Can Business Grants Mitigate a Crisis?
Evidence from Youth Entrepreneurs in Kenya during COVID-19

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1. Introduction

COVID-19 is the largest aggregate shock to hit the global economy in recent years, with far-reaching consequences for businesses, households, and individuals alike. Not only has the pandemic proven difficult to control, but the associated lockdowns and movement regulations have debilitated many micro and small businesses, especially in developing economies. At the same time, governments and international organizations are stretched thin in terms of their own resources and ability to respond. It is therefore crucial to know how to most effectively allocate these scarce resources, with implications for both precautionary and reactive policies.

Targeted support for entrepreneurs and small businesses can offer a crucial lifeline in times of crisis, with the potential for greater business viability, flexibility, and financial slack. In addition, such support can moderate the negative impacts on confidence, life satisfaction, and entrepreneurial aspirations that are undoubtedly at risk. Identifying which kinds of support are most useful and effective is therefore of great value to researchers and policy makers alike.

This paper addresses these pressing questions among a sample of youth entrepreneurs in Kenya and a repurposed field study on the effectiveness of mitigating policies. The original and ongoing study was designed prior to the pandemic with an aim to evaluate the impact of business support measures for self-employment among youth entrepreneurs in the form of grants and business development services (BDS). At the time the pandemic hit in March 2020, the baseline survey for the study had just been completed in January/February, with the intervention rollout of grants and BDS then coinciding with the onset of COVID-19 and its associated lockdowns.

The pandemic made landfall in Kenya in early March 2020, and the government reacted quickly and decisively with school closures, limits on social gathering, suspension of retail, restaurants, as well as international flights put in place before the end of the month. Early April also saw movement cessations and overnight curfews put in place in populous counties, which remained in effect for several months.

Given the sudden onset, this repurposed study assesses the immediate impact of the business support interventions of our original study in ameliorating the crisis. The analysis is based on three rounds of phone surveys among a sample of 1,054 youth who were part of the first rollout wave of the original study.[1] These surveys were conducted at three months (June), five months (August), and seven months (October) from the start of the pandemic, and

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[1] The original study comprises a sample of 9,380 youth across 15 counties in Kenya. Owing to the large scale of the program, the intervention rollout was organized by groups of 5 counties, and the sample in this repurposed study represents all youth who were part of the first wave of implementation. Please see section 2.1. for more details on study design and intervention timing.

combined with the baseline survey cover the period from January to October 2020. Hence, the study period falls squarely within the timeline of the first wave of pandemic spread and the associated stringent government response measures.

First, we use the phone surveys to document the large negative impacts of the crisis on income generation, business outcomes, and life satisfaction among the control group. This analysis shows that 78% of respondents report a negative change to their income within three months of the start of the pandemic (i.e., by June 2020). In addition, only 50% of businesses survive the early months of the pandemic, and new business startup rates drop sharply from over 50% pre-pandemic to an average of 10% in the March-October period. Among the businesses that existed before to the pandemic, sales and profits fall sharply by over 65% compared to prior performance, and business investment and employees decline correspondingly. At the personal level, our data show 40% of youth lack confidence in maintaining their living standards in the aftermath of the pandemic, and 79% are dissatisfied with life. Hence, from both business and individual well-being perspectives, the effects of the crisis were hard hitting and immediate.

Next, we turn to the causal impacts of business grants and BDS. The study design has multiple arms, with one group randomly assigned to receive business grants of Ksh. 40,000 (about US$ 360); a second group assigned to BDS in the form of classroom, digital business training, and follow-up counseling visits; a third group assigned both grants and BDS; and a final group assigned as control. The business grant is equivalent to approximately two months of baseline average sales and five months of average profits. Therefore, it represents a sizable monetary boost to entrepreneurs in our sample. While the grant disbursement was not conditioned on business outputs or outcomes, youth were subject to monitoring via a mix of phone follow-up and spot checks.[2]

Our results show that youth who were assigned business grants or a combination of business grants and BDS are twice as likely to have an operational business in the follow-up rounds compared to the control group, with statistically significant impacts on both business survival and new business startup. These youth are also 90% more likely to report business as their main source of income; 15% less like to report a negative change to their income; and 11% more likely to be the main household income provider, compared to the control group.

On business performance, we find significant treatment effects for both surviving and new businesses, with up to 47% higher sales as well as profits for the former group. Relative to the control group, these effect sizes correspond to 0.28 standard deviation (SD) and 0.26 SD,

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[2] The grant disbursement was divided into two tranches with attendance at an initial orientation session mandatory to receive the first tranche of funds. A second orientation session was originally planned but subsequently cancelled due to COVID-19 social distancing measures, and funds were disbursed without a meeting.

respectively. The results show correspondingly significant impacts on the number of days businesses are operational, the number of days they can survive on existing cash flow, the number of employees, and business investment.

On confidence and life satisfaction, our results show that youth assigned to grants or both grants and BDS report 29% higher life satisfaction than the control group (0.26 SD), 5% more confidence that their households will maintain living standards (0.12 SD), and 10% more preparedness to navigate the business and job environment (0.21 SD).

Despite these positive impacts on business and individual outcomes, our analysis does not show complete mitigation on any of the outcomes that we measure. For example, while the impacts on business sales and profits are substantial and significant, we still find a more than 50% drop on both dimensions compared to pre-pandemic averages for grant recipients. In addition, we do not detect any treatment effects of BDS alone, although the BDS curriculum was not focused on the pandemic as it was designed well before the crisis emerged as part of the original study. Furthermore, the period between training rollout and the follow-up phone surveys is extremely short for training-induced effects to materialize, so it is not surprising that we do not detect significant impacts.

Collectively, these findings show that grants are instrumental in keeping businesses afloat immediately following an aggregate crisis, while also sustaining entrepreneurial confidence and satisfaction levels. Our results on business operational frequency, investment, and employee retention suggest that grant recipients were not simply substituting business income with grant money, but rather were using the money to keep their businesses afloat during the crisis. While not fully compensating for the pandemic-related declines, these effects are likely to play an important role in recovery after the pandemic as youth who are able to get through the crisis with relatively high levels of confidence and satisfaction as well as operational businesses may ultimately be better suited to ramp up business activity quickly, re-engage with customers, and be more motivated to expand their entrepreneurship activities.

A simple back-of-the-envelope calculation shows that the extra revenue generated among pre-existing businesses fully recoups the cost of business grants in 13.5 months, and this estimate yet does not include the substantial multiplier benefits to employees and trading partners as well as the individual and psychological benefits to the youth themselves. Hence, from a cost-benefit perspective, our results suggest that business grants are a compelling policy solution to mitigating a crisis.

This paper is related to several emerging strands of research on the impact of COVID-19 on socioeconomic outcomes in emerging market economies (e.g. Akim et al., 2021; Bottan et al., 2021; Egger et al., 2021; Janssens et al., 2021; Kansiime et al., 2021; Londoño-Vélez and

Querubin, 2021; Mahmud and Riley, 2021). The notion that grants can be helpful in an emergency is a natural one.[3] Yet, it is relatively difficult to obtain rigorous causal evidence on the question given the logistical and political hurdles involved in implementing and measuring exogenous variation quickly in the midst of a crisis. There are a few papers that do so in the context of COVID-19, but to our knowledge only one other study focuses on entrepreneurship outcomes. Brooks et al. (2021) studies 753 female micro-entrepreneurs in Nairobi slums in a cash grants field experiment, and finds significant mitigation effects on profits, operational status, and household food expenditure. Specifically, average profits fell from about $2/day in January 2020 to $1/day in May, at which point a random subset received a $50 grant. By August, profits rebounded by 38%, businesses were 5 percentage points more likely to be open, and food expenditures increased. Our study involves both female and male entrepreneurs operating at a larger scale around the country, with a grant amount that is five times higher relative to monthly profits. Our analysis, therefore, complements the earlier findings.

It is important to note that grants may not necessarily have large impacts in times of crisis. Indeed, it is entirely plausible that very little can be accomplished via moderate grants when the entire system is under stress. Along these lines, Kimani et al. (2020) finds that even $1,000 grants given randomly to refugees in Uganda (in Feb-May 2020) did not lead to higher food consumption levels several months later. Banerjee et al. (2021) also finds only slightly higher well-being, as measured by food security, and physical and mental health, from a universal basic income program in Kenya. Most of the cash in their treatment arms was distributed prior to the pandemic, which resulted in improved outcomes at the time, but also led to more lost income after the pandemic.

In terms of business outcomes, a crisis is likely to endow a desire for flexibility and hence a preference for reversible investments and costs. This may imply that hiring and employment, which are often stickier than other costs, are slower to recover after a crash. Indeed, at a macro level, there is evidence for so-called 'jobless growth' in Nigeria (Osiobe and Oseghe, 2020), South Africa (Meyer, 2017), and Uganda (Bbaale, 2013). At a micro level, de Mel, McKenzie, and Woodruff (2012) studies the impact of the 2004 tsunami on Sri Lankan firms, along with randomized access to capital in the form of grants. The study finds that most firms recover their physical assets within three months of the disaster, but that profits take up to two years to return to normal – unless grants are provided, in which case recovery is almost immediate.

Combined, these studies show substantial variation in how impactful grants can be in times of crisis. Our study contributes to this young literature by offering field evidence from a large

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[3] For example, cash grants are a popular tool in times of humanitarian crises. See Doocy and Tappis (2017) for a review on cash grants in such settings.

emerging economy and using a rich set of panel data with baseline immediately before the onset of COVID and follow-up across three rounds of post-COVID surveys.

2. Study Context
2.1. Context
This study leverages a large youth employment and opportunities project currently being implemented by the Government of Kenya (GoK) with funding from the World Bank. The Kenya Youth Employment and Opportunities Project (KYEOP) seeks to increase employment and earning opportunities among vulnerable youth in the country by providing skills training, entrepreneurship support, and access to relevant job market information.

A key component of KYEOP is a support program for self-employment that targets youth aged 18-29 years with low formal education levels. We are currently implementing a large-scale impact evaluation of this program that provides selected youth with the following forms of support to help them start or grow a business: (a) a business grant of Ksh. 40,000 (about US$ 360) (b) business development services in the form of formal training and counseling (BDS); or (c) both grants and BDS. This study comprises 9,380 youth with the selection stratified across 15 counties in Kenya, as well as by gender.

The program and its evaluation were initiated in June 2019 with a call for applications followed by a screening process to determine eligible applicants. Among those eligible, a baseline survey was conducted in January/February 2020 and selection into the three treatment arms and a control arm was conducted right after.

Owing to the large scale of the program, the intervention rollout was organized by groups of five counties. This study focuses on the first group of five counties where BDS started in February 2020, and grants were disbursed in two tranches, with the first tranche in March 2020 and the second in July 2020.[4]

The timing of the original study is such that the baseline survey was completed right before the pandemic reached Kenya in early March 2020. We immediately organized three rounds of phone surveys in the five treatment counties to assess the mitigation impacts of these support measures on individual and business outcomes. This resulted in a study sample of 1,054 youth across the 5 counties and three rounds of surveys that cover the period from February to October 2020.

2.2. COVID-19 in Kenya
The first case of COVID-19 in Kenya was declared on March 13, 2020. The GoK decided almost immediately to implement social distancing measures. It announced on March 15 a

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[4] The five counties are Kisumu, Kwale, Mombasa, Nairobi, and Nakuru.

number of measures that became effective between March 20 and 25, including school closures, limits on social gatherings of five or more people, closing of restaurants and bars, suspension of international flights, and a nationwide overnight curfew. Furthermore, a cessation of movement was put in place in early April across Nairobi, Mombasa, and Kwale counties – the counties included in this study – which remained in place through the summer.

The GoK also implemented measures to support the economy. While some policies had wide reach, such as mobile money fee waivers (in part to reduce physical interactions), most measures were directed to the formal sector, such as corporate tax relief, and therefore had limited scope for affecting our sample of youth entrepreneurs.

The first wave of COVID-19 cases and mortality peaked in July-August 2020, the second wave in October-December 2020, and a third wave in April-May 2021. In terms of aggregate economic impact, the annual GDP growth rate in Kenya was approximately 6% in the years leading up to the pandemic, but in the most recent estimates by the International Monetary Fund, the economy contracted by 0.1% in 2020.[5] The COVID-19 economic impacts were felt through sharp drops in (1) tourism and service industry; (2) remittances; and (3) cash and export crops, such as roses, for which demand in OECD countries decreased. Correspondingly, the unemployment rate rose sharply, doubling to 10.4% in the second quarter of 2020. Poverty was estimated to have increased by 4 percentage points, or two million people (World Bank, 2020).

To date, little is known about the micro-level impacts of a crisis of such magnitude, especially how it affects small businesses and entrepreneurs. As the COVID-19 crisis continues to unfold with ongoing repercussions, our study sheds light on the micro-level impacts of such a large shock as well as areas of resilience and mitigation. For instance, a headline on August 6, 2020, suggested that the "path to recovery" runs through 'mama mbogas' (small food and retail vendors); the article goes on to highlight that cash is not only a humanitarian imperative but also plays an important role as an economic stimulus.[6] Our paper is a direct test of this hypothesis.

3. Study Design and Data

3.1. Study Design
Mirroring the research design of the original study as described in section 2.1. above, this paper is based on a multi-arm field study, with youth exogenously assigned to business grants, BDS, both grants and BDS, or a control group.

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[5] See https://www.imf.org/en/Countries/KEN
[6] See: https://www.thenewhumanitarian.org/news-feature/2020/08/06/Kenya-coronavirus-informal-economy-mama-mbogas

The business grant of $360 is equivalent to approximately two months of baseline average revenue and five months of average profits in our sample. It was electronically distributed to the youth in the assigned treatment groups in two tranches, in March and June 2020. Youth were required to attend a short orientation session in order to receive the grant, where they were provided information about the program's purpose and follow-up requirements. Specifically, youth were told that they needed to attend the second orientation session in order to receive the second tranche, and that there would be some telephone and in-person monitoring in the intervening period. In practice, the monitoring was relatively light touch and primarily over the telephone due to COVID-19 restrictions.

The BDS comprises a multi-faceted approach to teaching managerial skills to youth entrepreneurs, and includes four days of classroom training, four months of access to a digital BDS repository, and seven individual visits by a trained financial counselor. The curriculum covers the topics of business idea formation and business models; funding sources; legal registration; marketing and pricing; and record-keeping. Its worth noting that the curriculum does not include any explicit content related to dealing with economic shocks as it was developed prior to COVID-19 as part of the original study. Nevertheless, the hypothesis that we test in this paper is whether standard business knowledge and growth tools can sustain businesses for longer and allow youth entrepreneurs to better cope with the impacts of the crisis.

In terms of timing of BDS, the classroom sessions took place in February 2020, and the digital repository became available starting in August 2020. The counseling sessions were conducted between June and December 2020.

For the purposes of this paper and for statistical power purposes, we pool all forms of BDS into a single composite treatment that we label "Any BDS". The results are not different if we disaggregate the analysis.

3.2. Data Description
The analysis presented in this study is based on two sources of data: (i) an in-person baseline survey that was conducted in January and February 2020, prior to any COVID-19 related restrictions; and (ii) phone surveys that were conducted in 3 rounds between June and November 2020 to retrospectively collect data from February to October on the impact of COVID-19 on business and individual outcomes.

The in-person baseline survey comprised 9,380 respondents from 15 counties throughout Kenya, whereas the phone surveys comprised 1,054 respondents from 5 counties where the study interventions had started to roll out.

The first round of phone surveys was conducted in June and July 2020, the second round in August and September 2020, and the third round in October and November 2020. While most survey questions were asked round-by-round, recall of sales and profits was elicited at a more frequent monthly interval with respondents asked to recall values for each month since the previous survey round. Hence, for these business performance outcomes, we have recall-based monthly phone survey data from February to October 2020.

Response rates for the phone surveys were high with 83% of the sample reached in all three rounds and 91% in at least one round. Attrition is uncorrelated with treatment status.

3.3. Overlapping Timeline
The timing of the follow-up phone surveys overlaps with the rollout of BDS components in our sample. By the first survey round in June, the classroom BDS sessions had been completed, counseling sessions had just begun, and digital BDS was not yet available. The latter was introduced in August, coinciding with the start of the second survey round. Both counseling and digital BDS continued to be rolled out through the third survey round in October, with the counseling sessions spanning June-December and the digital BDS repository open from August-November.

The pooled "Any BDS" indicator variable described in section 3.1. is based on eventual treatment assignment. While this identification strategy is independent of treatment rollout timing and is therefore the simplest to implement, it can depress the average treatment coefficient of "Any BDS", since the full suite of BDS treatments only became available in the later survey rounds.

An alternative strategy is to allow the "Any BDS" indicator to vary by survey round depending on which treatments were in place at the time each survey was conducted.[7] Appendix Table 2 presents the round-by-round analysis following this strategy and the results are discussed in section 5 below.

Regardless of which strategy is used, it is important to note that the results on BDS should be viewed as very short-term effects given the short gestation period between the trainings and surveys.

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[7] Anticipation effects are not a great concern as invitations to the various BDS sessions were sent out only shortly beforehand.

4. Summary Statistics and Aggregate Impacts of COVID-19

4.1. Summary Statistics

We have rich information on our study sample from the pre-COVID period, and summary statistics are presented in Table 1. We restrict the data to the experimental sample from five counties that are the focus of this study.

Columns (1) and (2) present summary statistics for the control arm; columns (3) and (4) for the grants arm; columns (5) and (6) for the BDS arm; and columns (7) and (8) for the combined arm. Column (9) presents p-values from an equality of means F-test across all arms.

The sample comprises youth with an average age of 24 years and is gender balanced. Almost a quarter of the respondents are married or living together with a partner, and in a household with a mean size of 4 members (including the respondent). More than 75% of respondents have completed secondary education, and over 60% express confidence in their own abilities. In terms of economic activity, just under 50% of respondents have a business at baseline, while 40% have a wage job. The average business age is 3 years with an average of 1-1.5 employees. The p-values on differences in means tests are mostly high, with business profits showing a marginal imbalance (p-value of 0.09). Nevertheless, our empirical strategy described in section 4.1. involves controlling for baseline values when assessing impacts.

The sectoral distribution of the overall sample is wide, with the highest representation coming from wholesale and retail trade, agriculture, and other services. We do not have sufficient statistical power to disentangle treatment effects by sector. However, this remains a viable estimation option for the larger study to understand the disproportionate impact of COVID-19 by the level of crisis exposure across sectors.

4.2. Immediate Consequences of COVID-19 on Individual and Business Outcomes

In this section, we quantify the immediate consequences of COVID-19 on business and individual outcomes for the control group, including indicators of business ownership, business performance, and standards of living.

Appendix Figures 1-3 illustrate these findings with each figure plotting the round-by-round summary statistics for the outcome of interest. Note that while these trends cannot be statistically identified as causal, they nevertheless provide a useful summary of the declines following COVID-19.[8]

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[8] As discussed in the previous section, we do not have sufficient variation in crisis intensity across regions or business sectors to identify causal effects, but this remains a potential avenue for the original study with a much larger and more diverse sample.

Appendix Figure 1 focuses on business ownership and shows a sharp decline from 48% of the sample owning a business in February to only 30% in June. By October, business ownership among the original sample is still only 39%. Disentangling these business ownership changes for existing and new businesses, the figure shows that only 45% of businesses that existed at baseline in January remain open in June, a substantial decline in business activity. By October, this proportion only reaches 55%, evidencing a persistent decline among previous business owners. The frequency of business startups is also quite low, at less than 10% in June and August compared to over 50% in the pre-pandemic period. Combined, these findings indicate the difficult business environment immediately following the pandemic.

Appendix Table 1 investigates the main reasons for business closure and finds that by round 1 of the survey (i.e. June 2020) and among businesses that shut down, 67% closed because of worries about COVID-19, 46% due to lack of demand, 23% due to business losses, and 20% due to lockdowns and curfews. Inability to acquire inputs (15%), access transport (15%), and obtain capital (12%) were other reported reasons for business closures.

Business performance also suffers, with Appendix Figure 2 showing immediate and substantial declines in both sales and profits in the months after the crisis hit. Specifically, sales decline by 75% from February to June, with only marginal improvements by October. Similarly, profits decline by 78% in the immediate aftermath and correspondingly show minimal recovery over the next few months.

Finally, Appendix Figure 3 illustrates impacts on perceptions, confidence, and life satisfaction. Nearly 80% of survey respondents report a negative change in income in round 1 of the survey. Furthermore, more than 40% lack confidence in maintaining their living standards, and less than 20% report being satisfied with life. There are some improvements in subsequent months, but the overall levels still remain quite low. Nearly 20% of respondents even report further negative changes to income over the declines in June. Combined, these findings show that the effects of the COVID-19 crisis were hard hitting and immediate on both business and individual outcomes.

5. Estimation and Results
5.1. Estimation Strategy
We estimate the causal impact of grants and BDS with two rounds of pre-COVID data (baseline and February recall) and three rounds of post-COVID data, using the following ANCOVA specification:

$$Y_{i(Post)} = \alpha + Y_{i(Baseline)} + Y_{i(February)} + \gamma_1.Grants_i + \gamma_2.Any\,BDS_i$$

$$+ \gamma_3.Grants\_and\_Any\,BDS_i + \sum_{m=1}^{M} \beta_m.X_m + \sum_{t=Post2}^{Post3} \delta_t.Round_t + \varepsilon_i \quad (1)$$

where $Y_{i(Post)}$ is the stacked business or individual outcome of interest in the post-COVID period, with flexible controls for $Y_{i(Baseline)}$ and $Y_{i(Febraury)}$ – the dependent variable values at baseline and February, respectively. $\sum_m \beta_m$ are the coefficients on stratification variables including gender and county, as well as additional controls for economic sector. $\sum Round_t$ are the post-COVID survey round dummies for rounds 2 and 3. $\gamma_1, \gamma_2,$ and γ_3 are the coefficients of interest representing the causal impact of each corresponding treatment. Standard errors are clustered at the individual level.

5.2. Causal Evidence on Mitigation
Tables 2-5 present causal impacts on outcomes related to income generation, business performance, business operations, and confidence and life satisfaction, respectively. All even numbered columns present the results from specification (1), while all odd numbered columns present results from a simpler specification where all treatments are pooled into an indicator variable for being assigned any treatment.

Table 2 focuses on income generation. Column (1) shows that compared to the control group average of 34% business ownership in the post-crisis period, entrepreneurs assigned any treatment are 68% more likely to have an operational business – an effect that is significant at the 1% level. Column (2) disaggregates this effect by individual treatment status and finds large and statistically significant effects for the "Grants" and "Grants and Any BDS" arms, both showing a two-fold increases in the likelihood of operating a business compared to the control group, but no significant effects for the "Any BDS" arm. Even the magnitude of the "Any BDS" coefficient is close to zero. Owing to this last finding, the two treatment arms containing grants show significantly higher coefficients than the "Any BDS" arm, evident in the F-test p-values at the bottom of the table. At the same time, the two arms containing grants are statistically indistinguishable from each other.

This trend of the "Any BDS" arm not showing significant impacts continues across other outcomes in Table 2 as well as for outcomes across other tables. As explained previously in section 3, the BDS curriculum was not focused on pandemic resistance and the follow-up period is incredibly short with some overlap between when the BDS components were released and the timing of the follow-up surveys. Appendix Table 2 conducts round-by-round analysis with a more flexible treatment variable that changes across rounds based on which components of BDS were available at the time. However, the results are still statistically insignificant and small in magnitude. Ultimately, any potential impacts of BDS are likely to

appear over the longer term, and the follow-up survey timeline of the original study will be able to test for any such effects in the future.

Table 2 also reports on other aspects of income generation. Specifically, we find entrepreneurs who were assigned business grants or a combination of business grants and BDS are up to 90% more likely to report business as their main source of income, 15% less likely to report a negative change to their income, and 11% more likely to be the main household income provider.

Table 3 focuses on business performance outcomes of sales and profits. In Panel A, we separate the sample by youth who owned a business prior to the crisis and those who did not yet own a business. Columns (1) and (2) study the treatment effects on business survival for the former sample, and columns (3) and (4) present results on business startup for the latter sample. The analysis shows large and statistically significant effects on both outcomes for youth assigned business grants and those assigned both grants and BDS. Specifically, compared to a business survival rate of 50% in the control group, we find up to a 28 percentage points higher survival rate due to business grants. Similarly, compared to a 10% business startup rate in the control group, our results show up to 48 percentage point higher startup rate owing to grants. All these coefficients are statistically significant at the 1% level.

Panel B of Table 3 presents results on the intensive margin of performance, namely sales and profits, for both samples.[9] The findings show that both sales and profits are significantly and substantially higher for both the "Grants" and the "Grants and BDS" groups, up to 47% higher sales and 47% higher profits. In terms of standard deviation improvements over the control group, these effects correspond to 0.28 SD and 0.26 SD, respectively.

The natural question that arises is through which mechanism are entrepreneurs and businesses receiving grants or both grants and BDS able to maintain higher income generation and business performance? Moreover, which aspects of business operations do the grants prop up to boost performance? Delving into these aspects in Table 4, our analysis shows significant impacts on the number of operational business days, the number of days the business can remain open with current cash flow, the number of employees, and the amount of investment in business supplies and materials. Specifically, in Panel A, for businesses that existed at baseline, compared to the control group average of 13 days of business operation in the last month, businesses assigned grants or both grants and BDS remain open for up to 8 more days, an effect size of 62% that is statistically significant at the

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[9] Note that since both business survival and business startup show positive and significant treatment effects, the intensive margin analysis suffers from selection bias as the pool of businesses for whom sales and profits data are available is affected by treatment. To overcome this identification problem, we replace missing performance values with zeros, therefore, the results in Panel B of Table 3 represent treatment impacts on unconditional sales and profits.

1% level. Likewise, these same businesses report up to 43% higher capability of remaining open with current cash flow, have 71% greater number of employees, and report 67% higher business investment than the control group. We find qualitatively similar findings for new businesses in Panel B of Table 4. Hence, these results suggest business grants are vital for maintaining day-to-day business operations, which then translates to higher sales and profits.

Finally, table 5 focuses on individual level welfare outcomes and presents analysis on confidence and life satisfaction. These outcomes are based on self-reported survey questions with responses recorded on a sliding scale, which are then normalized. The results show that compared to the control group, youth assigned to grants or both grants and BDS report 29% higher life satisfaction (0.26 SD effect size), 5% more confidence their households will maintain living standards (0.12 SD), and 10% more preparedness to navigate the business and job environment (0.21 SD). There are no statistically significant differences in the number of days youth believe the effects of COVID-19 will last, though the coefficients for "Grants" and "Grants and BDS" are negative.

Overall, these findings show that grants are instrumental in keeping businesses afloat during times of aggregate crises. The mechanism appears to operate through stronger business operations and also higher levels of entrepreneurial confidence and life satisfaction. While we acknowledge that we cannot identify the causal chain, as better individual satisfaction could lead to better performance just as much as better performance could result in higher satisfaction, nevertheless our results do highlight the importance of these individual factors in crisis recovery. Moreover, our evidence suggests that COVID-19 is not only an economic shock but also a psychological shock that is felt at the personal level, and recovery from both is key to eventual improvements in well-being.

6. Conclusion and Discussion

The goal of this study is to learn how a large shock – to both demand and supply – affects micro and small businesses in an emerging economy, and whether policy measures such as business grants and/or business development services can mitigate adverse outcomes. We do so in the context of the COVID-19 pandemic and a field study among youth entrepreneurs across Kenya. Our results show that beneficiaries who were assigned to receive business grants of $360 (with or without BDS in addition) are significantly less likely to report a decline in income; are up to twice as likely to maintain their business in operation; report significantly higher sales and profits; and maintain significantly higher life satisfaction and confidence levels.

Our results also show that business development services in the form of business training and counseling are ineffective in curtailing the negative effects of the crisis. Given that the original study envisioned a different purpose for business development services rather than crisis mitigation, it is unsurprising that we find no impact on any of the outcomes that we

measure in this paper. While it is possible that this is because the program is ineffective, it is crucial to qualify that it was designed to overcome obstacles that are less relevant in a dynamic (even chaotic) state of disequilibrium. In particular, efforts to invest in the future (whether via skills, capital, or social relationships) by definition will not bear fruit over a few months, and furthermore may be substantially less relevant in times of crisis. Our longer-term endline surveys with the full sample will allow us to test whether positive effects appear on that timescale, as well as evaluate any continued overall recovery from the pandemic and the long-run impact of the business grants.

One limitation of our study is that despite the fine-grained data and timing, we cannot distinguish the direction of causality between the two main categories of outcomes: economic performance and well-being. That being said, almost certainly it is self-reinforcing and goes in both directions. What we can confidently say in the bigger picture is that both elements matter and that grants can be instrumental in ameliorating negative effects along these two key dimensions in times of crisis. This is especially important for a population of youth, such as ours, for whom both upward and downward trajectories can have long-lasting impacts. Moreover, our results suggest that reacting quickly and investing at the individual level, especially in the absence of other support services, can offer a vital lifeline to youth that can facilitate recovery in the short-run and open doors for productivity and growth in the long-run.

References

Akim, A., F. Ayivodji, and J. Kouton. 2021. "Do Remittances Mitigate COVID-19 Employment Shock on Food Insecurity? Evidence from Nigeria" SSRN Working Paper.

Banerjee, A., M. Faye, A. Krueger, P. Niehaus, and T. Suri. 2021. "Effects of a Universal Basic Income during the Pandemic," MIT Working Paper.

Bbaale, E. 2013. "Is Uganda's Growth Profile Jobless?" *International Journal of Economics and Finance*, 5(11): 105-123.

Blattman, C., N. Fiala, and S. Martinez.2020. "The Long-Term Impacts of Grants on Poverty: Nine-Years Evidence from Uganda's Youth Opportunities Program," *American Economic Review: Insights* 2(3): 287-304.

Bottan, N., B. Hoffman, D. A. Vera-Cossio. 2021. "Stepping Up During a Crisis: The Unintended Effects of a Noncontributory Pension Program During the Covid-19 Pandemic," *Journal of Development Economics*, 150; 102635.

Brooks, W., K. Donovan, T.R. Johnson, and J. Oluoch-Aridi. 2021. "Cash Transfers as a Response to COVID-19: Experimental Evidence from Kenya" ASU Working Paper.

de Mel S., D. McKenzie, C. Woodruff. 2010. "Who Are the Microenterprise Owners? Evidence from Sri Lanka on Tokman v. de Soto," in Lerner J, Schoar A, eds. *International Differences in Entrepreneurship*, University of Chicago Press, Chicago, 63-87.

de Mel, S., D. McKenzie, and C. Woodruff. 2012. "Enterprise Recovery Following Natural Disasters," *The Economic Journal,* 122(559), 64-91.

Doocy, S., and H. Tappis. 2017. "Cash-based Approaches in Humanitarian Emergencies: A Systematic Review," *Campbell Systematic Review*, Vol 13:1.

Egger, D., E. Miguel, S. Warren, A. Shenoy, E. Collins, D. Karlan, et al. 2021. "Falling Living Standards During the COVID-19 Crisis: Quantitative Evidence from Nine Developing Countries," *Science Advances*, Vol. 7:6, February 2021.

Janssens, W., M. Pradhan, R. de Groot, E. Sidze, H. P. P. Donfouet, and A. Abajobird. 2021. "The Short-term Economic Effects of COVID-19 on Low-income Households in Rural Kenya: An Analysis Using Weekly Financial Household Data," *World Development*, Vol. 138, February 2021.

Kansiime, M. K., J. A. Tambo, I. Mugambi, M. Bundi, A. Kara, and C. Owuor. 2021. "COVID-19 Implications on Household Income and Food Security in Kenya and Uganda: Findings from a Rapid Assessment," *World Development*, Vol. 137, January 2021.

Kimani, E., H. Lanthorn, D. Stein, R. Bergmann. 2020. "Cash Transfers and COVID-19: Experiences from Kiryandongo, Uganda," IPA Working Paper.

Londoño-Vélez, J., and P. Querubín. Forthcoming. "The Impact of Emergency Cash Assistance in a Pandemic: Experimental Evidence from Colombia," *Review of Economics and Statistics*.

Mahmud, M., and E. Riley. 2021. "Household Response to an Extreme Shock: Evidence on the Immediate Impact of the Covid-19 Lockdown on Economic Outcomes and Well-Being in Rural Uganda," *World Development*, Vol 140, April 2021.

McKenzie, D. 2012. "Beyond baseline and follow-up: The case for more T in experiments," *Journal of Development Economics* 99(2): 210-221.

Meyer, D. F. 2017. "An Analysis of The Short and Long-Run Effects of Economic Growth on Employment in South Africa," *International Journal of Economics and Finance Studies*. 9(1) ISSN: 1309-8055 (Online).

Osiobe, E. U., and O. M. Oseghe. 2020. "Analyzing the Jobless Recovery Phenomenon in the Nigerian Economy," *Journal of Applied Economics* 22(9): 196-211.

World Bank. 2013. "World Development Report," World Bank Group, Washington DC.

World Bank. 2020. "Kenya Economic Update, November 2020: Navigating the Pandemic," World Bank Group, Kenya.

Table 1: Baseline Summary Statistics

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Control		Grants		Any BDS		Grants and Any BDS		
									Equality of Means Across All Treatments (p-value)
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
Female	0.48		0.43		0.49		0.53		0.13
Age	24.07	2.73	24.48	2.81	24.33	2.90	24.40	2.94	0.52
Married or Living Together	0.21		0.19		0.27		0.25		0.17
Household Size	4.04	2.43	3.97	2.46	3.86	2.39	3.87	2.27	0.84
Has Children Under 4	0.30		0.31		0.32		0.28		0.68
Secondary Education	0.78		0.78		0.78		0.76		0.91
Confidence in Own Ability	0.60	0.24	0.59	0.25	0.63	0.23	0.64	0.22	0.12
Business Training in Last 12 Months	0.30		0.33		0.23		0.27		0.05
Has a Wage Job	0.40		0.43		0.40		0.36		0.39
Has a Business	0.45		0.47		0.49		0.41		0.28
Number of Businesses	1.08	0.32	1.09	0.32	1.06	0.24	1.19	0.44	0.03
Main Business Age	2.82	1.03	2.82	1.09	2.88	1.08	2.84	1.03	0.97
Main Business is Registered	0.34		0.28		0.28		0.28		0.79
Number of Employees	1.36	2.37	1.70	3.85	1.18	2.10	1.42	2.07	0.61
Business Sales (KSh)	19318.79	19693.31	22173.71	21487.78	18128.77	20292.79	21125.63	21491.93	0.47
Business Profits (KSh)	5925.05	6514.22	8672.68	8396.12	6400.93	7270.29	7333.23	7412.65	0.09

This table presents baseline summary statistics for our study sample, separately for the control group and each treatment group. Column (9) presents p-values for equality of means tests across all experimental groups (treatment and control).

Table 2: Treatment Effects on Income Generation

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Has a Business		Business is Main Sources of Income		Negative Changes to Income		Main Income Provider for the Household	
Assigned Any Treatment	0.23***		0.17***		-0.04*		0.01	
	(0.03)		(0.03)		(0.02)		(0.02)	
Assigned Grants		0.34***		0.25***		-0.06**		0.05*
		(0.04)		(0.04)		(0.03)		(0.03)
Assigned Any Form of BDS		0.02		-0.01		-0.02		-0.01
		(0.03)		(0.03)		(0.02)		(0.02)
Assigned Grants and Any Form of BDS		0.35***		0.28***		-0.04*		0.01
		(0.04)		(0.04)		(0.02)		(0.02)
R-squared	0.18	0.27	0.17	0.23	0.26	0.27	0.74	0.74
Sample Size	2946	2946	1958	1958	2946	2946	1054	1054
Dependent Variable Mean in Control Group	0.34	0.34	0.31	0.31	0.39	0.39	0.46	0.46
Dependent Variable Mean in Control Group in Feb	0.48	0.48	0.43	0.43			0.49	0.49
Dependent Variable Mean in Control Group at BL	0.45	0.45					0.34	0.34
Grants = BDS F-test p-value		0.00		0.00		0.06		0.00
Grants & BDS = BDS F-test p-value		0.00		0.00		0.19		0.19
Grants = Grants & BDS F-test p-value		0.75		0.32		0.48		0.10
Grants + Grants & BDS Joint F-test p-value		0.00		0.00		0.02		0.15
Grants & BDS + BDS Joint F-test p-value		0.00		0.00		0.15		0.99

This table presents ANCOVA regression analysis for income generation outcomes based on three rounds of follow-up surveys. All regressions include flexible controls for pre-pandemic (baseline and February) dependent variable values, follow-up survey round dummies, stratification variables, and county and business sector controls. Standard errors are clustered at the individual level. Outcome data in columns (3) and (4) were unintentionally corrupted for round 2, therefore only rounds 1 and 3 are included. Outcomes in columns (7) and (8) were only elicited for round 1.

Table 3: Treatment Effects on Business Performance

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Extensive Margin	Business Survival		Business Entry					
Assigned Any Treatment	0.16***		0.30***					
	(0.05)		(0.04)					
Assigned Grants		0.24***		0.48***				
		(0.05)		(0.06)				
Assigned Any Form of BDS		-0.01		0.01				
		(0.05)		(0.04)				
Assigned Grants and Any Form of BDS		0.28***		0.45***				
		(0.05)		(0.05)				
R-squared	0.05	0.11	0.08	0.25				
Sample Size	1740	1740	1206	1206				
Dependent Variable Mean in Control Group	0.50	0.50	0.10	0.10				
Grants = BDS F-test p-value		0.00		0.00				
Grants & BDS = BDS F-test p-value		0.00		0.00				
Grants = Grants & BDS F-test p-value		0.38		0.58				
Grants + Grants & BDS Joint F-test p-value		0.00		0.00				
Grants & BDS + BDS Joint F-test p-value		0.01		0.00				
Panel B: Intensive Margin	Monthly Sales of Existing Businesses (Win 5%)		Monthly Profits of Existing Businesses (Win 5%)		Monthly Sales of New Businesses (Win 5%)		Monthly Profits of New Businesses (Win 5%)	
Assigned Any Treatment	1718.06***		593.62**		2272.58***		777.57***	
	(655.65)		(231.06)		(364.57)		(129.63)	
Assigned Grants		2272.73***		698.95***		2995.68***		1005.37***
		(745.71)		(266.94)		(599.29)		(213.58)
Assigned Any Form of BDS		0.71		101.41		123.48		31.93
		(753.84)		(262.29)		(302.19)		(109.12)
Assigned Grants and Any Form of BDS		2960.61***		988.11***		3770.70***		1310.64***
		(768.38)		(270.99)		(572.32)		(206.14)
R-squared	0.31	0.33	0.24	0.25	0.04	0.10	0.04	0.09
Sample Size	4165	4165	4163	4163	2845	2845	2845	2845
Dependent Variable Mean in Control Group	6343.44	6343.44	2118.60	2118.60	552.81	552.81	189.00	189.00
Dependent Variable SD in Control Group	10641.09	10641.09	3777.47	3777.47	2754.88	2754.88	1022.38	1022.38
Dependent Variable Mean in Control Group in Feb	20030.86	20030.86	7693.83	7693.83				
Dependent Variable SD in Control Group in Feb	18260.36	18260.36	7258.95	7258.95				
Dependent Variable Mean in Control Group at BL	19318.79	19318.79	5925.05	5925.05				
Dependent Variable SD in Control Group at BL	19693.31	19693.31	6514.22	6514.22				
Grants = BDS F-test p-value		0.00		0.01		0.00		0.00
Grants & BDS = BDS F-test p-value		0.00		0.00		0.00		0.00
Grants = Grants & BDS F-test p-value		0.32		0.23		0.31		0.27
Grants + Grants & BDS Joint F-test p-value		0.00		0.00		0.00		0.00
Grants & BDS + BDS Joint F-test p-value		0.03		0.02		0.00		0.00

This table presents ANCOVA regression analysis for business performance outcomes based on three rounds of follow-up surveys. All regressions include flexible controls for pre-pandemic (baseline and February) dependent variable values, follow-up survey round dummies, stratification variables, and county and business sector controls. Standard errors are clustered at the individual level. Data in Panel A on the extensive margin of business performance are available for each survey round. Data in Panel B on the intensive margin of business performance are available for each month (from March to October 2020).

Table 4: Treatment Effects on Business Outcomes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Existing Businesses	Number of Days Business was Open in Last Month		Number of Days Business Can Remain Open With Current Cash Flow		Total Number of Employees		Log of Spending on Materials and Supplies	
Assigned Any Treatment	4.89***		3.80		0.10*		1.00***	
	(1.10)		(2.94)		(0.06)		(0.33)	
Assigned Grants		6.81***		10.01**		0.08		1.43***
		(1.22)		(3.91)		(0.07)		(0.38)
Assigned Any Form of BDS		0.64		-6.42**		0.02		0.07
		(1.23)		(3.03)		(0.07)		(0.36)
Assigned Grants and Any Form of BDS		7.61***		10.52***		0.20**		1.63***
		(1.21)		(3.18)		(0.08)		(0.38)
R-squared	0.18	0.23	0.06	0.10	0.31	0.32	0.07	0.10
Sample Size	1740	1740	1562	1562	1740	1740	1719	1719
Dependent Variable Mean in Control Group	12.54	12.54	24.62	24.62	0.28	0.28	2.42	2.42
Dependent Variable SD in Control Group	13.02	13.02	33.52	33.52	0.82	0.82	3.89	3.89
Dependent Variable Mean in Control Group in Feb	19.78	19.78			0.73	0.73	6.83	6.83
Dependent Variable SD in Control Group in Feb	8.13	8.13			1.06	1.06	3.87	3.87
Dependent Variable Mean in Control Group at BL	20.87	20.87			1.36	1.36		
Dependent Variable SD in Control Group at BL	9.24	9.24			2.37	2.37		
Grants = BDS F-test p-value		0.00		0.00		0.31		0.00
Grants & BDS = BDS F-test p-value		0.00		0.00		0.01		0.00
Grants = Grants & BDS F-test p-value		0.42		0.88		0.13		0.53
Grants + Grants & BDS Joint F-test p-value		0.00		0.00		0.03		0.00
Grants & BDS + BDS Joint F-test p-value		0.00		0.48		0.09		0.01

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel B: New Businesses	Number of Days Business was Open in Last Month		Number of Days Business can Remain Open With Current Cash Flow		Total Number of Employees		Log of Spending on Materials and Supplies	
Assigned Any Treatment	7.80***		13.35***		0.24***		1.58***	
	(1.07)		(1.97)		(0.04)		(0.21)	
Assigned Grants		12.33***		20.83***		0.34***		2.38***
		(1.47)		(3.10)		(0.08)		(0.37)
Assigned Any Form of BDS		0.61		1.49		0.07**		0.13
		(1.10)		(1.93)		(0.03)		(0.20)
Assigned Grants and Any Form of BDS		11.63***		20.30***		0.33***		2.45***
		(1.29)		(2.58)		(0.06)		(0.29)
R-squared	0.08	0.24	0.08	0.18	0.03	0.06	0.05	0.13
Sample Size	1206	1206	1139	1139	1206	1206	1197	1197
Dependent Variable Mean in Control Group	2.46	2.46	3.88	3.88	0.01	0.01	0.48	0.48
Dependent Variable SD in Control Group	7.81	7.81	15.18	15.18	0.08	0.08	1.93	1.93
Grants = BDS F-test p-value		0.00		0.00		0.00		0.00
Grants & BDS = BDS F-test p-value		0.00		0.00		0.00		0.00
Grants = Grants & BDS F-test p-value		0.64		0.88		0.91		0.86
Grants + Grants & BDS Joint F-test p-value		0.00		0.00		0.00		0.00
Grants & BDS + BDS Joint F-test p-value		0.00		0.00		0.00		0.00

This table presents ANCOVA regression analysis for business outcomes based on three rounds of follow-up surveys. All regressions include flexible controls for pre-pandemic (baseline and February) dependent variable values, follow-up survey round dummies, stratification variables, and county and business sector controls. Standard errors are clustered at the individual level.

Table 5: Treatment Effects on Confidence and Satisfaction

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Satisfied with Life (Normalized Scale)		Confident HH will Maintain Living Standard Next Month (Normalized Scale)		How Many Weeks Do You Think Covid-19 Effects will Last		Feels Prepared to Navigate Business and Job Environment (Normalized Scale)	
Assigned Any Treatment	0.04**		0.01		-0.43		0.03**	
	(0.02)		(0.01)		(1.35)		(0.02)	
Assigned Grants		0.06***		0.03**		-1.14		0.06***
		(0.02)		(0.02)		(1.70)		(0.02)
Assigned Any Form of BDS		0.01		-0.04**		0.88		-0.01
		(0.02)		(0.02)		(1.51)		(0.02)
Assigned Grants and Any Form of BDS		0.05***		0.03**		-1.25		0.06***
		(0.02)		(0.02)		(1.47)		(0.02)
R-squared	0.05	0.06	0.05	0.06	0.04	0.05	0.03	0.05
Sample Size	1958	1958	2981	2981	2313	2313	2928	2928
Dependent Variable Mean in Control Group	0.21	0.21	0.63	0.63	28.17	28.17	0.63	0.63
Dependent Variable SD in Control Group	0.23	0.23	0.25	0.25	19.78	19.78	0.28	0.28
Grants = BDS F-test p-value		0.00		0.00		0.17		0.00
Grants & BDS = BDS F-test p-value		0.00		0.00		0.07		0.00
Grants = Grants & BDS F-test p-value		0.78		0.86		0.93		0.96
Grants + Grants & BDS Joint F-test p-value		0.00		0.03		0.40		0.00
Grants & BDS + BDS Joint F-test p-value		0.06		0.71		0.89		0.13

This table presents OLS regression analysis for individual confidence and life satisfaction outcomes based on three rounds of follow-up surveys. All regressions include follow-up survey round dummies, stratification variables, and county and business sector controls. We do not have pre-pandemic data on these outcomes. Standard errors are clustered at the individual level. Outcome data in columns (1) and (2) were unintentionally corrupted for round 2, therefore only round 1 and 3 are included.

Appendix Table 1: Reasons for Business Closure

|	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Round 1			Round 2			Round 3		
Reason for closure	Total	Temporarily closed	Permanently closed	Total	Temporarily closed	Permanently closed	Total	Temporarily closed	Permanently closed
Closed because of worries about COVID-19/coronavirus	67%	68%	39%	45%	45%	40%	11%	12%	0%
Lack of demand	46%	46%	33%	41%	41%	40%	37%	34%	67%
Business running at a loss	23%	22%	56%	29%	29%	30%	26%	25%	33%
Closed because of lockdown/curfew	20%	20%	22%	2%	2%	0%	5%	6%	0%
Cannot get inputs	16%	15%	17%	20%	20%	10%	16%	13%	44%
Cannot travel or transport goods	15%	15%	22%	5%	5%	0%	4%	5%	0%
Other	12%	13%	6%	1%	1%	0%	4%	4%	11%
Lack of enough capital	12%	12%	6%	26%	26%	30%	41%	42%	33%
Government requirements (by-laws, trading licenses)	9%	9%	6%	5%	5%	0%	0%	0%	0%
Seasonal closure / usually closed in this season	2%	2%	0%	0%	0%	0%	1%	1%	0%
Need to take care of an ill relative	1%	1%	0%	3%	3%	10%	3%	4%	0%
Theft / vandalism	1%	1%	0%	0%	0%	0%	0%	0%	0%
Mechanical breakdown	1%	1%	0%	1%	1%	0%	4%	5%	0%
Dissolution of the business by the partners	0%	0%	0%	0%	0%	0%	1%	1%	0%
Sample Size	393	375	18	260	250	10	92	83	10

Note: This table shows the percentage of respondents who mentioned each reason for business closure (in order of importance), by survey round. Multiple answers were allowed. Since responses are not mutually exclusive and respondents could select multipe reasons, the sum of percentages associated to all reasons does not add up to 100.

Appendix Table 2: Round by Round Treatment Effects

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Panel A: Business and Personal Outcomes		Has a Business		Business is Main Sources of Income		Satisfied with Life (Normalized Scale)		Confident HH will Maintain Living Standard Next Month (Normalized Scale)		
	Round 1	Round 2	Round 3	Round 1	Round 3	Round 1	Round 3	Round 1	Round 2	Round 3
Assigned Grants	0.39***	0.34***	0.29***	0.24***	0.24***	0.08***	0.03	0.04	0.01	0.04**
	(0.04)	(0.04)	(0.05)	(0.04)	(0.05)	(0.02)	(0.02)	(0.03)	(0.03)	(0.02)
Assigned Any Form of BDS	0.03	0.03	-0.01	-0.01	-0.02	0.01	0.01	-0.02	-0.08***	-0.04*
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.02)	(0.02)	(0.03)	(0.03)	(0.02)
Assigned Grants and Any Form of BDS	0.39***	0.37***	0.31***	0.27***	0.29***	0.07***	0.04*	0.04	0.01	0.05**
	(0.04)	(0.04)	(0.04)	(0.04)	(0.05)	(0.03)	(0.02)	(0.03)	(0.03)	(0.02)
R-squared	0.28	0.34	0.23	0.28	0.21	0.05	0.03	0.03	0.04	0.06
Sample Size	969	988	989	969	989	969	989	969	988	1024
Dependent Variable Mean in Control Group	0.29	0.33	0.39	0.28	0.34	0.14	0.27	0.57	0.72	0.61
Dependent Variable SD in Control Group	0.46	0.47	0.49	0.45	0.48	0.24	0.21	0.28	0.27	0.19
Dependent Variable Mean in Control Group in Feb	0.48	0.48	0.48	0.43	0.43					
Dependent Variable SD in Control Group in Feb	0.50	0.50	0.50	0.50	0.50					
Dependent Variable Mean in Control Group at BL	0.45	0.45	0.45							
Dependent Variable SD in Control Group at BL	0.50	0.50	0.50							
Grants = BDS F-test p-value	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.01	0.00	0.00
Grants & BDS = BDS F-test p-value	0.00	0.00	0.00	0.00	0.00	0.01	0.08	0.02	0.00	0.00
Grants = Grants & BDS F-test p-value	0.92	0.55	0.57	0.55	0.26	0.59	0.48	0.87	0.99	0.75
Grants + Grants & BDS Joint F-test p-value	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.12	0.64	0.01
Grants & BDS + BDS Joint F-test p-value	0.00	0.00	0.00	0.00	0.00	0.07	0.24	0.75	0.21	0.74

Panel B: Business Performance Outcomes	Monthly Sales of Existing Businesses (Win 5%)			Monthly Profits of Existing Businesses (Win 5%)						
	Round 1	Round 2	Round 3	Round 1	Round 2	Round 3				
Assigned Grants	2112.53***	2786.83***	2841.57**	747.31***	881.04**	550.19				
	(665.60)	(879.99)	(1158.28)	(242.27)	(347.01)	(363.12)				
Assigned Any Form of BDS	-53.76	-99.08	-163.04	103.14	89.15	-139.44				
	(748.28)	(802.61)	(1059.37)	(267.92)	(325.61)	(347.50)				
Assigned Grants and Any Form of BDS	1606.18**	3757.63***	3156.04***	601.58**	1199.59***	894.57**				
	(756.16)	(884.14)	(1133.58)	(259.19)	(353.35)	(366.67)				
R-squared	0.36	0.36	0.31	0.31	0.23	0.21				
Sample Size	1788	1199	1178	1786	1199	1178				
Dependent Variable Mean in Control Group	5058.15	5822.78	7405.00	1681.80	2039.96	2409.17				
Dependent Variable SD in Control Group	9495.49	9830.61	11771.07	3309.14	3809.53	3870.90				
Dependent Variable Mean in Control Group in Feb	20030.86	20030.86	20030.86	7693.83	7693.83	7693.83				
Dependent Variable SD in Control Group in Feb	18260.36	18260.36	18260.36	7258.95	7258.95	7258.95				
Dependent Variable Mean in Control Group at BL	19318.79	19318.79	19318.79	5925.05	5925.05	5925.05				
Dependent Variable SD in Control Group at BL	19693.31	19693.31	19693.31	6514.22	6514.22	6514.22				
Grants = BDS F-test p-value	0.00	0.00	0.00	0.02	0.02	0.04				
Grants & BDS = BDS F-test p-value	0.04	0.00	0.00	0.09	0.00	0.00				
Grants = Grants & BDS F-test p-value	0.50	0.30	0.77	0.57	0.38	0.32				
Grants + Grants & BDS Joint F-test p-value	0.00	0.00	0.00	0.00	0.00	0.02				
Grants & BDS + BDS Joint F-test p-value	0.22	0.01	0.13	0.11	0.03	0.24				

This table presents round-by-round ANCOVA regression analysis for business and personal outcomes in Panel A; and business performance outcomes in Panel B. Round 1 surveys were conducted in June/July 2020; round 2 surveys in August/September; and round 3 surveys in October/November. All regressions include flexible controls for pre-pandemic (baseline and February) dependent variable values, stratification variables, and county and business sector controls. Robust standard errors are reported in parentheses. Data in Panel A on business and personal outcomes are available for each survey round. Data in Panel B on business performance outcomes are available for each month (from March to October 2020). Outcome data in columns (4)-(7) of Panel A were unintentionally corrupted for round 2, therefore only rounds 1 and 3 are included.
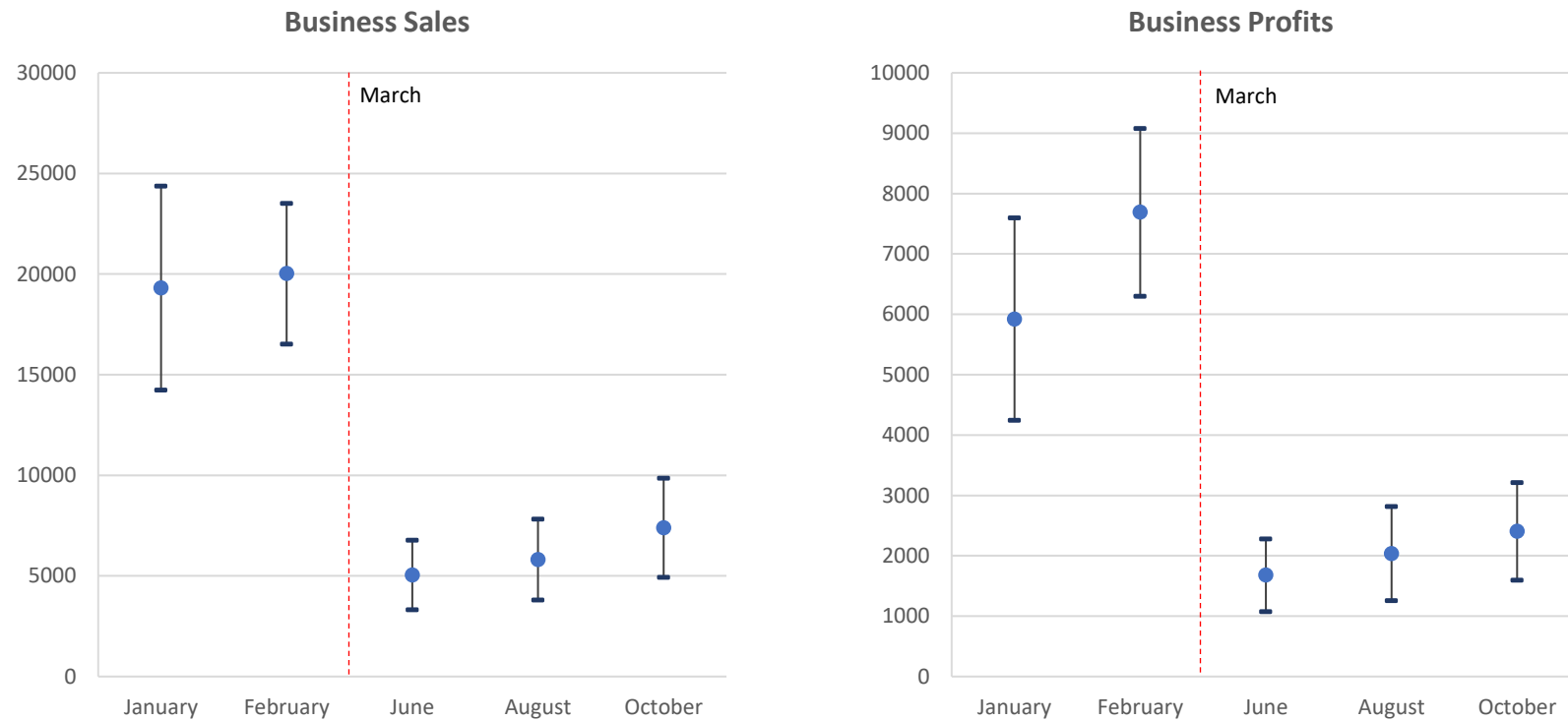
Appendix Figure 1: Consequences of COVID-19 on Business Ownership
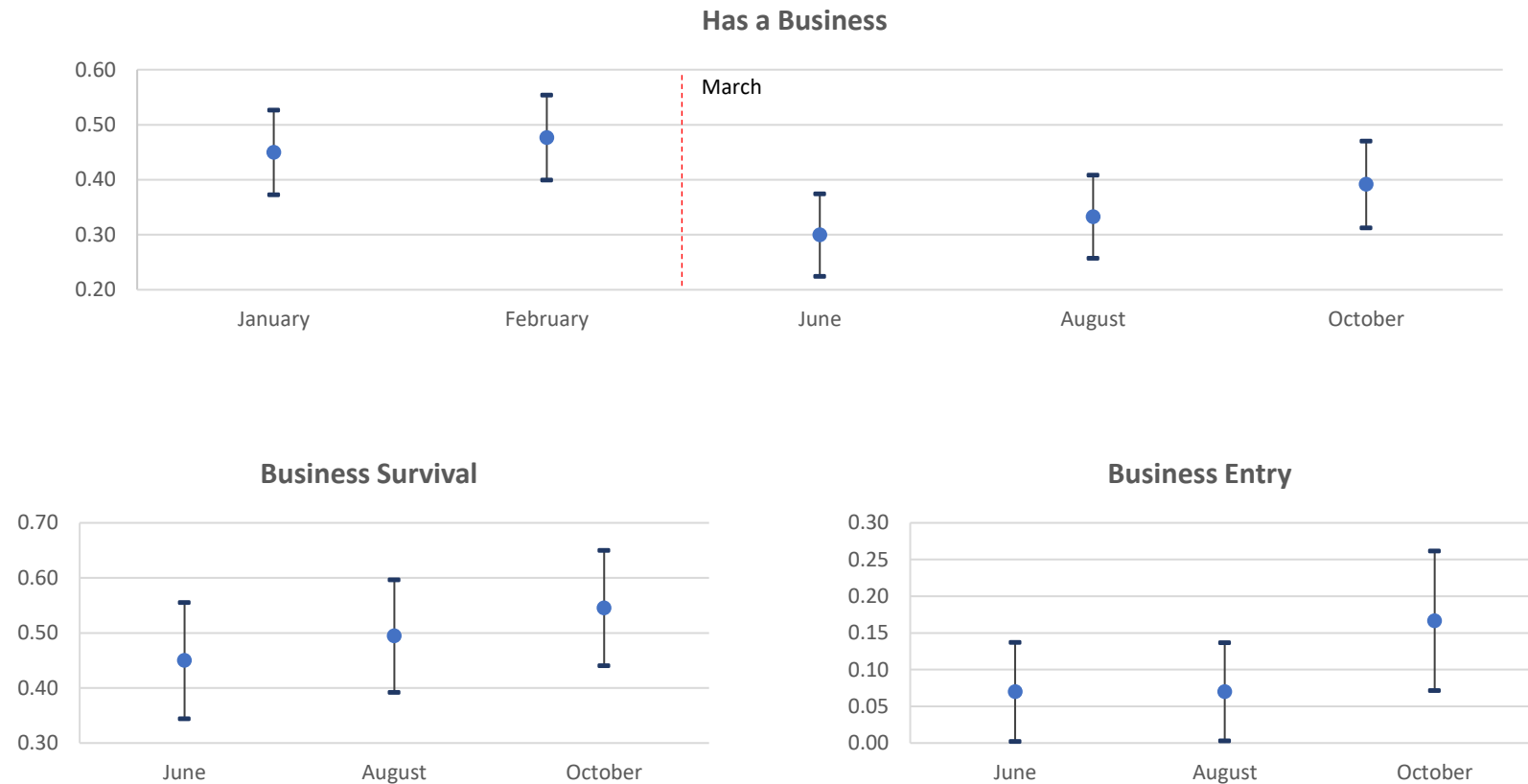
95% confidence intervals

Notes: This figure plots the evolution of business ownership, business survival, and business entry for the control group from January to October 2020. January and February values are considered pre-pandemic, while June-October represents the post-COVID-19 period. Business survival is limited to businesses that were operational in the pre-pandemic period, and business entry is limited to respondents who did not have an operational business in the pre-pandemic period.

Appendix Figure 2: Consequences of COVID-19 on Business Performance

95% confidence intervals

Notes: This figure plots the evolution of business sales and profits for the control group among businesses that existed in the pre-pandemic period. January and February 2020 values are considered pre-pandemic, while June-October represents the post-COVID-19 period. Both sales and profits are winsorized at the 5% level on both tails, and the values are reported in Kenyan Shillings.

Appendix Figure 3: Consequences of COVID-19 on Standards of Living

95% confidence intervals
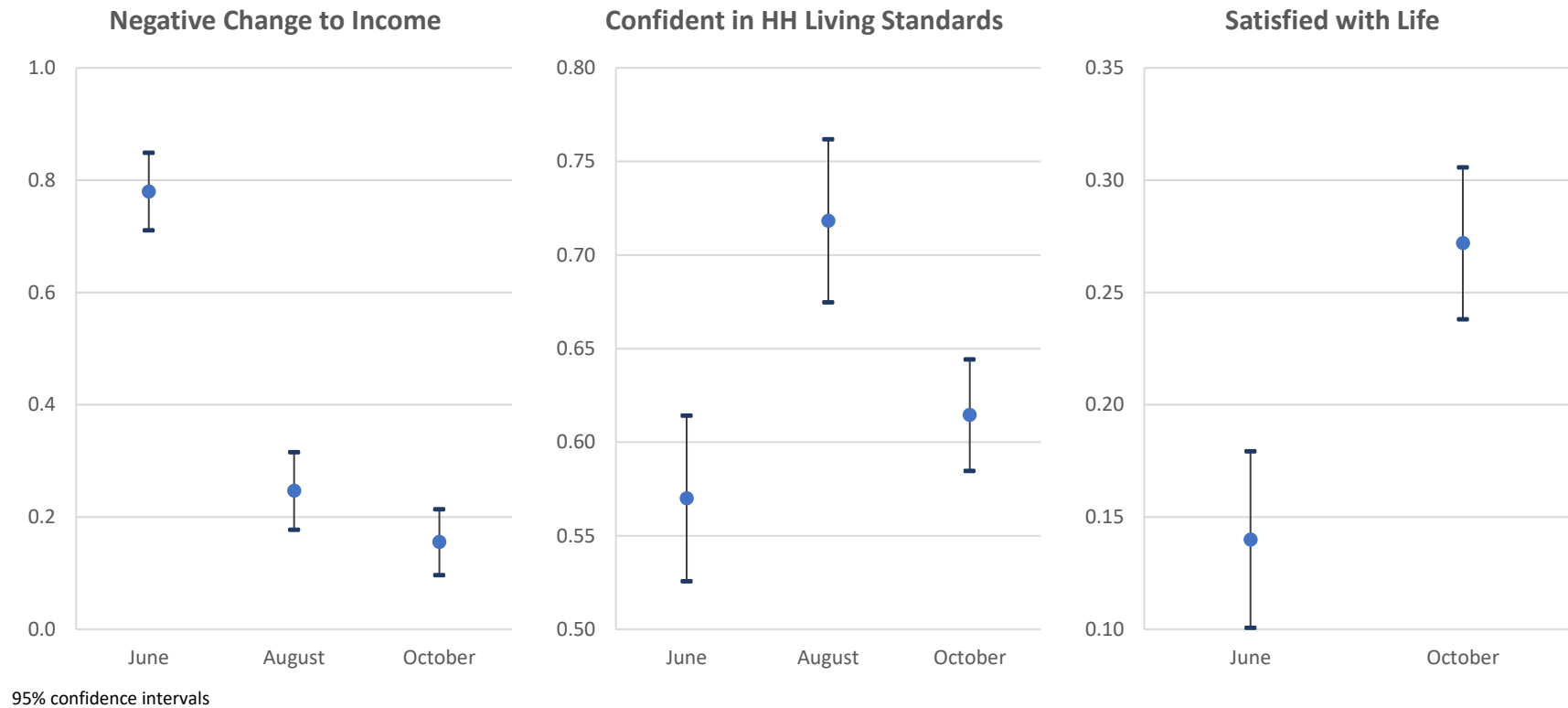
Notes: This figure plots the evolution of individual indicators of standards of living collected for the post-COVID-19 period (June-October 2020). "Negative Change to Income" is a dummy equal to 1 if a respondent reports a negative change to their income compared to the previous reported month. "Confident in HH Living Standards" is normalized scale ascending from 0-1 on whether the respondent feels confident that their household will maintain its living standards next month. "Satisfied with Life" is a normalized scale ascending from 0-1 on whether the respondent is currently satisfied with their life.