-values are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level).

Table 7: Impact on Sales (ITT and TOT) and Customers (ITT)

	(1)	(2)	(3)	(4)	(5)
	ITT	TOT			
	Sales Last Month (win 5%)	Sales Last Month (win 5%)	Total Number of Customers	Total Number of Loyal Customers	Total Number of General Customers
Assigned/Received Handbook	-396.976 (314.252)	-417.198 (328.897)	-0.397 (2.458)	1.310 (1.414)	-0.348 (2.273)
Assigned/Received Handbook & Movie	335.489 (337.881)	601.221 (606.634)	0.961 (2.214)	0.653 (1.291)	0.670 (2.097)
Assigned/Received Handbook & Assistance	836.755** (372.924)	1031.692** (457.015)	0.626 (2.422)	1.794 (1.328)	0.735 (2.197)
Assigned/Received All Three	807.462** (358.384)	1558.326** (696.317)	1.483 (2.414)	1.139 (1.484)	1.140 (2.228)
R-squared	0.492	0.483	0.336	0.247	0.306
N	2197	2197	2203	1181	1181
Dependent Variable Mean in Control Group	4998.923	4998.923	40.232	16.459	33.632
Dependent Variable SD in Control Group	5623.257	5623.257	35.578	15.834	27.300
F-test (p-value): Book = Book & Movie	0.020	0.047	0.592	0.645	0.664
F-test (p-value): Book = Book & Assistance	0.000	0.000	0.715	0.740	0.665
F-test (p-value): Book = All Three	0.000	0.001	0.495	0.916	0.557

Notes: This table presents Intent-to-treat and Treatment-on-Treated impact analysis for sales winsorized at 5% on both tails (columns 1 and 2) and number of customers (columns 3-5). The sample is pooled across two follow-up survey rounds, a midline at 6 months and endline at 18 months after the intervention. The regressions include a midline survey round dummy, baseline value of the outcome variable, as well as stratification controls. Standard errors are clustered at retail shop level. Statistically significant p-values are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level).

Table 8: Impact on Expenses and Size (ITT)

	(1)	(2)	(3)	(4)	(5)
	Total Expenses Last Month (win 5%)	Shop Size in Square Meters	Total Number of Employees	Total Number of Family Employees	Total Number of Non-Family Employees
Assigned Handbook	-114.749 (253.781)	-0.140 (0.664)	0.015 (0.086)	0.014 (0.080)	-0.003 (0.034)
Assigned Handbook & Movie	139.676 (282.880)	0.102 (0.672)	0.082 (0.083)	0.079 (0.078)	-0.005 (0.038)
Assigned Handbook & Assistance	175.259 (294.524)	0.931 (0.716)	0.130 (0.079)	0.112 (0.076)	-0.008 (0.034)
Assigned All Three	336.894 (290.615)	0.392 (0.636)	0.008 (0.084)	0.007 (0.073)	-0.001 (0.039)
R-squared	0.532	0.356	0.226	0.229	0.114
N	2188	2204	2205	2205	2205
Dependent Variable Mean in Control Group	4287.789	12.856	1.954	1.819	0.135
Dependent Variable SD in Control Group	4811.178	9.235	1.150	1.089	0.468
F-test (p-value): Book = Book & Movie	0.323	0.725	0.446	0.430	0.950
F-test (p-value): Book = Book & Assistance	0.285	0.132	0.175	0.226	0.886
F-test (p-value): Book = All Three	0.092	0.401	0.943	0.926	0.961

Notes: This table presents Intent-to-Treat impact analysis for total expenses (column 1), shop size (column 2), and number of employees (columns 3-5). The sample is pooled across two follow-up survey rounds, a midline at 6 months and endline at 18 months after the intervention. The regressions include a midline survey round dummy, baseline value of the outcome variable, as well as stratification controls. Standard errors are clustered at retail shop level. Statistically significant p-values are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level).

Table 9: Impact on Credit (ITT)

	(1)	(2)	(3)
	Applied for Business Loan	Obtained Business Loan	Log(Outstanding Loan Amount)
Assigned Handbook	0.013 (0.028)	0.023 (0.027)	0.078 (0.220)
Assigned Handbook & Movie	0.019 (0.028)	0.026 (0.027)	0.017 (0.215)
Assigned Handbook & Assistance	-0.010 (0.027)	-0.012 (0.025)	-0.262 (0.205)
Assigned All Three	0.015 (0.028)	0.017 (0.026)	-0.150 (0.206)
R-squared	0.121	0.117	0.149
N	2205	2205	2205
Dependent Variable Mean in Control Group	0.177	0.157	1.510
Dependent Variable SD in Control Group			3.012
F-test (p-value): Book = Book & Movie	0.837	0.906	0.782
F-test (p-value): Book = Book & Assistance	0.381	0.167	0.105
F-test (p-value): Book = All Three	0.957	0.831	0.284

Notes: This table presents Intent-to-Treat impact analysis for business credit outcomes. The sample is pooled across two follow-up survey rounds, a midline at 6 months and endline at 18 months after the intervention. The regressions include a midline survey round dummy, baseline value of the outcome variable, as well as stratification controls. Standard errors are clustered at retail shop level. Statistically significant p-values are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level).

Table 10: Impact on Satisfaction (ITT)		
	(1)	(2)
	Satisfied with Life	Satisfied with Finances
Assigned Handbook	0.030 (0.021)	0.021 (0.021)
Assigned Handbook & Movie	-0.001 (0.021)	0.022 (0.021)
Assigned Handbook & Assistance	0.016 (0.020)	0.020 (0.020)
Assigned All Three	0.015 (0.019)	0.045** (0.020)
R-squared	0.038	0.037
N	1019	1018
Dependent Variable Mean in Control Group	0.699	0.635

Notes: This table presents Intent-to-Treat impact analysis for shop owner satisfaction outcomes. The sample is pooled across two follow-up survey rounds, a midline at 6 months and endline at 18 months after the intervention. The regressions include a midline survey round dummy, baseline value of the outcome variable, as well as stratification controls. Standard errors are clustered at retail shop level. Statistically significant p-values are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level).

Appendix: For Online Publication

Appendix Table A1: Statistics from the Assistance Intervention

	First Session					Second Session				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
	Record Keeping	Profit Calculation	Stocking up	Attracting Customers	Joint Decisions	Record Keeping	Profit Calculation	Stocking up	Attracting Customers	Joint Decisions
Interest in Implementing Practices (1=Most Interest - 5=Least interest)	2.992 (1.525)	2.995 (1.330)	2.605 (1.262)	2.551 (1.355)	3.731 (1.313)	---	---	---	---	---
Started Reading Chapter (Yes/No)	0.475 (0.500)	0.419 (0.494)	0.410 (0.492)	0.412 (0.493)	0.388 (0.488)	0.602 (0.490)	0.569 (0.496)	0.554 (0.498)	0.542 (0.499)	0.535 (0.499)
Any Practice Implemented (Yes/No)	0.473 (0.500)	0.373 (0.484)	0.387 (0.487)	0.533 (0.499)	0.515 (0.500)	0.635 (0.482)	0.540 (0.499)	0.581 (0.494)	0.694 (0.461)	0.727 (0.446)
Any Problems Encountered (Yes/No)	0.425 (0.495)	0.288 (0.453)	0.319 (0.467)	0.329 (0.470)	0.294 (0.456)	0.471 (0.500)	0.358 (0.480)	0.356 (0.479)	0.352 (0.478)	0.360 (0.480)

Notes: This table presents data collected by the facilitators during the first and second session of the assistance visits. The variables include the interest shown by the retailer in the practices described in each chapter of the handbook, whether they started engaging with the material of the chapters and implementing its practices, as well as whether they encountered problems during the assistance. Data were collected by the facilitators during the first and second session of the assistance visits.

Appendix Table A2: Impact on Individual Expense Items (ITT)

	(1)	(2)	(3)	(4)	(5)
	Stockup (win 5%)	Wage (win 5%)	Rent (win 5%)	Electricity (win 5%)	Transportation (win 5%)
Assigned Handbook	-166.718 (273.158)	-2.394 (1.570)	-5.976 (4.983)	1.897 (3.551)	0.311 (2.237)
Assigned Handbook & Movie	57.639 (301.641)	-1.367 (1.877)	-1.156 (4.798)	2.134 (3.425)	-0.265 (2.257)
Assigned Handbook & Assistance	81.961 (306.100)	2.901 (2.101)	-0.893 (4.926)	5.020 (3.457)	-0.735 (2.159)
Assigned All Three	244.251 (307.530)	-1.597 (1.575)	-2.726 (4.719)	-0.605 (3.459)	-0.961 (2.178)
R-squared	0.514	0.317	0.628	0.280	0.214
N	2200	2204	2204	2189	2197
Dependent Variable Mean in Control Group	4269.507	6.993	52.190	68.178	31.086
Dependent Variable SD in Control Group	5080.647	30.175	91.692	52.269	30.710
F-test (p-value): Book = Book & Movie	0.407	0.601	0.281	0.948	0.794
F-test (p-value): Book = Book & Assistance	0.371	0.014	0.268	0.397	0.621
F-test (p-value): Book = All Three	0.141	0.625	0.451	0.498	0.546
F-test (p-value): Book & Movie = Book & Assistance	0.936	0.076	0.952	0.422	0.827
F-test (p-value): Book & Move = All Three	0.541	0.905	0.705	0.443	0.745

Notes: This table presents impact analysis (Intent-to-Treat) for individual business expense items across midline and endline survey rounds. Regressions use an ANCOVA specification, where a midline survey round dummy, baseline value of the outcome variable as well as stratification controls are included on RHSs and standard errors are clustered at retailer level. Statistically significant p-values are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level).

Appendix Table A3a: Impact on Individual Record Keeping Practices (ITT)

	(1)	(2)	(3)
	Recorded Every Purchase and Sale	Itemized Business Revenues and Expenses	Estimated Cash on Hand
Assigned Handbook	0.015 (0.013)	0.032 (0.029)	0.019 (0.030)
Assigned Handbook & Movie	0.029** (0.014)	0.077*** (0.029)	0.054* (0.031)
Assigned Handbook & Assistance	0.026* (0.014)	0.081*** (0.030)	0.070** (0.031)
Assigned All Three	0.016 (0.014)	0.082*** (0.030)	0.051* (0.030)
R-squared	0.112	0.142	0.127
N	2204	2205	2204
Dependent Variable Mean in Control Group	0.035	0.230	0.323
F-test (p-value): Book = Book & Movie	0.335	0.139	0.248
F-test (p-value): Book = Book & Assistance	0.428	0.117	0.105
F-test (p-value): Book = All Three	0.927	0.105	0.278
F-test (p-value): Book & Movie = Book & Assistance	0.858	0.894	0.623
F-test (p-value): Book & Move = All Three	0.402	0.866	0.917

Notes: This table presents impact analysis (Intent-to-Treat) for individual record keeping practices across midline and endline survey rounds. Regressions use an ANCOVA specification, where a midline survey round dummy, baseline value of the outcome variable as well as stratification controls are included on RHSs and standard errors are clustered at retailer level. Statistically significant p-values are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level). Details on business practices can be found in Appendix Table A10.

Appendix Table A3b: Impact on Individual Planning Practices (ITT)

	(1)	(2)	(3)
	Reviewed Financial Performance to Identify Areas of Improvement	Compared Target vs. Actual Monthly Sales	Anticipated Budget for Upcoming Business Costs
Assigned Handbook	0.007 (0.033)	0.034 (0.035)	0.037 (0.023)
Assigned Handbook & Movie	0.035 (0.033)	0.052 (0.034)	0.037 (0.023)
Assigned Handbook & Assistance	0.041 (0.032)	0.015 (0.033)	0.040* (0.023)
Assigned All Three	0.065** (0.032)	0.081** (0.034)	0.056** (0.023)
R-squared	0.106	0.130	0.185
N	2204	2204	2204
Dependent Variable Mean in Control Group	0.642	0.418	0.146
F-test (p-value): Book = Book & Movie	0.396	0.613	0.971
F-test (p-value): Book = Book & Assistance	0.298	0.578	0.918
F-test (p-value): Book = All Three	0.074	0.180	0.445
F-test (p-value): Book & Movie = Book & Assistance	0.869	0.277	0.887
F-test (p-value): Book & Move = All Three	0.359	0.402	0.413

Notes: This table presents impact analysis (Intent-to-Treat) for individual planning practices across midline and endline survey rounds. Regressions use an ANCOVA specification, where a midline survey round dummy, baseline value of the outcome variable as well as stratification controls are included on RHSs and standard errors are clustered at retailer level. Statistically significant p-values are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level). Details on business practices can be found in Appendix Table A10.

Appendix Table A3c: Impact on Individual Stockup Practices (ITT)

	(1)	(2)	(3)	(4)
	Top Selling Products Always in Stock	Adjusted Stock Based on Product Profitability	Negotiated Lower Prices with a Supplier	Compared Product Prices and Quality Across Suppliers
Assigned Handbook	0.031 (0.029)	-0.001 (0.033)	-0.008 (0.028)	-0.044 (0.034)
Assigned Handbook & Movie	0.066** (0.028)	0.039 (0.034)	0.018 (0.029)	0.037 (0.035)
Assigned Handbook & Assistance	0.026 (0.028)	-0.010 (0.034)	0.041 (0.029)	0.007 (0.034)
Assigned All Three	0.041 (0.029)	0.091*** (0.034)	0.055* (0.029)	0.038 (0.034)
R-squared	0.054	0.111	0.108	0.153
N	2205	2205	2204	2204
Dependent Variable Mean in Control Group	0.770	0.420	0.195	0.500
F-test (p-value): Book = Book & Movie	0.198	0.226	0.350	0.018
F-test (p-value): Book = Book & Assistance	0.862	0.785	0.084	0.125
F-test (p-value): Book = All Three	0.720	0.007	0.025	0.013
F-test (p-value): Book & Movie = Book & Assistance	0.130	0.144	0.446	0.372
F-test (p-value): Book & Move = All Three	0.348	0.130	0.210	0.965

Notes: This table presents impact analysis (Intent-to-Treat) for individual stock up practices across midline and endline survey rounds. Regressions use an ANCOVA specification, where a midline survey round dummy, baseline value of the outcome variable as well as stratification controls are included on RHSs and standard errors are clustered at retailer level. Statistically significant p-values are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level). Details on business practices can be found in Appendix Table A10.

Appendix Table A3d: Impact on Individual Marketing Practices (ITT)

	(1)	(2)
	Consulted with Former Customers	Offered Discount to Loyal/Bulk Customers
Assigned Handbook	0.007 (0.024)	-0.027 (0.032)
Assigned Handbook & Movie	0.042 (0.026)	0.041 (0.034)
Assigned Handbook & Assistance	0.026 (0.025)	0.055 (0.034)
Assigned All Three	0.057** (0.027)	0.067** (0.034)
R-squared	0.098	0.144
N	2204	2205
Dependent Variable Mean in Control Group	0.142	0.358
F-test (p-value): Book = Book & Movie	0.197	0.041
F-test (p-value): Book = Book & Assistance	0.468	0.014
F-test (p-value): Book = All Three	0.070	0.005
F-test (p-value): Book & Movie = Book & Assistance	0.570	0.703
F-test (p-value): Book & Move = All Three	0.614	0.461

Notes: This table presents impact analysis (Intent-to-Treat) for individual marketing practices across midline and endline survey rounds. Regressions use an ANCOVA specification, where a midline survey round dummy, baseline value of the outcome variable as well as stratification controls are included on RHSs and standard errors are clustered at retailer level. Statistically significant p-values are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level). Details on business practices can be found in Appendix Table A10.

Appendix Table A3e: Impact on Individual Joint Decision Making Practices (ITT)

	(1)	(2)
	Made Joint Business Decisions with Business Partner	Drafted an Agreement for Joint Decision-Making
Assigned Handbook	0.024 (0.031)	-0.001 (0.027)
Assigned Handbook & Movie	0.038 (0.031)	0.041 (0.028)
Assigned Handbook & Assistance	0.039 (0.031)	0.035 (0.027)
Assigned All Three	0.068** (0.030)	0.051* (0.028)
R-squared	0.126	0.107
N	2205	2205
Dependent Variable Mean in Control Group	0.310	0.228
F-test (p-value): Book = Book & Movie	0.640	0.124
F-test (p-value): Book = Book & Assistance	0.628	0.172
F-test (p-value): Book = All Three	0.148	0.058
F-test (p-value): Book & Movie = Book & Assistance	0.980	0.826
F-test (p-value): Book & Move = All Three	0.321	0.737

Notes: This table presents impact analysis (Intent-to-Treat) for individual joint decision making practices across midline and endline survey rounds. Regressions use an ANCOVA specification, where a midline survey round dummy, baseline value of the outcome variable as well as stratification controls are included on RHSs and standard errors are clustered at retailer level. Statistically significant p-values are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level). Details on business practices can be found in Appendix Tables A10 and A11.

Appendix Table A4: Analysis of Profits

	(1)	(2)	(3)	(4)	(5)	(6)
	Mean	SD	Bartlett Test p-value	Levene Test p-value	Bartlett One-Sided Test p-value	
			SD(C) = SD(T)	SD(C) = SD(T)	SD(C) > SD(T)	SD(C) < SD(T)
Baseline:						
Control Group	889.58	1167.42	--	--	--	--
Book Only	961.10	1207.89	0.59	0.45	0.71	0.29
Book & Movie	926.78	1192.31	0.74	0.45	0.63	0.37
Book & Assistance	825.25	1107.45	0.40	0.45	0.20	0.80
All Three	934.66	1249.39	0.28	0.45	0.86	0.14
Midline:						
Control Group	896.85	1106.40	--	--	--	--
Book Only	805.06	1006.01	0.14	0.23	0.07	0.93
Book & Movie	971.75	1185.84	0.29	0.18	0.86	0.14
Book & Assistance	1148.67	1268.23	0.04	0.00	0.98	0.02
All Three	1033.00	1260.63	0.05	0.03	0.98	0.02
Endline:						
Control Group	891.81	1155.26	--	--	--	--
Book Only	837.76	1088.17	0.40	0.45	0.20	0.80
Book & Movie	1040.76	1368.84	0.02	0.02	0.99	0.01
Book & Assistance	1223.05	1488.37	0.00	0.00	1.00	0.00
All Three	1138.58	1359.07	0.02	0.04	0.99	0.01

Notes: This table provides a variance comparison for profits between treatment arms and control across three survey rounds (baseline, midline, and endline). Columns 1 and 2 report mean and standard deviations. Bartlett and Levene tests for the equality of standard deviations of the control and treatment groups are reported in columns 3 and 4. Columns 5 and 6 report one-sided Bartlett tests for differences in standard deviations between treatment and control groups.

Appendix Table A5: Causal Mediation Analysis

<i>Outcome</i>	<i>Sales</i>					<i>Profits</i>				
<i>Mediator</i>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Record Keeping	Planning	Stocking-Up	Marketing	Joint Decision Making	Record Keeping	Planning	Stocking-Up	Marketing	Joint Decision Making
ACME	46.89	58.94	132.17*	214.06**	52.98	8.66	10.43	6.56	18.95*	5.76
ADE	1216.13***	1204.15***	1131.04**	1049.3**	1210***	187.97**	186.22**	190.07**	177.7**	190.86**
% of ATE Mediated	3.7%	4.6%	10.4%	16.9%	4.2%	4.3%	5.2%	3.3%	9.4%	2.9%

Notes: This table presents analyses to measure the average causal mediation (ACME) and the average direct effects (ADE) of the *All Three* treatment on two outcomes; namely, 5% winsorized sales (columns 1-5) and 5% winsorized profits (columns 6-10). ACME isolates the impact of particular business practice channels (mediators) that treatment effects get transmitted through (record keeping (columns 1 and 6), planning (columns 2 and 7), stocking-up (columns 3 and 8), marketing (columns 4 and 9) and joint decision making (columns 5 and 10)). ADE represents all other pathways. Statistically significant p-values are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level).

Appendix Table A6: Impact on Aspirations (ITT)

	(1)	(2)	(3)	(4)
	12 month aspirations shop size (win 5%)	12 month aspirations employment (win 5%)	12 month aspirations customers (win 5%)	12 month aspirations sales (win 5%)
Assigned Handbook	-1.081 (0.746)	-0.036 (0.081)	-1.162 (2.867)	-33.425 (20.538)
Assigned Handbook & Movie	-0.386 (0.719)	-0.014 (0.079)	1.590 (2.871)	26.043 (23.733)
Assigned Handbook & Assistance	0.739 (0.747)	0.099 (0.078)	1.345 (2.891)	-3.824 (23.801)
Assigned All Three	0.103 (0.724)	-0.019 (0.081)	1.553 (2.819)	15.174 (22.817)
R-squared	0.235	0.146	0.252	0.558
N	2204	2205	2203	2194
Dependent Variable Mean in Control Group	15.347	1.750	51.741	416.316
Dependent Variable SD in Control Group	10.438	1.095	41.183	419.047
F-test (p-value): Book = Book & Movie	0.371	0.781	0.337	0.008
F-test (p-value): Book = Book & Assistance	0.023	0.090	0.385	0.185
F-test (p-value): Book = All Three	0.126	0.832	0.333	0.023

Notes: This table presents impact analysis (Intent-to-Treat) for 12 month business aspirations (with respect to shop size (column 1), employment (column 2), number of customers (column 3) and sales (column 4)) - all winsorized at 5% level - across midline and endline survey rounds. Regressions use an ANCOVA specification, where a midline survey round dummy, baseline value of the outcome variable as well as stratification controls are included on RHSs and standard errors are clustered at retailer level. Statistically significant p-values are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level).

Appendix Table A7: Impact on Unrelated Practices (ITT)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Other Business Practices Aggregate Score	Observed Products for Sale at Competing Business	Asked Suppliers about High Demand Products	Advertised the Business	Identified Profit Contribution of Best Products	Kept Annual Profit and Loss Statement	Kept Annual Cash Flow Statement	Kept Annual Balance Sheet	Kept Annual Income and Expenses Statement
Assigned Handbook	-0.003 (0.010)	0.007 (0.031)	-0.020 (0.032)	-0.003 (0.013)	0.005 (0.030)	0.007 (0.011)	-0.009 (0.011)	0.000 (0.008)	-0.010 (0.013)
Assigned Handbook & Movie	-0.001 (0.010)	-0.001 (0.031)	-0.036 (0.033)	0.012 (0.015)	0.020 (0.029)	0.002 (0.012)	0.002 (0.012)	-0.002 (0.008)	-0.004 (0.013)
Assigned Handbook & Assistance	0.005 (0.010)	-0.000 (0.031)	-0.012 (0.032)	-0.005 (0.013)	0.014 (0.029)	0.013 (0.011)	0.013 (0.013)	0.005 (0.009)	0.013 (0.014)
Assigned All Three	0.005 (0.009)	0.034 (0.032)	0.001 (0.032)	0.021 (0.014)	0.005 (0.029)	0.005 (0.012)	-0.008 (0.010)	-0.007 (0.007)	-0.001 (0.013)
R-squared	0.183	0.106	0.136	0.087	0.080	0.074	0.066	0.035	0.103
N	2204	2204	2203	2204	2204	2204	2204	2204	2204
Dependent Variable Mean in Control Group	0.179	0.239	0.294	0.044	0.748	0.024	0.029	0.015	0.040
F-test (p-value): Book = Book & Movie	0.809	0.822	0.609	0.321	0.622	0.696	0.327	0.790	0.608
F-test (p-value): Book = Book & Assistance	0.413	0.831	0.793	0.829	0.762	0.627	0.078	0.622	0.099
F-test (p-value): Book = All Three	0.369	0.403	0.491	0.099	0.983	0.846	0.939	0.354	0.477
F-test (p-value): Book & Movie = Book & Assistance	0.576	0.992	0.452	0.232	0.845	0.391	0.406	0.475	0.241
F-test (p-value): Book & Move = All Three	0.528	0.286	0.245	0.574	0.603	0.846	0.349	0.545	0.831

Notes: This table presents impact analysis (Intent-to-Treat) for business practices we measured in baseline, midline and endline surveys but did not cover in the handbook, hence did not treat. Regressions use an ANCOVA specification, where a midline survey round dummy, baseline value of the outcome variable as well as stratification controls are included on RHSs and standard errors are clustered at retailer level. Statistically significant p-values are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level). Details on business practices can be found in Appendix Table A10.

Appendix Table A8: Impact on Objective Measures (ITT)

	(1)	(2)	(3)	(4)	(5)
	Objective Measures Aggregate Score	Shop is Clean and Tidy	Shop is Well- Stocked	Prices are Clearly Marked	Goods are Displayed in Groups
Assigned Handbook	0.005 (0.015)	-0.016 (0.026)	0.017 (0.030)	0.037 (0.025)	-0.009 (0.016)
Assigned Handbook & Movie	0.017 (0.016)	-0.029 (0.027)	0.070** (0.029)	0.052** (0.025)	-0.014 (0.018)
Assigned Handbook & Assistance	0.004 (0.015)	-0.031 (0.027)	0.029 (0.030)	0.043* (0.025)	-0.011 (0.017)
Assigned All Three	0.013 (0.015)	-0.015 (0.027)	0.024 (0.031)	0.034 (0.024)	0.014 (0.016)
R-squared	0.114	0.148	0.119	0.065	0.063
N	2204	2204	2204	2204	2204
Dependent Variable Mean in Control Group	0.609	0.673	0.695	0.144	0.925
Dependent Variable SD in Control Group	0.237				
F-test (p-value): Book = Book & Movie	0.443	0.616	0.071	0.566	0.761
F-test (p-value): Book = Book & Assistance	0.971	0.570	0.686	0.832	0.909
F-test (p-value): Book = All Three	0.604	0.979	0.830	0.887	0.167
F-test (p-value): Book & Movie = Book & Assistance	0.423	0.955	0.169	0.716	0.849
F-test (p-value): Book & Move = All Three	0.780	0.611	0.118	0.466	0.115

Notes: This table presents impact analysis (Intent-to-Treat) for objective measures - across midline and endline survey rounds - that enumerators noted during survey interviews. Regressions use an ANCOVA specification, where a midline survey round dummy, baseline value of the outcome variable as well as stratification controls are included on RHSs and standard errors are clustered at retailer level. Statistically significant p-values are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level).

Appendix Table A9: Distance Analysis

	(1)	(2)
	Sales Last Month (win 5%)	Estimated Profits (win Last Month 5%)
Distance to Nearest Treated Business	-1649.377 (2183.64)	-477.693 (526.92)
R-squared	0.527	0.248
Observations	452	445

Notes: Using only control group businesses, this table presents OLS regressions of 5% winsorized sales (column 1) and 5% winsorized profits (column 2) on distance to the nearest treated business. Regressions control for a midline survey round dummy, baseline value of the outcome variable as well as stratification controls. Statistically significant p-values are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level).

Appendix Table A10: List of Business Practices Measured in Surveys

Label	Name of the Practice	Survey Question
Record Keeping:		
R1	Keeps written business records	Do you keep written business records?
R2	Records every purchase and sale	Do you record each purchase and sale of your business?
R3	Can use records to check cash on hand	Are you able to use your records to see how much cash your business has available at any point in time?
R4	Uses records to check sales of product	Do you regularly use your records to know whether sales of a particular product are increasing or decreasing?
R5	Works out costs of main products	Do you work out the costs to the business of each main product you sell?
R6	Knows products with most profit per item	Do you know your three products with the highest profit per item selling in your business?
R7	Has written monthly expenses budget	Do you have a written budget which states how much you have to pay each month for rent, electricity, equipment maintenance, transport, advertising, and other indirect costs to business?
R8	Can use records to service potential loan	Imagine you wanted to take out a bank loan for your business and you needed to check if you can pay the monthly rates. Do you have records showing whether you have enough money each month after paying all business expenses?
R9	Keeps records in ledger book	What kind of business records do you keep? a) Electronic records (phone, computer, etc.) b) Ledger book or equivalently organized notes c) Disorganized notes d) Orderly filed receipts e) Loose receipts f) Other g) None
R10	Calculates profits considering all costs	How do you calculate profits? a) Only from the sales (no calculation) b) Sales minus product purchases c) Sales minus product purchases minus some other business expenses d) Sales minus all business expenses (salaries, rent, electricity, interest, etc.)
Planning:		
F1	Reviews and analyses financial performance	Do you review your financial performance and analyze where there are areas for improvement at least on a monthly basis?
F2	Has sales target set for next year	Do you have a target set for sales over the next year?
F3	Compares target with sales at least monthly	Do you compare your sales achieved to your target at least monthly?
F4	Has cost budget for next year	Do you have a budget for the anticipated costs your business will have to pay over the next year?
F5	Issues annual profit/loss statement	Do you have an annual profit and loss statement?
F6	Issues annual cash-flow statement	Do you have an annual statement of cash flow?
F7	Issues annual balance sheet	Do you have an annual balance sheet?
F8	Issues annual income and expenditure sheet	Do you have an annual income/expenditure statement?

Appendix Table A10: List of Business Practices Measured in Surveys

Label	Name of the Practice	Survey Question
Stocking Up:		
S1	Negotiates prices with suppliers	In the last 3 months, have you tried to negotiate with any of your suppliers for a lower price of products?
S2	Compares suppliers on product quality	In the last 3 months, have you compared the prices or quality offered by alternate suppliers to the business' current suppliers?
S3	Does not run out of stock	Does your business run out of stock monthly or more often?
S4	Stocks up late for any of top 3 selling products	How often do you stock up your top 3 products? a) No fixed schedule, whenever products are out of stock b) No fixed schedule, whenever products are almost out of c) Fixed schedule, plus when products are out of stock d) Fixed schedule, plus when products are almost out of stock e) Whenever an item or product is sold
S5	Changes inventory based on profits per item	Do you ever adjust your level of inventory based any of the following reasons? a) Change in customer demand b) Shelf space c) Purchasing prices d) Profits per item
S6	Changes inventory based on buying price	(see above: S5)
Marketing:		
M1	Visits competitors to see prices	In the last 3 months, have you visited at least one of your competitors' businesses to see their selling price?
M2	Visits competitors to see products	In the last 3 months, have you visited at least one of your competitors' businesses to see what products they have available for sale?
M3	Asks customers for new products they would like	In the last 3 months, have you asked existing customers if there are other products or brands they would like you to sell?
M4	Asks former customers why they quit buying	In the last 3 months, have you talked with at least one former customer to find out why they have stopped buying from your shop?
M5	Asks suppliers for bestselling products	In the last 3 months, have you asked any of your supplier about which products sell the best?
M6	Attracts customers with special offer	In the last 3 months, have you tried to attract customers with a special offer?
M7	Advertizes the business	In the last 6 months, have you ever advertised your shop in any way?
M8	Compares sales with competitors	Do you compare your own firm's sales performance with your competitors?
M9	Adjusts prices based on competitors	In the last 3 months, have you changed prices for any of the following reasons? a) Different price charged by competitor b) More/less buyers than normal for that product c) Discount for bulk purchases d) Discount for loyal customers e) Discount for stocks in need to be sold quickly
M10	Gives any discount	(see above: M9)
M11	Has discussions about new products	What kind of business topics do you discuss with other people? a) Sales b) Selling price c) Bestselling products d) Discounts e) Promotion, marketing, advertising f) Government funding g) Other financing opportunities h) Arisan ("ROSCAs") i) Supplier(s) j) Purchasing prices k) New brands or products l) Business practices m) Business plan n) Market trends o) Business rumors p) Security-related issues q) Most profitable products r) Assets owned s) New assets t) Others
M12	Has discussions about suppliers	(see above: M11)
M13	Has discussions about bestsellers	(see above: M11)

Appendix Table A10: List of Business Practices Measured in Surveys

Label	Name of the Practice	Survey Question
Joint Decision-Making:		
		With whom do you discuss your business most often?
<i>J1</i>	Discusses business with family members	a) Family member b) Personal friend c) Business friend in neighborhood d) Business friend outside of neighborhood e) Supplier f) Local official (“Kepala RT/RW/Kelurahan”) g) Preman h) No one
<i>J2</i>	Discusses business with business friends	(see above: <i>J1</i>)
<i>J3</i>	Discusses business matters with anyone	(see above: <i>J1</i>)
<i>J4</i>	Discusses business sales	What kind of business topics do you discuss with other people?
		a) Sales b) Selling price c) Best-selling products d) Discounts e) Promotion, marketing, advertizing f) Government funding g) Other financing opportunities h) Arisan (“ROSCAs”) i) Supplier(s) j) Purchasing prices k) New brands or products l) Business practices m) Business plan n) Market trends o) Business rumors p) Security-related issues q) Most profitable products r) Assets owned s) New assets t) Others
<i>J5</i>	Discusses selling prices	(see above: <i>J4</i>)
<i>J6</i>	Discusses best-selling products	(see above: <i>J4</i>)
<i>J7</i>	Discusses financing opportunities	(see above: <i>J4</i>)
<i>J8</i>	Discusses buying prices	(see above: <i>J4</i>)
<i>J9</i>	Discusses business practices	(see above: <i>J4</i>)
<i>J10</i>	Discusses business plan	(see above: <i>J4</i>)
<i>J11</i>	Joint decisions on business sales	What kind of business decisions do you make with other people?
		a) Sales b) Selling price c) Best-selling products d) Discounts e) Promotion, marketing, advertizing f) Government funding g) Other financing opportunities h) Arisan (“ROSCAs”) i) Supplier(s) j) Purchasing prices k) New brands or products l) Business practices m) Business plan n) Market trends o) Business rumors p) Security-related issues q) Most profitable products r) Assets owned s) New assets t) Others
<i>J12</i>	Joint decisions on selling prices	(see above: <i>J11</i>)
<i>J13</i>	Joint decisions on best-sellers	(see above: <i>J11</i>)
<i>J14</i>	Joint decisions on financing opportunities	(see above: <i>J11</i>)
<i>J15</i>	Joint decisions on buying prices	(see above: <i>J11</i>)
<i>J16</i>	Joint decisions on new products	(see above: <i>J11</i>)
<i>J17</i>	Joint decisions on business practices	(see above: <i>J11</i>)
<i>J18</i>	Joint decisions on business plan	(see above: <i>J11</i>)

This table lists the business practices measured in the baseline and followup surveys for this study, along with the corresponding survey question for each practice.

Appendix Table A11: Handbook Content on Beliefs, Reasons to Adopt Practices, Step-by-Step Implementation Guidance, and Tips

Chapter 1: Record Keeping

Misconception	HB Response
Some people think keeping records is difficult for people without higher education.	In our survey, those who keep records of their daily transactions varied widely in their educational background.
Some people think keeping records is complicated.	We will show you easy steps to take in order to keep track of your daily transactions
Many people believe they know their profits, know how much to reinvest, and how much to spend.	In our research we learned that many shop owners did not have a good idea of their business performance.
Some people think that one cannot prepare for unexpected events since nobody can predict the future.	Record keeping is a good example of how you can, in fact, prepare yourself. It makes sense to save up for large bills which arrive periodically, for instance, electricity and telephone bills, as well as rental costs and taxes.
Some people think keeping records is a lot of work and yields no benefits.	We will show you that once you know how to do it and how to integrate it into your everyday routines, record-keeping is a lot easier than it might first seem. In our survey, we found that a majority of people confuse business sales with profits. As a consequence, they may end up spending more than they actually have and thus risk running into financial trouble.

Reasons to Adopt the Practice
It is what differentiates successful businesses from those with less success.
Once you do record-keeping, you will know exactly how much you make per day, how much you can reinvest in your shop, how much you can save, and how much you can spend on you and your family.
Without savings, unexpected events can hit you and your family hard.
It allows you to take full control over all business decisions.
It helps keeping household and business finances separate.
You will be better able to save up and withstand unexpected events.
It is essential when borrowing from banks, money lenders, and family. Often, the only way to convince a potential lender is by showing them a written record of how your business is performing. Keeping records of your daily sales and weekly or monthly profits does just that. It gives you proof of how well your shop is performing and that the money will be paid back in time.

Chapter 1: Record Keeping

Step-by-step Implementation Guidance

Step 1: Physically separating private and business finances (use labels)

Step 2: Preparing the ledger book (Column 1: "Product", Column 2: "Amount" ...)

Step 3: Recording daily sales (with tips: eg. leave the first row on the first page of your book empty; with detailed examples on how to do it)

Step 4: Recording stock-up purchases.

Step 5: Dealing with household expenses (with concrete realistic examples: "your kid takes a snack or your aunt borrow money" and local tips "use colored pen for household expenses")

Step 6: Dealing with stalled payments ("paying later") with concrete local example "let's say when Pak Agung (a loyal customer) comes to your shop to buy 10 cans of condensed milk, he does not have enough money to complete the purchase."

Step 7: Adding other costs (electricity, transportation, rent, etc) (tips: used a coloured pen, divide the monthly value per days in the month, keep the invoice either behind the current page or at the end of the ledger.)

Step 8: Summing up at the end of the page (tips: leave two rows free at the end of each page. Draw a line beneath the last entry and use these last rows to note down the total sum of money received in column four ("Cash in") and the total sum of money spent in column five ("Cash out").

Step 9: Balance at the end of the day (and for the next).

Tips

Dealing with sales you forgot to write down: Whenever you realize you have forgotten a transaction, leave a few lines empty and immediately fill in the information you remember. For instance, you may remember the product name and unit (e.g. "Shampoo, 25ml sachets"). Should you fail to remember anything, simply leave one single line empty and carry on.

Dealing with electricity bills (vouchers): Switch to a voucher-based payment system, which allows you to top up your electricity balance when you would like to with exactly the amount you have allocated for it.

Set aside money to pay regular bills (electricity, rent, etc.).

Dedicate a third wallet/drawer/box to savings for these long-term expenses and to label it clearly (for instance, "savings for electricity bill").

Chapter 2: Calculating Profits

Misconception	HB Response
Some people think that counting sales is already enough.	When we did our survey back in March 2016, we asked detailed questions about how people dealt with costs, sales, profits and record-keeping in general. We found that many people gave up calculating profits and some just consider sales as a guide for the performance of their business. The HB shows by means of an idiosyncratic example the consequences of this mistake.
Some people think that profits are simply “sales minus product purchases”.	The HB shows by means of an idiosyncratic example the consequences of this mistake.
Some people think that profits are “sales minus everything you pay that day”.	The HB shows by means of an idiosyncratic example the consequences of this mistake.
Some people think calculating profits is complicated.	The HB shows it can be simple.

Reasons to Adopt the Practice

Shops which have records detailed enough that they allow for the shop manager to calculate profits including all major costs to the business are associated with monthly sales 42% higher and profits 45% higher than shops without detailed records or without any records at all.
Only if you calculate profits, you can draw the right conclusions from your records.
You may overestimate your profits as you do not account for various bills and expenses. As a consequence, you may spend more money than you should, especially if there are outstanding bills to be paid in the future. Conversely, you may have the impression you are short on money, even if that is not the case. The HB gives an idiosyncratic example to illustrate both cases.

Chapter 2: Calculating Profits

Step-by-step Implementation Guidance

Step 1: Calculating total daily sales and costs at the end of the day. The HB goes back to Step 9 of record-keeping. It uses idiosyncratic rules of thumb like "the sum where you disregard all colored entries will now be used to calculate profits. Entries highlighted with color represent costs that are not related to business expenses, such as loans to your sister". The HB illustrates with the example carried from Chapter 1

Step 2: Calculating daily profits "simply take your total daily sales and subtract from it your total daily costs." Illustrates with the example carried from Chapter 1

Step 3: Calculating monthly profits and profits on a "normal day". "calculating your monthly profits is equivalent to calculating profits on a daily basis. Hence, all you have to do is add up your daily profits for all days of the month."

Tips

Making daily profits more precise (stock-ups for multiple days): "With the records now in place, you can estimate the days it takes until the products stocked up on one occasion sell out completely....Try to estimate the number of days for each product to stock-out. The way you deal with the entries in your records will be the same as with costs that represent more than one day. Just as you have done already (record-keeping, step 7), every purchase that represents more than a day shall be marked with color. Then add the total purchases for those products divided by the days they will last for."

Matching daily profits with monthly profits: "at the end of a month, calculate the monthly profits as shown above. Then, go back to each day of the month and note down, on the page that you are calculating your monthly profits, both the total daily sales and that day's total costs including those you marked with color. If you now sum up the daily total sales, you receive your monthly total sales. Likewise, you can calculate the monthly total costs."

Chapter 3: Stocking up

Misconception	HB Response
In our survey, we found that concerning stock-ups some people go by the principle that stocking up is not necessary until things are lacking on your shelf.	You lose money with every customer who decides to turn to another shop because they cannot wait for you to stock up. If you want to retain customers, it is vital to schedule your product purchases.
"I simply stock up the exact same amount that I had on my shelves before"	If you do this, you can run out of stock on special days (like Lebaran and other holidays).
"I have my favourite supplier with the best prices and do not need any other"	A shop owner who relies entirely on one or two suppliers, no matter how good the prices, will become dependent. When we asked owners of small and mid-sized stores to share advice on doing business, they stressed two things: not to rely on one or two suppliers only and to keep up to date with prices.

Reasons to Adopt the Practice
Stores whose owners kept a schedule to plan when to stock up and how much were associated with 26% higher monthly sales and 25% higher monthly profits.
However, most businesses do not plan ahead for supplies. Hence, they will be more prone to experience stock-outs. Shops which stock up daily are associated with monthly sales that are 48% higher and monthly profits that are 37% higher.
With a ready plan for stock-ups you will not have to purchase supplies every day and you will still be able to adjust when things change. We found that stores which never ran out of stock for their main products are associated with 25% higher monthly sales and 27% higher monthly profits.
You will be better able to pick up on product trends or seasonal changes for a particular product. Likewise, you will be able to observe the sales of new products more closely.
A fixed schedule will give you a better focus in managing your business and certainly make things easier for you. You do not make yourself dependent on your supplier's schedule, but follow your own. If your stock-up schedule is not fixed, you will tend to stock up more according to what is available at your suppliers. With your own schedule you will know better when to purchase any given product.

Chapter 3: Stocking up

Step-by-step Implementation Guidance

Step 1: Preparing the material. It is best to keep your records in a special book (your inventory book). Any booklet or notebook will do.

Step 2: Figure out your most profitable products. Select the five to seven most profitable products, since it will be easier to track every single product's stock-out (step 3), demand (step 4), compare its requirements for storage, capital, and transport relative to other products (step 5), and compare relevant prices, product quality, availability, and supplier schedules (step 6).

Step 3: Get an idea about stock-outs. Take the ledger where you listed your most profitable products in (step 1) and start taking note of how often you run out of stock for these products. If you ask your customers how much exactly they were going to buy, you will have to note this down in a certain unit. For example, if a customer asks for 4 bottles of soy sauce, you can add 4 tallies in the row of that product in your records. Label the third column with "Unit" and the fourth column with "Stock-outs". In the fourth column you will keep the tallies for stockouts of all your main products. The examples in the HB illustrate all this with typical goods sold.

Step 4: Get an idea of your inventory. Add the following two new column labels: label column 5 with "Items sold" and column 6 with "Inventory". In column 5, you will keep count of the number of items sold for each of the products using a tally in just the same way you did with stock-outs.

Step 5: Identify constraints (storage, capital, transport, limited shelf-life, manpower). The HB proposes product-specific solutions for typical problems with stocking-up (e.g. lack of storage space, size of vehicle, and time)

Step 6: Compare suppliers (quality, prices, availability, schedules). This is important in order to avoid undesirable outcomes and to get the best prices. The HB explains how to do this.

Step 7: Come up with a stock-up schedule.

Tips

If you ran out stocks for a product, get used to asking your customer "Do you want something else?". That way, you may find out about demand for products the customer would not have mentioned otherwise.

Reacting to price fluctuations, discounts, and product availability: If price changes are not communicated to you directly by your supplier, you can set a day in the week on which you update those price. Also, keep an open eye on discounts. In our talks with small and mid-sized shop owners, every one of them emphasized this practice as key for success. Sometimes it is your local supermarket which runs a discount offer for cooking oil or a local supplier who needs to get rid of his stock in eggs (and so decreases prices).

Do keep an eye on your suppliers' delivery times and stockouts. Do not hesitate to change to a more reliable partner.

Retailers like you have emphasized that getting the best prices and being attentive to bulk discounts of their suppliers are keys to reducing stocking-up costs.

Chapter 4: Marketing

Misconception	HB Response
"I have sold the same products for a long time now, there is no need to change my assortment."	In our survey we found that shops that introduced at least one new product in the last three months were associated with significantly higher sales and profits than those that did not.
"If a customer decides to quit buying, I cannot do anything."	From our conversations with shop owners, it became apparent that many do not simply give up on an absent customer, and try to follow up to understand the reasoning.
"I already make the best possible prices, giving discounts is not necessary."	You may want to give discounts for products that are on the verge of spoiling. If your supplier offers you good terms, you can pass on a bit of discount to customers. Also, consider giving discounts for goods bought in bulk.

Reasons to Adopt the Practice
From our survey of small and mid-size retail shops, we gathered that successful shops were the ones that adopted some simple practices to help retain customers and win over new ones.
Shop owners who decide to get back to former customers to see the reasons why they quit buying at their shop associated with monthly sales 24% higher than the sales of businesses whose owners just let it go. What is more, their monthly profits are 23% higher.
From the survey we know that shops that use discounts to attract new and retain loyal customers are associated with monthly sales that are 40% higher than the sales of shops that do not give discounts. Also, their monthly profits are 29% higher.

Chapter 4: Marketing

Step-by-step Implementation Guidance

Step 1: Introducing a new product. Though not every customer may be interested in the newly offered products, some may end up buying. There may be customers who do not plan a purchase, but become interested in buying something new after seeing the product in the store.

Step 2: Get back to customers who are no longer buying at your shop. From our survey we know that shop owners who do not give up on former customers and get back in touch have higher sales and profits. It is simple: Almost no customer will mind being asked why they quit buying. So, do not be ashamed to ask. Their reasons can be well-founded. For instance, customers may have moved or may no longer need goods from your shop. Hence, everything is clear. Though, that does not mean you do not have a chance to win back former customers. Another reason can be that someone is simply trying out different vendors, that they happened to pass by other shops, or perhaps prices are better elsewhere. By simply contacting them, you can inquire about their reasons for leaving and also make them feel appreciated. As such, politely asking for their reasons to quit buying at your shop may already win them over. If your customer has been loyal for a long time, on the other hand, you may additionally want to provide a discount to retain their loyalty.

Step 3: Devise a discount strategy. First, it will be useful when new products are introduced. Second, to win back customers you don't see around anymore. Third, for products that are close to expiring. Once you have tried all the different types of discounts, ask yourself which one works best for your shop.

Tips

Even if you do not get a discount from your supplier, they frequently have other special deals. For example, some might leave the product in your shop without you having to pay for it right away. You will only pay later and only for the units you sell. Do not hesitate to ask your supplier for such an offer. Remember, they also want to find out how well the new product sells in the market.

Large suppliers often provide special discounts on new products when those are first introduced to the market. This is to test the product's appeal. Hence, you might want to display the new product in a place that your customers can easily spot. In case your supplier offers you a better price or a special discount for a new product, you may want to pass down the discount to your customers. This way you can see if the item has the potential to sell well or not. Of course, even if you do not receive a better price you can still offer discounts. If the product does not sell well at the reduced price, you know you do not need to sell it again.

Chapter 5: Making Decisions Together

Misconception	HB Response
<p>"I know my shop best, so I do not have to discuss it with anyone."</p>	<p>Nobody doubts that you know your shop best. After all, you have invested your time, money, and energy in it. Plus, you make all the important decisions. Importantly, we do not advise you to give up the decision-making power but to make productive use of other people’s inputs, their ideas, and experiences. Hence, this is not about letting others decide in your stead but about making informed decisions incorporating both your knowledge and that of another person. Consider stocking up: Imagine you are in the back of the shop making a list of items to stock up while your spouse is serving customers in front. It can only be beneficial to receive input from your spouse regarding popular items. That way, you will know better what exactly to stock up on and by what amount.</p>
<p>"It will not help me in my business."</p>	<p>Even though you might think discussions and joint decision-making will not help you stocking up or writing records, we have evidence that it benefits your business. In our interviews with small and mid-size retailers all over Jakarta, we found that shop owners who discuss business topics with others are associated with higher sales and profits. In the same way, shop owners who cooperate on any decisions regarding their business also have higher earnings.</p>
<p>"If I discuss my business with people outside of my family, they will use it against me."</p>	<p>There is nothing wrong with starting by consulting your siblings and spouses. In fact, this is a good first step in improving your business. However, do consider seeking out other people to discuss business matters. We understand that not everyone can be trusted but you can still ask for people’s opinions without giving away sensitive information. You can explain, in a general fashion, your situation and the decision you face without going into too much detail. You can also start by discussing with your close friends. For business-related advice, you can talk to some of your suppliers. Large suppliers usually have a better overview about what is going on in the market. Surely, you do not want to ask the delivery service whether their products are worth buying – after all, they have an incentive to sell. However, you can ask about other products or new offers. Or simply ask for advice on more general questions such as whether or not your prices are in line with those they see elsewhere.</p>

Chapter 5: Making Decisions Together

Reasons to Adopt the Practice

We found that shop owners who have an open attitude to discussing matters with family members or friends in business or outside of it earn higher profits. Shop owners who said they were open to receiving inputs and who made decisions together with others on any business matter were associated with monthly sales that were 25% higher than the sales of shop owners who did not consult on business matters. In addition, their profits were by 27% higher.

Shop owners who consulted with others on the topic of which new products to offer for sale had 30% higher monthly sales and 35% higher monthly profits compared to shop owners who did not.

Shop owners who decided jointly with others on which new practice to implement in their business made monthly sales 26% higher than the sales of a business whose owner would insist to make decisions alone. In addition, monthly profits were 27% higher.

Two minds can hardly know less than one. This is especially true if the other person differs in their ideas, intuitions, and ways of thinking or if they have expertise different from yours. By including your business partner, co-worker, or spouse in the process of making decisions about the shop, chances are they will become more involved and thus be of even greater use.

It is the most cost-effective way to improve your business. Think about all the things you can do to improve your business. Most come with costs attached or at least some major changes. Consulting others, discussing business matters, and making decisions together is an inexpensive alternative. By exchanging ideas and cooperating with others, you practically benefit for free.

Step-by-step Implementation Guidance

Before we start: Topics to discuss or decide on together. In our survey of 1300 shop owners in Jakarta, we found that many already discuss business matters with their spouses, friends, or suppliers they trust. Most use the opportunity to exchange ideas about sales, selling and purchasing prices, as well as which products are most profitable or sell best. They discuss which products to start offering for sale and where to acquire additional capital (e.g., bank offers or government programs). Moreover, shop owners report discussing discount policies (which discounts to give, to whom, when, and how much), product quality, reliability of suppliers, marketing and promotional offers, and general market trends. Beyond these topics, we strongly recommend discussing business practices.

Step 1: Observe or discuss expertise and define clear roles. The first step in finding out what could be worth discussing apart from the above mentioned topics is to see where you and your co-worker/spouse differ in expertise. Once you know where you differ, you have identified a good discussion topic, you are sure to complement each other's knowledge.

Step 2: Dedicate time for quick feedback. Once you have thought about topics to discuss, whom to discuss them with, and have assigned responsibilities so as to benefit from everyone's expertise, it is a good idea to set out a routine for feedback. It is not easy to break old habits, and so reserving a specific time of the day, preferably towards day's close when you make plans for stocking up, for feedback can help. Just take a few minutes every day to walk over to your friend or to discuss the most important topics in your shop with your co-worker or spouse.

Step 3: Keeping records helps. It may happen that your co-worker or spouse has the feeling that a specific product is selling particularly well without being able to explain. He or she may feel the demand for a product is changing with seasons or in the run-up to holidays but has no way to back it up. Keeping records and updating them whenever sales happen is especially useful here. If both of you keep updating your records, they will both be more comprehensive and will serve as evidence in cases like this. Have a look into your records and see whether the actual sales prove your feeling right.

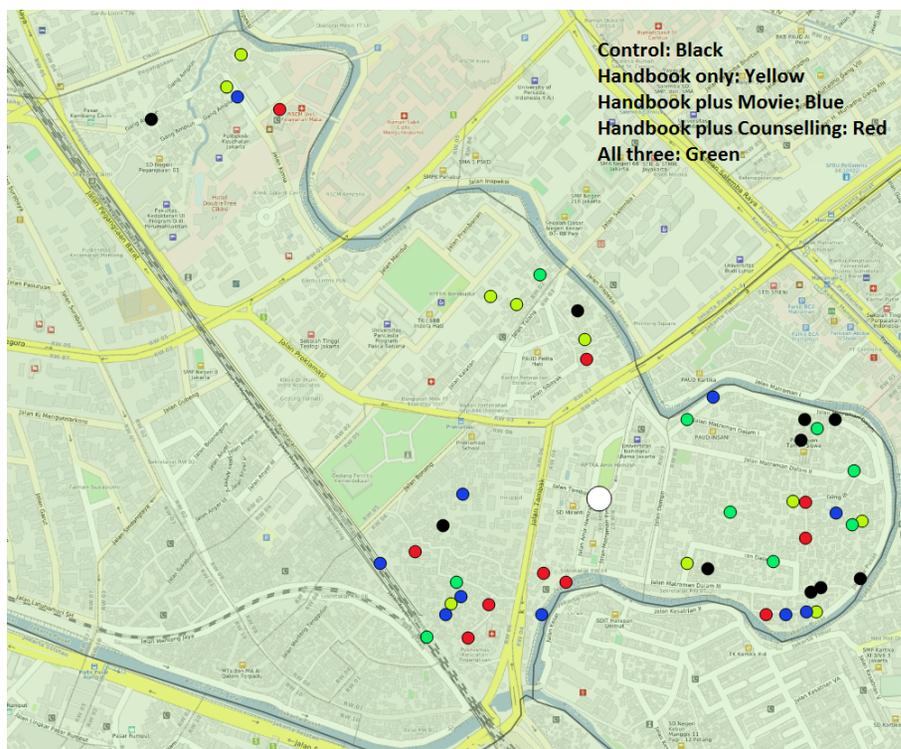
Step 4: Ask someone outside your family. Finding people outside the family will increase the chance of having more diverse input and different ideas.

Appendix Figure 1: Businesses Pictures

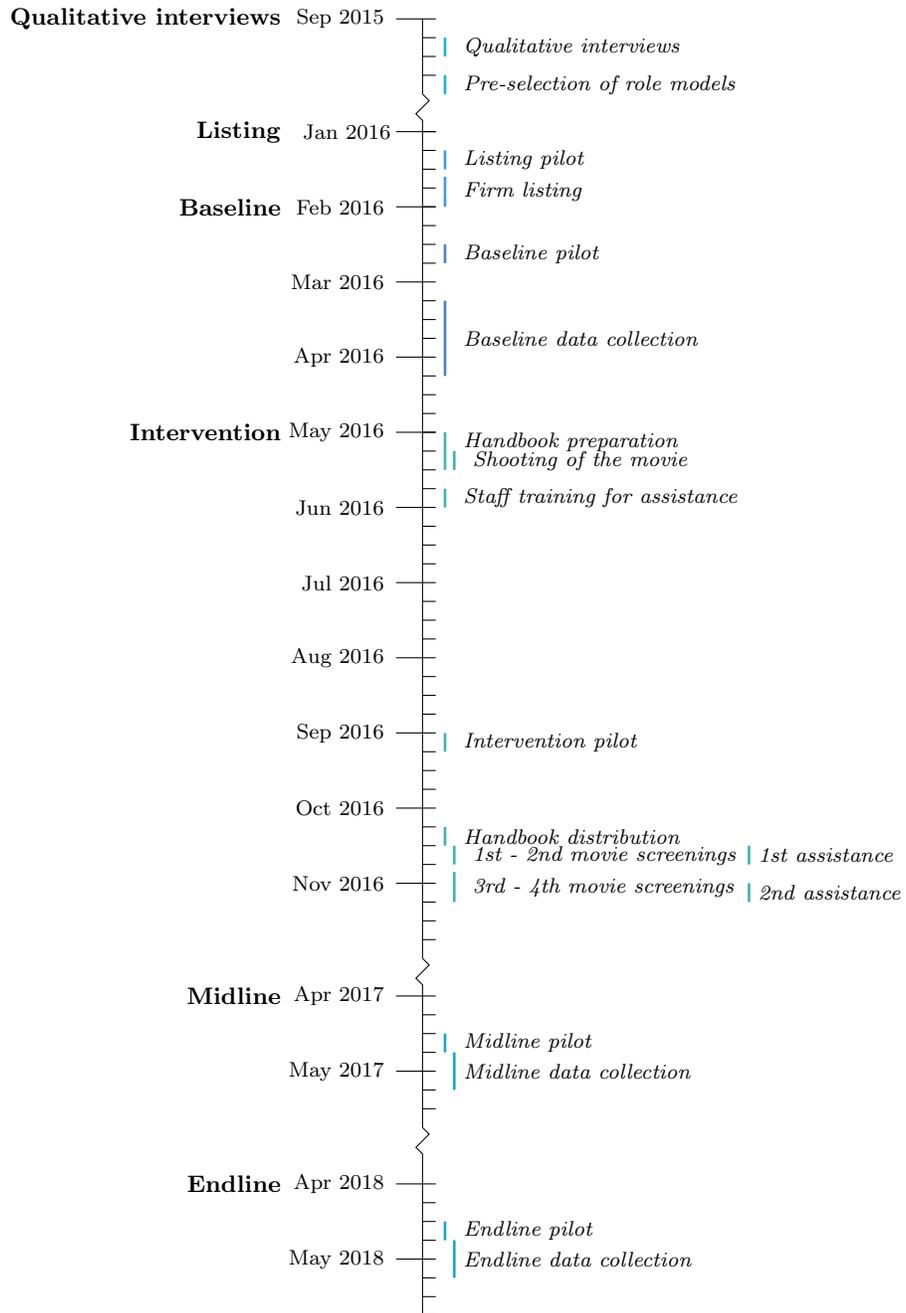
Pictures of two shops representative of the sample of small-scale retail businesses in this study



Example Treatment Distribution across shop owners: District Pegangsaan



Appendix Figure 4: Project Timeline



Notes: This figure presents the timeline of all field activities for the present study.