Shocking Business Aspirations: Experimental Evidence from Small-scale Entrepreneurs in a Developing Economy*

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Abstract

Lack of growth aspirations can be an important psychological constraint to small-scale entrepreneurship in developing economies. We use a field experiment among urban retail entrepreneurs in Indonesia to provide an exogenous shock to their aspirations window. A randomly selected set of entrepreneurs are provided a handbook of key business practices implemented by successful local peers, complemented with two psychological and implementation nudges: a movie with business role models from the local area who demonstrate their path to success; and personalized business assistance to help entrepreneurs with individual implementation challenges. We show that business growth aspirations respond strongly to these interventions, measured up to eighteen months afterwards. In line with the theoretical literature, we find that the distance between the initial aspirations of the entrepreneurs and the business frontier is the key driver for the direction of the effects. Entrepreneurs with high business aspirations at baseline respond positively to the treatments and increase business aspirations, sales, and profits; while those with low initial aspirations respond negatively and decrease their business aspirations and performance. We find similar heterogeneity in complementary aspirations for children's education and satisfaction with household finances. These results confirm that initial levels of aspirations are crucial in determining how entrepreneurs respond to exogenous aspirational shocks.

Keywords: Aspirations, Aspirations Failure, Aspirations Frustration, Small-business Growth, Business Performance, Subjective Well-Being, Randomized Control Trial.
JEL Codes: O12; L26; M20; O17; M50

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I Introduction

It is a long-standing puzzle in development economics why poor individuals and small-scale businesses often do not exploit productive investment opportunities (see, Banerjee and Duflo, 2013; de Mel, McKenzie, and Woodruff, 2008; McKenzie and Woodruff, 2008; Karlan and Zinman, 2010). Beyond classical work on imperfections in the markets for credit and insurance (e.g., Banerjee, Duflo, Glennester, and Kinnan, 2015; Banerjee, Duflo, and Hornbeck, 2017), lack of formal saving instruments (e.g., Dupas and Robinson, 2013a,b), low human capital (e.g., Anderson, Chandy, and Zia, 2018; McKenzie and Woodruff, 2014), and institutional constraints (e.g., Bardhan, 1997), a more recent literature highlights psychological constraints as a possible explanation for foregone investments both at the individual- and firm-level (see, e.g., Duflo, 2012; Bernheim, Ray, and Yeltekin, 2015; Banerjee and Mullainathan, 2008; Ashraf, Karlan, and Yin, 2006; Bertrand, Mullainathan, and Shafir, 2004).

One important psychological factor that can stymie growth opportunities is aspirational constraints (Ray, 2006; Genicot and Ray, 2017; Dalton, Ghosal, and Mani, 2016; Bogliacino and Ortoleva, 2014; Lybbert and Wydick, 2018). As argued by Appadurai (2004) and Ray (2006), poverty may affect an individual's capacity to aspire in order to contest and alter one's own conditions, in turn discouraging investment in self-betterment and hampering the ability to grow. According to this literature, the capacity to aspire is socially determined by the agent's aspirations window, which is influenced by social comparisons with the achievements of others who are similar in spatial and socio-economic backgrounds. An important question is to what extent widening aspirations windows can be an effective measure to help people escape poverty. Ray (2006) and Genicot and Ray (2017) provide a testable hypothesis based on theory: it depends on the extent to which the aspirations window is open. In the words of Ray (2003, p.4) "If economic betterment is an important goal, the aspirations window must be opened, for otherwise there is no drive to self-betterment. Yet it should not be open too wide: there is the curse of frustrated aspirations. There must be individuals in our immediate cognitive neighborhood who do better than we do, yet if they do a lot better, there will be no investments made..." Dalton et al. (2016) arrive at a similar prediction with a different model, which shows that a positive shock to aspirations will be an effective policy to move people out of an aspirations-based poverty trap only if their initial aspirations are high enough and resources to satisfy rising aspirations are available. In contrast, a policy aimed at raising aspirations of individuals with too low starting levels of aspirations will not be effective.

Despite its potential for explaining patterns of persistent poverty, to the best of our knowledge,

these predictions have not been empirically tested. With notable exceptions in the domain of household and educational aspirations (see, Bernard, Dercon, Orkin, and Taffesse, 2014; Riley, 2017; Macours and Vakis, 2014; Beaman, Duflo, Pande, and Topalova, 2012), evidence on the relationship between aspirations windows, aspirations, and achievement is mostly correlational and based on household-level cross-sectional and panel data. In a recent empirical study, (Dalton, Rüschenpöhler, and Zia, 2018) shows that aspirations of small-scale retailers in Jakarta are strong predictors of savings, plans for credit, business expansion, and business innovation. What remains unclear is whether the business aspirations of small-scale entrepreneurs are responsive to exogenous shocks. If so, does the direction of change depend on initial aspiration levels, as theory predicts? More generally, what is the impact of a shock to business aspirations on business performance, and on complementary aspirations for the entrepreneurs' family, and their subjective well-being?

We address these research questions in this paper with a randomized control trial among urban retail shop owners in Indonesia. The study is designed to test the causal predictions of theory by providing an exogenous shock to the aspirations windows of small-scale entrepreneurs. To do so, we distribute a handbook of profitable and easy to implement business practices used by successful local peers (hereafter *Handbook*). The *Handbook* was developed by combining the results from an extensive baseline survey with qualitative interviews on implementation practices. We interpret the *Handbook* as a pure shock to the information available to the entrepreneur on local pathways to business growth implemented by relevant peers. Using the jargon of the aspirations literature, the *Handbook* aims at "populating the cognitive neighborhood" of the small-scale entrepreneurs in our sample with the practices used by their best-performing peers. Crucially, the practices depicted in the *Handbook* are adapted to the context in suitability and simplicity and are implementable at essentially no economic costs.

The *Handbook* treatment is complemented with two psychological and implementation nudges aimed at improving the capacity to aspire and achieve. First, a randomly selected subgroup of business owners are invited to watch a documentary broadcasting five successful role models who describe their experience with implementing business practices and demonstrate how these practices helped them grow (hereafter *Movie*). Second, another random subgroup of businesses is offered two sessions of personalized, hands-on implementation assistance on topics related to the *Handbook* (hereafter *Assistance*). Finally, a third group of businesses is offered both the *Movie* and *Assistance* to test for possible complementarities.

Both the *Movie* and the *Assistance* aim to foster the agency of entrepreneurs to adopt the profitable business practices in the handbook, and develop their capacity to aspire and achieve. The

former does so by providing vivid examples of how peers have successfully implemented the particular practices; and the latter by demonstrating the applicability of the practices in the entrepreneur's own idiosyncratic environment. Since all entrepreneurs are exposed to the same frontier of practices, we use predictions from theory to test how initial distance of the entrepreneurs' aspirations to the frontier affects changes in their aspirations window. Specifically, we expect that the effectiveness of our interventions will depend on how distant the entrepreneurs perceive they are from the examples they get exposed to with the treatments.

Our empirical analysis is based on two follow-up surveys, six months and eighteen months after the interventions. We find statistically significant and economically meaningful effects on several dimensions of business aspirations as well as on business sales and profits. Importantly, these effects sharply follow the divergence predicted by Ray (2006), Genicot and Ray (2017), and Dalton, Ghosal, and Mani (2016). We find that entrepreneurs whose business aspirations are above the median at baseline increase their aspirations, especially for customers and business sales, in reaction to both the *Movie* and the *Assistance*, and show considerable gains in monthly profits of USD 405 to USD 578 (33 to 47 percent improvement) and in business sales of USD 1329 to USD 1598 (15 to 18 percent improvement) over the control group. In contrast, entrepreneurs who report below-median aspirations at baseline lower their aspirations further and report significant reductions in business sales by USD 1088 (41 percent reduction) in reaction to the *Handbook*.

We also study complementary impacts on other aspiration dimensions of the entrepreneur, specifically aspirations for their children's education and their own valuations of well-being. We find that the divergence predicted for business aspirations is also reflected in their family aspirations. At endline, entrepreneurs with above-median business aspirations at baseline when assigned to treatment aspire to almost one year more educational attainment for their children than the control group, and are more likely to aspire for their children to reach, on average, a masters-level university education. In contrast, entrepreneurs with below-median baseline aspirations lower their educational aspirations for children. This evidence suggests that, for the small-scale entrepreneurs in our sample, business and family aspirations are complements rather than substitutes.

Finally, we find significant and sustained positive effects on overall financial satisfaction with entrepreneurs of above-median baseline aspirations reporting gains of up to 9 percent (0.26 standard deviations) over the control group. Moreover, we detect significant positive effects on life satisfaction scores for these entrepreneurs eighteen months after the treatment. In contrast, the satisfaction scores of entrepreneurs with below-median baseline aspirations are not significantly different from the control group.

Combined, the findings of this paper confirm that indeed, as Ray (2006), Dalton, Ghosal, and Mani (2016), and Genicot and Ray (2017) predict, distance from the efficient frontier is key and if the aspirations window is opened too wide then this can be counter-productive for promoting a growth mindset. The sharp heterogeneity also suggests an important role for policy in the design of such programs. Specifically, while widening the aspirations window can be an effective policy tool for those whose aspirations are already close to the business local frontier, highlighting the same for entrepreneurs further away from the frontier may lead to opposite impacts.

This paper contributes to several strands of literature. First, it adds to the empirical literature on aspirations and poverty (e.g., Bernard, Dercon, Orkin, and Taffesse, 2014; Riley, 2017; Beaman, Duflo, Pande, and Topalova, 2012; Janzen, Magnan, Sharma, and Thompson, 2017). To the best of our knowledge, these findings provide first empirical evidence for the theoretical prediction by both Genicot and Ray (2017) and Dalton, Ghosal, and Mani (2016) that, in the absence of binding economic constraints, changes in aspirations can be sustained over the long-term. We show that, in the context of small-scale businesses, performance levels follow changes in business aspirations as predicted by theory. Moreover, we provide first empirical evidence consistent with the concept of aspirations frustration (Ray, 2006; Genicot and Ray, 2017) and for the causal role of aspirations in subjective well-being. We add further by investigating the important role of providing soft psychological and implementation nudges to nurture the entrepreneurs' capacity to aspire and to achieve.

Second, we contribute to the literature on small-business growth. We complement Dalton, Rüschenpöhler, and Zia (2018), who document strong associations between business aspirations and productive investment and innovation, with experimental evidence of both the malleability of business aspirations and their impact on firm performance.This has implications also for strands of the literature which focus on business mentoring (e.g., Brooks, Donovan, and Johnson, 2017; Cai and Szeidl, 2018), business counseling, consulting, and training (for reviews see, Carpena, Cole, Shapiro, and Zia, 2017; McKenzie and Woodruff, 2014), and business plan competitions (e.g., McKenzie, 2017; Bjorvatn, Cappelen, Helgesson Sekei, Sørensen, and Tungodden, 2015). Lastly, our findings speak to a recent literature on the identification of businesses with potential for rapid growth (see, Fafchamps and Quinn, 2016; Fafchamps and Woodruff, 2017). We provide evidence on the conditions through which exogenous changes in aspirations windows do indeed cause business growth.

Third, the paper adds to the growing literature on the effectiveness of role models in promoting behavioral change (see, e.g., Berg and Zia, 2017; Beaman, Duflo, Pande, and Topalova, 2012; La Ferrara, Chong, and Duryea, 2012; Chong and La Ferrara, 2009; Kearney and Levine, 2015; Bernard,

Dercon, Orkin, and Taffesse, 2014; Riley, 2017). In the context of development economics, interventions involving role models have been used to affect financial knowledge and behavior (Berg and Zia, 2017), separation and divorce rates (Chong and La Ferrara, 2009), fertility (La Ferrara, Chong, and Duryea, 2012), teen pregnancies (Kearney and Levine, 2015), educational outcomes (Beaman, Duflo, Pande, and Topalova, 2012; Riley, 2017), or individual investment behavior and savings (Bernard et al., 2014). We add to this in providing evidence that role-model interventions can also affect the growth aspirations of small-business owners and their business performance. We further contribute by quantifying the effect of a role-model intervention against a purely informational shock.

Finally, our results speak to the empirical literature on well-being and income aspirations (e.g., Easterlin, 1995, 2001, 2003; Clark, Frijters, and Shields, 2008; Frey and Stutzer, 2002). We show that exposing small-scale entrepreneurs to their successful peers can have positive net effects, especially for individuals with high aspirations at baseline. We differ from Bernard, Dercon, Orkin, and Taffesse (2014) in that we provide *Assistance* alongside a role-model treatment and show that, in conjunction, these interventions can positively affect both financial and life satisfaction levels in the long-term. By providing first experimental evidence on the effect of widening aspirations windows on the entrepreneur's aspirations both for their business and their children's educational prospects, we also contribute to a nascent literature on potential substitution effects among multiple dimensions of aspirations (see, e.g., Bernard, Dercon, Orkin, and Taffesse, 2014; Bjorvatn, Cappelen, Helgesson Sekei, Sørensen, and Tungodden, 2015). This is particularly important in a context where large parts of self-employment are essentially subsistence-oriented. Our findings suggest that, in this sample of small-scale entrepreneurs, business and family aspirations are complements rather than substitutes and that, consequently, no discernable negative impact on well-being can be detected.

The rest of the paper is organized as follows. In Section II, we introduce the concepts of aspirations failure and aspirations windows and lay out our own approach in connection to this literature. Section III outlines the experimental design and Section IV describes the data and estimation method. Section V reports the results and Section VI concludes.

II Framework and Hypotheses

The concept of aspirations and the potential for explaining patterns of persistent poverty is not new to the field of development economics. Since Simon (1955) and Selten (1998) and more recently Bogliacino and Ortoleva (2014), Dalton, Ghosal, and Mani (2016), and Genicot and Ray (2017), aspirations have been conceptualized as reference points. Thus, losses and gains relative to the

initial level of aspirations are what determine investment incentives, and in turn, performance and achievement. Understanding the causal determinants of entrepreneurial aspirations has both research and policy relevance. This section lays out the hypotheses for how our experimental interventions are expected to affect entrepreneurs' business and family aspirations, and through them, their business performance and subjective well-being. The hypotheses tested in this paper are directly derived from predictions of the models introduced by Dalton, Ghosal, and Mani (2016) and Genicot and Ray (2017).

A The Effect of Aspirations Windows on Aspirations

In his work on the social formation of aspirations, Ray (2003, 2006) defines the aspirations window of an agent as "her zone of 'similar', 'attainable' individuals" (Ray, 2003, p.1), that is, their "spatially, economically, perhaps even socially" close others (Ray, 2003, p.2). Aspirations are formed through "the lives, achievements, or ideals" (Ray, 2003, p.2) of such individuals. Consistent with this conceptualization, there is broad empirical support for the notion that relative status within a community or neighborhood has some bearing on individuals' aspirations (Bernard, Dercon, Orkin, and Taffesse, 2014; Beaman, Duflo, Pande, and Topalova, 2012; Janzen, Magnan, Sharma, and Thompson, 2017; Knight and Gunatilaka, 2012; Stutzer, 2004). In an instructive example, Macours and Vakis (2014) show how plausibly exogenous proximity to females in leadership positions may have opened local women's aspirations windows in a field experiment in Nicaragua.

Inherent in this view of socially determined aspirations is the notion that aspirations can be improved by opening aspirations windows (see, Ray, 2006; Genicot and Ray, 2017; Janzen, Magnan, Sharma, and Thompson, 2017). In the framework of Genicot and Ray (2017), the agent maximizes the net benefits of effort investment considering two possible outcomes: satisfying their aspirations or failing to satisfy them. In this context, there is a threshold level of aspirations at which the agent is indifferent between exerting high effort and reaping utility from satisfying their aspirations, or exerting low effort in frustration. Hence, opening aspirations windows may only be optimal up to a point beyond which individuals in the zone of relevant peers may become too dissimilar to the agent and aspiration levels too high to be worthwhile attaining.

By opening aspirations windows up to the same level for all entrepreneurs, the design of our study creates natural heterogeneity in treatment shocks conditional on initial aspiration levels. We ask whether the distance between the entrepreneur's initial aspirations and the efficient frontier accounts for a potential divergence in aspiration levels at endline. We expect entrepreneurs aspiring

high at baseline to be more likely to perceive the shock provided through the *Handbook* as a relevant enlargement of their aspirations windows by the achievements of similar others and to react by increasing aspiration levels and exerting greater effort. In contrast, entrepreneurs with low aspirations at baseline will see dissimilar others migrate into their aspirations windows and, following Ray (2006) and Genicot and Ray (2017), will be more likely to see their aspirations frustrated. Given the theory, this should result in a divergence in aspirations and outcomes with initial aspiration levels mediating the change.

B The Effect of Business Aspirations on Business Performance

Dalton, Ghosal, and Mani (2016) develop a model in which differences in initial wealth exacerbate common behavioral biases to produce an aspirations-based poverty trap. In it, behavioral individuals take their aspiration levels as given when choosing effort to invest in the future, even though aspirations are determined by effort and achievement in equilibrium. For both the poor and the rich, this bias leads to suboptimal choices of effort investments. However, since lower wealth levels reduce the marginal benefit of exerting effort, it is the poor individuals who are more likely to aspire below their true potential. That is, poor individuals end up choosing to exert less effort and to set less ambitious aspirations with respect to their true potential. This leads to multiple welfare-ranked equilibria. If constraints to achieve aspirations are not binding and initial aspirations levels are close to an aspirations threshold, an exogenous shock to aspirations can propel the individual out of the aspirations-based poverty trap and move the individual to an equilibrium with higher effort, higher aspirations, and better outcomes. Galiani, Gertler, and Undurraga (2018) shed light on the case in which resource constraints are, in fact, binding. Here, the poor individual, once propelled out of the bad equilibrium of a poverty trap through an exogenous shock to aspirations, may not be able to sustain their increased aspirations in the long-term. In the context of a field experiment that randomizes improvements in housing quality to inhabitants of poor slums in Mexico, Uruguay, and El Salvador, the authors show that individuals in the control group indeed report higher aspirations for home improvements in the short-term. However, investment levels did not change and any gains in aspirations receded eight months after treatment.

Since we provide a step-by-step guidance on business practices which can be implemented at no economic costs, by design, our study creates an environment in which economic constraints to satisfying rising aspirations can be plausibly assumed not to be binding. In addition, the nudges provided by *Movie* and *Assistance* are based on and are almost perfectly equivalent to the content

of the *Handbook*, such that treatment effects beyond the *Handbook* cannot be driven by purely informational shocks. In the short-term (i.e. six months after treatment), we expect aspiration levels to rise in response to each of the treatments. In the absence of binding economic constraints to satisfying higher aspirations, we moreover expect (i) an increase in business performance in the short-term and (ii) for higher aspirations and better performance to be sustained in the long-term (eighteen months after treatment). It is an open question whether, in the absence of economic constraints, agency constraints hold back aspirations and performance. Following the literature on role models and behavioral change, we expect the increase in business aspirations and performance to be stronger for entrepreneurs exposed to *Movie and Handbook* than for those assigned to the *Handbook Only*.

C The Effect of Business Aspirations on Family Aspirations

While there is a growing literature on the impact of aspiration levels on effort and investment, much of this literature has been limited to conceptualizing aspirations as one-dimensional and as pertaining to income only (see, e.g., Janzen, Magnan, Sharma, and Thompson, 2017; McBride, 2010; Stutzer, 2004; Knight and Gunatilaka, 2012). In contrast, Ray (2003, 2006) acknowledges that "the concept of aspirations itself may be inherently multidimensional" and that "depending on one's place in the socio-economic hierarchy, these many-faceted aspirations may complement one another, or they may be mutual substitutes" (Ray, 2003, p.2). Such a multidimensional view on aspirations is arguably of particular relevance in the study of small-business growth and entrepreneurship in developing countries where, typically, a majority of individuals are self-employed (e.g. Maloney, 2004; Gollin, 2008; Nichter and Goldmark, 2009). While common, such small-scale firms are often not the only source of household income and their owners are often compelled to divide their time between business tasks, household chores, and child rearing. Indeed, in our sample, 79 percent of the enterprises are operated from within the entrepreneur's household. An exogenous shock to the entrepreneur's aspirations window may simply render one dimension salient at the expense of another in the pursuit of utility maximization or change the relative marginal benefits of time spent on business task versus in the household or with their children.

Though the empirical literature is still sparse, there is some evidence on the interplay of different aspirations dimensions. Considering multiple dimensions of Ethiopian villagers' individual aspirations, Bernard, Dercon, Orkin, and Taffesse (2014) report treatment effects of a role-model intervention on the aspirations for their children's educational attainment. The study finds no impacts

on these other aspiration dimensions or on measures of life satisfaction. The authors conjecture that the finding may be due to a strong local belief in the returns to education in the wake of comprehensive government reform. However, aspirations for their childrens' prospects may simply act as a substitute for aspirations towards the individual's own income and social status. Bjorvatn, Cappelen, Helgesson Sekei, Sørensen, and Tungodden (2015) offers further suggestive evidence along these lines from a field experiment among school students in Tanzania. The authors show that exposure to an edutainment program that motivated entrepreneurship among students facilitated interest in entrepreneurship and business start-up but decreased school performance and graduation rates.

In this paper, we consider the multidimensionality of aspirations by measuring the entrepreneur's aspirations for their children's educational attainments alongside their business aspirations. We explore potential substitution effects between these aspirations dimensions by capturing the effect of widening aspirations windows on educational aspirations.

D The Effect of Business Aspirations on Subjective Well-being

Though the literature on aspirations and poverty has largely established that aspirations correlate with forward-looking behavior and investment (see, e.g., Janzen, Magnan, Sharma, and Thompson, 2017; Dalton, Rüschenpöhler, and Zia, 2018; Kosec and Mo, 2017; Favara, 2017; Ross, 2017; Serneels and Dercon, 2014) and that aspirations are amenable to change (e.g., Bernard, Dercon, Orkin, and Taffesse, 2014; Macours and Vakis, 2014; Beaman, Duflo, Pande, and Topalova, 2012; McBride, 2010), it is not clear what the welfare consequences of such change should be on the treated individuals. As common proxies for individual utility, self-reported happiness and well-being should offer first insights into the impact of aspirations-based interventions on individual welfare (see, e.g., Clark and Oswald, 1994; Oswald, 2016; Ng, 1997; Easterlin, 2001; Stutzer, 2004; Frey and Stutzer, 2000, 2002). Generally, the happiness literature finds happiness to increase in income but decrease in income aspirations (e.g., Easterlin, 1995, 2001, 2003; Stutzer, 2004; Knight and Gunatilaka, 2012; Clark, Frijters, and Shields, 2008; Frey and Stutzer, 2002). Using a large cross-section from Switzerland, Stutzer (2004) provides evidence for a negative correlation between aspiration levels and life satisfaction. Knight and Gunatilaka (2012) find the same result in a cross-section from rural China. McBride (2010) corroborates this finding in the controlled environment of a laboratory study, confirming the importance of relative judgments for happiness found in previous lab research (see, e.g., Tversky and Griffin, 1991; Smith, Diener, and Wedell, 1989).

Social comparisons may also drive changes in happiness and satisfaction. The literature finds

that improvements in the incomes of relevant peers tend to decrease individual happiness (e.g., Clark and Senik, 2010; Fafchamps and Shilpi, 2008; Luttmer, 2005; Ferrer-i Carbonell, 2005; Stutzer, 2004; Senik, 2004, 2009). This social channel is consistent with the models of (Ray, 2006; Genicot and Ray, 2017; Janzen, Magnan, Sharma, and Thompson, 2017). A shock to the exposure to well-off peers may thus cause changes in the individual's aspiration levels which, in turn, impact happiness. Moreover, potential substitution effects between multiple dimensions of aspirations, as outlined above, may provide a further channel of how aspirations impact subjective well-being.

We are able to shed light on the impact of social comparisons on subjective well-being in that we expose entrepreneurs to the example of aspirational peers with the *Movie* and measure the entrepreneur's satisfaction with their finances and with life in general. Following the happiness literature (e.g., Easterlin, 1995, 2001, 2003; Clark, Frijters, and Shields, 2008; Frey and Stutzer, 2002), any treatment effect on subjective well-being will be the net effect of a positive income effect and a negative effect from rising aspirations. Since the exposure to successful, well-off peers differs in impact by the distance to this frontier, we expect entrepreneurs closer to it (above-median baseline aspirations) to benefit more from the intervention in terms of satisfaction levels than those further from it (below-median baseline aspirations). In contrast, the direction of the overall effect depends on the relative magnitudes of the opposing effects of income and aspirations and is, therefore, not clear ex ante. By providing *Assistance*, we explore the possibility that increases in perceived agency may contribute to raising satisfaction levels.

III Research Method

A Study Location and Population of Interest

The study was conducted in Jakarta, the capital city of Indonesia. While the city of Jakarta is home to roughly 10 million inhabitants, 30 million people live in its metropolitan area including the peripheral cities of Bogor, Depok, Tangerang, and Bekasi ("Jabodetabek"). We draw our sample from the population of traditional retail businesses in the city of Jakarta (excluding "Jabodetabek"). Locally known as "toko kelontong" or "warung", shops of this kind are ubiquitous in Indonesia where retail and hospitality is the second largest sector of employment following agriculture (Indonesian Ministry of Cooperatives and SMEs Indonesia, 2011). Offering staples such as rice, nuts, and beans but also snacks, sweets, beverages, toiletries, cigarettes, and other convenience goods, traditional retail shops are concentrated largely in residential areas and adjacent to traditional markets for

vegetables, fruits, rice, meat, and fish. Most are operated as family businesses with only 2.43 percent employing any hired labor. Appendix A shows pictures of two shops representative of this sample.

B Sampling Frame

For logistical reasons, we restricted the area of study to the 144 districts of the city of Jakarta, excluding the wider metropolitan area ("Jabodetabek"). Of the 144 districts that comprise the city of Jakarta, we dropped all 32 districts of Northern Jakarta ("Kota Jakarta Utara") due to a small and medium enterprise training program being run by a large retail chain. Out of the 112 eligible districts, we randomly selected 29 districts to be part of the research.[1] Within these 29 areas of study, we conducted a listing exercise to create a list of all businesses which met the following four selection criteria: (i) shop size of at least $4m^2$, (ii) at least two different product categories on offer, (iii) no handcart or other moveable business premises, and (iv) no franchise of larger retail chains. Regarding the sampling procedure, within each district a team of two to three enumerators would first request a map of *community-level* boundaries at the local district office. This enabled us to avoid marketplaces with high population density, which would make the research design vulnerable to spillover concerns. Spillovers were further controlled by sampling only businesses which were at a distance of at least 30 meters from each other. This procedure yielded a total of 2042 businesses of which we randomly selected a sample of 1301 to be included in the study.

C Experimental Design

In order to create exogenous variation in the exposure to treatment, we divided the sample into four treatment groups ($N = 260$ each) and one control group ($N = 261$). Randomization was stratified according to (i) gender, (ii) business size (below $6m^2$, between 6 and $10m^2$, or above $10m^2$), and (iii) a dummy for whether the entrepreneur scored above or below the median in a composite of business practices.

All treated entrepreneurs ($N = 1040$) received the *Handbook* which characterized local best practices in doing business and provided step-by-step advice on their implementation. Orthogonal to this, subsets of businesses received different combinations of the *Handbook* and two additional treatments. One group of 520 recipients of the *Handbook* were invited to the screening of a role-model movie in which successful peers explained their own trajectory of growth adopting the top

[1] Appendix B provides a map of the districts of study in the context of the wider metropolitan area.

practices. A second group of 520 recipients of the *Handbook* were offered individualized business assistance with trained counselors who provided specific assistance on adoption of business practices. Since assignment to the *Movie* and *Assistance* partly overlapped, this resulted in four treatment groups: *Handbook Only*, *Handbook and Movie*, *Handbook and Assistance*, and *All Three*.

Regarding the timing of activities, we conducted the listing exercise in January 2016 and administered the baseline survey in March and April 2016. Interventions took place in October and November 2016. These were followed by a first endline survey conducted in April and May 2017 and a second endline survey in April and May 2018.[2]

D Interventions

D.1 Handbook

Selection of Best Practices

The business practices presented in the *Handbook* are the ones identified as the most profitable in the local context among a total set of 84 practices studied. In order to identify these local best practices we relied on a detailed baseline survey that collected data on the business practices. As detailed in Dalton, Rüschenpöhler, Uras, and Zia (2018), we used multivariate regressions of firm performance measures (sales, profits, number of customers) against sets of business practices to identify which of the practices were most predictive of performance in our sample. Practices were ranked based on the number of specifications where their coefficients were statistically significant, and the magnitude of the coefficients. Through this protocol, we identified a set of fourteen best practices to be included in the *Handbook*. [3] The *Handbook* further relied on qualitative interviews with 102 small-scale entrepreneurs who were not part of our sample but had a similar business profile. These interviews provided guidance and adoption strategies which helped develop and guide the writing of the handbook.

Handbook Production

The *Handbook* focuses on five business practice topics with dedicated chapters on keeping records, calculating profits, planning stock-up purchases, attracting new and retaining old customers, and discussing and cooperating on business decisions. Each chapter introduces the identified best practices in a simple way, and emphasizes the local origin of the data and the direct relevance of the information. The first page provides an outline of the content, followed by brief statements that

[2] For a detailed timeline, see Appendix C.

[3] For a complete list of all the practices mentioned in the *Handbook*, see Dalton, Rüschenpöhler, Uras, and Zia (2018).

correct misperceptions about practices, which were identified in the qualitative interviews. The remainder of the text highlights the returns to the relevant practices, as per our quantitive baseline analysis, and is supported by illustrative examples, figures, tables, and pictures. Each chapter concludes with a rules of thumb guide on how to implement the business practices covered in the chapter.

The handbook is written such that it can be read cover to cover as well as cursorily since all chapters are self-contained and provide necessary and independent information. We also supplemented the handbook with an exercise book that provides space and structure for the business owner to start keeping business records, for instance recording a stocking-up schedule as per instructions provided in the handbook.

D.2 Movie

Selection of Role Models

In order to identify potential entrepreneurs for the role model exercise, we conducted in-person surveys with 102 shop owners in the pre-pilot stage of the study. Nine candidate were short-listed with the highest number of business practices in place, as per McKenzie and Woodruff (2017). For these nine entrepreneurs, we conducted in-depth interviews to understand their trajectory of growth and their business growth aspirations. We also inquired about their adoption of various business practices and recorded their personal implementation experiences. Based on these interviews, we selected five entrepreneurs who best represented the local frontier of best practices and acquired informed consent for their appearance as role models in our *Movie*.

The five role models were heterogeneous in terms of shop size, gender, age, and ethnicity. This heterogeneity is important since similarity cues based on gender, age, and ethnicity have been shown to facilitate social learning besides cues of success, competence, skill, and knowledge (see, e.g., Rendell, Fogarty, Hoppitt, Morgan, Webster, and Laland, 2011; Efferson, Lalive, and Fehr, 2008; Chudek, Brosseau-Liard, Birch, and Henrich, 2013; Henrich and Gil-White, 2001; Corriveau and Harris, 2009; McElreath, Bell, Efferson, Lubell, Richerson, and Waring, 2008). Moreover, the differences in business size are intended to show the range of possibilities for business growth and therefore facilitate the opening of "aspirations windows" (Ray, 2006). On average, the smallest businesses in our sample are roughly as large as the very smallest shop shown in the *Movie*. Larger businesses in our sample are on par with larger role-model shops but smaller than the very largest aspirational example.

Movie Production and Screening

A professional production company was hired to shoot and edit the *Movie*. We supevised all aspects of the process, from script writing and shooting to post-production. The final *Movie* is 25 minutes in length and depicts each entrepreneur's experience and success with a set of business practices, the impact of their use on the business, and specific implementation advice. Overall, the movie seeks to establish aspirational goals for viewers with the adoption of business practices framed as pathways to business success.

We conducted public screenings of the movie 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 incentivize attendance, shop owners were offered IDR 100,000 (USD 24.68) as a show-up fee. In addition, we offered two 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 Assistance

For the *Assistance* intervention, we trained local staff ourselves based on the content of the handbook. The training was conducted over three days and included classroom-style lectures as well as role play 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 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 had 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 documented any issues with the material and then gave standardized advice. Once all issues were dealt with, they would encourage the entrepreneur to go through the rest of the chapter under their supervision. Third, if the entrepreneur had not yet 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 counseling session lasted approximately 40 minutes. At the end of the first visit, the entrepreneur 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 entrepreneur. 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.

E Treatment Compliance

Table 2 presents the movie take-up 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, Fischer, and Schoar (2014) report take-up rates comparable to ours for both a standard business training and a more intuitive rule-of-thumbs based approach. Giné and Mansuri (2014) and Bruhn, Karlan, and Schoar (2018) document problems equivalent in magnitude. Bruhn and Zia (2013) observes even lower attendance, of below 40 percent of invitees. Calderón, Cunha, and De Giorgi (2013) and Premand, Brodmann, Almeida, Grun, and Barouni (2016) report attendance below 70 percent. With the exception of the interventions by Drexler, Fischer, and Schoar (2014), costs per participant for either of these interventions are typically many times higher than the expenses per person of this study. Moreover, we find low attendance despite a meaningful show-up compensation of IDR 100,000 (USD PPP 24.68) which every invited shopkeeper in the movie treatment group was offered. Table 2 also shows that, despite moderate take-up, the feedback from the movie screening was very positive. Entrepreneurs who attended reported to have learned something new, to feel inspired, and to be hopeful after watching the movie.

With respect to the *Assistance*, compliance rates were higher, with 77 percent receiving the first and 68 percent receiving both sessions of the intervention (see Table 3). The higher compliance rate may be because *Assistance* was provided in the business premises and visits were individually scheduled with each assigned entrepreneur. As Table 3 shows, overall feedback was positive as well.

IV Data and Estimation Method

A Description of Variables

The empirical analysis of this paper draws on three waves of data collection, one baseline and two endline surveys at 6 month and 18 months after the interventions. Besides a wide range of entrepreneurial and business characteristics, such as business performance and practices, these surveys include detailed measures on the aspirations of the entrepreneur, both towards their business and the education of the their children.

Business and Family Aspirations

Regarding business aspirations, we elicit both short-term and long-term aspirations for different business dimensions. For the short-term, we asked: "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?". For the long-term, we ask "*Please imagine your ideal business. How large is your shop? How many people work there? How many customers come by on a normal day?*". Complementing these long-term aspirations, we elicited the aspirations horizon: "*How many years do you think it will take for you to achieve your ideal business?*". 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. We use the levels for each dimension as outcomes to capture potential treatment effects. Additionally, we compute aggregate scores for business aspirations by averaging z-scores for each dimension.

Further, we measure the aspirations of the entrepreneur towards their children's educational attainment[4]. The questionnaire first records the respondent's offspring by asking: "Do you have any sons [daughters] and, if so, what are their names and how old are they?". We then elicit aspirations regarding the oldest son and the oldest daughter under the age of 18, respectively. Specifically, we ask: "How many years of schooling do you aspire him [her] to achieve?". Respondents answer with estimates in years or are aided by the enumerator in translating any degree to the number of years necessary to acquire it in the Indonesian education system. We use the number of years as an outcome and construct a dummy variable that is equal to 1 if the entrepreneur aspires for their son [daughter] to acquire at least a Master's level education, and 0 otherwise.

[4]For budgetary reasons, data on the educational aspirations of the entrepreneur are only available at baseline and first endline.

Subjective Well-being

The entrepreneur's subjective well-being is proxied by their self-reported overall satisfaction with the financial situation of their household and with life in general at the time of the survey. We use standard questions taken from the World Values Survey and ask: "How satisfied are you with the financial situation of your household?" and "How satisfied are you with your life at this point?" (see, World Values Survey, 2014). Respondents are instructed to answer on a scale from 1 to 10, where 1 indicates "very dissatisfied" and 10 indicates "very satisfied".

B Summary Statistics

Table 1 presents summary statistics on entrepreneur- and business-level characteristics as well as on business and educational aspirations at baseline. Column (1) shows the number of observations for each characteristic, while Columns (2) presents the mean and the standard deviation for each characteristic using the full baseline sample of 1301 businesses. Columns (3) to (7) show the means for businesses assigned to each of the experimental groups and, in brackets, results from difference-in-means tests to check for balance between each of the treatment groups and the control.

The average entrepreneur in our sample is female (70.83 percent), 45.27 years of age, and has completed 9.39 years of formal education (equivalent to middle school). However, this masks considerable heterogeneity, as 46.78 percent have finished high-school and 4.44 percent hold college degrees. At baseline, the average business was established for 13.60 years, it employed 2 workers, measured 13.22 square meters in size, and had average monthly profits of USD 496.66 PPP with average monthly sales of USD 5906.18 PPP. The average business owner reported aspirations to reach daily sales on the order of about USD 500.00 PPP in the next year. They further aspired for their business to be about 15 square meters in size, to employ a total of 1.72 people, and for 56 customers to visit their shop daily. For the long-term ideal business, the average entrepreneur estimated an achievement horizon of almost 3 years. With respect to their ideal business, the average shop owner aspired for a business of 24 square meters in size and with 73 daily customers. Surprisingly, aspirations for the number of employees were no higher than current levels ($mean = 2.09$). Regarding their children's prospects, aspirations exceeded the educational attainment of the average entrepreneur by a considerable margin. The average business owner aspired for their children to complete almost 17 years of schooling, while 27 percent aspired for a master's-level education.

Columns (3) to (7) of Table 1 also present p-values for differences-in-means tests between each

of the treatment groups and the control group. The results suggest that the randomization can be considered successful: out of 132 difference-in-means tests performed, nine return statistically significant differences.

C Survey Attrition

There were three sources of attrition among respondents: (1) owners of shops that have closed down and cannot be tracked, (2) owners who refused to take part in the endline survey, (3) owners who were sick or out of town for a period longer than two weeks at the time of either of the endline surveys. Regarding the effect on statistical power, attrition levels are low. Six months after the interventions, we document a loss of about 8 percent of the overall sample. This places our study at the lower end of the distribution of business training interventions in developing countries for which attrition rates at the first endline survey are typically in excess of 10 percent and can reach up to 25 percent or higher (for a review, see McKenzie and Woodruff, 2014). At the second endline eighteen months after treatment, another 13 percent of business have attrited. This rate of attrition is well in line with prior surveys of small-scale businesses (McKenzie and Woodruff, 2014).

Table 4 presents attrition analyses for the first and the second endline survey. These analyses regress a dummy of whether the entrepreneur was part of the respective endline sample on treatment dummies. Column (1) shows results for the first endline survey and Column (2) for the second. Importantly, attrition is not correlated with treatment status for any of the treatments in either endline survey.

D Estimation Strategy

Based on the theoretical insights of Ray (2006), Genicot and Ray (2017), and Dalton, Ghosal, and Mani (2016), we estimate the differential impact of the four treatments on aspirations, subjective well-being, and business performance for subgroups of entrepreneurs with high and low aspiration levels at baseline. To do this, we interact a dummy which indicates whether the entrepreneur reported below-median baseline aspirations with each of the four treatment dummies and add both the vector of interactions and the vector of treatment dummies to the specification. Using ordinary least squares (OLS), we estimate the following ANCOVA regression specification:

$$Y_{2i} = \alpha + \sum_{m=1}^{4} \beta_m \mathrm{T}_{mi} + \eta \mathrm{S}_{1i} + \sum_{m=1}^{4} \theta_m \mathrm{T}_{mi} \times \mathrm{S}_{1i} + \gamma \mathrm{X}_{1i} + \delta V + \zeta \mathrm{Y}_{1i} + \epsilon_i \tag{1}$$

where θ_m is the coefficient on the interaction of each treatment m with a dummy S equal to one if the entrepreneur's baseline level of aspirations was below the median and zero otherwise. When the outcome are the dimensions of business aspirations, we construct dummies from the baseline level of the outcome. For instance, when we estimate the heterogeneity in treatment effects on sales aspirations, S takes on one if the entrepreneur's baseline level of sales aspirations was below the median and zero otherwise. Regarding business performance, educational aspirations, and subjective well-being, we use an interaction dummy constructed from the z-score of aggregate short-term business aspirations. In either case, the coefficients β_{m1} to β_{m4} measure the effect of treatment m for entrepreneurs with above-median baseline aspirations. The effect of treatment m on entrepreneurs with below-median scores is measured by the sum of β_m and θ_m. F-tests are used to compute significance scores for below-median scores. Following Bruhn and McKenzie (2009), we include strata dummies represented by the vector X. V represents district fixed effects and Y_{1i} is the baseline value of the outcome of interest. ϵ_i is a firm-level error term.

V Results

A Impact on Business Aspirations

Tables 5 and 6 estimate Equation 1 with respect to business aspirations for the two endline surveys, separately. Columns (1) to (5) in each table present results on business aspirations in the short-run, and columns (6) to (9) present results on long-term aspirations for the entrepreneur's ideal business. We find a clear divergence in treatment impacts by initial levels of aspirations that sharply follows insights from theory. Further, while these differential effects on business aspirations are modest at the first endline six after the intervention (Table 5), they grow and become more pronounced by the second endline eighteen months after the intervention (Table 6).

As depicted in Table 5, six months after the interventions, treatment effects on business aspirations are (i) more pronounced for shop owners with below-median baseline aspirations than for those with above-median aspirations and they are (ii) stronger for long-run aspirations than for short-run aspirations. We find no effects on aspirations for the size of the business (Column 2) or the number of employees (Column 3). In contrast, Column (4) shows that, when invited to the *Assistance*, shop owners above the median of baseline aspirations aspire to an additional 20 daily customers which is an improvement of about 27 percent (0.30 standard deviations). In contrast, as shown in Column 5, low-aspiring entrepreneurs aspire to 38 and 28 percent (0.10 and 0.38 standard deviations) lower

sales when assigned to *Handbook Only* and *All Three*, respectively. Column (6) shows that these entrepreneurs also reduce their long-run business aspirations both after being assigned to *Handbook Only* and to *All Three*. This aggregate effect is mostly driven by long-run aspirations for business size. According to Column (7), entrepreneurs below the median of business aspirations at baseline when assigned to *Handbook and Assistance* and *All Three* show reductions equivalent to about 4.5 and 6.9 square meters or 22 and 34 percent compared to the aspirations of the control group. In contrast, the aspirations of entrepreneurs with high aspirations are not affected by the treatments.

This divergence in aspiration levels becomes more pronounced eighteen months after treatment. As Table 6 shows, significant effects are now (i) observed for both entrepreneurs with below-median and those with above-median baseline aspirations, for (ii) both short-run and long-run aspirations, and they are (iii) strongest for customer and sales aspirations. According to Column (3), high-aspiring shop owners assigned to the *Movie* increase their aspirations for employees by 20 percent above control levels (0.43 standard deviations) and for customers by about 29 percent or 20 daily customers (0.37 standard deviations) compared to the control group. Along these lines, entrepreneurs invited to receive *Assistance* and *All Three* each aspire to roughly 15 extra customers or a plus of about 21 percent (0.27 standard deviations) over the control group. Finally, Column (5) shows that assignment to the *Movie* also increases the sales aspirations of high-aspiring entrepreneurs: this subgroup aspires to a considerable plus of USD 151.00 PPP in daily sales, equal to an improvement of 20 percent (0.23 standard deviations) above the control.

In contrast, shop owners who aspired low at baseline further reduce their business aspirations. Column (3) shows that the *Movie* decreased these entrepreneurs' aspirations for employment by 10 percent (0.16 standard deviations). Likewise, low-aspiring shop owners further lower their aspirations by about 17 daily customers or 43 percent (0.57 standard deviations) vis-à-vis the control when assigned to the *Handbook Only*, and by 8 and 9 customers (21 and 22 percent) when additionally invited to the *Movie* and *Assistance*, respectively (Column 4). As per Column (5), these shop owners also reduce their sales aspirations. While at about USD 114.00 PPP or 52 percent (0.53 standard deviations) the effect is largest for those assigned to *Handbook Only*, entrepreneurs also reduce their sales aspirations when invited to the *Movie* (by 9 percent or 0.10 standard deviations) and to *All Three* (by 32 percent or 0.33 standard deviations).

Long-run aspirations corroborate this pattern. As shown in Column (9), when assigned to *Handbook Only* and *Handbook and Movie*, shop owners with high customer aspirations at baseline increase their aspirations by 25 and 36 daily customers (an improvement of 29 and 41 percent) over the control, respectively. In contrast, the negative aggregate effect for shop owners who aspired below

the median at baseline, shown in Column (6), is driven by aspirations for business size (Column 7) and customers (Column 9). While Column (7) shows no significant positive effects on long-run aspirations for business size, all interventions significantly reduce these aspirations for shop owners with below-median baseline aspirations. Effects for *Handbook Only*, *Handbook and Movie*, and *Handbook and Assistance* are considerable: low-aspiring entrepreneurs reduce their aspirations vis-à-vis the control group by about 6, 5, and 5 square meters (reductions by 30, 25, and 22 percent), respectively. In addition, Column (9) illustrates that the *Handbook* further lowered the customer aspirations of entrepreneurs with low aspirations at baseline by about 20 customers or 34 percent (0.27 standard deviations) compared to the control group.

B Impact on Business Performance

Tables 7 and 8 present results for treatment effects on business profits and sales for the same subgroups of high- and low-aspiring entrepreneurs. In each case, Columns (1) to (3) present results on total monthly business profits and Columns (4) to (6) on total monthly sales. Columns (2) and (4) show estimates for the respective outcome winsorized at the 1%-level on both tails. Overall, the results sharply follow the divergence predicted by theory and found for business aspirations. While entrepreneurs above the median gain in performance from both the *Movie* and the *Assistance* but not from the *Handbook Only*, the aspirations of below-median entrepreneurs only falter when assigned to the *Handbook Only* but not when invited to the *Movie* or the *Assistance*.

Table 7 presents significant and positive treatment effects on business profits (Columns 1 to 3) and sales (Columns 4 to 6) for entrepreneurs with above-median baseline aspirations. Again, high-aspiring shop owners increase their sales by about USD 578.00 PPP or 47 percent (0.28 standard deviations) over the control group when invited to receive *Assistance*.

As per Column (3), the *Movie* shows a statistically less significant but economically sizable effect of USD 405.00 PPP (an improvement of 33 percent or 0.20 standard deviations). Presumably due to noise in the profits data, this effect is only significant when the outcome is winsorized at the 2%-level. The data on business sales shows a similar picture. In Columns (4) to (6), we observe that shop owners with high baseline aspirations see gains in monthly business sales of roughly USD 1598.00 PPP or 18 percent (0.17 standard deviations) when assigned to *Assistance* and of about USD 1329.00 PPP (an improvement of 15 percent or 0.14 standard deviations) when invited to the *Movie*. When assigned to *All Three*, high-aspiring shop owners gain, on average, USD 489.00 PP or 40 percent in profits and USD 1611.00 PPP or 18 percent in sales over the control group.

In comparison with the estimate on *Assistance*, this indicates that we find no complementarities between this intervention and the *Movie*.

On the contrary, as indicated by the F-tests, we do not see treatment effects on profits for entrepreneurs with below-median aspirations. Only the low-aspiring entrepreneurs assigned to *Handbook Only* report significant reductions in monthly business sales by USD 1088.00 PPP or 41 percent (0.54 standard deviations).

Table 8 corroborates the divergence in business performance with data from the 18-months endline survey. Over the long-run, the most robust positive effects on business profits and sales accrue to those assigned to *All Three*: Columns (1) to (3) show that high-aspiring entrepreneurs see an increase in monthly profits of about USD 623.00 PPP or 51 percent (0.30 standard deviations). As per Column (3), we find significant effects of assignment to *Assistance* only when the profits data is winsorized at the 2%-level on both tails. This treatment improves the profits of entrepreneurs with high initial aspiration levels by USD 526.00 PPP, which is equivalent to a plus of 43 percent (0.26 standard deviations) over the control group. Columns (4) to (6) complement this pattern with effects on business sales which are roughly on par with results from the first endline. As depicted in Column (6), shop owners with high baseline aspirations for their business see an improvement in sales of about USD 1797.00 PPP or 20 percent (0.19 standard deviations) over the control.

Consistent with the results from the first endline survey, Columns (1) to (3) show that shop owners with baseline aspirations below the median report reductions in profits which are, however, not significantly different from the control in statistical terms. As per Columns (4) to (6), these same entrepreneurs see statistically significant reductions in business sales of about USD 1518.00 PPP or 57 percent (0.75 standard deviation) when assigned to *Handbook Only*. Unlike after the first endline, the sales of low-aspiring shop owners also show a contraction when invited to the *Movie*. As depicted in Column (5), exposure to entrepreneurial role models reduced monthly sales by USD 943.00 PPP or 35 percent (0.47 standard deviations). However, this effect disappears when monthly sales are winsorized at the 2%-level.

C Impact on Aspirations for Children's Education

Table 9 estimates Equation (1) for the entrepreneur's aspirations towards the education of their children six months after treatment. While Columns (1) and (2) present estimates for an aggregate score representing the statistical average of aspirations towards both the family's oldest son and daughter under the age of eighteen, Columns (3) to (4) show estimates regarding the family's son

and Columns (5) to (6) show estimates regarding the daughter, respectively.

Overall, we find evidence for the same divergence between entrepreneurs with high and low business aspirations at baseline. Shop owners with above-median baseline aspirations aspire to almost one additional year of educational attainment for their children when assigned to *All Three* (Column 1). This is an improvement of five percentage points (0.30 standard deviations) over the control. According to Column (2), the same high-aspiring entrepreneurs are about 40 percent (0.28 standard deviations) more likely to aspire for their children to reach, on average, Masters-level university education. On the contrary, shop owners with low baseline levels of aspirations reduce their aspirations towards their sons' educational attainment by roughly one year when assigned to *All Three*. With respect to the control group, this equals to a reduction by six percent (0.30 standard deviations) and is roughly equivalent in magnitude with the effect for high-aspiring entrepreneurs.

D Impact on Subjective Well-being

In Table 10, we present additional results on levels of subjective well-being as proxied by financial and life satisfaction. We find significant and sustained positive effects on overall financial satisfaction for entrepreneurs with high baseline aspirations both six months (Column 1) and 18 months after treatment (Column 3). In particular, high-aspiring shop owners have nine percent (0.26 standard deviations) higher satisfaction after six months and seven percent (0.21 standard deviations) higher satisfaction over the control group 18 months after the interventions. Moreover, we find a significant increase in life satisfaction of six percent (0.21 standard deviations) for these same entrepreneurs over the control group eighteen months after the treatment (Column 4). The satisfaction scores of entrepreneurs with below-median baseline aspirations are not significantly different from the control group.

E Characteristics of High-Aspiring Entrepreneurs

Given the clear, robust, and sustained divergence between entrepreneurs with high and low aspirations at baseline, we ask who the high-aspiring entrepreneurs are. To this end, we use baseline data and regress above-median aspirations for business growth in the short-run and in the long-run on entrepreneur's socio-demographic background, firm-level characteristics, business practices, and psychological scales, such as the entrepreneur's intelligence, and their risk and time preferences. Table 11 presents results from these linear OLS regressions, Columns (1) to (5) present regression estimates for short-term aspirations and Columns (6) to (10) for long-term aspirations.

Both Columns (5) and (10) show that business owners with high aspirations both for the short-term and for the long-term at baseline are more likely to be younger and male. For instance, male entrepreneurs are 26 percent more likely to aspire above the median at baseline than are female owners. Their businesses tend to be younger, larger in size, and to employ more people. While each square meter increases the chances of the entrepreneur reporting high aspirations by about two percent, each additional employee raises the odds by more than 24 percent. Innovativeness, as proxied by product innovations, increases the chances of high aspirations by about 21 percent. According to Column (5), shop owners with better financial planning skills and a greater willingness to take on risks are more likely to aspire high for the short-term. On the other hand, as can be seen in Column (10), entrepreneurs with more formal education and large families, as proxied by having at least three children, are more likely to have high aspirations for the long-term.

VI Conclusion

This paper shows that the growth aspirations of small-scale entrepreneurs are malleable, and that they respond to information about the best practices of successful peers coupled with business role models and personalized assistance. As predicted by theory, the distance between the initial aspirations of the entrepreneurs and the business frontier is the key determinant of the direction of change in aspirations and business performance. Specifically, entrepreneurs with high initial aspirations experience positive and sustained treatment effects on their business aspirations, business performance, family aspirations, and subjective well-being. In contrast, these effects are negative for entrepreneurs with low initial aspirations for business growth.

These findings have important implications for policy design and future research. First, and complementary to Galiani et al. (2018), we show that effects on aspirations and business performance can persist in the long-term when potential economic and psychological constraints are addressed simultaneously. Crucially, informational shocks on best practices of peers alone may not be suited to bring about positive change without complementary treatments that provide additional psychological and logistical resources, such as the opportunity to learn from role models or being assisted in implementation to foster agency. Moreover, our findings suggest that effective policy interventions will have to be mindful of both economic and psychological constraints in order to foster aspirations and achievement. In this study, we use exposure to role models and assistance to foster agency, but we do not rule out other alternative avenues, which is an interesting area for future research.

Second, this study underlines the critical importance of latent heterogeneity in the growth aspi-

rations of small-scale entrepreneurs. Our findings present an example of cost-effective interventions that can trigger sustained small-business growth by widening the aspiration window of the initially high-aspiring entrepreneurs. However, it still remains unclear which kinds of interventions could help the low-aspiring entrepreneur. The negative effect on aspirations and business performance created by widening the aspirations window of these entrepreneurs is suggestive of a state of frustration with their businesses. It is possible that these entrepreneurs have a business because they do not see other alternative ways to generate income, and a more suitable policy for them may be to identify or create employment opportunities outside of self-employment. This is also a fertile avenue for future research.

Finally and related to the point above, our study speaks to the importance of targeting efforts prior to implementing policy, specifically matching interventons with characteristics of the target population.

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Tables

Table 1: Summary Statistics at Baseline by Experimental Groups

	Sample Size	Mean (Standard Deviation)	Control Group	Handbook Only (p-values)	Handbook & Movie (p-values)	Handbook & Assist. (p-values)	All Three (p-values)
		N = 1301	N = 261	N = 260	N = 260	N = 260	N = 260
Entrepreneur-level Characteristics							
Sociodemographics							
Gender (Male=1)	1301	0.29	0.28	0.30	0.29	0.30	0.28
				[0.611]	[0.825]	[0.680]	[0.867]
Age (Years)	1300	45.27	45.22	45.27	45.28	45.16	45.38
		(11.31)		[0.959]	[0.951]	[0.951]	[0.866]
Formal Education (Years)	1301	9.39	9.10	9.52	9.36	9.42	9.55
		(3.78)		[0.185]	[0.446]	[0.327]	[0.174]
Has at Least 3 Children (Yes=1)	1301	0.39	0.40	0.39	0.40	0.39	0.38
				[0.816]	[0.971]	[0.816]	[0.553]
Business Practices							
Marketing Subscore	1301	0.16	0.16	0.15	0.17	0.15	0.17
		(0.19)		[0.529]	[0.345]	[0.709]	[0.517]
Stocking-up Subscore	1301	0.46	0.47	0.47	0.47	0.47	0.44
		(0.30)		[0.935]	[0.884]	[0.984]	[0.291]
Record-keeping Subscore	1301	0.46	0.48	0.46	0.45	0.45	0.46
		(0.19)		[0.229]	[0.09*]	[0.07*]	[0.254]
Financial Planning Subscore	1301	0.21	0.23	0.20	0.20	0.20	0.21
		(0.17)		[0.131]	[0.128]	[0.07*]	[0.316]
Psychological Characteristics							
Time Preference (0-10 Scale)	1301	5.18	5.19	5.07	5.21	5.25	5.20
		(2.26)		[0.542]	[0.924]	[0.742]	[0.940]
Risk Preference (0-10 Scale)	1301	3.73	3.74	3.76	3.88	3.60	3.68
		(2.09)		[0.902]	[0.451]	[0.453]	[0.739]
Digit Span (0-8 Scale)	1301	1.71	1.70	1.67	1.80	1.67	1.69
		(0.83)		[0.734]	[0.549]	[0.742]	[0.890]
Business-level Characteristics							
General Characteristics							
Business Age (Years)	1295	13.60	12.76	13.77	14.03	13.98	13.47
		(11.79)		[0.313]	[0.222]	[0.236]	[0.478]
Business Has Tax ID (Yes=1)		0.19	0.20	0.21	0.20	0.15	0.18
				[0.811]	[0.878]	[0.145]	[0.516]
Business Size (Square Meters)	1301	13.22	12.67	12.77	12.84	13.82	14.03
		(12.34)		[0.908]	[0.851]	[0.248]	[0.287]
Total Number of Full-time Employees	1301	2.00	2.03	2.05	1.90	1.99	2.04
		(1.22)		[0.837]	[0.218]	[0.708]	[0.919]
Number of Full-time Formal Employees	1236	0.04 (0.28)	0.03	0.03	0.03	0.05	0.05
				[0.861]	[0.840]	[0.379]	[0.398]
Business Performance							
Total Profits Last Month (USD PPP)	1286	496.66	806.96	1155.26	363.47	-388.08	527.98
		(6452.28)		[0.579]	[0.364]	[0.01**]	[0.536]
Total Sales Last Month (USD PPP)	1286	5906.18	5077.37	5771.24	5535.05	5704.26	7419.87
		(15570.50)		[0.453]	[0.535]	[0.437]	[0.200]
Total Daily Sales (USD PPP)	1295	239.83	206.14	224.23	234.75	239.50	294.31
		(585.97)		[0.574]	[0.313]	[0.233]	[0.206]

to be continued on the next page

Table 1 (cont.): Summary Statistics at Baseline by Experimental Groups

	Sample Size	Mean (Standard Deviation)	Control Group	Handbook Only (p-values)	Handbook & Movie (p-values)	Handbook & Assist. (p-values)	All Three (p-values)
		N = 1301	N = 261	N = 260	N = 260	N = 260	N = 260
Business Aspirations							
Short-term Aspirations (12 Months)							
Business Size (Square Meters)	1301	15.56	14.19	15.60	14.93	15.86	17.23
		(15.13)		[0.169]	[0.470]	[0.115]	[0.05*]
Employees	1301	1.72	1.65	1.82	1.66	1.72	1.72
		(1.33)		[0.155]	[0.953]	[0.512]	[0.543]
Daily Customers	1297	56.85	51.18	55.85	59.74	63.76	53.74
		(68.24)		[0.341]	[0.141]	[0.04**]	[0.565]
Daily Sales (USD PPP)	1280	500.26	443.24	482.65	488.00	569.32	517.47
		(643.85)		[0.438]	[0.348]	[0.03**]	[0.161]
Long-term Aspirations (Ideal Business)							
Business Size (Square Meters)	1301	24.19	22.00	23.46	24.45	24.40	26.67
		(26.69)		[0.425]	[0.187]	[0.181]	[0.09*]
Employees	1301	2.09	2.01	2.08	2.01	2.13	2.19
		(1.62)		[0.599]	[1.00]	[0.375]	[0.196]
Daily Customers	1297	73.35	66.50	76.58	78.52	74.56	70.64
		(100.22)		[0.185]	[0.155]	[0.327]	[0.559]
Aspirations Horizon (Years)	941	2.77	2.87	2.62	2.89	2.94	2.55
		(2.84)		[0.311]	[0.959]	[0.807]	[0.199]
Aspirations for Children's Education							
Education Aspirations (Years)							
Children	799	16.8	16.94	16.68	17.04	16.67	16.69
		(2.83)		[0.383]	[0.760]	[0.406]	[0.422]
Daughter	514	16.76	16.80	16.64	17.59	16.41	16.45
		(2.93)		[0.672]	[0.05*]	[0.347]	[0.368]
Son	523	16.74	17.01	16.58	16.59	16.71	16.83
		(2.87)		[0.280]	[0.330]	[0.471]	[0.657]
At Least Masters-level Education (Yes=1)							
Children	799	0.27	0.32	0.23	0.31	0.25	0.25
				[0.08*]	[0.749]	[0.152]	[0.145]
Daughter	514	0.25	0.29	0.22	0.36	0.22	0.20
				[0.225]	[0.338]	[0.22]	[0.111]
Son	523	0.25	0.31	0.21	0.24	0.23	0.26
				[0.101]	[0.286]	[0.177]	[0.403]

This table presents summary statistics for entrepreneur and business characteristics as well as business aspirations and aspirations for children's educational outcomes. Column (1) presents the sample size and Column (2) presents the mean and standard deviation of the characteristic using the full sample. Column (3) shows the mean in the control group and Columns (4) to (7) show the means of the characteristic for each of the treatment groups. Results of difference-in-means tests between each of the treatment groups and the control are reported in brackets. Statistically significant p-values are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level).

Table 2: Compliance With and Assessment of the Movie Treatment

	(1)	(2)	(3)
	Handbook & Movie (A)	Handbook & Movie & Assist. (B)	(A) – (B)
	N = 260	*N = 260*	*(p-values)*
Attendance			
Business Owner or Business Partner Attended Movie Screening	0.52	0.49	0.54
Baseline Respondent Attended Movie Screening	0.47	0.45	0.79
Respondent was Reminded by Personal Visit	0.05	0.07	0.36
Respondent was Reminded by Phone Call	0.35	0.33	0.78
Distance to Screening Location (in Decimal Degrees)	0.01	0.01	0.87
Assessment			
Learned Something New (1-4 Scale)	3.34	3.21	0.18
Feels Inspired (1-4 Scale)	3.31	3.30	0.94
Feels Hopeful (1-4 Scale)	3.60	3.42	0.04**
Feels Bored (1-4 Scale)	0.83	0.97	0.43

This table presents analyses on the compliance with the movie treatment and on the evaluation of this intervention by the treated entrepreneurs. Columns (1) and (2) present summary statistics for the two experimental groups assigned to the movie, respectively. Column (3) shows results from difference-in-means tests between these two groups. Statistically significant p-values are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level).

Table 3: Compliance With and Assessment of the Assistance Treatment

	(1)	(2)	(3)
	Handbook & Assist. (A)	Handbook & Movie & Assist. (B)	(A) – (B)
	N = 260	*N = 260*	*(p-values)*
Attendance			
1st Session			
Business Owner or Business Partner Attended 1st Session	0.77	0.78	0.752
Baseline Respondent Attended 1st Session	0.76	0.77	0.756
Plans to Implement at Least One New Practice (Yes=1)	0.37	0.47	0.021**
Plans Neither Handbook Study Nor Implementation (Yes=1)	0.12	0.11	0.784
2nd Session			
Business Owner or Business Partner Attended 2nd Session	0.68	0.68	0.925
Baseline Respondent Attended 2nd Session	0.67	0.67	1
Plans to Implement at Least One New Practice (Yes=1)	0.39	0.47	0.063*
Plans Neither Handbook Study Nor Implementation (Yes=1)	0.13	0.08	0.044**
Assessment			
Learned Something New (1-4 Scale)	2.88	2.89	0.908
Feels Inspired (1-4 Scale)	2.76	2.83	0.422
Feels Hopeful (1-4 Scale)	2.88	2.97	0.312
Feels Bored (1-4 Scale)	0.59	0.43	0.118

This table presents analyses on the compliance with either session of the assistance treatment and on the evaluation of this intervention by the treated entrepreneurs. Columns (1) and (2) present summary statistics for the two experimental groups assigned to assistance and Column (3) shows results from difference-in-means tests between these two groups. Statistically significant p-values are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level).

Table 4: Attrition Analysis for Endline Surveys 6 and 18 Months After Treatment

	(1)	(2)
	6-Months Endline	*18-Months Endline*
	Business Part of Endline Sample	Business Part of Endline Sample
Assigned Handbook Only	-0.022	-0.036
	(0.024)	(0.035)
Assigned Handbook and Movie	-0.028	-0.008
	(0.025)	(0.035)
Assigned Handbook and Counseling	-0.023	-0.024
	(0.024)	(0.035)
Assigned All Three	-0.036	-0.039
	0.025	(0.035)
Stratification Controls And Village-level Fixed Effects	*Yes*	*Yes*
R-squared	0.032	0.044
Sample Size	1301	1301
Outcome Mean in Control	0.927	0.787
F-test (p-value): Book = Book & Movie	0.836	0.441
F-test (p-value): Book = Book & Assist.	0.972	0.743
F-test (p-value): Book = All Three	0.613	0.983
F-test (p-value): Book & Movie = Book & Assist.	0.863	0.655

This table presents attrition analyses for both endline surveys which use a dummy of whether the business is part of the endline sample. While Column (1) shows results for the first endline survey six months after treatment, Column (2) shows results for the second endline survey eighteen months after the interventions. All regressions include stratification controls and village-level fixed effects. Statistically significant p-values are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level).

Table 5: Treatment Effects on Business Aspirations for High- and Low-Aspirers 6 Months After Treatment

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	12-months Aspirations					*Aspirations for the Ideal Business*			
	Aggregate (z Score)	Size (m²)	Employees	Daily Customers	Daily Sales (USD PPP, Winsorized 1%)	Aggregate (z Score)	Size (m²)	Employees	Daily Customers
Assigned Handbook Only	0.006	2.613	0.232	10.508	-20.596	0.078	-0.586	0.317	25.916
	(0.070)	(3.482)	(0.297)	(11.119)	(48.818)	(0.103)	(4.497)	(0.540)	(19.833)
Assigned Handbook and Movie	0.041	2.302	0.168	9.027	63.577	-0.053	-2.396	-0.224	20.121
	(0.077)	(2.627)	(0.234)	(11.289)	(59.874)	(0.097)	(3.720)	(0.458)	(16.243)
Assigned Handbook and Counseling	0.041	2.828	0.130	20.134*	-41.298	0.004	4.088	-0.251	21.308
	(0.072)	(1.930)	(0.250)	(10.925)	(56.046)	(0.096)	(4.009)	(0.415)	(15.048)
Assigned All Three	0.065	1.570	-0.225	15.027	24.426	-0.037	-0.659	-0.338	16.694
	(0.071)	(1.928)	(0.225)	(9.707)	(54.844)	(0.100)	(3.575)	(0.438)	(12.961)
Assigned Handbook Only X Below-Md BL Aspirations	-0.042	-3.940	-0.351	-12.065	-52.688	-0.236**	-5.219	-0.581	-33.680
	(0.086)	(3.463)	(0.306)	(13.194)	(46.899)	(0.095)	(4.251)	(0.520)	(20.491)
Assigned Handbook and Movie X Below-Md BL Aspirations	0.002	-3.242	-0.022	-8.862	-76.283	0.100	0.493	0.350	-21.736
	(0.093)	(2.768)	(0.266)	(13.278)	(60.300)	(0.094)	(3.691)	(0.436)	(17.213)
Assigned Handbook and Counseling X Below-Md BL Aspirations	-0.007	-2.038	-0.081	-12.408	16.801	-0.004	-8.584**	0.179	-22.369
	(0.091)	(2.389)	(0.272)	(12.655)	(56.815)	(0.095)	(3.779)	(0.368)	(15.235)
Assigned All Three X Below-Md BL Aspirations	-0.115	-3.545*	0.232	-12.971	-78.690	-0.107	-6.263**	0.034	-23.131
	(0.080)	(1.926)	(0.244)	(13.077)	(52.062)	(0.085)	(3.059)	(0.387)	(15.271)
Stratification Controls, Control for Baseline Level of Outcome, And Village-level Fixed Effects	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
R-squared	0.345	0.191	0.149	0.155	0.603	0.232	0.227	0.157	0.169
Sample Size	1181	1181	1181	1177	1160	1181	1181	1181	1177
Outcome Mean for High-Aspiring Entrepreneurs in Control	0.180	22.989	2.186	72.527	833.300	0.276	37.009	3.460	110.436
Outcome SD for High-Aspiring Entrepreneurs in Control	0.575	20.768	1.200	66.489	714.569	1.224	45.469	4.617	121.013
Outcome Mean for Low-Aspiring Entrepreneurs in Control	-0.257	12.000	1.698	38.638	188.887	-0.314	20.312	1.927	52.277
Outcome SD for Low-Aspiring Entrepreneurs in Control	0.299	7.886	1.428	36.582	142.509	0.360	23.870	1.994	57.651
F-test (p-value): Book = Book X Interaction	0.474	0.310	0.344	0.812	0.006	0.015	0.020	0.147	0.341
F-test (p-value): Book & Movie = (Book & Movie) X Interaction	0.401	0.460	0.333	0.979	0.683	0.543	0.513	0.525	0.858
F-test (p-value): Book & Assist. = (Book & Assist.) X Interaction	0.506	0.638	0.719	0.397	0.406	0.993	0.109	0.703	0.901
F-test (p-value): All Three = All Three X Interaction	0.288	0.111	0.958	0.797	0.049	0.032	0.008	0.091	0.527

This table presents results from regressions of business aspirations on treatment dummies using data from the first endline survey six months after treatment. Columns (1) to (5) present results from regressions that take short-term aspiration levels as their outcome. Besides an aggregate score of short-term aspirations (Column 1), these include the following aspirations dimensions: aspirations for the size of the business in square meters (Column 2), for the total number of full-time employees (Column 3) and daily customers (Column 4), as well as for the amount of daily sales in USD PPP (Column 5). Sales aspirations are winsorized at the 1%-level on both tails. Analogously, Columns (6) to (9) present results with long-term aspirations as the outcome. The outcome dimensions are the same as for the short-term with the exception that no data was collected for long-term sales aspirations. All regressions include stratification controls, controls for the outcome variable at baseline and village-level fixed effects. Robust standard errors are reported in parentheses. Statistically significant p-values are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level).

Table 6: Treatment Effects on Business Aspirations for High- and Low-Aspirers 18 Months After Treatment

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	12-months Aspirations					*Aspirations for the Ideal Business*			
	Aggregate (z Score)	Size (m²)	Employees	Daily Customers	Daily Sales (USD PPP, Winsorized 1%)	Aggregate (z Score)	Size (m²)	Employees	Daily Customers
Assigned Handbook Only	0.004	-2.726	0.005	12.149	37.135	0.084	-1.978	0.203	25.666**
	(0.075)	(2.271)	(0.222)	(7.585)	(61.596)	(0.099)	(3.673)	(0.336)	(12.634)
Assigned Handbook and Movie	-0.048	-3.559	-0.068	20.367**	151.431**	0.083	2.245	-0.321	36.499***
	(0.068)	(2.531)	(0.191)	(7.913)	(64.096)	(0.094)	(3.621)	(0.247)	(13.185)
Assigned Handbook and Counseling	0.087	0.909	0.446*	14.705*	-7.053	0.082	4.172	0.092	11.649
	(0.090)	(2.377)	(0.228)	(8.192)	(55.988)	(0.098)	(3.261)	(0.250)	(10.103)
Assigned All Three	0.057	0.431	0.223	15.218**	51.146	0.072	2.242	0.238	20.607*
	(0.082)	(2.070)	(0.307)	(6.547)	(59.098)	(0.110)	(3.346)	(0.348)	(12.307)
Assigned Handbook Only X Below-Md BL Aspirations	-0.086	1.768	0.054	-29.029***	-151.679**	-0.360***	-4.420	-0.453	-45.957***
	(0.085)	(2.643)	(0.240)	(7.391)	(60.984)	(0.096)	(3.944)	(0.348)	(12.040)
Assigned Handbook and Movie X Below-Md BL Aspirations	0.037	3.268	-0.109	-28.792***	-218.817***	-0.243**	-7.717**	0.128	-47.803***
	(0.082)	(2.921)	(0.202)	(8.131)	(64.923)	(0.098)	(3.728)	(0.270)	(13.382)
Assigned Handbook and Counseling X Below-Md BL Aspirations	-0.087	-1.217	-0.190	-23.607***	-34.333	-0.200*	-9.031**	-0.253	-22.817**
	(0.099)	(2.719)	(0.256)	(8.692)	(56.250)	(0.104)	(3.766)	(0.272)	(10.408)
Assigned All Three X Below-Md BL Aspirations	-0.085	-0.234	-0.265	-22.106***	-122.166**	-0.146	-6.574*	-0.467	-22.468*
	(0.093)	(2.388)	(0.314)	(7.732)	(57.075)	(0.113)	(3.472)	(0.358)	(12.830)
Stratification Controls, Control for Baseline Level of Outcome, And Village-level Fixed Effects	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
R-squared	0.313	0.309	0.139	0.182	0.536	0.214	0.208	0.132	0.186
Sample Size	1024	1023	1024	1018	999	1024	1023	1024	1018
Outcome Mean for High-Aspiring Entrepreneurs in Control	0.144	22.500	2.242	69.697	743.812	0.146	36.010	2.440	88.605
Outcome SD for High-Aspiring Entrepreneurs in Control	0.437	14.976	1.032	54.804	637.900	0.636	26.985	1.146	81.206
Outcome Mean for Low-Aspiring Entrepreneurs in Control	-0.193	11.883	1.729	39.243	217.843	-0.099	21.383	2.175	58.372
Outcome SD for Low-Aspiring Entrepreneurs in Control	0.361	8.763	1.079	29.603	213.861	0.870	19.376	1.732	73.822
F-test (p-value): Book = Book X Interaction	0.099	0.479	0.624	0.000	0.000	0.000	0.005	0.139	0.001
F-test (p-value): Book & Movie = (Book & Movie) X Interaction	0.814	0.823	0.091	0.058	0.049	0.024	0.011	0.211	0.110
F-test (p-value): Book & Assist. = (Book & Assist.) X Interaction	0.985	0.814	0.078	0.059	0.254	0.121	0.072	0.348	0.129
F-test (p-value): All Three = All Three X Interaction	0.571	0.887	0.698	0.210	0.028	0.307	0.057	0.140	0.821

This table presents results from regressions of business aspirations on treatment dummies using data from the second endline survey eighteen months after treatment. Columns (1) to (5) present results from regressions that take short-term aspiration levels as their outcome. Besides an aggregate score of short-term aspirations (Column 1), these include the following aspirations dimensions: aspirations for the size of the business in square meters (Column 2), for the total number of full-time employees (Column 3) and daily customers (Column 4), as well as for the amount of daily sales in USD PPP (Column 5) Sales aspirations are winsorized at the 1%-level on both tails. Analogously, Columns (6) to (9) present results with long-term aspirations as the outcome. The outcome dimensions are the same as for the short-term with the exception that no data was collected for long-term sales aspirations. All regressions include stratification controls, controls for the outcome variable at baseline and village-level fixed effects. Robust standard errors are reported in parentheses. Statistically significant p-values are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level).

Table 7: Treatment Effects on Business Performance for High- and Low-Aspirers 6 Months After Treatment

	(1)	(2)	(3)	(4)	(5)	(6)
	Estimated Monthly Profits	Estimated Monthly Profits (Winsorized 1%)	Estimated Monthly Profits (Winsorized 2%)	Monthly Business Sales	Monthly Business Sales (Winsorized 1%)	Monthly Business Sales (Winsorized 2%)
Assigned Handbook Only	-1284.263	-186.042	-134.262	1312.271	469.825	248.836
	(1044.289)	(217.006)	(173.938)	(1040.951)	(702.223)	(587.923)
Assigned Handbook and Movie	594.237	501.167*	405.521*	1030.771	1367.943*	1329.642*
	(371.696)	(268.491)	(212.299)	(982.738)	(810.107)	(687.651)
Assigned Handbook and Counseling	531.564*	652.882***	578.620***	1703.126*	1691.132**	1598.410**
	(277.018)	(228.872)	(189.635)	(985.361)	(798.465)	(689.008)
Assigned All Three	1114.562**	652.279**	489.824**	1843.933*	1562.743*	1611.174**
	(513.767)	(273.257)	(209.071)	(976.338)	(811.879)	(721.083)
Assigned Handbook Only X Below-Md BL Aspirations	1126.896	51.246	-11.604	-2398.499**	-1514.369**	-1337.772**
	(1075.273)	(234.792)	(186.343)	(1087.344)	(695.912)	(583.556)
Assigned Handbook and Movie X Below-Md BL Aspirations	-864.910**	-730.406***	-593.086***	-1348.366	-1587.748**	-1539.837**
	(374.696)	(269.780)	(212.928)	(952.487)	(776.493)	(664.422)
Assigned Handbook and Counseling X Below-Md BL Aspirations	-610.654**	-730.127***	-599.614***	-1754.661*	-1579.841**	-1474.590**
	(297.965)	(236.941)	(198.951)	(995.899)	(777.587)	(681.562)
Assigned All Three X Below-Md BL Aspirations	-1144.661**	-631.809**	-520.059**	-2355.687**	-1954.578**	-1988.679***
	(510.946)	(290.379)	(216.053)	(1062.597)	(774.506)	(686.813)
Stratification Controls, Control for Baseline Level of Outcome, And Village-level Fixed Effects	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
R-squared	0.067	0.102	0.113	0.520	0.502	0.517
Sample Size	1178	1178	1178	1179	1179	1179
Outcome Mean for High-Aspiring Entrepreneurs in Control	1323.944	1236.612	1209.951	9597.913	9258.308	8878.403
Outcome SD for High-Aspiring Entrepreneurs in Control	3293.439	2475.358	2022.040	12194.224	10632.002	9368.423
Outcome Mean for Low-Aspiring Entrepreneurs in Control	483.519	483.519	483.519	2651.488	2652.602	2655.014
Outcome SD for Low-Aspiring Entrepreneurs in Control	880.933	880.933	880.933	2021.287	2019.867	2016.913
F-test (p-value): Book = Book X Interaction	0.478	0.445	0.321	0.044	0.030	0.017
F-test (p-value): Book & Movie = (Book & Movie) X Interaction	0.200	0.152	0.173	0.534	0.632	0.631
F-test (p-value): Book & Assist. = (Book & Assist.) X Interaction	0.729	0.649	0.889	0.928	0.819	0.789
F-test (p-value): All Three = All Three X Interaction	0.899	0.912	0.838	0.346	0.386	0.378

This table presents results from regressions of business sales and profits on treatment dummies using data from the first endline survey six months after treatment. Columns (1) to (3) present results from regressions that take as their outcome monthly business profits. Specifically, we calculate monthly profits by subtracting self-reported total costs to the business from self-reported total monthly sales. In Columns (2) and (3), we show estimates for calculated monthly profits winsorized on both tails at the 1% and at the 2% level. Analogously, Columns (4) to (6) present results for self-reported total monthly sales. All regressions include stratification controls, controls for the outcome variable at baseline and village-level fixed effects. Robust standard errors are reported in parentheses. Statistically significant p-values are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level).

Table 8: Treatment Effects on Business Performance for High- and Low-Aspirers 18 Months After Treatment

	(1)	(2)	(3)	(4)	(5)	(6)
	Estimated Monthly Profits	Estimated Monthly Profits (Winsorized 1%)	Estimated Monthly Profits (Winsorized 2%)	Monthly Business Sales	Monthly Business Sales (Winsorized 1%)	Monthly Business Sales (Winsorized 2%)
Assigned Handbook Only	-124.803	81.110	98.966	124.240	169.984	329.534
	(393.534)	(276.082)	(233.771)	(653.818)	(595.798)	(552.392)
Assigned Handbook and Movie	174.688	220.510	257.151	1256.322	690.647	721.084
	(421.482)	(355.341)	(294.497)	(943.140)	(776.810)	(695.859)
Assigned Handbook and Counseling	522.263	519.478	526.022*	1811.681	1039.731	1116.623
	(408.548)	(322.356)	(272.728)	(1467.126)	(841.020)	(725.499)
Assigned All Three	893.129*	681.168**	623.875**	1773.521**	1726.702**	1797.919**
	(467.371)	(336.229)	(297.198)	(872.366)	(822.925)	(744.940)
Assigned Handbook Only X Below-Md BL Aspirations	-9.346	-173.517	-214.769	-1756.330***	-1843.795***	-1847.545***
	(364.170)	(252.239)	(221.695)	(659.186)	(558.434)	(541.127)
Assigned Handbook and Movie X Below-Md BL Aspirations	-190.938	-197.682	-275.035	-2287.690**	-1634.492**	-1469.838**
	(412.137)	(359.565)	(309.287)	(930.811)	(763.773)	(702.526)
Assigned Handbook and Counseling X Below-Md BL Aspirations	-234.474	-241.602	-278.831	-1741.004	-859.321	-790.098
	(406.094)	(344.396)	(306.588)	(1466.135)	(845.029)	(765.437)
Assigned All Three X Below-Md BL Aspirations	-794.366*	-563.048	-569.582*	-1952.787**	-1940.405**	-1852.613**
	(467.091)	(361.195)	(322.949)	(881.227)	(812.473)	(750.566)
Stratification Controls, Control for Baseline Level of Outcome, And Village-level Fixed Effects	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
R-squared	0.230	0.090	0.093	0.464	0.437	0.450
Sample Size	1003	1003	1003	1018	1018	1018
Outcome Mean for High-Aspiring Entrepreneurs in Control	1323.944	1236.612	1209.951	9597.913	9258.308	8878.403
Outcome SD for High-Aspiring Entrepreneurs in Control	3293.439	2475.358	2022.040	12194.224	10632.002	9368.423
Outcome Mean for Low-Aspiring Entrepreneurs in Control	483.519	483.519	483.519	2651.488	2652.602	2655.014
Outcome SD for Low-Aspiring Entrepreneurs in Control	880.933	880.933	880.933	2021.287	2019.867	2016.913
F-test (p-value): Book = Book X Interaction	0.562	0.635	0.481	0.006	0.001	0.001
F-test (p-value): Book & Movie = (Book & Movie) X Interaction	0.945	0.914	0.926	0.082	0.080	0.134
F-test (p-value): Book & Assist. = (Book & Assist.) X Interaction	0.264	0.243	0.262	0.912	0.765	0.570
F-test (p-value): All Three = All Three X Interaction	0.726	0.639	0.798	0.760	0.683	0.910

This table presents results from regressions of business sales and profits on treatment dummies using data from the second endline survey eighteen months after treatment. Columns (1) to (3) present results from regressions that take as their outcome monthly business profits. Specifically, we calculate monthly profits by subtracting self-reported total costs to the business from self-reported total monthly sales. In Columns (2) and (3), we show estimates for calculated monthly profits winsorized on both tails at the 1% and at the 2% level. Analogously, Columns (4) to (6) present results for self-reported total monthly sales. All regressions include stratification controls, controls for the outcome variable at baseline and village-level fixed effects. Robust standard errors are reported in parentheses. Statistically significant p-values are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level).

Table 9: Treatment Effects on Educational Aspirations for High- and Low-Aspirers 6 Months After Treatment

	(1)	(2)	(3)	(4)	(5)	(6)
	Children's Education		*Daughter's Education*		*Son's Education*	
	Aspired Education (Years)	At Least MA (Yes/No)	Aspired Education (Years)	At Least MA (Yes/No)	Aspired Education (Years)	At Least MA (Yes/No)
Assigned Handbook Only	-0.284	0.027	-0.730	-0.058	0.132	0.035
	(0.408)	(0.060)	(0.487)	(0.070)	(0.590)	(0.075)
Assigned Handbook and Movie	-0.362	0.020	-0.213	0.038	-0.278	-0.014
	(0.407)	(0.062)	(0.482)	(0.082)	(0.592)	(0.075)
Assigned Handbook and Counseling	-0.309	-0.095*	-0.354	-0.097	0.184	-0.025
	(0.445)	(0.056)	(0.558)	(0.069)	(0.515)	(0.069)
Assigned All Three	0.983*	0.132**	1.035	0.130	0.776	0.124
	(0.532)	(0.062)	(0.707)	(0.082)	(0.585)	(0.076)
Assigned Handbook Only X Below-Md BL Aspirations	-0.128	-0.066	-0.107	-0.050	-0.428	-0.073
	(0.511)	(0.075)	(0.588)	(0.086)	(0.784)	(0.092)
Assigned Handbook and Movie X Below-Md BL Aspirations	0.443	-0.004	0.719	-0.017	-0.492	-0.063
	(0.506)	(0.077)	(0.648)	(0.098)	(0.606)	(0.089)
Assigned Handbook and Counseling X Below-Md BL Aspirations	-0.223	0.050	0.180	0.046	-0.956*	-0.021
	(0.500)	(0.066)	(0.649)	(0.080)	(0.560)	(0.078)
Assigned All Three X Below-Md BL Aspirations	-1.359**	-0.130*	-0.931	-0.074	-1.824***	-0.200**
	(0.588)	(0.072)	(0.777)	(0.092)	(0.623)	(0.086)
Stratification Controls, Control for Baseline Level of Outcome, And Village-level Fixed Effects	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
R-squared	0.152	0.165	0.216	0.215	0.168	0.188
Sample Size	696	696	454	454	453	453
Outcome Mean for High-Aspiring Entrepreneurs in Control	17.577	0.323	18.000	0.366	17.386	0.295
Outcome SD for High-Aspiring Entrepreneurs in Control	3.191	0.471	3.633	0.488	2.863	0.462
Outcome Mean for Low-Aspiring Entrepreneurs in Control	16.785	0.222	16.458	0.208	16.933	0.222
Outcome SD for Low-Aspiring Entrepreneurs in Control	3.290	0.419	3.108	0.410	3.512	0.420
F-test (p-value): Book = Book X Interaction	0.387	0.562	0.136	0.187	0.670	0.650
F-test (p-value): Book & Movie = (Book & Movie) X Interaction	0.864	0.820	0.422	0.794	0.136	0.333
F-test (p-value): Book & Assist. = (Book & Assist.) X Interaction	0.223	0.458	0.763	0.507	0.146	0.539
F-test (p-value): All Three = All Three X Interaction	0.401	0.978	0.858	0.476	0.039	0.307

This table presents results from regressions of the entrepreneur's aspirations for their children's educational attainment at age 25 on treatment dummies using data from the first endline survey six months after treatment. Aspirations are elicited for the oldest son and daughter under the age of 18 years, respectively. Columns (1) to (2) present results from regressions that take an aggregate score of the average aspirations for both son and daughter. While Column (1) reports results from regressions that take as their outcome the number of years of aspired education, Column (2) reports estimates for a dummy which takes the value one if the entrepreneur aspires at least to Master-level education. Analogously, Columns (3) to (4) report aspirations for the entrepreneur's daughter's education and Columns (5) and (6) for the entrepreneur's son's education. All regressions include stratification controls, controls for the outcome variable at baseline and village-level fixed effects. Robust standard errors are reported in parentheses. Statistically significant p-values are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level).

Table 10: Treatment Effects on Satisfaction for High- and Low-Aspirers 6 and 18 Months After Treatment

	(1)	(2)	(3)	(4)
	6-Months Endline		*18-Months Endline*	
	Financial Satisfaction (1-10)	Life Satisfaction (1-10)	Financial Satisfaction (1-10)	Life Satisfaction (1-10)
Assigned Handbook Only	0.023	-0.293	0.399	0.476*
	(0.255)	(0.250)	(0.254)	(0.253)
Assigned Handbook and Movie	0.182	-0.222	0.371	0.119
	(0.264)	(0.262)	(0.257)	(0.256)
Assigned Handbook and Counseling	0.237	-0.039	0.142	0.111
	(0.257)	(0.247)	(0.241)	(0.242)
Assigned All Three	0.646***	0.199	0.448*	0.437*
	(0.245)	(0.244)	(0.250)	(0.234)
Assigned Handbook Only X Below-Md BL Aspirations	-0.059	0.157	-0.371	-0.348
	(0.320)	(0.308)	(0.307)	(0.311)
Assigned Handbook and Movie X Below-Md BL Aspirations	0.033	-0.055	-0.301	-0.254
	(0.304)	(0.299)	(0.293)	(0.300)
Assigned Handbook and Counseling X Below-Md BL Aspirations	0.127	0.013	0.123	0.134
	(0.329)	(0.334)	(0.280)	(0.287)
Assigned All Three X Below-Md BL Aspirations	-0.486*	-0.130	0.003	-0.567**
	(0.275)	(0.281)	(0.288)	(0.258)
Stratification Controls, Control for Baseline Level of Outcome, And Village-level Fixed Effects	*Yes*	*Yes*	*Yes*	*Yes*
R-squared	0.037	0.031	0.040	0.044
Sample Size	1179	1181	1018	1019
Outcome Mean for High-Aspiring Entrepreneurs in Control	6.679	7.376	6.581	6.935
Outcome SD for High-Aspiring Entrepreneurs in Control	2.396	2.133	2.118	2.058
Outcome Mean for Low-Aspiring Entrepreneurs in Control	6.159	6.910	6.171	7.026
Outcome SD for Low-Aspiring Entrepreneurs in Control	2.171	2.298	2.090	2.167
F-test (p-value): Book = Book X Interaction	0.895	0.610	0.918	0.635
F-test (p-value): Book & Movie = (Book & Movie) X Interaction	0.391	0.256	0.782	0.605
F-test (p-value): Book & Assist. = (Book & Assist.) X Interaction	0.203	0.932	0.291	0.339
F-test (p-value): All Three = All Three X Interaction	0.498	0.776	0.072	0.571

This table presents results from regressions of satisfaction scores on treatment dummies using data from the first and second endline survey six and eighteen months after treatment. Columns (1) and (2) present results from regressions using data from the first endline that take as their outcomes overall life satisfaction (Column 1) and the entrepreneur's satisfaction with the finances of their household (Column 2). Following standard questions from the World Values Survey, both scores are measured as self-reports on a scale from 1 to 10 (World Values Survey, 2014). Analogously, Columns (3) and (4) show equivalent regression results using data from the second endline survey. All regressions include stratification controls, controls for the outcome variable at baseline and village-level fixed effects. Robust standard errors are reported in parentheses. Statistically significant p-values are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level).

Table 11: Characteristics of Entrepreneurs With Above-median Business Aspirations

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Above-median Aggregate Short-term Aspirations					Above-median Aggregate Long-term Aspirations				
Sociodemographics										
Entrepreneur's Gender (Male=1)	0.161***				0.130***	0.229***				0.203***
	(0.031)				(0.029)	(0.031)				(0.030)
Entrepreneur's Age (Years)	-0.008***				-0.004***	-0.009***				-0.005***
	(0.001)				(0.001)	(0.001)				(0.001)
Has at Least 3 Children (Yes=1)	0.075**				0.006	0.116***				0.050*
	(0.032)				(0.030)	(0.031)				(0.030)
Formal Education (Years)	0.006				0.000	0.013***				0.007*
	(0.004)				(0.004)	(0.004)				(0.004)
Business Characteristics										
Business age (Years)		-0.006***			-0.004***		-0.005***			-0.004***
		(0.001)			(0.001)		(0.001)			(0.001)
Firm Registered (for Taxes or Else)		0.014			-0.021		0.111***			0.045
		(0.040)			(0.040)		(0.039)			(0.040)
Business size (square meters)		0.012***			0.011***		0.009***			0.007***
		(0.003)			(0.003)		(0.002)			(0.002)
Estimated Profits Last Month (win 1%)		-0.000			-0.000		0.000			0.000
		(0.000)			(0.000)		(0.000)			(0.000)
Total number of employees		0.124***			0.122***		0.120***			0.118***
		(0.011)			(0.011)		(0.011)			(0.011)
Business Practices										
Marketing Subscore			0.004		-0.033			0.101		0.060
			(0.082)		(0.073)			(0.081)		(0.075)
Stocking-up Subscore			0.057		0.004			0.092*		0.036
			(0.054)		(0.047)			(0.053)		(0.047)
Record-keeping Subscore			0.086		-0.039			0.041		-0.093
			(0.095)		(0.088)			(0.097)		(0.091)
Financial Planning Subscore			0.302***		0.207**			0.260**		0.151
			(0.102)		(0.097)			(0.104)		(0.098)
At Least 5 New Products in Last 3 Months (Yes=1)			0.153***		0.106***			0.188***		0.135***
			(0.040)		(0.039)			(0.039)		(0.037)
Psychological Characteristics										
Digit Span (0-8 Scale)				0.023	-0.021				0.044***	-0.010
				(0.017)	(0.016)				(0.017)	(0.017)
Time preference (0-10 Scale)				-0.005	-0.000				-0.003	0.004
				(0.006)	(0.005)				(0.007)	(0.006)
Risk Preference (0-10 Scale)				0.019***	0.012*				0.004	-0.003
				(0.007)	(0.006)				(0.007)	(0.007)
Village-level Fixed Effects	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
R-squared	0.105	0.256	0.093	0.064	0.292	0.121	0.205	0.084	0.042	0.267
Sample Size	1181	1181	1181	1181	1181	1181	1181	1181	1181	1181
Outcome Mean in Control	0.500	0.500	0.500	0.500	0.500	0.499	0.499	0.499	0.499	0.499

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This table presents results from regressions of dummies for high business aspirations at baseline on a number of entrepreneur- and business-level characteristics. Columns (1) to (5) present results from regressions that take as their outcome a dummy indicating whether an entrepreneur has above-median aggregate business aspirations for the short-term at baseline. In Columns (1) to (4), we sequentially test regression models with different vectors of entrepreneur-level sociodemographics, business characteristics, business practices, and psychological characteristics, while in Column (5) we combine all vectors in one specification. Analogously, Columns (5) to (10) show results from regressions taking as their outcome a dummy of whether an entrepreneur shows above-median aggregate business aspirations for the long-term at baseline. All regressions include village-level fixed effects. Robust standard errors are reported in parentheses. Statistically significant p-values are highlighted by: * (10% significance level), ** (5% significance level), and *** (1% significance level)

A Example Businesses

Figure 1: Pictures of Two Businesses Representative of the Study Sample





B Maps of Study Area

Figure 2: Distribution of Businesses Across Jakarta (White=Treated, Black=Control)

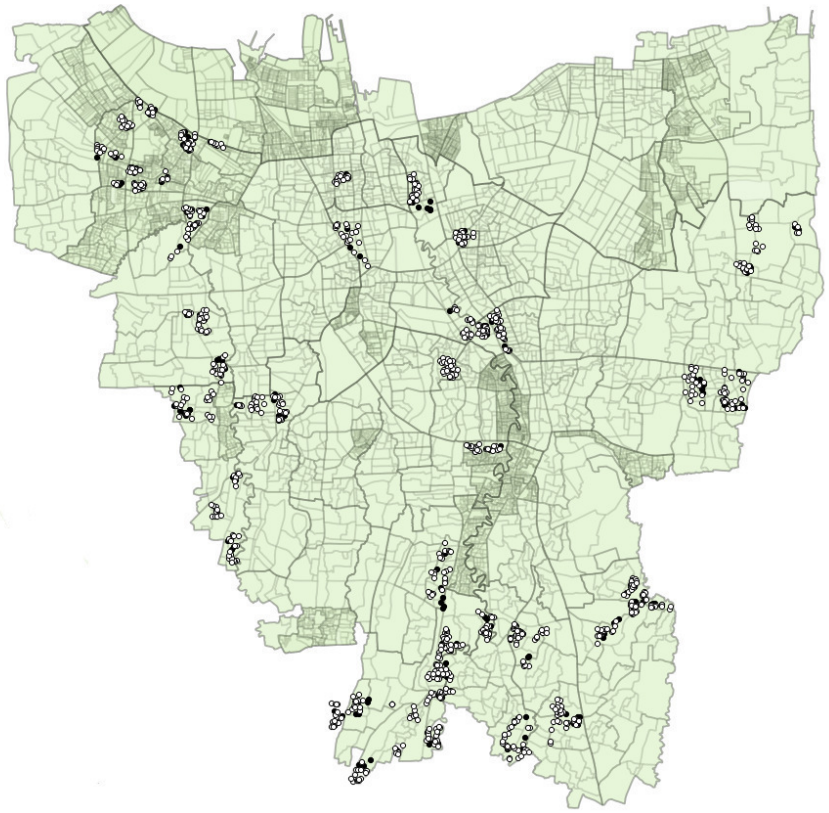


Figure 3: Distribution of Experimental Groups at the Village-level: Example Village “Pegangsaan”

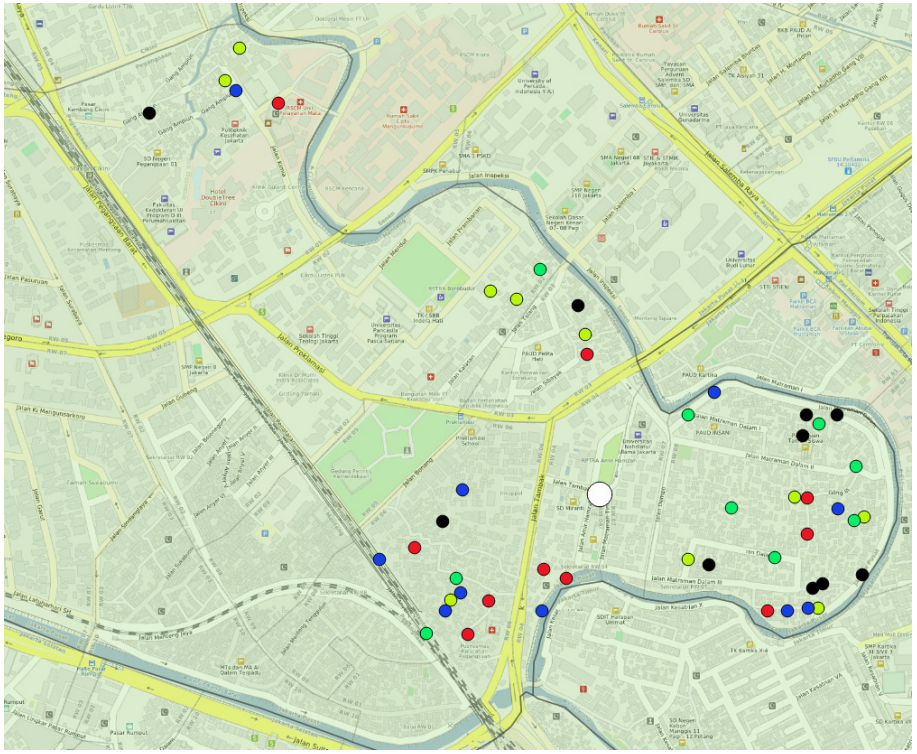
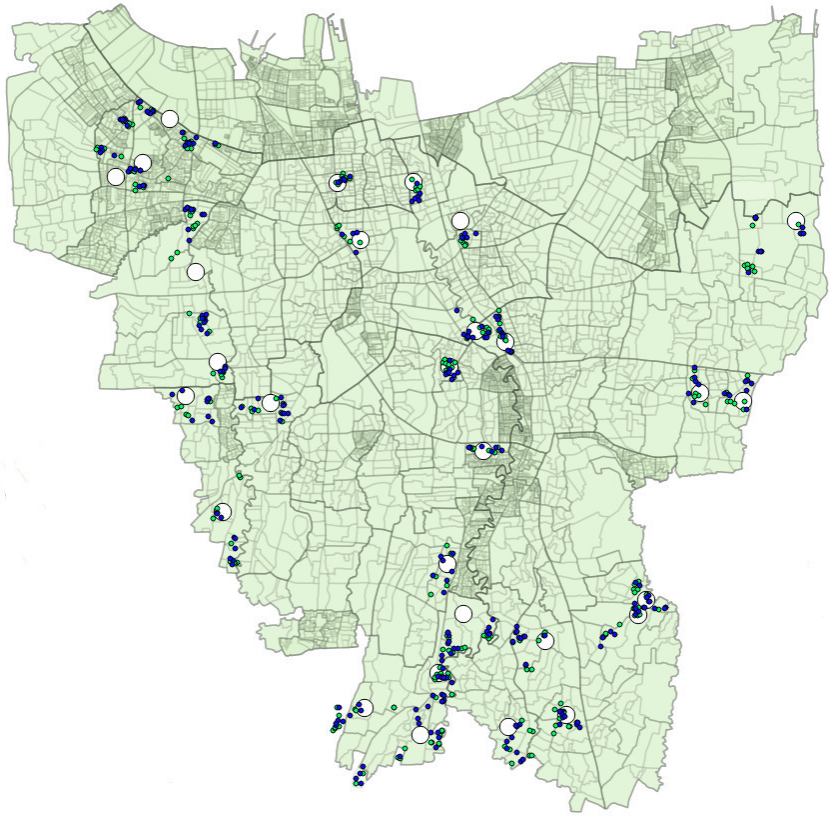


Figure 4: Locations of Movie Screenings (Big White Circles) and Businesses Invited to the Screenings



C Project Timeline

FIGURE 1: STUDY TIMELINE

