

Consulting and Capital Experiments with Micro and Small Tailoring Enterprises in Ghana¹

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Abstract

We conduct a randomized evaluation in urban Ghana in which micro and small tailoring enterprises receive advice from an international consulting firm, cash, both, or neither. We find that all three treatments lead to their immediate intended effects: changed business practices and higher investment. However, both treatments lead to lower profits on average in the short term. Then, in the long run, the micro-entrepreneurs in the treatment group disinvest relative to those in the control group, and revert back to their prior scale of operations and business practices.

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I. Introduction

We test whether providing urban micro enterprises with capital, consulting services or both can help relax constraints and facilitate firm growth. The interventions were not intended to be scalable: the capital was provided as grants, not loans, and the consulting services were costly relative to the firm size. Rather, we ask whether the transformation from micro enterprise to small business is even possible for a “big push” effort, given the mixed evidence on the impacts of credit and training programs. Thus, we relax the potential constraints substantially by giving large cash grants and enlisting four talented and creative professional business consultants, who know the local business environment, to provide their advisory services to micro-entrepreneurs over a significant period of time.²

We find that entrepreneurs invested the cash and took the consultants’ advice, but both treatments led to lower profits on average. Eventually, the entrepreneurs reverted back to their prior operations, and likewise there was no meaningful long run change in firm size. Furthermore, there was no additive effect (positive or negative) from providing both treatments at once.

We conducted the experiment in Accra, Ghana with 160 small urban tailors from 2008-2011. The capital treatment group of 36 tailors received grants of 200 cedis (about US \$133), doubling their average working capital. The consulting treatment group of 41 tailors received one year of management consulting services from Ernst & Young (“E&Y”), a major international consulting firm. The combined group, containing 36 tailors, received both the cash grant and the management consulting. The control group contained 45 tailors.

² Thus the consulting treatment arm purposefully differs from existing literature and development practice. Prior studies and practice focus either on providing training to micro-entrepreneurs but not customized consulting services (e.g., see (Berge, Bjorvatn, and Tungooden 2011; Bruhn and Zia 2011; Calderon, Cunha, and de Giorgi 2013; Drexler, Fischer, and Schoar 2011; Giné and Mansuri 2011; Karlan and Valdivia 2011), or focus on customized consulting services, but for large firms (Bloom et al. 2012).

II. Sample Frame, Interventions and Data

a) Sample

We chose to work with microenterprises in a single industry because it allowed the consultants to develop expertise in that sector and it allowed us to gather more precise data on business practices by asking industry-specific questions in our surveys. We looked for an industry that has continuous variation in firm size (making growth plausible), is not concentrated in a particular part of the Accra (minimizing possible spillovers to control groups), and is relatively widespread (allowing a sufficiently large sample). The tailor industry fits these requirements: tailors are easy to find throughout the city, and one-person tailoring shops are common, but 10-person and larger tailor firms also exist.

The 160 study participants were randomly selected from an enumeration of all tailors and seamstresses in eight neighborhoods in/around Accra who had five or fewer total employees and apprentices. Thirty five percent of participants had zero employees or apprentices, and 94% had three or fewer employees or apprentices (see Appendix Table 1 for more details). The eight neighborhoods were chosen because they had enough tailors to form the sample frame, and thus it was not overly costly for consultants and surveyors to visit multiple participants in a day. If two tailors were immediate neighbors, one was randomly chosen to be in the enumeration, to limit the chance the consulting lessons would be overheard by control group tailors. The density of the firms within each neighborhood varied. In one neighborhood, the tailors were right next to each other in market stalls, whereas in other neighborhoods tailors were between a one and ten minute walk apart. Each neighborhood had 20 firms at the baseline. No firms refused to take part in the full study. Table 1 reports baseline values for various relevant metrics and shows that assignment to the capital or consulting groups is not correlated with baseline characteristics.

Five of the tailors passed away over the course of the study and six moved, leaving a final sample of 149 for the final follow-up. Attrition is not correlated with treatment status³. Though no tailors permanently exited the tailoring business during the course of the study, some tailors did temporarily stop sewing, for health or other reasons. These individuals were included, with profit being either zero or negative (depending on whether all expenses ceased). If a respondent diversified into other activities (for example, selling goods), then we included the revenue, expenses and profits from the additional activities as well (i.e., the sample frame is defined as the individual and any of their enterprises jointly, not merely the tailoring enterprise).

Figure 1 provides a timeline of all interventions and data collected in the study.

b) **Consulting Treatment**

At the baseline, the microenterprises appeared to be poorly managed, according to standards in the managerial performance literature (Bloom and Van Reenen 2007). Only 17% of the respondents reported keeping any written financial records, only 7% reported spending any money on marketing in the last year and only 30% of shops were rated as very organized by our enumerators. These business practices are correlated at baseline with profitability ($r=0.2648$), thus suggesting that the measures are indicative of relevant management practices for these enterprises.

From E&Y in Ghana, we worked with one partner, a director and four consultants. The E&Y consultants typically work on business advisory engagements in a variety of areas including training, human resources, monitoring and evaluation, and project management. Consultant biographies and examples of prior engagements are in Appendix B⁴. We worked closely with the consultants to monitor hours spent with the tailors and to maintain momentum throughout the study period. The consultants

³ Appendix Table 2 details the sample attrition.

⁴ At the time of the study, the un-subsidized hourly rate for the consultants was US \$75 per hour. We paid a fixed price of \$75,000 plus travel expenses for the consultant labor, based on an expected 3,000 total hours worked, implying a subsidized rate of US \$25 per hour. Actual total hours worked were approximately 1200, including travel time. The difference between the expected and actual hours worked was due to scheduling and motivational challenges on the part of both the consultants and the tailors.

received a two-day training on microenterprise coaching from Ghana's National Bureau of Small Scale Industries, which frequently provides training to microenterprises in Ghana, on the Bureau's method for training micro-entrepreneurs.

The consultants largely followed an adapted version of this framework (outlined in Appendix C) for technical topics. The training modules were twelve-fold: (1) Record Keeping, (2) Procurement, (3) Operational Activities, (4) Motivation of workers, (5) Value addition, (6) Costing, (7) Customer service, (8) Security of shop, (9) Sales and marketing, (10) Work/life balance, (11) Financing of business and savings, and (12) Business growth. In addition, consultants were encouraged to act as mentors for the tailors, to think creatively about important business decisions the tailors face, and to provide *ad hoc* advice that they felt would be beneficial. Examples of this *ad hoc* support can be seen in the consultants' notes in Appendix D.

We conducted the individual-level randomization, stratified by the tailor's neighborhood of operation, into consulting/non-consulting in January 2009.

The training took place at the tailors' shops over the course of one year, from February 2009 to February 2010. After mastering the foundational lesson on record keeping, the consultants helped the tailors calculate profit margins on each item they sold and calculate monthly income statements. Lessons on customer service and employee management occurred throughout the training. For example, if the consultants observed impolite behavior to customers while in the shop, they might take the opportunity to discuss customer service. The pace of the training was set by the pace at which the tailors mastered each set of skills, such that some never moved past record keeping, while others began preparing cash flow statements and developing detailed plans to finance expansion. The training included both simple, targeted lessons, similar to the "rule of thumb" lessons in Drexler et al (2011), as well as more complicated modules. Examples of the rules of thumb are: "keep your business and personal money separate" and "Buy a second wallet to keep your business money in, so you don't mix it with personal

money.” Examples of more complicated modules include calculating a monthly profit/loss statement or calculating profits on specific items.

Similar to other studies on business training, some tailors were reluctant to make time for the consultants, and, on average, the tailors covered fewer modules than expected. The average total time spent interacting with each tailor was ten hours over the course of the study (Figure 2) and the maximum hours was 18. This is comparable to Drexler et al (2011), which reports maximum hours of 15 for the “rule-of-thumb” group and 18 for the accounting treatment. Few variables predict with statistical significance the number of hours individuals participated, although there is a large differential across consultants, and firms with higher baseline profits had slightly more hours (Appendix Table 3). Each available tailor was visited one to four times per month, with each visit lasting thirty minutes to one hour. Note the mean total number of hours visited is ten, thus the opportunity cost of that time, spread over the year, is effectively included in the empirical analysis. The consultants attempted to schedule meetings during slow times to minimize interruption, but inevitably, meetings were occasionally disrupted by clients.. The consultants used these moments to provide feedback on the tailors’ interactions with clients, or to practice the customer service lessons they discussed. One of the consultants was unavailable after November 2009 and was replaced by a consultant from the National Bureau of Small Scale Industries for the final two months – the same consultant who provided the initial two-day training for the E&Y team.

In a follow-up survey, participants reported satisfaction with the consulting services. The average reported willingness to pay for the same consultants to come and continue the training was 5.9 cedis per hour (US \$4, which is far below the normal rate of the consultants but still large for micro or small entrepreneurs), 2.8 cedis per hour for other consultants to continue the same training (p-value of equality to the E&Y consultants<1%), and 4.2 cedis per hour for another training of their choice (p-value of equality to the E&Y consultants<5%).

c) Capital Grant

At the baseline, 82.5% of our sample frame had never accessed formal credit markets. The unconditional capital grant was 200 cedis (approximately US \$133). This is a little more than the average tailor's total baseline cash, savings and on-hand money. The capital grant therefore represents, on average, a doubling of the reported cash available for investment for a group of micro entrepreneurs who do not have a prior history of accessing formal loans. In terms of typically desired investment goods, the capital grant was large enough to buy a mechanical sewing machine. An electric, "industrial" sewing machine cost 300-600 cedis, and was thus within reach if combined with savings or borrowing.

The capital grant randomization was done in October 2009, eight months after the consulting began, and was stratified on consulting treatment status and the tailor's community of operation. Between the randomization stage and the distribution of the capital grant, we verified that the capital grant was not correlated with previous profit data, age, gender, marital status, literacy, years of experience, number of staff, or weekly hours worked. Of the initial sample frame of 160, two individuals in the study died and four permanently moved out of the study area before the capital grant randomization, thus leaving 154 respondents for inclusion in the capital grant randomization. Of these, 75 were randomly selected to receive capital (37 from the consulting group and 38 from the no consulting group). We asked capital grant recipients to spend the money on their businesses, but explained that they would not have to repay the money under any circumstances.

We included a two-week buffer between the notification and the delivery of money to leave time for the consultants to help their respondents plan how to use the money. However, not all consultants and tailors were available in this window, so not every tailor developed a plan before receiving the money. Control group individuals were provided key chains, t-shirts, and mugs in order to create good will and encourage continued participation in surveying.

d) Survey Data

We conducted eight rounds of surveying over the course of two years. We split the baseline survey into two separate waves one month apart to reduce the length of each interview (December 2008

and January 2009, Rounds #1 and #2). The first visit focused on financial outcomes and the second visit focused on business processes and attitudes. Each survey took about 40 minutes to one hour. The first follow-up was conducted six months later (five months after the consulting began), in July 2009 (Round #3), and primarily included questions on business processes.

In August 2009 (Round #4), we visited the respondents every other day to record how much money they received, how much they spent, how many sales they made, and what type of clothes they sold. The goal of these visits was to get a measure of profitability that was unaffected by changes in the consulting group's understanding of how to calculate profit and ability to recall revenue/expenses, and to collect more frequent data to reduce in-firm variation. In September 2009 (Round #5), we returned once more to gather recall measures on expenses, revenue and profit for the previous month (August 2009).

We repeated the baseline format for the next wave, with surveys in December 2009 (Round #6) and January 2010 (Round #7). The December survey again focused on financial outcomes and the January survey focused on business process outcomes. In December 2010 (Round #8), we conducted the final follow-up, which focused on financial outcomes and business processes. This survey occurred 14 months after the capital drop and 11 months after the consulting stopped.

III. Estimation Models and Results

We examine a series of outcomes related to the interventions: knowledge of business practices in the consulting curriculum, adoption of these practices, investment and savings behavior, and business income and profits. A typical column in the tables that follow reports the results of a cross-sectional regression at time t of the form

$$(0) \quad y_i = \alpha + T_i\beta_1 + y_{i0}\beta_2 + N_i\beta_3 + \varepsilon_i,$$

where y_i is the post treatment outcome for tailor i . Note that we have multiple measures of post treatment outcomes in each wave. T_i is a vector of indicators of the intent-to-treat status of tailor i , y_{i0} is the value of the outcome for tailor i in the baseline (either round 1 or round 2, depending upon the measure) and N_i is a vector of dummy variables corresponding to the neighborhood in which tailor i operates. This specification permits a flexible examination of the timing of responses to the treatments. To estimate average effects across rounds, we pool all follow-up rounds, add round dummies (“R”), and report robust standard errors clustered at the individual level.

$$(0) \quad y_{it} = \alpha + T_{it}\beta_1 + y_{i0}\beta_2 + N_i\beta_3 + R_t\beta_4 + \varepsilon_{it},$$

We divide the results into four categories: (1) business literacy and business practices; (2) investments, savings and loans; (3) profitability; and (4) measurement.

a) Business literacy and practices

Eleven months after the end of the consulting period, we find that being assigned to consulting (irrespective of capital treatment status) increased business literacy knowledge by an average of 0.3 questions on a 4-question quiz, which is 0.52 of a standard deviation (Table 2, column 1). We also find that tailors who received the consulting treatment adopted the practices discussed in the curriculum, at least temporarily. Columns 3-5 of Table 2 report the results of estimating (0) where y_{it} is an index of the business practices encouraged by the consultants at three different times after consulting began. Business practices were measured by self-reported responses to 35 questions on various practices advocated for by the consultants. Not all of the questions were asked in every round; for columns 3 through 5, y_{it} is a management practice score calculated as the proportion of recommended practices asked about in each round, which the micro-entrepreneur reports doing. In the six month follow-up (July 2009) the consulting treatment increased the management practice score by 5.65 percentage points, against a baseline average of 40% of questions answered correctly (p-value<1%). At the 12-month follow-up (January 2010), this

effect had diminished to 2.95 percentage points, although the reduction from the six-month treatment effect to the twelve-month treatment effect is not statistically significant. At the two-year follow-up (December 2010), the treatment effect further diminished to 0.8 percentage points (although still not significantly different from that estimated in the six month follow-up).

In column 2, we estimate (2) the average effect of the consulting treatment on business practices over all post-consulting rounds. The pooled index for Column 2 was generated by taking the average number of practices adopted across all post-consulting rounds. As can be expected, the average effect falls within the range described above for each round (p-value <10%).

The consultants' foundational lesson was record keeping, so this was the lesson that the largest number of tailors received and was the one that was returned to most often. As such, if the tailors learned anything from the consulting, we would expect it to be record keeping. We find a strong impact on record keeping (p-value<1%), with the tailors who received consulting being 45% more likely to report keeping records in July 2009 and 23% more likely to keep records in January 2010, against a baseline average of 17%. By December 2010, however, this point estimate had decreased to 6.6%, which is statistically distinguishable from the initial 45% (p-value<1%). Record keeping in the consulting group declined from a high of 63% of consulting tailors in round 3 to only 28% in round 8, so this impact is caused by consulting tailors abandoning record keeping, not control tailors catching up to consulting tailors in record keeping.

Overall, we conclude that the consulting was successful in changing both business knowledge and behavior, although the effect on behavior diminished over time such that one year after the consulting ended there were no statistically significant differences in behavior between the consulting group and the control group.

b) Investment

Table 3 shows estimates of equation (0) when y_{it} is investment flow over the previous 12 months. Our preferred investment measure is the amount of investment in the category the tailor stated he or she would invest in when asked how they would spend an extra 200 cedis at the baseline (details shown in Appendix Table 2). This measure has the highest power, given that we would not expect everyone to invest in the same asset class, so any average impact in an asset class would be diluted by those who preferred to invest in a different type of investment. The categories that make up the “investment in preferred category” variable are machines, property and expenses on materials.

In column 1, we see that the capital grant group invested an average of 179 cedis more than the control group by December 2009 (about two months after the grants were made in cash). The point estimate for the investment response of the combined group is lower, only 90 cedis. These two estimates are jointly significantly different from zero ($p\text{-value} < 10\%$), but they are not significantly different from each other. However, one year later in December 2010 (Column 2), we no longer see any additional investment and the effect disappears. No new capital grant was provided, so new investment would only likely occur if higher profits from year one led to higher investment in year two, and this did not bear out in the data.

Columns 3-10 break the investment results down into one year results (Col 3-6) and two year results (Col 7-10), and then within each time period into four outcome measures: total investment, machines, property/shop, and inputs. Converting the outcome measure to investment in a particular category, rather than investment in what each tailor said they would do in the baseline, leads to a loss of statistical power as more noise is introduced. However, the general pattern persists and is consistent with columns 1 and 2. The first year results are generally positive, and the second year results are generally negative. The results are very similar when examining stocks of assets as opposed to flows (these results are not reported in tables).

Table 4 shows our results on savings. In lieu of investing the capital, the recipients could have saved the money, or, if the capital led to an increase in profits, saved a portion of the increase in profits. We find no statistically significant impacts on total savings or bank savings when pooling all rounds, but find an impact on susu savings⁵ in the capital & consulting group, whose average monthly susu savings is almost twice the baseline value of 18.6 cedis a month (point estimate 16.6, standard error 8.4). Looking at the cross-sectional impacts, we find that total savings, bank savings and susu savings were higher in the combined group in the December 2009 follow-up, about two months after the capital drop. We also find a statistically significant difference in total savings between the capital only and combined groups, with the capital only group having lower total savings (p-value<10%). This might explain the higher point estimate on investment in goals seen the capital only group – the consultants reported encouraging the capital winners to top up the capital drop with their own money to make larger purchases, saving to do so if necessary.

Table 5 examines net financial flows over the one and two year time horizons. In the months following the capital drop (Column 1, one-year), we find a reduction in loan take-up for those in the capital group . We find no long term impact on borrowing (Column 2)⁶.

Columns 3-6 of Table 5 examine the sum of capital flows from all channels. The higher-powered “investment in goal” specification shows increased investment, savings and fewer loans in the capital group (p-value<5%) and the combined group (p-value<5%) immediately following the grant. The effect of receiving any capital is positive (p-value<5%), and the combined group estimate is higher than the consulting only estimate (p-value<5%). The point estimates on capital and combined are greater than the amount of the capital drop, 200 cedis, but are not significantly different from 200. The total investment

⁵ We define susu savings for our tailors as any savings account where someone stops by your shop every day to collect money.

⁶ To examine if we are measuring debt at a high borrowing season (and thus may be at a peak of liquidity constraints), we examine seasonality of borrowing and find that borrowing over the three months from September to November is roughly equal to borrowing over the six months from January to June.

specification has qualitatively similar results but larger standard errors. Total uses for the money one year later in December 2010 are primarily negative and not significant.

In summary, short-run knowledge and business practices shift in the consulting group towards practices taught by the consultants, and short-run investments are made in the capital grant group. The tailors do seem to learn about new types of techniques from the consultants (or modify their prior beliefs about the profitability of these techniques). Furthermore, the tailors respond to the capital grant as though they are capital constrained in their business through increased investment and/or savings. However, in both cases we find that these changes in behavior are short-lived. One year later, there are no significant differences between the capital grant or consulting groups and the control group of tailors.

c) Profitability

An examination of profits provides an explanation for why the tailors abandoned these changes in behavior in the long term. Table 6, column 1 reports the results of estimating (2) where y_{it} is the tailor's stated income from his or her business. There is no evidence that the consulting treatment is associated with higher profits. Turning to look at the capital grant group, it seems that the capital grant *lowered* profits. The point estimate is a post-treatment drop in income of 45 cedis (p-value<5%), compared to a control group mean of 146 cedis. There is a smaller (and not statistically significant) drop of 23 cedis in income of the combined group. The capital only and combined point estimates are jointly statistically significant (p-value<10%), suggesting that the capital grant had negative effect on profits for both groups that received it.

We find no statistically significant impacts on revenue and expenses or changes in hours worked (Column 2-5 of Table 6)⁷, nor is there a statistically significant impact on total staff, apprentice use, or paid employees of any of the treatments (columns 6-8).⁸

Table 7 examines the average impact of the capital, consulting and combined treatments on post-treatment profits and employment. An examination of the time path of the impacts is revealing (shown in Figure 3). Recall from our earlier examination of business practices that tailors in the consulting group had adopted the advocated practices by round 3, but that the use of these practices dropped off in round 7 and then again in round 8. We find in column 1 of Table 7 that, by round 3, monthly income in the consulting group is 26 cedis lower than in the control group (p-value<5%). By round 5, income is almost statistically significantly higher in the consulting group, but in later rounds this effect disappears, and there is no difference in income between the consulting group and the control group.

In round 7, the first post-grant holiday season, the point estimate on income in the capital group is 53 cedis lower than the control and the combined group income is 16 cedis lower, but these estimates are not statistically significant. One year later, both groups show large drops in income relative to the control group (point estimates -75 and -98, standard errors 40 and 45, for capital versus combined, respectively). Our revenue and expense measures, reported in columns (6-11) are too noisy to permit conclusions to be drawn. The income results are extremely similar with the addition of wages that owners paid to themselves to the income measure (not reported).

The time path of the profits results mirrors the path of the consulting and capital results. In response to the consulting, the tailors changed their practices and profits decreased. The tailors reverted to their previous practices, and profits reverted to match those of the control group. In response to the capital, the

⁷ The revenue results and expenses results do not add up to revenue less expenses because some tailors are missing revenue data, but not expense data, or vice versa. If the sample is constrained to tailors who have both revenue and expense data, then the results do sum as expected (not shown).

⁸ Not shown, but we also tested the binary dependent variable of any paid employees, rather than the dependent variable of number of paid employees (Column 8). Results were qualitatively similar, and were not statistically different than zero.

tailors invested and, one year later, profits decreased and the tailors stopped investing. This suggests a learning dynamic where, in response to relaxed constraints, the tailors experiment with new techniques, learn that they are not profitable, abandon the techniques and recover to their previous scale.

d) Daily data collection versus recall

If individuals were systematically biased upward or downward in their perception of profits, and the record keeping removes some or all of that bias, we may estimate treatment effects that are mere reporting effects, and not reflective of actual changes in the enterprise. To address this, and to improve statistical power, we conducted a series of high frequency surveys (every other day) in August 2009, seven months after consulting began. We compared those high frequency visits to questions asked at the end of the month as recall questions.

In these high frequency surveys, we visited each tailor every-other day to ask, for the previous two days, how much money the tailors received, how much money they spent, how many sales they made, what hours they worked, and what types of garments were sold. We collected on average 23.9 days of data per tailor, which is 92.9% of workdays assuming a six-day workweek. We have an average of 0.9 days fewer data points for the consulting tailors than for the remaining groups; this difference is not statistically significant.

Table 8 reports the results of these daily visits. There are no statistically significant differences in cash received, cash spent, net cash received (cash in less cash out), the number of hours worked, or the number of sales made. Thus, the average impact of the consulting treatment in August 2009 appears to have been approximately zero and is not likely to be biased by recall ability or knowledge of profits.

To examine whether recall questions are accurate, we returned to the tailors in the following month (September 2009, Round 5) to ask about results in the previous month. The total expenses number from Round 5 should therefore roughly correspond to the sum of the cash spent from the daily visits data (i.e.,

treating the recall data as the truth)⁹. Appendix Table 6 makes this comparison for revenue (sum of cash in), expenses (sum of cash out), and revenue less expenses (sum of net cash). Column 3 reports the treatment effect of consulting on the difference between the recall amount and the sum of the high frequency visits data. For revenue, expenses and revenue less expenses, we find no statistically significant difference between the two reporting methods. Furthermore, the magnitude of the differences are fairly small, relative to the mean. This gives two insights: (1) the recall data are on average quite similar to the daily visits data; and (2) the consulting group does not appear to have more accuracy in the recall questions than the control group.

We also examine the dispersion of the difference between the recall and daily visits numbers by looking at the squared difference (Column 4), and find more dispersion for the consulting group than the control group. This could be a natural byproduct of record keeping combined with highly variable income: individuals do, on average, know their income (whether asked as a recall or daily), and they report that accurately on average whether they have records or not. But for high frequency surveys, if they have records they report exactly what they brought in, whereas without records they instead report an average figure. Thus the variance is higher for the sum of daily observations than the recall for a month, even if the mean is the same, for those that keep daily revenue records.

IV. Discussion of Power

We focus our discussion of statistical power on the profit results. The profit estimate for the consulting group is 0.9 (se=21.4), from a control group mean of 146 (Column 1 of Table 6). Thus, the upper bound of the 95% confidence interval is 41 cedis, a 28% increase over the control group mean. If we consider the impact of receiving any consulting, as opposed to the separate impact of consulting

⁹ From an accounting standpoint, expenses and cash spent should not be equal, but we expect the difference between accounting revenue/expenses and cash in/out to be relatively minor in our case.

versus consulting and capital combined, the upper bound of the 95% confidence interval is 23% of mean control group profits¹⁰. Although this is not trivial, it is small relative to the cost of the consultants' labor.

More importantly, we compare our 95% confidence interval to results from other studies. McKenzie and Woodruff (2013) review business training experiments and report the impact on profits and revenue of ten different estimates (of which only two report statistically significant results). We can reject (at 5%) impacts as large as the two statistically significant results from comparable studies. We can also reject a third large but not statistically significant result. The average impact from this table of ten estimates is 10.5% (Appendix Table 7). Weighting these point estimates by sample size, the average impact is 9.5%. We cannot reject the null that the impact of any consulting in our study is equal to the simple average or the weighted average by sample size (p-values of 14% and 17%).

The capital grant experiment has fewer comparable studies. The two most relevant capital grant studies are de Mel et al. (2008) and Fafchamps et al. (2013). The de Mel et al. (2008) study reports average impacts of 20% and 37% of real baseline profits (Tables 1 and 2). Fafchamps et al. (2013) report average impacts of 0%-13.7% in various specifications (Tables 2-3). Fafchamps et al. (2013) is particularly important comparison to our study, since it is located in the same city, during an overlapping time. A third related study is Blattman et al. (2013), which reports a 41% increase in real net cash earnings over four years from capital grants to underemployed youth that aimed to increase micro enterprise formation.

The 95% confidence interval of our point estimate for the capital only treatment is -66% to -1%, which includes neither the simple (27% increase in profits) nor the weighted average (25% increase in profits) of the results in found in de Mel et al (2008), Fafchamps et al (2013) and Blattman et al. (2013).

¹⁰ From a regression that combines consulting only and capital only into a single, "any consulting" group (not reported). The "any consulting" point estimate from this regression is -10.4 and the standard error is 17.4.

V. Conclusion

Canonical theories of development suggest that credit and managerial capital constraints inhibit investment and thus profits. To examine these hypotheses, we provided large grants of capital and management consulting, separately and combined, to urban microenterprises in Ghana. We find that the entrepreneurs invest the cash grants in their businesses and adopt the management practices advocated by the businesses consultants. But there is no evidence that these changes were associated with increases in profits, and in the long run – about one year after the interventions were completed – these microenterprises looked no different on average than the control group.

Critical questions remain, as the literature review in McKenzie and Woodruff (2012) documents a wide variety of outcomes across studies. We suggest four directions for further research: (1) heterogeneity with respect to type of entrepreneur and individual, (2) dynamics and determinants of learning (including differences in program design), (3) market selection for interventions, and (4) general equilibrium and competitive effects. We discuss each of the four directions briefly.

What are the individual factors that could help predict what type of individual has potential to be a positive outlier? Perhaps the problem with small and even medium sized evaluations in this space is that the positive impacts will be most pronounced in a few strong outliers, but ones that are difficult to predict beforehand. Are there diagnostics that could substitute for the costly experimentation otherwise required to distinguish a minority who can flourish at a larger scale from those who will not? For policy, such diagnostics could be used to target more efficiently, which is particularly critical if the intervention is great for some and bad for others.

Further related questions pertain to the process of learning. Here, we have found what we consider important results: individuals tried what was given to them (either advice from consulting, and/or investment from cash grants), but then learned that neither was profitable, and therefore stopped. Clearly there are many channels for learning: from one's own experience, from that of a teacher in a classroom setting, from a paid consultant, from an NGO, from a mentor with experience in one's own industry, etc.

How do these different channels of learning differ in effectiveness, and why? Could it be that better advice through a more effective channel would have had more positive impacts and long lasting changes in behavior?

Third, markets differ in terms of competitiveness, and such interventions as discussed here should generate different impacts depending on the competitive landscape. Perhaps the tailor industry is in perfectly competitive equilibrium, but some other industry is less so in the same geography. Understanding, and then testing, the underlying market factors that are necessary for success is important both for validating our models and for establishing diagnostics for policymakers and institutions interested in improving the industrial performance. For example, markets with potential product differentiation or skilled and available supply of labor may be ripe for such interventions, but those with fully competitive markets less so.

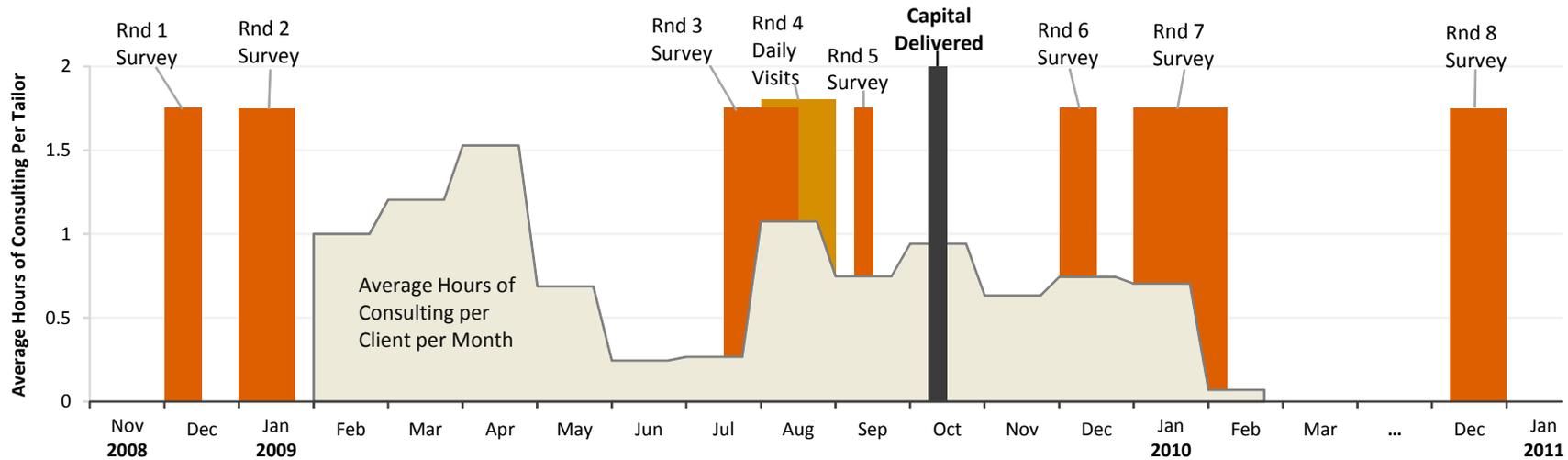
Lastly, few if any studies have satisfactorily tackled the impact of improving the performance of one set of firms on general equilibrium outcomes. The challenge is simple and obvious: if helping one firm greatly improve its performance yields a smidgeon of negative impacts for 100 other firms, it will be difficult to have sufficient statistical power to measure the smidgeons. Theory can help, as well as a focus on collecting data about the channels through which changes occur within the firm, and by extension, the actual changes in services that customers receive. For example, if the intervention primarily teaches better persuasive marketing, but not informative marketing, then business is likely simply being shifted from the less persuasive firm to the more persuasive one. If, on the other hand, product quality has increased, or costs have been lowered, then general equilibrium benefits are likely accruing. We believe this is an important area for further research in the entrepreneurship development literature, for both research and policy.

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VII. Tables and Figures

Figure 1: Timeline



Survey Modules

<u>All Modules</u>	<u>Rnd 1</u>	<u>Rnd 2</u>	<u>Rnd 3</u>	<u>Rnd 4</u>	<u>Rnd 5</u>	<u>Rnd 6</u>	<u>Rnd 7</u>	<u>Rnd 8</u>
Income	Income		Income		Income	Income	Income	Income
Biz Overview	Biz Overview		Biz Overview			Biz Overview		Biz Overview
Staff	Staff					Staff		Staff
Assets	Assets					Assets		Assets
Finance	Finance		Finance			Finance		Finance
Operations	Operations		Operations				Operations	
Rev/Expense	Rev/Expense				Rev/Expense	Rev/Expense		Rev/Expense
Products		Products	Products		Products	Products		Products
Marketing		Marketing					Marketing	
Skills/Formality		Skills/Formality					Formality	
Household		Household					Household	
Financial Literacy		Financial Literacy						Financial Literacy
Attitudes		Attitudes					Attitudes	
Social Networks		Social Networks						
Games		Games					Games	
Bookkeeping			Bookkeeping				Bookkeeping	Bookkeeping
Quality of Consulting								Quality of Consulting
Daily Logs				Daily Logs				

Figure 2: Histogram of hours of consulting per tailor

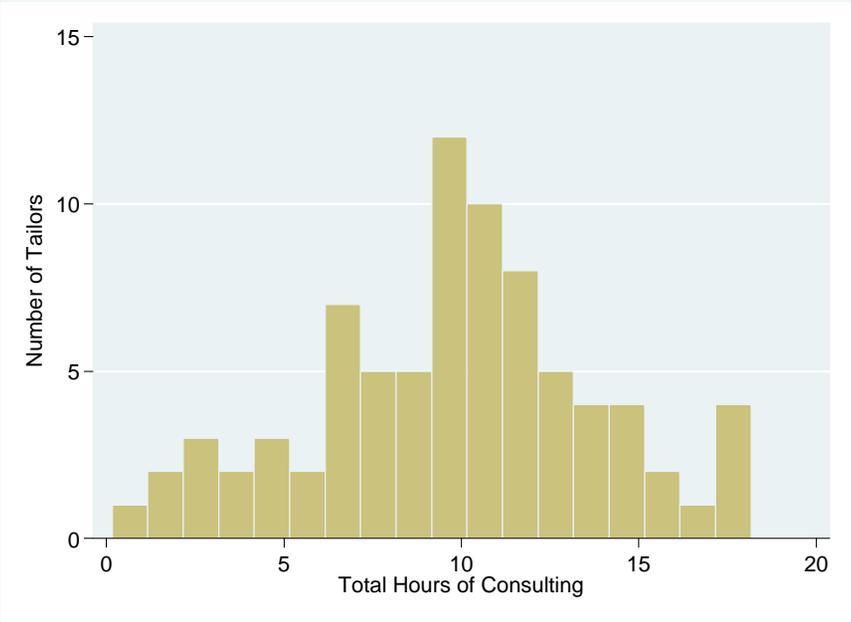


Figure 3: Mean Income by Month

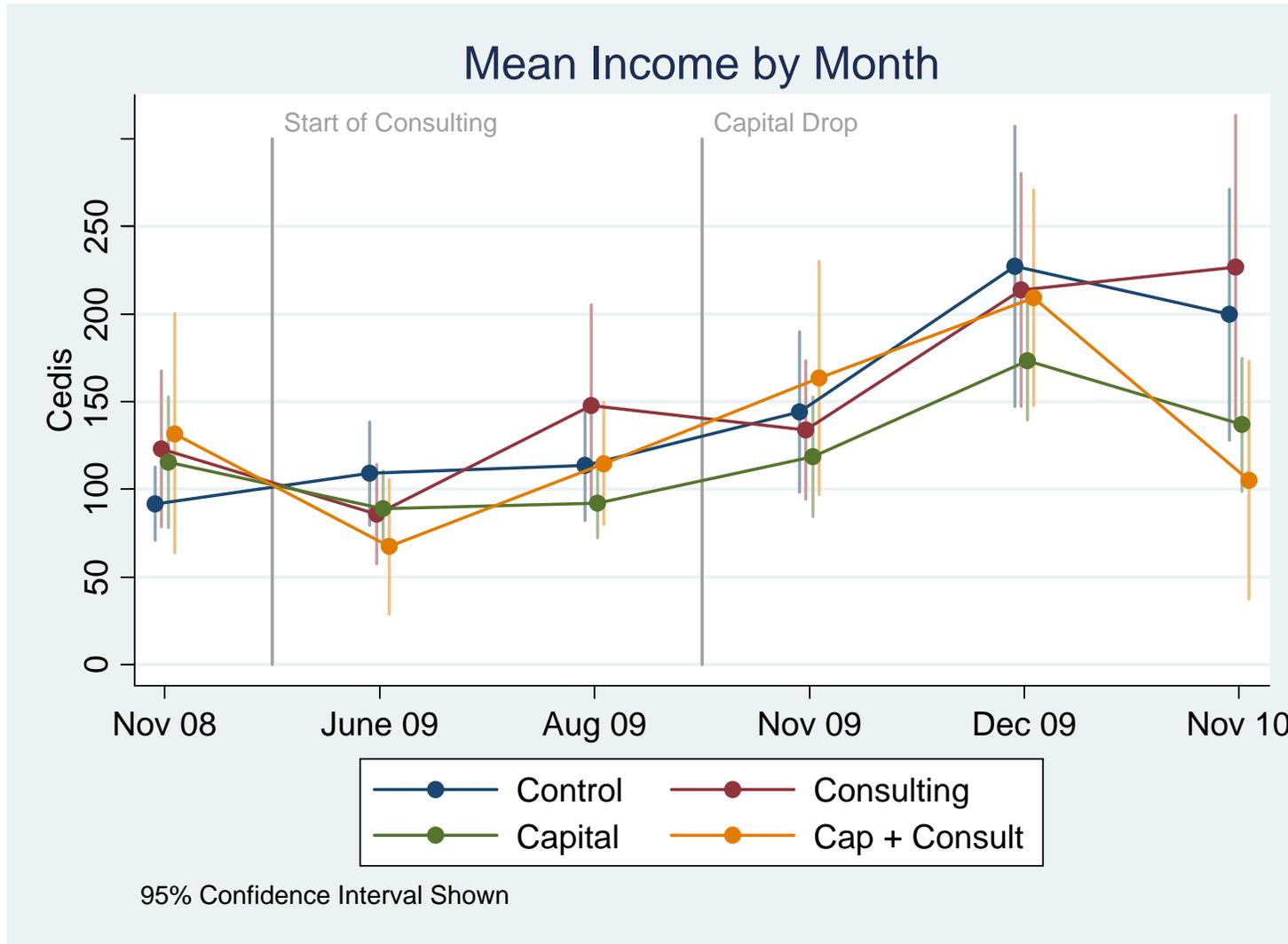


Table 1: Baseline Summary Statistics and Randomization Check

	Baseline Sample Stats			Randomization Check: Differences from Mean					
	Mean	Min	Max	Control	Consulting	Capital	Capital &	Model	Prob > F
	(std dev)			(std err)	(std err)	(std err)	(std err)	F-Stat	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
Number of Tailors	160			45	41	36	36		
Male	0.43 (0.5)	0	1	0.00777 (0.0549)	-0.0166 (0.0549)	0.0424 (0.0570)	-0.0424 (0.0586)	0.297	0.880
Age	35.29 (7.8)	22	76	0.125 (1.181)	-1.655 (1.181)	1.816 (1.227)	-0.204 (1.278)	1.048	0.385
Married	0.56 (0.5)	0	1	0.120 (0.0772)	0.0229 (0.0772)	-0.115 (0.0802)	-0.00694 (0.0824)	1.148	0.336
Literacy	1.30 (1.0)	1	5	0.101 (0.166)	0.0421 (0.164)	-0.0561 (0.172)	-0.0708 (0.177)	0.175	0.951
Number of Children	1.24 (1.3)	0	6	0.343* (0.205)	-0.120 (0.205)	-0.103 (0.219)	-0.0420 (0.222)	0.853	0.494
Shop is cement	0.21 (0.4)	0	1	0.0620 (0.0630)	0.0620 (0.0630)	-0.0484 (0.0654)	-0.0951 (0.0672)	1.123	0.348
Income last month	113.99 (122.9)	0	1000	-22.20 (19.94)	8.924 (20.75)	1.570 (22.01)	17.84 (22.74)	0.511	0.728
Ave Monthly Revenue	240.21 (224.9)	12	2000	3.392 (35.79)	61.50* (35.35)	-36.21 (38.26)	-32.62 (38.81)	1.160	0.331
Monthly Expenses	247.66 (262.9)	3	1712	33.66 (41.63)	-16.56 (41.63)	6.848 (43.24)	-19.59 (44.42)	0.258	0.904
Apprentices	0.86 (1.1)	0	5	-0.204 (0.171)	0.430** (0.171)	-0.205 (0.178)	-0.0292 (0.183)	2.263	0.0649
Employees	0.35 (0.6)	0	4	-0.00854 (0.0984)	-0.0329 (0.0984)	0.124 (0.102)	-0.1000 (0.105)	0.623	0.647
Fixed Assets	1566.01 (1975.8)	110	20230	-72.22 (312.1)	-125.3 (312.1)	457.0 (324.2)	-260.8 (333.0)	0.704	0.590
Working Capital	184.02 (263.6)	0	2000	48.96 (41.23)	42.38 (41.74)	-68.07 (44.00)	-16.59 (44.62)	1.243	0.295
Keeps Records	0.17 (0.4)	0	1	-0.0224 (0.0594)	-0.0468 (0.0594)	0.0681 (0.0617)	0.0257 (0.0634)	0.536	0.710
Registered Business	0.53 (0.5)	0	1	0.0297 (0.0788)	0.00534 (0.0788)	0.0214 (0.0818)	-0.00347 (0.0841)	0.0543	0.994
Has Ever Taken a Loan	0.11 0.3	0	1	-0.0331 (0.0479)	-0.0575 (0.0479)	0.131*** (0.0498)	-0.0229 (0.0511)	2.251	0.0662
Social Network Size	2.81 (2.6)	0	13	-0.0808 (0.289)	0.0168 (0.289)	-0.0757 (0.300)	0.271 (0.308)	0.230	0.922
Digits Backward	3.11 (0.9)	1	6	-0.0881 (0.0997)	-0.0637 (0.0997)	0.0980 (0.104)	0.0264 (0.106)	0.537	0.709

Notes: Standard errors and F-Stat are from a regression of de-measured baseline values against all four groups with no constant. Baseline standard deviations are reported below baseline means.

Table 2: Business Literacy and Practices

	Business Literacy	Business Practices				Record Keeping			
	Rnd 8 Dec-10 ols (1)	Pooled (2)	Rnd 3 Jul-09 ols (3)	Rnd 7 Jan-10 ols (4)	Rnd 8 Dec-10 ols (5)	Pooled (6)	Rnd 3 Jul-09 probit (7)	Rnd 7 Jan-10 probit (8)	Rnd 8 Dec-10 probit (9)
Consulting	0.309** (0.120)	0.363* (0.0200)	0.0565*** (0.0216)	0.0295 (0.0216)	0.00807 (0.0312)	0.220*** (0.0519)	0.448*** (0.0786)	0.227*** (0.0777)	0.0663 (0.0713)
Test Consulting = Consulting in Rnd 3									
Chi-sq				0.86	1.74			3.70	9.12
p				0.355	0.187			0.055	0.003
Observations	149	749	150	153	149	452	150	153	149
Rounds with Data		1, 2, 3, 5, 6, 7, 8				1, 3, 7, 8			
Individuals		154				154			
Outcome Mean at Baseline	None	0.398	0.398	0.398	0.398	0.169	0.169	0.169	0.169
Control for Outcome Value at Baseline	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of items in practices index		35	19	20	23				

*p < . 10, **p < .05, ***p < . 01

Standard errors in parenthesis

All regressions include dummies for which neighborhood the tailors lived in at the baseline.

Consulting in this table includes both individuals assigned to Consulting and individuals assigned to Consulting and Capital

Business literacy is the number of answers correct on a 4 question test of business literacy

Business Practices is the proportion of all practices recommended by the consultants that were adopted in that round. All practices were not measured in all rounds.

Record Keeping is whether the respondent stated that they keep financial records.

Round-by-round record keeping regressions are probit models with marginal effects reported

Test Consult = Consult in Rnd 3 reports the result of a Wald test that the coefficient on Consulting in Round 1 is equal to the coefficient on Consulting in Round 3.

Table 3: Investment Flows

OLS

	Actual Investment in Category of Likely Use for 200 Cedi Grant at Baseline		Investments Made During Previous Year					
			Dec-09			Dec-10		
	Dec-09	Dec-10	Total	Fixed	Inputs	Total	Fixed	Inputs
			Investment	Assets		Investment	Assets	
(1)	(2)	(3)	(4)	(6)	(7)	(8)	(10)	
Consulting Only	11.33 (47.11)	-72.74 (67.08)	151.6 (246.7)	151.3 (246.2)	-5.396 (14.19)	-175.9 (195.4)	-61.51 (129.3)	-35.76 (54.32)
Capital Only	179.3 (121.2)	-13.70 (110.9)	73.52 (260.7)	74.58 (260.1)	46.35 (30.70)	-378.3** (191.2)	-213.8** (107.3)	-21.52 (63.35)
Consulting & Capital	89.57 (54.66)	-64.92 (74.15)	269.0 (274.5)	262.9 (269.8)	21.12 (23.01)	-66.51 (222.3)	41.22 (137.5)	9.693 (63.97)
p value on tests of joint significance								
Consulting & Capital with Consulting	0.24	0.28	0.33	0.33	0.60	0.52	0.93	0.80
Consulting & Capital with Capital	0.06	0.61	0.42	0.42	0.09	0.23	0.43	0.91
p value on tests of equality of means								
Consulting & Capital = Consulting	0.16	0.90	0.69	0.71	0.27	0.55	0.45	0.44
Consulting & Capital = Capital	0.48	0.64	0.55	0.56	0.50	0.10	0.03	0.66
Observations	153	149	153	153	153	149	149	149

*p < . 10, **p < .05, ***p < . 01

Standard errors in parenthesis

All variables winsorized at the highest 1%

See Appendix Table 3 for breakdown of likely investment categories at baseline.

All regressions include controls for baseline value and stratification variables

Table 4: Savings

OLS

	Total Savings				Bank Savings				Susu Savings			
	Rnd 3 Jul-09	Rnd 6 Dec-09	Rnd 8 Dec-10	Rounds 3, 6, 8 Combined	Rnd 3 Jul-09	Rnd 6 Dec-09	Rnd 8 Dec-10	Rounds 3, 6, 8 Combined	Rnd 3 Jul-09	Rnd 6 Dec-09	Rnd 8 Dec-10	Rounds 3, 6, 8 Combined
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Consulting Only	8.842 (14.27)	36.61 (32.52)	3.233 (45.94)	10.46 (18.28)	9.592 (13.24)	20.65 (27.86)	7.693 (41.47)	10.83 (16.80)	8.244 (5.254)	16.55** (7.374)	13.21 (13.46)	8.547 (6.203)
Capital Only		11.61 (31.72)	6.639 (45.29)	3.159 (29.49)		6.999 (30.10)	-2.228 (40.34)	0.742 (26.45)		2.783 (8.040)	10.81 (15.77)	2.158 (8.081)
Consulting & Capital		75.13** (33.41)	8.617 (50.51)	28.96 (21.99)		47.42* (27.80)	-2.079 (42.23)	19.33 (18.31)		28.38*** (10.03)	22.75 (17.64)	16.63* (8.448)
p value on tests of joint significance												
Consulting & Capital with Consulting		0.06	0.89	0.24		0.17	0.94	0.30		0.00	0.20	0.04
Consulting & Capital with Capital		0.12	0.85	0.41		0.27	0.95	0.57		0.05	0.24	0.16
p value on tests of equality of means												
Consulting & Capital = Consulting		0.19	0.89	0.42		0.32	0.78	0.66		0.16	0.51	0.33
Consulting & Capital = Capital		0.07	0.97	0.45		0.20	1.00	0.52		0.01	0.49	0.14
Observations	150	153	149	452	150	153	149	452	150	153	149	452
Outcome Mean at Baseline	79.4	79.4	79.4	79.4	53.3	53.3	53.3	53.3	18.6	18.6	18.6	18.6

*p < . 10, **p < .05, ***p < . 01

Robust standard errors in parentheses, clustered by individual where more than one round is combined (columns 4, 8 and 12).

Controls for baseline value and stratification variables (neighborhood) in all regressions.

Table 5: Change in Net Financial Flows, All Channels

OLS

	Loan Amounts		Investment in Goal, Savings, and Avoided Loans		Total Investment, Savings, and Avoided Loans	
	Dec-09	Dec-10	Dec-09	Dec-10	Dec-09	Dec-10
	(1)	(2)	(3)	(4)	(5)	(6)
Consulting Only	-55.82 (68.60)	-31.71 (85.61)	67.35 (97.33)	-42.43 (104.1)	211.6 (270.9)	-54.14 (149.4)
Capital Only	-135.6** (68.29)	21.75 (102.2)	326.2** (139.9)	-43.32 (115.4)	191.5 (272.2)	-245.6* (132.0)
Consulting & Capital	-85.09 (65.78)	13.12 (83.99)	229.3** (99.73)	-69.13 (121.8)	400.0 (289.5)	17.27 (169.7)
p value on tests of joint significance						
Consulting & Capital with Consulting	0.28	0.90	0.11	0.57	0.19	0.89
Consulting & Capital with Capital	0.09 *	0.83	0.01 **	0.57	0.19	0.39
p value on tests of equality of means						
Consulting & Capital = Consulting	0.43	0.56	0.03 **	0.82	0.55	0.66
Consulting & Capital = Capital	0.08 *	0.93	0.41	0.84	0.54	0.09 *
Observations	153	149	153	149	153	149

*p < . 10, **p < .05, ***p < . 01

Robust standard errors in parentheses.

Controls for baseline value and stratification variables (neighborhood) in all regressions.

Columns 1 and 2 winsorized at the highest 1%. Columns 3-5 winsorized at highest and lowest 1%.

See Appendix Table 3 for breakdown of likely investment categories at baseline.

Columns 3 and 4 are investment in goal category plus savings minus loans taken.

Columns 5 and 6 are total investment plus savings minus loans taken.

Table 6: Profitability Pooled

OLS

	<u>Stated Income</u>	<u>Revenue</u>	<u>Expenses</u>	<u>Revenue less Expenses</u>	<u>Hours Worked per Month</u>	<u>Total Staff</u>	<u>Apprentices</u>	<u>Paid Employees</u>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Consulting Only	0.905 (21.42)	-33.34 (38.76)	-18.24 (29.97)	-16.50 (22.47)	2.325 (11.40)	0.0565 (0.205)	0.0687 (0.157)	0.0474 (0.106)
Capital Only	-45.43** (21.99)	29.24 (86.31)	12.52 (49.82)	-31.03 (34.15)	4.284 (10.89)	-0.158 (0.205)	0.0166 (0.146)	-0.169 (0.112)
Consulting & Capital	-23.23 (20.06)	-29.94 (39.43)	7.778 (34.36)	-39.06 (25.13)	-12.87 (11.63)	-0.0159 (0.192)	-0.0376 (0.155)	0.104 (0.117)
p value on tests of joint significance								
Any Consulting	0.52	0.34	0.85	0.15	0.58	0.91	0.91	0.44
Any Capital	0.06 *	0.99	0.77	0.14	0.65	0.61	0.93	0.74
p value on tests of equality of means								
Consulting & Capital = Consulting	0.29	0.93	0.42	0.43	0.25	0.73	0.53	0.61
Consulting & Capital = Capital	0.30	0.49	0.92	0.83	0.17	0.49	0.74	0.02 **
Observations	747	445	447	426	452	302	302	302
Rounds with Data	1,3,5,6,7,8	1,5,6,8	1,5,6,8	1,5,6,8	1,3,6,8	1,6,8	1,6,8	1,6,8
Individuals	154	154	154	154	154	153	153	153
Outcome Mean at Baseline	111.9	235.0	244.9	1.2	243.0	1.3	0.9	0.4

*p < . 10, **p < .05, ***p < . 01

Robust standard errors clustered by individual in parentheses.

Controls for baseline value and stratification variables (neighborhood) in all regressions.

Revenue, expenses and revenue less expenses all include both baseline revenue and baseline expenses as controls for consistency.

Profit, Revenue less expenses and profit per hour are winsorized (capped) at highest and lowest 1%.

Revenue, expenses and hours worked are winsorized (capped) at the highest 1%.

Table 7: Profitability by Round

OLS

	Income					Revenue			Expenses		
	Rnd 3	Rnd 5	Rnd 6	Rnd 7	Rnd 8	Rnd 5	Rnd 6	Rnd 8	Rnd 5	Rnd 6	Rnd 8
	Jul-09	Sep-09	Dec-09	Jan-10	Dec-10	Sep-09	Dec-09	Dec-10	Sep-09	Dec-09	Dec-10
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Consulting Only	-25.83** (12.90)	25.67 (16.34)	-17.04 (29.37)	-15.83 (44.45)	11.35 (51.03)	24.25 (26.34)	-7.319 (51.35)	-131.2 (82.07)	5.541 (13.17)	-0.327 (24.90)	-68.33 (75.61)
Capital Only			-29.21 (28.48)	-52.62 (36.70)	-74.61* (40.35)		-3.283 (51.97)	45.69 (159.9)		52.67 (37.17)	-25.61 (87.47)
Consulting & Capital			6.597 (33.83)	-16.06 (43.07)	-98.46** (45.34)		35.79 (53.19)	-143.8* (83.13)		34.62 (35.33)	-0.459 (84.21)
p value on tests of joint significance											
Consulting & Capital with Consulting			0.85	0.68	0.30		0.77	0.06 *		0.49	0.64
Consulting & Capital with Capital			0.68	0.35	0.03 **		0.73	0.63		0.14	0.86
p value on tests of equality of means											
Consulting & Capital = Consulting			0.45	1.00	0.03 **		0.32	0.87		0.32	0.29
Consulting & Capital = Capital			0.24	0.27	0.52		0.41	0.22		0.67	0.75
Observations	149	144	152	153	149	144	151	149	145	153	149
Outcome Mean at Baseline	111.9	111.9	111.9	111.9	111.9	235.0	235.0	235.0	244.9	244.9	244.9

*p < .10, **p < .05, ***p < .01

Robust standard errors in parentheses.

Controls for baseline value and stratification variables (neighborhood) in all regressions.

Consulting includes all 80 individuals assigned to the consulting group in rounds 3 and 5.

Revenue and expenses include both baseline revenue and baseline expenses as controls for consistency.

Revenue and expenses are winsorized at the highest 1% and income is winsorized at the highest and lowest 1%.

Table 8: Daily Visits Results

OLS

	Daily Cash In	Cash Out	Net Cash	Hours Worked	Sales Made	Days With Data August
	(1)	(2)	(3)	(4)	(5)	(6)
Consulting	0.679 (1.097)	-0.110 (0.571)	1.010 (0.779)	-0.210 (0.266)	0.0881 (0.136)	-0.835 (0.683)
Observations	3583	3583	3583	2824	3583	143
Individuals	150	150	150	148	150	143
Outcome Mean	8.11	3.32	4.12	10.61	1.19	23.9

*p < . 10, **p < .05, ***p < . 01

Robust standard errors in parentheses, clustered by individual where more than one day is combined (columns 1-5).

Controls for baseline profit, stratification variables (neighborhood) and day.

Consulting includes all 80 individuals assigned to the consulting group.

All outcomes are winsorized at the highest 1%.

VIII. Appendix A: Additional Tables

Appendix Table 1: Baseline Characteristics

	<u>Mean</u>	<u>SD</u>	<u>Min</u>	<u>Median</u>	<u>Max</u>	<u>N</u>
Income Last Month	114	123	0	80	1000	141
Average Monthly Revenue	240	225	12	200	2000	154
Monthly Expenses Excluding Rent	237	261	3	151	1712	160
Working Capital	184	264	0	100	2000	156
Fair Value of Fixed Assets	1566	1976	110	1140	20230	160
Number of Paid Employees	0.4	0.6	0.0	0.0	4.0	160
Keeps Financial Records	0.2	0.4	0.0	0.0	1.0	160
Has Ever Taken a Loan	0.1	0.3	0.0	0.0	1.0	160

Appendix Table 2: Attrition

<u>Round</u>	<u>Found</u>	<u>Not Found</u>	<u>Reasons Not Found</u>			<u>Not Found by Treatment</u>			
			<u>Deceased</u>	<u>Permanently Moved</u>	<u>No Info/Temporary</u>	<u>Control</u>	<u>Consulting</u>	<u>Capital^{^^}</u>	<u>Capial and Consulting</u>
1) Dec 2008	160	0	0	0	0				
2) Jan 2009	160	0	0	0	0				
3) July 2009	150	10	2	4	4	5	5		
4) Aug 2009	150 [^]	10	2	4	4	7	4		
5) Sept 2009	145	15	2	4	9	7	8		
6) Dec 2009	153	7	3	4	0	3	4	0	0
7) Jan 2010	153	7	3	4	0	3	4	0	0
8) Dec 2010	149	11	5	6	0	3	4	3	0

[^] Found on at least one day

^{^^} Note that capital group randomization excluded 6 individuals not found in any of rounds 3-5.

Appendix Table 3: Predictors of Take-up in Consulting Treatment

OLS		
	<u>Hours of Consulting</u>	<u>% of Practices Adopted</u>
	(1)	(2)
Male	0.447 (1.031)	-0.0554 (0.0513)
Baseline Income	0.00474** (0.00235)	0.000139 (0.000196)
Consultant 2	-1.834 (1.485)	0.0133 (0.0693)
Consultant 3	-5.018*** (1.682)	0.0386 (0.0836)
Consultant 4	-3.030** (1.338)	0.0677 (0.0798)
Size of Social Network	-0.421** (0.206)	0.00769 (0.00889)
Business Place is Permanent Structure	-0.0215 (1.235)	0.0382 (0.0575)
Business is Registered	-0.833 (0.942)	-0.0295 (0.0540)
Baseline Staff	-0.0148 (0.345)	0.0280 (0.0190)
Years of Education	0.0207 (0.172)	0.0202 (0.0145)
Years of Experience as Tailor	0.328 (0.551)	0.00892 (0.0263)
Log of Baseline Asset Replacement Cost	0.948 (0.745)	-0.0267 (0.0400)
Digits Backwards	-0.0907 (0.427)	-0.0346 (0.0308)
Member of a Tailors' Association	0.337 (1.004)	0.0221 (0.0615)
Observations	76	76
Mean Value	10.02	0.323

*p < .10, **p < .05, ***p < .01

Robust standard errors in parentheses.

Consulting includes all individuals assigned to the consulting group, except 3 who passed away and one who is missing data.

All regressions include controls for stratification variables (neighborhood).

Appendix Table 4: Stated Uses of Capital

Hypothetical Likely Use for 200 Cedi Grant (at baseline)	Actual Use for 200 Cedi Grant (self reported after capital drop)			
	Machines	Property	Inputs	Other
Consulting & Capital				
Machines	0	0	1	3
Property	0	2	2	0
Inputs	7	1	9	12
Other	0	0	0	0
Total Consult & Capital	7	3	12	15
Capital Only				
Machines	2	2	1	0
Property	0	1	1	1
Inputs	5	4	17	7
Other	0	0	0	0
Total Capital Only	7	7	19	8
Overall				
Machines	2	2	2	3
Property	0	3	3	1
Inputs	12	5	26	19
Other	0	0	0	0
Overall Total	14	10	31	23

Note: Some people split the money into different categories, so reported uses are greater than the number baseline likely uses.

One person is missing actual use data.

Other uses includes saving, domestic use and paying down debt

Chi2 that distribution of Consulting & Capital uses = Capital Only uses = 7.5, p = .19

Appendix Table 5: Fixed Effects version of Table 6

Fixed Effects

	<u>Stated Income</u> (1)	<u>Revenue</u> (2)	<u>Expenses</u> (3)	<u>Revenue less Expenses</u> (4)	<u>Hours Worked per Month</u> (5)	<u>Total Staff</u> (6)	<u>Apprentices</u> (7)	<u>Paid Employees</u> (8)
Consulting Only	-16.15 (27.04)	-69.88 (46.12)	29.37 (43.48)	-103.6** (51.73)	6.131 (14.47)	-0.154 (0.232)	-0.137 (0.183)	0.0623 (0.113)
Capital Only	-42.54** (19.00)	40.24 (73.63)	7.059 (48.88)	-11.76 (38.55)	-2.533 (12.50)	-0.196 (0.235)	0.0201 (0.174)	-0.221* (0.131)
Consulting & Capital	-24.97 (28.69)	-29.66 (45.13)	32.91 (55.85)	-87.66* (50.41)	-11.61 (11.73)	-0.0471 (0.213)	-0.0984 (0.184)	0.153 (0.127)
p value on tests of joint significance								
Any Consulting	0.35	0.20	0.47	0.04 **	0.80	0.60	0.45	0.29
Any Capital	0.07 *	0.90	0.62	0.18	0.49	0.53	0.80	0.75
p value on tests of equality of means								
Consulting & Capital = Consulting	0.80	0.41	0.95	0.74	0.25	0.65	0.84	0.49
Consulting & Capital = Capital	0.57	0.41	0.70	0.14	0.50	0.53	0.52	0.01 **
Observations	799	580	607	580	612	462	462	462
Rounds with Data	1,3,5,6,7,8	1,5,6,8	1,5,6,8	1,5,6,8	1,3,6,8	1,6,8	1,6,8	1,6,8
Individuals	141	154	160	154	154	160	160	160
Outcome Mean at Baseline	111.9	235.0	244.9	1.2	243.0	1.3	0.9	0.4

*p < .10, **p < .05, ***p < .01

Robust standard errors in parentheses.

Profit, Revenue less expenses and profit per hour are winsorized (capped) at highest and lowest 1%.

Revenue, expenses and hours worked are winsorized (capped) at the highest 1%.

Appendix Table 6: Comparison of Daily Visits Totals to Recall Data

OLS

		<u>Daily Visits</u>	<u>Recall</u>	<u>Difference</u> <u>Daily - Recall</u>	<u>Squared</u> <u>Difference</u>
		(1)	(2)	(3)	(4)
Revenue	(1) Consulting	-1.248	24.25	-4.081	22895.1**
	SE	(37.37)	(26.34)	(28.30)	(9362.6)
	N	143	144	124	124
	Mean	207	223	-12.6	24626
Expenses	(2) Consulting	-27.39	5.541	8.712	9032.5**
	SE	(37.52)	(13.17)	(15.32)	(3882.5)
	N	143	145	122	122
	Mean	99	110	-15	8422
Revenue less Expenses	(3) Consulting	26.14	22.38	-2.402	7626.5
	SE	(21.70)	(23.23)	(28.64)	(10928.0)
	N	143	138	126	126
	Mean	108	115	5.5	27197

*p < . 10, **p < .05, ***p < . 01

Robust standard errors in parentheses.

Controls for baseline revenue, baseline profit and stratification variables (neighborhood) in every regression.

Consulting includes all 80 individuals assigned to the consulting group.

Difference and squared difference regressions include only individuals found at least 20 times in the daily visits.

All outcomes are winsorized at the highest 1%.

Appendix Table 7: Comparable Study Result Weighting

Business Training Studies								
Study	Group	Profit % Change	Confidence Interval	Sample Size			Weight	
				Treatment	Control	Total		
Berge et al. (2012) [a]	Male	5.4%	(-20%, +38%)	59.5	58	118	0.036	
	Female	-3%	(-23%, +22%)	59.5	58	118	0.036	
Bruhn and Zia (2012)	All	-15%	(-62%, +32%)	297	148	445	0.136	
Calderon et al. (2012)	Female	24%	(-1%, 56%)	164	711	875	0.267	
De Mel et al. (2012) [b]	Current Enterprises	-5.4%	(-44%, +33%)	200	114	314	0.096	
	Potential Enterprises	43%	(+6%, +80%)	200	114	314	0.096	
Giné and Mansuri(2011) [c]	Mixed	-11%	(-33%, +17%)	186.5	187	374	0.114	
	Male	-4.30%	(-34%, +38%)	186.5	187	374	0.114	
Karlan and Valdivia (2011)	Mostly Female	17%	(-25%, +59%)	138	101	239	0.073	
Mano et al. (2012)	Male	54%	(+47%, +82%)	47	66	113	0.034	
Simple Average	10.5%							
Weighted Average	9.5%							

Capital Grant Studies								
Study	Group	Profit % Change	Confidence Interval	Sample Size			Weight	
				Treatment	Control	Total		
del Mel et al. (2008) [d]	US\$100 Cash	20%	(-12%, +53%)	84	81.5	166	0.117	
	US\$200 Cash	36.9%	(+12%, +62%)	40	81.5	122	0.086	
Fafchamps et al. (2012) [e]	US\$120 Cash	9.7%	(-4.8, +24.2)	198	396	594	0.419	
Blattman et al. (2013) [f]	US\$382 to Potential Entrepreneurs	41.0%	(+29%, +53%)	265	270	535	0.378	
Simple Average	26.9%							
Weighted Average	25.1%							

[a] Sample size is based on 119 treatment groups and 116 control groups, split equally for weighting purposes.

[b] Control sample size based on an even split of the total control size of 228 individuals.

[c] Sample size is based on 373 treatment groups and 374 control groups, split equally for weighting purposes.

[d] Control size is based on a total control size of 163 individuals, split equally for weighting purposes.

[e] Profit change is based on an absolute impact of 9.59 over a baseline mean of 99.

[f] Sample size is groups.

Notes: Business training table based on tables 5 and 9 of McKenzie and Woodruff (2013).

We do not include Berge et al. (2012) in the capital grant studies because 100% of their sample were current clients of a microfinance institution, which presumably alleviated their credit constraints, at least in part. Berge et al. (2012) found returns to capital of approximately 0%.

IX. Appendix B: Ernst & Young (“E&Y”) Team

The four E&Y consultants were supervised by a Director and a Partner at E&Y – Ghana, and monitored by field staff at Innovations for Poverty Action - Ghana.

Consultant A

Consultant A is an Assistant Manager in the Business Advisory Service line of E&Y, Ghana. He has 6 years of experience in business process reviews, monitoring and evaluation, financial re-engineering, fund management, monitoring and evaluation and internal audit. He has been involved in number of Performance Improvement related assignments in both private and public sectors. He joined E&Y in 2007 and is currently based in the Accra Office. Prior to joining E&Y, Consultant A worked with TOTAL Petroleum Ghana Limited as Internal Auditor.

Consultant A was team leader in the ‘Returns to Business Management Consulting Study’ engagement undertaken for Innovations for Poverty Action (IPA). Consultant A holds a Bachelors degree in Administration (Accounting) from the University of Ghana and a MBA in Financial Management from the University of Hull. He is a member of the Association of Chartered Certified Accountants (UK).

Consultant B

Consultant B is a Manager in Advisory Service Line and engaged in the provision of performance improvement services, including monitoring and evaluation (M&E) for clients in the public and private sector. Consultant B has over 6 years of experience in diverse areas, including Monitoring and Evaluation, Policy Analysis, Project Management, Training, Strategy Planning, Communication, Advocacy and Campaigns and Fundraising, Knowledge Management and consultancy. He joined E&Y Ghana in 2008 and is based in the Accra office. He has work experience in Ghana, Sierra Leone and Liberia before joining E&Y.

Consultant B holds a Master of Science in Development Policy and Planning and a Bachelor of Science in Development Planning. He is a member of Ghana Monitoring and Evaluation forum.

Consultant C

Consultant B Mensa is a Manager with E&Y and has experience in Human Resource Management. Her areas of focus include HR Reorganization and Management, Training, Human Resource Policies and Procedures, Salary Surveys and Performance Management. She has highly developed research abilities and has led and supported Capacity Development and Institutional Strengthening assignments for clients both in the Public and Private Sectors. Consultant B has been involved in various roles, from support to managing, in a number of engagements. She joined E&Y in 2004 and is based in the Accra office.

Consultant D

Consultant D is a Manager with Business Advisory Services within E&Y focusing more on training and human resource management. She joined E&Y in 2007 and is based in the Accra office. She has over 18 years work experience and prior to joining E&Y, Consultant D worked with the World Vision, SNV-Ghana (Netherlands Development Organisation), African Centre for Human Development and DANIDA Volta Region Water and Sanitation Project. She holds a BSc. Administration (Human Resource Management) from the Central University College, Ghana.

X. Appendix C: Training Modules

	Module	Description
1	Record Keeping	<ul style="list-style-type: none"> • Gave respondents two books that covered procurement, sales, stock, cash in/out, wages, assets, etc. • Rationale for adopting bookkeeping: tracking revenue and expenses gives you a clearer picture of your financial situation • Remember to track indirect costs. Most were actually earning less than they thought they were before they started bookkeeping and including indirect costs • Monitored record keeping over the year • Took them through a monthly income statement for 1 month then monitored their own calculations of monthly income • Separation of business and personal finances • As the entrepreneur, you are both the owner of the business and an employee of the business. You are therefore entitled to both a share of the profits and a wage (wage is determined through costing)
2	Procurement	<ul style="list-style-type: none"> • Initially just-in-time buyers, purchasing what they need for each job • Advised to buy weekly stock to get bulk discounts and reduce time spent on travel • Also pay particular attention to the quality of bulk purchases – look out for high quality inputs
3	Operational Activities	<p>Very specific to the circumstances of each business. Some examples:</p> <ul style="list-style-type: none"> • Keeping your shop tidy can make customers more comfortable and more willing to pay a higher price if they can see that you are serious about the business • Need to assure consistent supply of electricity by applying pressure to the service providers • Try to charge advance every time, especially if the client is new, although it can be waived for reliable clients. (If business was slow, they were reluctant to charge advance) • Get insurance for both business and person (SSNIT) • Arrange your production process for efficiency: when should you do cutting? Who should do what? • Quality control: Monitoring of worker and apprentices • Where should you outsource knitting or other activities? Or is it better to save for a knitting machine yourself?
4	Motivation of workers	<ul style="list-style-type: none"> • How do you motivate your workers to get the best out of them? • Need to make their workers feel like they are part of the team • Reward them adequately: they have their own financial issues, just as you do • If there are any apprentices that you really want to keep, tip them some money regularly • Apprentices should be trained in customer service and should see themselves as more than just students • If your workers work particularly hard on something, give them something extra • Give workers training and teach them what you know so they can handle things when you are out of the shop • Advised to formalize agreements with employees

5	Value Addition	<ul style="list-style-type: none"> • Accept feedback and apply recommendations • Good finishing can be a source of sales, especially in conjunction w/ labels • Diversify from core business: add selling fabrics, selling inputs, buy knitting machine and take subcontracted jobs • Keep in touch w/ new designs, learn new skills and/or develop your own designs. You can then take subcontracted jobs as well if the knowledge/technique isn't common
6	Time management	<ul style="list-style-type: none"> • Planning for the business: set a time that you should be able to reach your investment goals (Eg, I will get a new container by April) • Having a consistent schedule is important so that customers know when they can stop by • Set realistic deadlines w/ customers that you can actually meet • Give an allowance when calculating customer deadlines in case there is a power outage. If timing is a consistent issue, leave one day a week open to handle emergencies • If you know you can't deliver on time, call the client in advance to let them know • If a customer is pushing for a tight deadline, charge a higher rate to compensate for you overtime
7	Costing	<p>A major exercise after bookkeeping was introduced.</p> <ul style="list-style-type: none"> • Took them through calculating the cost of making each product including indirect expenses, taxes & wages to determine how much they should charge for each one. • Many were undercharging, but found it difficult to raise the price if all the other tailors in the area are also undercharging • Introduced the need to account for their own time by asking how much they should charge for their own time (if you were to get someone like you to do this job, how much would you pay them? That is what you can set as your wage) • Need to add indirect costs such as rent and electricity (How many do you sew in a month? Divide the monthly rent/indirect cost by that number to get the cost per unit) • Need to add some profit as well
8	Customer Service	<ul style="list-style-type: none"> • How to receive customers: greeting them, saying thank you, accommodating their concerns with workmanship • Doing something different that will cause your customer to always come to you: give something over Christmas like a handkerchief w/ your business name printed on it, or dash them a dress if you are sewing plenty. • Know the individual customers and what they like • Create a database w/ customer names, phone numbers & where they live so you can call ones you haven't seen in a long time • Closely related to time management • Sewing well isn't enough: need to also meet deadlines, treat them nicely, make alterations for free, and so on • Be patient if the customers treat you w/ disrespect • Customer service is the key to building a base of loyal customers • Package things nicely for customers and use labels

9	Security of shop	<ul style="list-style-type: none"> • Have someone sleep in the store at night for security • Change the locks/buy more secure padlocks. • Keep valuables at home if possible. • If they have a wooden kiosk, can they save for a container?
10	Sales and Marketing	<p>Most viewed time spent marketing as competing with time spent sewing</p> <ul style="list-style-type: none"> • Market your products through labels, finishing, customer service, displaying sewn items • Buy fabrics so you can do sew & sell or let the customer buy their fabric right from your shop. • Help your customers to understand why you charge the prices you do if they think that the price is high • Go to offices/businesses/schools to let them know about your product • Tell people around about your abilities • Call customers that haven't visited in a while • Register business as this can be necessary for large contracts • When you get the contract, formalize terms of payment and deliverables • Get a signboard if you don't already have one. • Making sure you kiosk isn't an eyesore: look presentable!
11	Lifestyle in relation to work/life	<ul style="list-style-type: none"> • How do you balance child rearing/other household responsibilities and business? Do you need to work early or late or work from home sometimes? • Need to rest to maintain stamina • Dress professionally as if you come to work, not casually as if you're at home • Have a serious mind for work • See a doctor regularly and check your blood pressure
12	Financing of business/savings	<ul style="list-style-type: none"> • If you want to be able to grow, the best source for cash is retained profits. Identify how much you can save through your bookkeeping • Advised against getting a loan unless they have a concrete goal and plan to repay the principal and interest. <ul style="list-style-type: none"> ○ If you do to take a loan, top it up with savings to keep the amount borrowed low. ○ Pay particular attention to how much interest you will be paying. Ask them to calculate the amount of cash you will actually pay as interest instead of talking about it as a percentage • If you don't have a bank account, open one. If you don't have a separate business account, open one. • Don't dip hands into business money • Buy treasury bills for savings
13	Business Growth	<ul style="list-style-type: none"> • Identify concrete goals for expansion <ul style="list-style-type: none"> ○ How much will it cost to reach your goal? ○ How much would you have to save every week to get that much money? ○ If the savings goal is realistic, no need to take a loan ○ If the savings goal is unrealistic, a loan + savings might be worthwhile • If you consider a new location, be sure that the land rights are secure <ul style="list-style-type: none"> ○ Is a new location necessary or could your problems be solved

		<p>through better marketing?</p> <ul style="list-style-type: none">• If you know that there is a weakness in your skills set, take a course with a fashion school or association• Objective setting; short term, medium term and long term• Apart from sewing, what else can you do? Add on other businesses to protect against the seasonality of sewing• Sell the raw materials you use• How will you grow your customer base?<ul style="list-style-type: none">○ As your customer base is growing, how do you keep meeting your deadlines? Additional workers? Better machines?• Model: build customer base, hire more workers, buy faster machines with savings• If you have a specific need that requires investments to meet your customer demands, you can go in for a loan
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XI. Appendix D: Examples of Mentorship

Client	Consultant's Notes
819	Introduced bookkeeping and she adopted it and maintained records consistently. Wants to be a designer so advised her to seek a training course. Starting doing some more marketing but she is near the limit of her capacity so they developed plans to increase capacity by hiring a worker. Has expanded her shop a lot and took on an apprentice. Got connected to electricity and keeps a very clean shop. Adopted labels and sales of materials. Aims at a higher end customer. Responded to questions; client really embraced the consultancy.
810	Covered all models but he wasn't very interested in actually adopting new ideas. Wants to relocate his shop. Sews uniforms for school sports teams. Thinks that since he's approaching retirement it's not necessary to be aggressive about expanding and he wants to move his shop. Advised to do aggressive marketing for schools & use calling cards
402	Was suspicious of consultancy at first but really caught on. Registered her business, buys in bulk, keeps records, started using labels, dashes customers toffees. Developed plan to get a new apprentice. Wants to relocate to a place on the main road and discussed issues involved in moving. Will often ask questions about the decisions she's facing.
415	Has a second job sewing for industrial sewing shop so he's often not in the shop. Even when he's around he is not open regularly. Met him late in the year & didn't spend much time together.
304	Sews under a tree. Started well w/ bookkeeping although stopped along the line. Opened a bank account and was saving through account, also bought t-bills. No employees. Raised prices a bit before Christmas. Sews well & has good customer relations. Started insisting on advance.
309	Was big on record keeping before she feel sick. Very disciplined w/ finances. Help provide structure for her saving, separating business & personal expenses, paying self wage. Was sick, lost her mother, then got sick again, so we didn't have as much time together. Went through costing & value addition but doesn't have employees. Didn't cover sales/marketing. Already had good customer service. Lifestyle was an important topic. Started insisting on advance.
709	Initially difficult to convince of the value of consulting but became more receptive over time. Discussed diversifying away from sewing only suits. Tried sewing shirts and was overwhelmed by their popularity. Has a huge potential if he can diversify his products and do enough marketing. Discussed bookkeeping but he stopped along the line, although he has a good memory. Discussed savings. Wants to move to a new place (w/ help in financing from one of his customers). Procurement: started buying enough for ~5 suits at once. Interested in labels for suits and branding on bags. Was sick for a month so discussed health issues.
713	Very unreceptive at the start but warmed up eventually. Started insisting on advance and changed prices based on costing. Had a special interest in selling raw materials and used the capital drop for this after some discussion. Is moving shops. Opened a bank account for the first time with the money from the money games (the 6 Cedis). Has also started saving. Didn't really take up bookkeeping at all (may be only semi-literate). Talked about value addition but she didn't implement it. Didn't really cover marketing at all.
509	Didn't spend much time on record keeping because she was already keeping records on a computer. Has several other businesses in addition to sewing. Discussed strategies to get more retailers to sew for and open up her own retail shop. Is taking a professional course in marketing.
515	Is considering taking a loan of GHc 1000 to buy knitting and babylocking machines so they discussed financing in detail. Covered all 13 modules. Learned a new sewing technique that she now does for other seamstresses. Advised to learn to sew men's clothes to expand market, which she did. Has a market stall in addition to shop that she isn't using so advised her to work from both locations at once.
217	Went beyond basic record keeping to the preparation of monthly income statement. She focuses on higher-end market and discussed where she can find workers who meet her quality standards. Decided to hire someone who just graduated polytechnic. Discussed using

	savings to purchase quality machines. Discussed her plans to return to school to study business, and developed plans to start taking on apprentices w/ an SSS education who want to become designers, almost as an academy.
209	Wants to buy an industrial machine w/ IPA grant so they worked on saving to top up the price and arranging her space so she can fit it. Her location is small so they worked on finding a second place (and leaving a worker at the current one). Expansion limited by the space that she had available
111	Is semi-literate so they covered bookkeeping using symbols. Main problem is w/ an unreliable worker. Consultant spoke with the worker about her dedication & advised owner to try to find another worker. Has a school next door who would give him a larger contract if he had more reliable help. Discussed banking, retirement and customer service. Wants to get a good worker who can manage the business so he can farm and stop sewing.
119	Sews in his house & doesn't have a signboard so his market is small. Discussed getting a signboard and focusing on getting larger contracts to anchor his business while his wife conducts marketing for him to try to grow individual customer base. Will complete tasks outside of meetings.
608	Implements advise very quickly! She made handkerchiefs for X-Mas and gave them out to customers. Started using dress labels. Got business registration forms but is yet to fill them out. Started offering customers minerals for free but then charges them a little bit extra for the sewing to cover the minerals cost. Hired a worker. Advised to get a computer for record keeping/customer database because she is growing very quickly
618	Got a contract recently that the consultant helped negotiate/review the details on. Semi-literate so he asked a brother to keep records for him, although the consultant also advised him to try to use symbols to write the way he understands. Focused on utilizing his bank account for savings. Also discussed labels. His brother will help him sew but isn't reliable so needs a worker. Used to sell shirts and the consultant advised him to restart this and do sew and sell.

XII. Appendix E: Business Literacy and Practice Questions

Business Literacy Measurement

Question	Variable Name in Data	No Consulting Percent Correct	Consulting Percent Correct
For a farmer, planting one crop is usually safer than planting multiple crops.	diversify	44%	54%
The best way to finance the expansion of your business is through loans.	debt	30%	40%
Marketing your products is very important if you want to grow your business.	marketing	96%	100%
Your business money is the same as your personal money, so you should not try to keep them separate.	sep_money	77%	83%

Correct answers are true, false, true, false.

Business Practices Measurement

Question	Variable Name in Data	Rounds with Data	No Consulting Average	Consulting Average
SURVEYOR: In your opinion, how clean is the store?	shopclean	1,3,7,8	2.19	2.28
SURVEYOR: How organized are the materials in the shop?	shoporganized	1,3,7,8	2.21	2.24
In an average day in [last month], how many hours do you spend: Supervising employees/ training apprentices	hrs_management	3,6	1.74	2.14
Do you pay yourself any wages or salary for this business?	pay_self_wage	1,3,5,6,7,8	0.29	0.31
Number of “yes” answers from this list: <i>I would now like to know the division of your profit from each of the following categories. First, do you do:</i> <ul style="list-style-type: none"> • Individual customer orders • School or corporate contracts 	num_sources_revenue	7	1.87	1.91

<ul style="list-style-type: none"> • Sales to middle men [someone who resells your clothes to a boutique/store] • Sales to boutiques • Alterations • Sew and sell to individual customers [NOT FOR RESALE] • Any other sources of income (Specify) 				
Do you currently have a bank account?	bank_account	1,3,6,8	0.82	0.90
At least one deposit in response to: In [last month], how often did you make deposits in your bank account?	made_bank_deposit	3,6,8	0.45	0.51
Did you use a traditional susu collector to deposit money in November?	susu_account	1,3,6,8	0.57	0.50
At least one deposit in response to: On average, how often did you do susu in November?	made_susu_deposit	3,6,8	0.57	0.49
[If there are employees/ apprentices around, ask for a moment alone with the respondent] Do you currently keep your business money in a secure location, eg a cash box or a locked cabinet?	cashbox	1,3,6,8	0.65	0.58
Do you contribute to SSNIT?	ssnit	8	0.10	0.20
Answered “Financial records and measurements” in response to: In [last month], what kind of written bookkeeping/record keeping did you do? [ASK THIS QUESTION – DON’T FILL IT IN YOURSELF. READ OPTIONS ALOUD]	record_financial	1,3,7,8	0.26	0.47
SURVEYOR: <i>Is the record book used regularly?</i> [DO NOT READ ALOUD–FILL IN YOURSELF]	record_regularly	3,7,8	0.10	0.19
Number of categories mentioned in response to: In November, what did you record in your written records? [ASK THIS QUESTION – DON’T FILL IT IN YOURSELF. MULTIPLE RESPONSES. READ THE OPTIONS ALOUD]	numtrack	3,7,8	0.78	1.61
In November, how often did you make entries in your record books? [1 = several times a day to 6 = rarely] [ASK THIS QUESTION – DON’T FILL IT IN YOURSELF. READ THE	recordfreq	1,3,7,8	4.51	6.54

OPTIONS ALOUD]				
Do you record every purchase and sale made by the business?	record_every_purchase	8	0.16	0.18
Are you able to use your records to see how much cash your business has on hand at any point in time?	records_tosee_cash	8	0.14	0.18
Do you regularly use your records to know whether sales of a particular item are increasing or decreasing from one month to another?	sales_increase_decrease	8	0.19	0.21
Have you worked out how much each of your main products costs you to make?	products_costs	8	0.22	0.22
Do you know which item you sell makes the most profit per item sold?	most_profit_item	8	0.21	0.21
Do you have a written budget which tells you how much you have to pay each month for rent, electricity, transport, and other indirect costs of the business?	written_budget_rent	8	0.10	0.13
If you wanted to apply for a bank loan, could you provide records to show that you make enough money to repay a loan?	bank_loan_record	8	0.14	0.25
Have you calculated the income (profit) of the business in [last month]?	calculated_profit	3,5,6,7,8	0.27	0.26
Do you separate business and personal expenses in your records?	sep_pers_records	1,3,7,8	0.16	0.32
Do you keep your business money in a separate place from your personal money?	sep_biz_money	8	0.44	0.32
Did you ever make purchases on credit from your suppliers in [last month]?	buy_supplies_credit	1,7	0.08	0.11
Either answered “No” to: In [last month] , did you permit customers to pick up clothes before they have paid in full? Or “yes” to: Did you charge more if a customer didn’t pay in full (after taking cloths) in [last month] ?	credit_prem_none	1,7	0.70	0.63

How often were trips made to your main supplier in [last month] ? <i>If there are many suppliers, use the one that accounts for the biggest chunk of your purchases</i> [READ OPTIONS ALOUD] Fewer trips → higher score in index	freqsupply_opposite	1,3,7	10.33	11.25
How many different suppliers did your business buy raw materials from in [last month] ? [PROBE: WHAT IS YOUR BEST GUESS?] Fewer suppliers → higher score in index	num_suppliers_opposite	1,3,7	11.66	11.92
A measure of how aggressively they required advance payment in the previous month	advscore	3,7	6.45	6.51
How frequently they finished jobs on time in previous month. 0 = never to 3 = always	ontime_score	1,7	1.04	1.06
Number of different types of marketing they reported doing	ways_market	7	1.78	2.11
Do you use branding?	branding	2,3,7	0.21	0.13
Does your business have a display case or show case?	displaycase	3,7	0.21	0.19
Is your business currently registered with any government bodies?	registered	2,7	0.42	0.37

XIII. Appendix F: Examples of Tailors

A tailor who shares his small wooden shop with another tailor



A tailor operating out of a crowded market stall, with several apprentices.



A tailor working out of a kiosk.



A tailor who owns rents space in a concrete building.



A tailor who shares a kiosk.



A seamstress who owns a converted shipping container



A tailor in his wooden shop.

