Persistent yet Ameliorable Shocks to Female Entrepreneurship: Experimental Evidence from Kenya

Francisco Campos, Maria Hernandez-de-Benito, Julian Jamison, Abla Safir, Bilal Zia*

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While female entrepreneurs face multiple obstacles, it is unclear whether gender gaps worsen during economic crises: women may be more impacted than men due to those existing obstacles and restrictive social norms, but they may also be less exposed due to their specialized sectors of operation, or if a crisis flattens everyone together. In a large sample of partnered Kenyan youth microentrepreneurs, we document more severe consequences two years after the COVID-19 crisis for female entrepreneurs across various outcomes: business ownership; sales and profits; adaptability; time-use; and intrahousehold decision-making. However, the impact of randomized grants significantly offsets these declines, demonstrating a strong mitigating impact for both women and men. The grants increase women's labor supply, at the expense of domestic work, leisure time, and childcare hours, while they have no significant impacts on men's time allocation.

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^{*}Campos, Safir, and Zia are from the World Bank (fcampos@worldbank.org, asafir@worldbank.org, and bzia@worldbank.org, respectively); Hernandez-de-Benito is from the University of Alicante (mhernandez.debenito@ua.es); and Jamison is from the University of Exeter (i.jamison@exeter.ac.uk). We are deeply grateful to our counterparts in the Government of Kenya, in the Micro and Small Enterprises Authority (MSEA) and in the State Department for Youth (SDY), in particular Olivia Ouko, Augustine Mayabi, Christine Wanjira, Nobby Macharia, Samuel Matonda, Caroline Kioko, Carol Kungu, Lydiah Musimi, Christine Wairimu, Magdalene Mbiti, Raphael Koome, and Arnold Ouma. We thank different colleagues who have worked on the design or implementation of the interventions as well as to advance KYEOP in general, in particular Yanina Domenella, Cecilia Paradi-Guilford, Cornelia Tesliuc, Michael Munavu, Indhira Santos, and Kevin Heraniah. We also thank Kie Riedel for outstanding field coordination as well as Naomi (IPA) for data collection. Funding from the World Bank Group's Umbrella Facility for Gender Equality (UFGE), the Competitiveness Policy Evaluation Lab (ComPEL), the Africa Gender Innovation Lab (GIL), the Africa Social Protection and Jobs Global Practice (SPJ), the Africa Finance, Competitiveness and Innovation Global Practice (FCI), the Research Support Budget (RSB), IPA, and IPA's Women's Work, Entrepreneurship, and Skilling Initiative funded through the Bill and Melinda Gates Foundation are gratefully acknowledged. Maria Hernandez-de-Benito acknowledges financial support from the Spanish Ministry of Science and Innovation Grant PID2021-124237NB-I00. Thi RCT was registered as AEARCTR-0006099.

1. Introduction

A growing literature in development economics shows that exposure to economic shocks, such as the one triggered by COVID-19, disrupts labor markets and small businesses in low- and middle-income countries (Loayza et al 2007; Miguel and Mobarak, 2022). This labor market volatility exacerbates the increasing employment challenge facing workingage youth, especially in sub-Saharan Africa (Brooks et al. 2014, Fox et al. 2016). The productivity of these young workers is often constrained by a lack of both physical and human capital (Bruhn, Karlan, and Schoar 2010; Blattman, Fiala, and Martinez 2014).

These constraints tend to be more relevant for women who are further held back by social norms regarding their employment and family responsibilities (Buvinic et al. 2016; Hardy and Kagy 2018; Jayachandran 2021). As family care needs increased, the pandemic-induced crisis aggravated many pre-existing challenges for young workers (Domenella et al 2021; Egger et al. 2021), affecting women disproportionately in many settings (Kugler et al. 2021; Acevedo et al. 2024; Alon et al. 2022; Alfonsi, Namubiru, and Spaziani 2023; Hardy et al. 2023). Evidence suggests that women were disproportionately responsible for the increase in domestic burdens, limiting their labor supply and income-generating capacity (Andrew et al. 2020; Del Boca et al. 2020; Farre et al. 2020; Biscaye et al. 2022). Additionally, they already owned less profitable businesses, limiting that channel's resiliency to shocks (Hardy and Kagy 2020; Torres et al. 2023).

On the other hand, in places where women-owned businesses were less dependent on the overall economy and more concentrated on basic needs occupations and home-based activities, the pandemic economic shock may have been less harmful to female entrepreneurs (Afridi, Dhillon, and Sanchari 2023). This trade-off may be particularly salient for married individuals or households with multiple incomes (Bernhardt et al. 2019; Delecourt et al. 2022).

In this paper, we study the gender differential impacts of the COVID-19 crisis on Kenyan youth and evaluate the effects of a randomized youth entrepreneurship program implemented at large scale by the Government of Kenya that provided business grants and training during the crisis. We study the impacts on business, economic, time use, intra-household, and well-being outcomes over the course of approximately two years

from the inception of the pandemic. We draw on a timely data collection just before the pandemic outbreak, plus two follow-up surveys conducted in the falls of 2020 and 2021.

We focus this paper's analysis on youth living with a domestic partner (from now on referred as "married youth"). We first show that the COVID-19 crisis impacted married women's businesses ownership more negatively than men's. Once controlling for precrisis business sector, women are about five percentage points less likely than men to still own a business in both the 2020 and 2021 follow-up surveys, as compared to January and February 2020. In addition, among pre-pandemic business owners, the gender gap in monthly sales and profits increased by about 80% relative to pre-pandemic gaps. Among new entrepreneurs, women also opened businesses with significantly lower sales and profits than men during the period, with wider gender gaps than pre-existing business in early 2020.

Women entrepreneurs in Kenya also fared worse in adapting their business to the challenges imposed by the pandemic: female entrepreneurs were less likely than men to start online sales or remote work arrangements, less likely to have received national or local government support, and less likely to have taken a loan to sustain business operations. We find that the increased gender gap in business ownership is not present among those that received some form of government support in response to the crisis, which is particularly relevant in a context where, despite their availability, the majority of Kenyan microentrepreneurs were unaware of the existence of business assistance programs (World Bank 2020).

Beyond entrepreneurship outcomes, the pandemic affected the earnings gap: the gender gap for earnings from the primary income-earning activity increased by Ksh. 6,600 (about \$54¹, a 120% difference relative to the pre-pandemic gap). These results, along with supporting evidence from respondents' own estimates of their spouses' income, suggest that the pandemic impacted women more severely relative to their spouses.

¹ In 2021, 1 Kenyan Shilling (Ksh) = 0.009 USD (Source: International Monetary Fund, International Financial Statistics).

Given that increased domestic work, in particular childcare in relation to school closure, could affect women more during COVID-19, we examine time-use by men and women. We find that the pandemic increased the gender gap in the number of hours dedicated to childcare by 30%.² The increased childcare gap comes at the expense of women reducing their working hours relative to men. We also find suggestive evidence that the greater gaps in childcare mediate the increased gender gaps in business ownership.

A key question, including to shed light on possibly persistent impacts beyond the pandemic, is whether these widening entrepreneurship, earnings, and time-use gaps, have resulted in changes in intra-household bargaining power. We assess the respondents' perceptions of changes in intra-household dynamics by presenting them with three vignettes. We randomized the order and language of the vignettes, which presented different scenarios on whether the respondents' intra-household position improved or worsened during the pandemic. We find that women are more likely than men to relate to situations where their intra-household position has deteriorated since the COVID-19 outbreak, even almost two years after the pandemic started. This speaks to findings in other settings documenting the pandemic's effect on women's decision-making inside the household and their risk of intimate partner violence (Leslie and Wilson 2020; Aguero 2021; Mahmud and Riley 2021).

Having found such economically significant gender differences in business and household outcomes, we assess whether US\$ 360 business grants and training programs helped protect women's businesses differentially during the COVID-19 pandemic. The Government of Kenya, with support from the World Bank, implemented the Kenya Youth Employment and Opportunities Project (KYEOP hereafter) in parallel with the pandemic to support employment outcomes among youth, aged 18-29, with no more than secondary education, who were unemployed or working in vulnerable jobs. The KYEOP was implemented between 2017 and 2023, with calls for applicants for the main project's interventions every 6 months. In the 4th intake cycle, which started shortly before the onset of the pandemic, participants were randomly assigned to either business grants (grants only), business development services (BDS only), which included classroom

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² This is consistent with evidence from other countries (Andrew et al. 2020; Del Boca et al. 2020; Farre et al. 2020; Alfonsi et al. 2023; Biscaye et al. 2022).

business training and visits to the business by a counselor, or the combination of both (grants and BDS), in addition to a control group. The interventions were rolled out between February 2020 and July 2021.

The grants were impactful in boosting business performance, with effects relative to the control group between 25% and 45% for men and women. While various programs have found impacts for male-owned businesses but not for female-owned of small cash grants (Fafchamps et al. 2014), notably when associated with allocation of resources among married couples with businesses (Bernhardt et al. 2019), women benefitted in Kenya from the business grants as much as men in the context of the pandemic, including among women whose spouses were also entrepreneurs. Besides the context and timing, the grants were larger in amount relative to studies such as Fafchamps et al. (2014) and benefited both existing and new entrepreneurs.

Beyond business outcomes, the grants had significant impacts on other aspects of women's economic behavior and well-being. The grants had a large effect on the likelihood that women have any source of income, as well as on the amount they earn from their primary income-generating activity. We also find that the grants had strong positive impacts on survey-based subjective well-being outcomes.

Examining possible channels of impact from grants to business outcomes, we observe that the grants, particularly in combination with BDS, were effective at increasing women's working hours in a typical day, at the expense of domestic work, leisure time, and childcare activities. In contrast, the grants had no significant impacts on men's time allocations. If anything, the point estimates suggest the opposite pattern: grants reduced the time men spend working and increase their time spent on leisure and domestic work activities.

Our results contribute to several strands of the literature. We contribute to the mixed evidence (so far) regarding the pandemic crisis's impact on gender gaps in developing economies. We find, contrary to Alon et al. (2022) and Contreras-Gonzalez et al. (2022) persistent gender gaps even two years after the pandemic, more in line with findings from Alfonsi, Namubiru, and Spaziani (2023). Our study assesses in detail the intra-household

income gaps, showing sustained relative declines for women vs men (relative to their spouses).

Second, we contribute to the literature on the role of grant interventions in mitigating crises, in limiting the widening of income and employment gender gaps, and in buffering negative shocks to married women's intra-household positions.³ In this regard, the two most related papers are Brooks et al. (2022) and Domenella et al. (2021). The former evaluates the impact of delivering a one-time unconditional cash transfer in May 2020 to a randomly selected group of female microenterprise owners in an informal setting in Nairobi County, with endline data collected in August 2020. Their study only focuses on female entrepreneurs, while we collect data from men too, allowing us to examine gender gaps. Our sample also covers 15 different counties in the country. Additionally, we evaluate longer run effects two years after the pandemic onset, as opposed to a short-run stabilization policy. Domenella et al. (2021) builds on the same underlying KYEOP project sample, but it is focused on the short-run dynamics of the crisis for all youth entrepreneurs. In contrast, the present paper differs by focusing on the genderdifferentiated consequences of the COVID-19 shock, as well as by measuring a considerably wider set of individual and intra-household outcomes. In particular, the data on time-use and the vignettes allow us to directly analyze key gender-specific potential mechanisms and pathways. Furthermore, this paper focuses on a longer-run evaluation (two years as opposed to several months), allowing us to understand whether the interventions' impacts are sustained.

Finally, by examining channels of impact of both the economic shock and business support to mitigate its impact, we contribute to the broader literature on performance gaps between male and female businesses (Nix, Gamberoni, and Heath 2016; Jayachandran 2021), notably regarding self-control issues (Fafchamps et al. 2014), expropriation issues (Fiala 2017; Riley 2024), interactions between cash & training (de Mel, McKenzie, and Woodruff 2014), and response to shocks and differential adaptation from mitigating circumstances. For instance, Gazeaud et al. (2023) study cash grants to support new income-generating activities for marginalized women in Tunisia finding positive impacts

³ Bharadwaj and Vogl 2016; Bottan et al. 2021; Gulesci, Puente-Beccar, and Ubfal 2021; Decker et al. 2022; Alfonsi, Namubiru, and Spaziani 2023; Londoño-Vélez and Querubin 2022.

on women's income-generating activities—but only when male partners were *not* also involved. This allows them to speculate about some of the household dynamics, which we can make more precise (in our setting) via the vignette questions and the time-use surveys.

The next section describes the background of the paper. Section 3 details the data. Section 4 outlines the empirical strategy and the crisis effects on gender gaps. In section 5, we present the evidence on the impacts of the interventions on youth outcomes, and section 6 presents a discussion of the results and concludes.

2. Background and Context

2.1. Business Interventions

In recent years, policy makers have aimed to reduce African youth unemployment and underemployment by supporting ambitious training and employment programs (Mckenzie and Woodruff 2014; Bardasi et al. 2021; McIntosh and Zeitlin 2022).

The KYEOP is a large youth employment project implemented by the Government of Kenya, with funding from the World Bank. The project's objectives are to increase employment and earning opportunities among vulnerable youth by providing skills training, entrepreneurship support, and access to relevant job market information. One of the key interventions is a support program for self-employment targeting youth aged 18-29 years with no more than secondary education and who are unemployed or working in vulnerable jobs. This paper focuses on the self-employment component that provides selected youth with the following forms of support to help them start or grow their business: (a) business grants of Ksh. 40,000 (equivalent to about US\$ 360); (b) business development services (BDS) in the form of formal classroom group training and 7 oneon-one counseling visits; or (c) grants and BDS. The call for youth to apply to the fourth round of the KYEOP and their enrollment were organized in June-August 2019. Youth applicants, totaling 9,380 individuals stratified by gender⁴ across 15 counties, were randomly allocated into the three treatment groups, in addition to a control group, in February 2020, immediately after completion of an in-person baseline survey, and incidentally just before the pandemic.

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⁴ 4,489 women (48%) and 4,891 men (52%) were allocated randomly to the four groups.

The business grants of Ksh. 40,000 are quite substantial for the local context, equivalent to approximately seven times the monthly average income earned from primary activity at baseline for women in our sample, and four times for men.⁵ The grant is equivalent to approximately two months of baseline average sales, and six and eight months of average profits for male and female entrepreneurs, respectively. The grants were distributed as a digital payment through bank accounts in two tranches. To receive the grant, participants had to attend a brief orientation session where they were given details about the program's objectives and requirements. Given the COVID-19 restrictions, monitoring was mainly conducted via telephone.

The BDS program takes a multi-pronged approach to improving youth's business management practices. It consists of a four-day classroom training, four months of access to a digital BDS repository, and seven personalized sessions with a business counselor. The curriculum covers a range of topics, including business idea formation, business models, funding sources, legal registration, marketing, pricing, and record-keeping.

The intervention rollout was organized around three clusters, each consisting of five counties. The three clusters received the interventions at different times (see details in Tables A1 and A2). Figure 1 shows the timing of the interventions in relation to the timing of the two follow-up surveys. At the time of the first follow-up survey, only the first cluster had received the entirety of the grant, and BDS interventions were ongoing. At the time of the second follow-up survey, both grant and BDS interventions had been fully implemented with high take-up rates of 89% for grants and 82% for BDS.⁶ Besides the baseline data from January and February 2020, we conducted two follow-up phone surveys in the falls of 2020 and 2021 constituting the analytical sample of this paper. Further detail is provided in section 3.

⁵ A possible concern is that sizeable grants like these could cause negative externalities for competitors, especially during a crisis. Although we are not able to directly test this, McKenzie and Puerto (2021) find minimal spillovers of an impactful training program in a very similar sample in Kenya. In addition, the grants are implemented throughout the country with targeting not particularly concentrated on a specific county, and therefore with limited risks of spillovers.

⁶ For grants, disbursement of the first tranche was conditional to attending the one-day grant orientation session. For BDS, take-up is calculated here as the percentage, among those assigned to BDS, who attended the first day of the classroom training.

Cluster 1: Grant 1

Cluster 1: Grant 2

Cluster 2/3: Grant 1

Cluster 2/3: Grant 2

Cluster 2/3: Grant 2

Cluster 2/3: Grant 2

Cluster 2/3: Grant 2

First follow-up survey

Cluster 1: BDS

Cluster 2/3: BDS

Figure 1: Timeline of interventions and follow-up surveys

2.2 COVID-19 in Kenya

To contain the spread of the COVID-19 pandemic, the Government first took action in mid-March 2020 by shutting down restaurants and bars, prohibiting social gatherings comprising more than five individuals, interrupting international flights, installing a nationwide curfew from nightfall, and imposing mobility restrictions in the counties of Nairobi, Mombasa, and Kwale. The initial surge of COVID-19 infections and fatalities reached its peak during the months of July and August in 2020. Subsequently, a second wave occurred between October and December of the same year, followed by a third wave that emerged in April and May of 2021. Educational institutions were closed from March 16, 2020, and began a phased reopening, with schools fully reopening in January 2021. However, a new lockdown and school closures were introduced from March to May 2021.

Early evidence documented large negative impacts of COVID-19 on economic activity and households' living standards in Kenya (Miguel et al. 2020; Janssens et al. 2021; Miguel and Walker 2021; Heemann, Pape, and Vollmer 2022). The impacts on the Kenyan economy were particularly felt in the tourism and service industries, remittances, and cash and export crops. This led to a sharp increase in the unemployment rate, which more than doubled to 10.4% in the second quarter of 2020 (World Bank, 2020). Among

entrepreneurs, from January and February to July 2020, many young microenterprises had to temporarily shut down. Average sales and profits declined by nearly 40% and 50% respectively during that initial period (World Bank, 2020).⁷ Despite their availability, only 40% of microentrepreneurs were aware of business loan and payment deferral programs between May and July 2020, less than 10% of young entrepreneurs were aware of other assistance programs provided by the government and NGOs, and almost none had taken advantage of them (World Bank, 2020).

The COVID-19 impacts in Kenya varied by gender. Between February and June 2020, the average number of hours worked by wage workers dropped by a significant 23%, but the reduction was even more pronounced among women, who experienced a 30% decrease, with a consequent larger reduction in earnings (World Bank, 2020). Xu, Delius, and Pape (2022) show that male- and female-headed households had different coping strategies during the COVID-19 shocks explained by female-headed households being poorer to begin with and relying more on social networks to deal with shocks even prior to the pandemic. Biscaye, Egger, and Pape (2022) suggest that the partial school reopening in October 2020 substantially increased both males and female labor supply. They also find that both women and men increased hours spent on childcare during the pandemic.

3. Data and Summary Statistics

3.1 Data

This paper uses data from three sources: (i) in-person baseline survey collected in January and February 2020, prior to any COVID-19 related restrictions were adopted; (ii) a follow-up phone survey conducted between October and December 2020⁸ to collect data on the gendered impacts of the crisis on individuals' business, economic, and time-use outcomes; and (iii) a second follow-up phone survey conducted between October and December 2021. We concentrate the analysis to married couples given the risks identified in the literature of expropriation to women in such cases, and the importance of understanding how these would be impacted by the crisis.

⁷ Among a different random sample of KYEOP businesses, Domenella et al. (2021) conducted two rounds of phone surveys in July-August and then in October-December 2020, documenting large negative impacts on business ownership, sales, and profits.

⁸ This survey included questions about respondents' time-use and their spouses' income as of February 2020.

A total of 9,380 youth from 15 counties applied to the fourth wave of KYEOP and were interviewed at baseline. In this study, we randomly sampled 2,000 individuals among the applicants that complied with the following criteria: (i) be married or living together at baseline; and (ii) was not a respondent of the other post-COVID surveys, which had been randomly sampled (Domenella et al. 2021). This subsample was stratified by county, gender, and treatment status with respect to business grants and BDS.⁹

The final sample from the first follow-up survey consists of 1,888 respondents, after attrition at the first follow-up and dropping six individuals who had been incorrectly labelled as married or living together at the time of the baseline survey. The second follow-up survey interviewed 1,856 individuals, of which 1,715 of them had also participated in the first follow-up survey. These 1,715 individuals comprise this paper's main analytical sample.

The baseline survey collected data on individual demographics, labor, income, and business outcomes. To study the economic impacts of the pandemic, and in particular, the mechanisms through which the effects may differ by gender, the follow-up phone surveys included a subset of the economic and business outcomes from the baseline and introduced new modules that focused on pandemic-induced mitigation strategies, time use, intra-household dynamics, and subjective well-being. Appendix B describes the specific variables used in this paper.

In terms of business sales and profits, the follow-up surveys, due to their phone format, only collected these data with respect to the primary business the respondent spent the most hours at the time. Therefore, for comparability reasons, in the analysis of business outcomes, we restrict the sample to those individuals that reported owning only one or zero businesses at baseline (91% of the sample).¹⁰

In addition, the baseline and 2021 follow-up surveys also gathered comparable data on

⁹ The geographic counties were divided in three clusters. The sampling strategy consisted of selecting 85% of the available "pure controls" in each of the clusters. The rest of respondents within each cluster were selected as follows: 60% grants recipients, and 40% non-grants recipients. We kept a gender ratio of 55% female, 45% male in each component.

¹⁰ The results are consistent when including those respondents that owned more than one business at baseline.

income earned from other activities. In particular, the surveys first asked the respondent whether in the last week they had worked on any of the following activities for at least one hour: employee for compensation, own business, own farm/livestock, helped in a business/enterprise, helped in an agricultural activity/livestock, volunteer, and intern/apprentice. We construct an "income from primary activity" variable with their income earned in the last completed month, replacing it with a zero if the question was not administered because they did not participate in any of the listed activities. As a robustness check, we also add the monetary value of any in-kind compensation. In the follow-up surveys, we also gathered information on the income of the respondent's spouses.

To investigate the impacts of the pandemic on domestic and childcare needs, the follow-up surveys collected data on time use through a 24-hour recall diary. Participants were asked to report the number of hours spent on various activities during a typical working day. In the follow-up survey conducted in 2020, we also inquired about their time use prior to COVID-19, phrasing the question as a typical working day in February 2020. To mitigate any survey design biases, we randomized the order in which participants were asked about their time use in February 2020 or at the time of the follow-up survey. In the 2021 follow-up survey, we only asked about their current time use.

In the follow-up surveys, we also gauged the respondents' perceptions of changes in intrahousehold dynamics since the pandemic outbreak by presenting them with three vignettes. We randomized the order and language of the vignettes, which either presented scenarios that improved or worsened the respondents' intra-household position. We applied the same conceptual randomization to the three vignettes. The first vignette describes an individual who feels that, since the outbreak of COVID-19, their partner controls more (or less) than before how the household money is spent. The second vignette describes an individual who feels that their voice is heard less (or more) inside the household when it comes to making important decisions than it was six months ago. The third vignette describes an individual who feels that their household's well-being depends more (or less) than before COVID-19 on her partner's income. The hypothetical individuals described in the vignettes had the same gender as the respondents and had common names in the Kenyan context. We then asked the respondent if they were like

the person described after each of the three vignettes. If the answer was "yes", we followed up with the question "Are you completely the same or somewhat the same?" If the answer was "no" the follow up question was "Are you completely different or somewhat different?"

Finally, the follow-up surveys included questions about the respondent's subjective well-being. This included perception of current and future life quality, current food security, as well as satisfaction with their current work-life balance.

3.1 Pre-COVID Summary Statistics

Table 1 presents summary statistics of the baseline survey collected in January and February 2020, before COVID-related restrictions were imposed in Kenya. The sample comprises youth with an average age of 26 years old. Around 70% of them have completed secondary education. In terms of family structure, female respondents lived in slightly larger households than their male counterparts, and resided with a larger number of underage children, although men lived, on average, with more young children under the age of four, consistent with men in the sample having their first child at an older age than women (24.1 vs 21.6).

At baseline, women earned a lower income than men and had less sources of income. With regards to business outcomes, 58% of women and 62% of men were business owners at baseline, and the difference is not statistically significant. However, we do observe pre-pandemic gender gaps in terms of business sales and profits with female businesses performing worse. Based on the answers from the time-use diaries collected in the 2020 follow-up survey, women reported spending fewer hours working and more hours doing domestic work and caring for children than men on a typical working day in February 2020.

Table C1 shows that there were also baseline gender differences in the types of business sectors, with women more likely to own businesses in retail trade as well as in accommodation and food services, while less likely to own businesses in the agricultural, information and communication, manufacturing, and transportation sectors.

Baseline characteristics of both female and male respondents in the interventions treatment and control samples are also well balanced (columns (4) to (11) in Table 1). We brought together in the control group both the pure control and the "BDS only" treatment arms due to sample size limitations—robustness checks splitting the two are provided in the results section.

4. The Impacts of COVID-19 on Gender Gaps Among Youth Entrepreneurs

In this section, we present the estimation strategy to study the gendered impacts of the COVID-19 crisis on individual outcomes and discuss the results, including potential mechanisms.

4.1 Estimation Strategy

We study the impacts of the COVID-19 crisis estimating the following model:

(1)
$$Y_{it} = \beta_1 Covid\ 2020_t * Female_i + \beta_2 Covid\ 2021_t * Female_i + \mu_i + \theta_t + \gamma Z_{it} + \varepsilon_{it},$$

where Y_{it} is the outcome variable of respondent i and survey round t. Covid 2020_t and Covid 2021_t are indicator variables equal to one if the observation was collected during the post-COVID 2020 and 2021 follow-up surveys, respectively; $Female_i$ is an indicator equal to one for female respondents; μ_i are individual fixed effects that allow controlling for time-invariant individual heterogeneity; θ_t are survey fixed effects; and Z_{it} include survey-county fixed effects, and survey-pre-Covid business sector fixed effects, including not owning a business as a separate category. Finally, ε_{it} is the error term which we cluster at the individual-level.

The main coefficients of interest are β_1 and β_2 , which capture the difference in the impact of the crisis on women versus men over time, i.e., the evolution of the gender gap over time. The identification strategy consists of comparing the outcome variables of male and female respondents relative to February 2020, once controlling for time-invariant individual heterogeneity, common shocks across individuals, and differential time trends based on pre-COVID location and business sector characteristics. The model specified in equation (1) is used when data is available from the baseline and the two follow-up surveys. For a set of outcome variables, we only have comparable measures in the

baseline and the 2021 survey. Therefore, for these variables, the main coefficient of interest is only β_2 . Considering that the sample includes beneficiaries of grants, which could mitigate the impact of the shock, we also present, in Appendix C, the results of estimating equation (1) restricting the sample to the non-grant recipients.

4.2 Results: Impact of COVID-19 on Business Outcomes

4.2.1 Women further impacted from the pandemic on Business Ownership and Performance

The COVID-19 crisis impacted women's business ownership more negatively than men's with persistent impacts even close to two years past the start of the pandemic (Table 2). Once controlling for baseline business sector, including not owning a business as a separate category, women are five percentage points less likely than men to own a business in late 2020, with the gap persisting in late 2021, as compared to baseline. The increased gender gaps are observed both in terms of business survival and business entry (columns (3)-(6)). The negative effects on gender gaps in business ownership are similar when restricting the sample to non-grant recipients (Table C3).

The pandemic also had a very large impact on the gender gap in business sales and profits (Table 3¹²) among pre-pandemic business owners. In 2021, the gender gap in monthly sales and profits increased compared to baseline (January/February 2020) by approximately Ksh. 4,000 and 1,500, respectively, which is about an 80% increase relative to pre-pandemic gaps. Both monthly sales and profits are winsorized at the 5% level on both tails. These results are not driven by differential gender business closure (Table C4). Women also opened businesses with significantly lower sales and profits than the new businesses men opened during this time (columns (5) and (6) of Table 3), with wider gender gaps than business owners had back in early 2020 (Table 1). The estimates are similar amongst non-grant recipients (Table C5).

¹¹ We find the same patterns in the intensive margin with number of businesses as the outcome variable (Table C2).

¹² As explained in section 3, we collected these data both in the baseline and in the 2021 follow-up survey. However, the latter survey only collected profits and sales data on the primary business where the respondent spent the most hours. Therefore, for comparability reasons, columns (1) to (4) in Table 3 restrict the sample to those individuals who reported owning only one business at baseline (869 respondents) and for which sales and profits data was available at baseline (733 respondents)

4.2.2. Exploring Mechanisms

The findings suggest the pandemic crisis induced a widening in gender gaps in terms of both business ownership and business performance. Previous literature (Alfonsi, Namubiru, and Spaziani 2023; Alon et al. 2022a, 2022b), indicates that gender differences in pre-pandemic sectors of operations and changes in domestic responsibilities during the crisis may be potential explanations. However, these are not the only factors that can contribute to the widening of gender gaps during a crisis. For instance, women may face greater challenges in adapting their business due to pre-existing gender gaps in resources and capabilities. It could also go in the other direction. If men's businesses are initially sufficiently more successful, they may have more to lose in the face of a severe crisis. Although we cannot precisely test all of these possibilities, our data allow us to provide some suggestive evidence of the mechanisms driving the widening gap.

Our results suggest that sector of operations can only partly explain the changes in gender gaps. The coefficients of interest are similar with and without the inclusion of survey-pre-COVID business sector (columns (1) - (4) of Table 3). Still, heterogeneity analysis shows that gender gaps widened the most in the retail and health sectors (Table C6).

To explore the potential role played by domestic and childcare needs, we estimate equation (1) with the number of hours spent in different activities as the outcome variable. The differential effect of the pandemic on women's time in childcare relative to men is 0.27 hours per day in 2020 and 0.22 hours per day in 2021, a 31% and 26% increase relative to the pre-pandemic gender gap in childcare hours (Table 4). Almost a year after the pandemic outbreak, the childcare gap comes at the expense of women reducing their working hours relative to men. The magnitude of the decrease is large, with the gender gap in working hours increasing by 0.4 hours per day in 2020. Two years after, in the fall of 2021, women have somewhat adjusted working hours by reducing domestic work but, worryingly, they have also decreased sleep, although these results mask heterogeneity by prior working status. The pandemic effects on widening gender gaps

¹³ The 24-hour recall time-use modules allowed respondents to report time allocations in blocks of 15 minutes or more, hence the dependent variable has increments of 0.25.

¹⁴ This result of "catch-up" on work hours in 2021 seems to mask important heterogeneity by prior working status. If we restrict the sample to individuals that were working before COVID-19 (Table C7), the increased childcare needs still come at the expense of an increased gap in working hours in 2021, with gender gap in working hours increasing by 0.58 hours per day, a 34% increase relative to pre-COVID.

on time-use allocations were more prominent for non-grant recipients (Tables C8, C9).

To explore the role that increased gaps in childcare hours may play in explaining the business gaps results, we fully interact equation (1) with the number of hours respondents reported spending with children.¹⁵ The results suggest that gender differences in business ownership are, at least partly, due to mothers being more affected by the rise in childcare hours than fathers (Table C10), with childcare effects being more relevant in the short-term for business entry, but more important for business survival in the medium-term.

We also find evidence indicating women had a harder time adapting their business to the crisis challenges. Female business owners were less likely than male owners to start online sales or remote work arrangements, receive government support, and take a loan to sustain business operations in response to COVID-19 (Table 5).¹⁶ Heterogeneity analysis suggests that the increased gender gaps in business ownership and performance are concentrated among young entrepreneurs that switched to online sales and/or remote work arrangements, which are presumably the businesses more directly affected by the lockdowns. Additionally, the increased gender gap in business ownership is not present among those that received government support in response to the crisis (Table C11).

4.3 Results: Impact of COVID-19 on Intra-Household Income Dynamics and Perceived Bargaining Power

The results on business outcomes suggest that women's income generating capacity may have been more negatively affected than men's across the board. Supporting this hypothesis, we find that the gender gap in income diversification and in income earned from the primary income-generating activity substantially increased, even two years after the pandemic (Table 6). In 2021, the gender gap in the number of sources of income

 $^{^{15}}$ The coefficients of interest correspond to the following interactions $Childcare_{it} * Covid\ 2020_t * Female_i$ and $Childcare_{it} * Covid\ 2021_t * Female_i$. These interactions capture the gender gap in the business impacts of the pandemic, conditional on the time spent on childcare. If gender differences are, at least partly, due to mothers being more affected by the rise in childcare hours than fathers, we would expect these coefficients to be negative.

¹⁶ Trying to understand how the pandemic could have affected business operations, we asked a series of questions around six possible business changes in the two follow up surveys about the primary business they owned in February 2020. In the first survey, the question was "Did your business experience the following change in response to the COVID-19 outbreak?", and in the second round in 2021 "Did your business experience the following change since December 2020?". For each possible business change k, we build an indicator variable BC_i^k equal to 1 if the answer is "Yes" in any of the two follow-up surveys. Table 5 presents the results of regressions for each of these indicator variables on a female dummy and other individual characteristics (age, education, county, pre-Covid business sector, and KYEOP treatment status).

increased by 0.13 (44% increase relative to the pre-pandemic gap, as per column (1)) and by Ksh. 6,600 in primary income, accounting for in kind compensation, (120% relative to pre-pandemic gap, 33% winsorizing at 5%, as per columns (3) to (6)).¹⁷

The gendered impacts on income-generating capacity suggest that the pandemic may have had a detrimental impact on gender gaps in earnings between spouses. Columns (7) and (8) in Table 6 show a substantial increase in the spousal income gap for female respondents compared to their male counterparts. It is important to note that this coefficient should be interpreted with caution due to potential measurement error of respondents estimating their spouse's income, and the fact that 6% and 16% of respondents at baseline and follow-up, respectively, did not provide an estimate, with women being twice as likely to not report a number. It is also possible that the crisis may have affected the likelihood of spouses to hide income, or the magnitude of income losses, from each other, and this effect may have been different for each gender. Nevertheless, the change in underreporting or overreporting would need to be significant to fully explain the reported increased gender gap in spousal income gaps.

Previous research has shown how shocks that reduce an individual's relative ability to contribute to the household may negatively affect their intra-household bargaining power (Chiappori and Mazzocco 2017; Baland and Ziparo 2018). We examine this possibility using the responses to three different vignettes that describe changes in intra-household dynamics caused by the pandemic (see section 3 and Appendix B). The three vignettes are coded on a scale from one to four, with four indicating the largest decline in intra-household position as described by each vignette. Our findings show that women are more likely than men to identify with situations where their intra-household position has deteriorated, even almost two years after the pandemic started (Table 7). In column (1), the outcome variable is a standardized index based on the average of the three vignettes:

¹⁷ The income variable was collected asking respondents how much income they had earned in their primary activity in the last completed month, identifying as primary the activity where they earned the highest income. This question was skipped among those respondents who reported working in their own business as the only working activity in the last month. If respondents only report activity related to their own business, we consider their profits from the primary business as their income from primary activity. Appendix Table C12 shows the results are robust when restricting the sample to individuals that only reported one or zero activities at baseline and one or zero activities both at baseline and at the follow-up survey.

¹⁸ We asked the respondent "Approximately, how much income did your spouse/partner earn in total last month?".

¹⁹ The results are based on estimating equation (1) without baseline data since the vignettes were not collected then. We include the 1,611 respondents for which responses are available for the three vignettes and both follow-up survey rounds.

Women's index is 0.58 and 0.43 standard deviations higher than men's in the 2020 and 2021 post-covid surveys, respectively. The gender gap persists in time across the three vignettes, (columns (2) to (4)), although it seems to decrease over time (significant difference between 2020 and 2021 for the index and for vignette V1).

5. Experimental Evidence on Gender Impacts of Business Support during Crisis

5.1 Estimation Strategy

To study the gendered effects of the randomized entrepreneurship interventions during the COVID-19 crisis, we estimate regressions pooling data from the baseline survey and the 2021 follow-up survey, with the following specification:

(2)
$$Y_{it} = \pi_1 Covid\ 2021_t * Grants\ only_i + \pi_2 Covid\ 2021_t * Grants\ only_i * Female_i + \pi_3 Covid\ 2021_t * Grants\ and\ BDS_i + \pi_4 Covid\ 2021_t * Grants\ and\ BDS_i * Female_i + \beta Covid\ 2021_t * Female_i + \mu_i + \theta_t + \gamma Z_{it} + \varepsilon_{it},$$

where $Grants \ only_i$ and $Grants \ and \ BDS_i$ are indicator variables equal to one if the respondent received the "grants only" or the "grants and BDS" treatments, respectively. The omitted categories pool together the BDS only treatment group and the pure control, due to sample size limitations (from now on referred as "comparison group"). The rest of the controls mirror equation (1) and standard errors are clustered at the individual level.

The coefficients π_1 and π_3 capture the grants and grants and BDS treatment effects for men. The sum of $\pi_1 + \pi_2$ and $\pi_3 + \pi_4$ correspond to the treatment effects on females of receiving grants only and grants and BDS, respectively, with π_2 and π_4 , capturing the differential gendered effect of the grants only and grants and BDS treatments, respectively.

In Appendix C1, we also present the main results estimating the "BDS only" treatment effect separately and show that relevant results are mostly driven by the grant interventions.²⁰ Given the experimental variation exploited in equation (2), the model can

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²⁰ Domenella et al. (2021) also find no short-term impact of BDS only: In a time of crisis with large economy-wide shocks both in terms of demand and in terms of mobility restrictions, business advice alone may not suffice to support businesses that need cash infusion to help protect assets and maintain the fixed costs needed for business operations.

also be estimated with an ANCOVA specification that, as we show in Appendix C, yields comparable results and more precisely estimated coefficients.²¹

5.2 Results: Causal Evidence of Receiving Business Grants

5.2.1 Business Grants Effective for both Male and Female Entrepreneurs

Table 8 presents the impacts of the grants and of the grants and BDS on business ownership (columns (1) to (3)) and performance (columns (4) and (5)). The grants with or without the BDS led to an increase of 19 to 26 percentage points on the likelihood of having a business at the end of 2021. The impacts are large in proportion to the comparison group's mean.

In addition, Table 8 shows that there are no differential treatment effects on business ownership by gender. Still, in relative terms to the comparison group, the impacts are much larger for women than for men: for grants, the impacts on business ownership are 40% for women against the comparison group vs 31% for men. The relative effects are particularly large for business entry, where the grants increase the probability of starting a business by 32 percentage points for men and 33 percentage points for women, representing respectively a 74% and 91% increase relative to the comparison group. While the point estimate for Grants and BDS is higher than for Grants Only, the difference is not statistically significant.

The grants were also effective in boosting performance of male and female entrepreneurs during the pandemic. Male businesses that received the grants saw an increase in monthly sales by Ksh. 8,000 and profits by Ksh. 2,600 (a 45% increase relative to the comparison group). Female businesses that received grants had business sales that were Ksh. 4,700-5,700 higher, representing also more than 40% increase relative to the comparison group. The impacts on profits for female businesses are also positive of about 25% relative to the comparison group mean, but not statistically significant. The ANCOVA results (Table

The ANCOVA specification is as follows: $Y_i = \alpha_1 Grants \ only_i + \alpha_2 Grants \ only_i * Female_i + \beta_1 Grants \ and \ BDS_i * Female_i + \Gamma_i + \gamma Y_{i0} + \theta Missing \ baseline_i + \epsilon_i$, where the data comes from the 2021 follow up survey, Γ_i are dummy variables for the randomization stratification variables, and Y_{i0} are the outcome variables measured during the baseline period, whenever available. Y_{i0} values are set to zero when the baseline value is missing and $\theta Missing \ baseline_i$ is an indicator variable equal to one when this is the case.

D1) also show similar results. Finally, receiving BDS in addition to the grant (Table 8) or by itself (Table D2) had no meaningful (additional) impacts on business operations.²²

Table 9 shows that the grants had large impacts for women on the likelihood of having any source of income and the overall income from any source (from both businesses and other sources). While 99% of the men in the comparison group already had at least one source of income, and therefore, grants did not have a significant effect at this margin, for women, the grants had a large effect on the likelihood of having any source of income (11 pp, 14% increase relative to the comparison group). In terms of income from primary activity, the grant treatment effects were also positive and large for both men and women (see also ANCOVA results and BDS only effect in Tables D3-D4). Note that, by construction, as explained in section 3, this variable was collected for respondents who reported a main income-generating activity other than their own business, or replaced with profits when their business was the main activity, and it should be read in parallel with the business outcomes results reported in Table 8.

5.2.2 Positive effects also on Wellbeing and Channels of impact

In this section, we show that grants and grants jointly with BDS had significant genderdifferentiated impacts on other aspects of well-being.

Using answers from the time-use diary, we observe that grants, and in particular the combination of grants and BDS, were effective at increasing women's working hours in a typical day (Table 10). While there were decreases in domestic work, childcare, and leisure activities for women as a result of the grants, these had no significant impact on men's time allocations, and if anything, the point estimates suggest the opposite pattern emerges: grants reduce the time men spent working and increase their time spent on leisure and domestic work activities.²³

Furthermore, we included a set of standard subjective-wellbeing questions in the 2021 follow-up survey (see Appendix B). While it may be challenging to evaluate changes in time allocations from a normative perspective, as increasing female working hours at the

²² This is consistent with the results of Brooks et al. (2018), also with marginalized female microenterprise owners in Kenya.

²³ ANCOVA results are consistent and there is not a differential effect of BDS only (Tables D5 and D6).

expense of leisure time may not necessarily improve welfare (Eissler et al. 2021), the positive effects on business and income variables suggest that grants were potentially effective in improving individuals' well-being. Table 11 reports the results, which show that the grants had strong positive impacts on subjective well-being across outcomes, although less so for women than for men. The point estimates on the differential gendered treatment effects are negative and statistically significant, except for food security, but the grants are still quite effective for women as compared to the female comparison group. Appendix Table D7 also shows that BDS only was effective for men's life satisfaction.

6. Discussion and conclusion

The findings from this study demonstrate that married women entering entrepreneurship and operating small-scale businesses in Kenya were significantly impacted from the COVID-19 crisis in their economic and household activities, and more so than married men. With women also less likely – as discussed in this study – to know about and explore opportunities for mitigating these effects through government programs and access to finance, identifying, for the future, timely crisis-response mechanisms are of paramount importance for policy targeting.

However, the challenge is that the menu of mechanisms to support female entrepreneurship is limited, and the evidence is especially weak for supporting resilience in time of crises (Bandiera et al. 2019). Against that spare backdrop, this study identifies that providing grants can be a very effective mechanism of supporting (married) women entrepreneurs in a time of crisis. The impacts presented are large and cost-effective.

The effects are also encouraging when considering the mixed results of grants (Fafchamps et al. 2014) and microcredit (Banerjee, Karlan, and Zinman 2015) to existing female-owned businesses. The impacts of programs are heterogenous, given the diversity of the profiles of potential entrepreneurs. At one extreme, the large-scale grants in the context of business plan competitions have been shown to achieve strong impacts on both menand women-led businesses (McKenzie 2017), but at the cost that these programs require large funding per beneficiary and are designed so that only a small proportion of participants win (typically around 5%). Hence, they are not targeting the same group of

entrepreneurs as those studied in this program.²⁴ Furthermore, their selection and due diligence process typically results in a significant time between an entrepreneur's initial application period and the disbursement of the funding. At the other extreme, there are grants in cash transfer and economic inclusion programs, typically targeting very poor groups of the population, which lead to economic impacts including through new self-employment opportunities, especially in rural areas, where entrepreneurship is often a hedge against the volatility in income (Banerjee et al. 2015).

In between the two groups (vulnerable households and high growth entrepreneurs), the impact of (small) cash grants on the performance of female entrepreneurs operating existing businesses in urban areas is low. This is in contrast with impacts for male-owned businesses and in providing those grants in-kind (Fafchamps et al. 2014). The debate on the reasons for the lack of impact of cash grants for existing women entrepreneurs includes, as first area of explanation, the efficiency or not in the allocation of resources in the household, in particular if grants to female entrepreneurs are diverted to the businesses of their partners (Bernhardt et al. 2019). In our study, we find that the business grants were effective for female entrepreneurs whose spouses were also entrepreneurs (Table D8).

A second area of work relates to expropriation pressures (Fiala 2017). Riley (2024) shows that providing loans in mobile money leads to higher levels of business capital and profits compared to a control group who received their loan as cash. In our study, the grants were provided in individual bank accounts. There is a growing body of evidence on the importance of bank accounts for shielding income for business investment (World Bank 2019). Table D9 shows that the effects of the grants are similarly impactful, in terms of business entry, for both women with and without personal savings accounts at baseline, suggesting that the most important element of the package is the grant. In addition, women who already had personal savings accounts at baseline enjoyed larger impacts from the grants on business survival and business performance. This finding is indicative that the positive impacts are not driven by the opening of savings accounts.

²⁴ KYEOP included a separate business plan competition targeting high-growth entrepreneurs with potential for job creation on a separate set of participants than the one in this study.

In conclusion, while the pandemic-induced crisis had persistent and large negative effects on female entrepreneurship performance, the introduction of mid-size grants (equivalent to seven times the monthly average income earned by women) led to significant improvements on both business performance and well-being for women facing multiple constraints. While resources are necessarily limited during a crisis, it is important for policymakers to be aware that there is indeed scope for making a substantial difference in the lives of this population. Future work could help to target even more finely in terms of recipient characteristics, business sectors, and timing.

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Table 1: Baseline Descriptive Statistics and Balance

	All				F	Female			Male			
	(1) Female	(2) Male	(3) Diff.	(4) Grants	(5) Grants+BDS	(6) C/BDS only	(7) T-C/BDS only	(8) Grants	(9) Grants+BDS	(10) C/BDS only	(11) T-C/BDS only	
Socio-economic												
Age	25.94	26.62	-0.67***	26.12	26.07	25.75	-0.34*	26.56	26.82	26.50	-0.21	
	[2.68]	[2.51]	(0.13)	[2.60]	[2.61]	[2.77]	(0.18)	[2.44]	[2.61]	[2.47]	(0.18)	
Secondary education	0.67	0.72	-0.06**	0.64	0.65	0.70	0.05	0.71	0.70	0.75	0.04	
	[0.47]	[0.45]	(0.02)	[0.48]	[0.48]	[0.46]	(0.03)	[0.45]	[0.46]	[0.44]	(0.03)	
Household size	4.27	4.07	0.20**	4.31	4.21	4.29	0.04	4.13	4.15	3.96	-0.18	
	[1.85]	[1.95]	(0.09)	[1.94]	[1.70]	[1.89]	(0.12)	[1.96]	[2.14]	[1.77]	(0.14)	
# of hh minors	1.92	1.62	0.30***	1.93	1.90	1.93	0.02	1.75	1.64	1.54	-0.15	
	[1.41]	[1.53]	(0.07)	[1.35]	[1.39]	[1.47]	(0.09)	[1.79]	[1.57]	[1.33]	(0.11)	
# of hh children under 4	0.79	0.88	-0.09***	0.82	0.78	0.78	-0.02	0.95	0.86	0.85	-0.04	
	[0.67]	[0.70]	(0.03)	[0.76]	[0.63]	[0.64]	(0.04)	[0.73]	[0.71]	[0.66]	(0.05)	
Ever parent	0.96	0.92	0.04***	0.95	0.98	0.96	-0.00	0.93	0.90	0.93	0.02	
-	[0.19]	[0.27]	(0.01)	[0.22]	[0.15]	[0.19]	(0.01)	[0.26]	[0.30]	[0.25]	(0.02)	
Age at first child	21.60	24.18	-2.59***	21.68	21.62	21.53	-0.12	23.79	24.40	24.25	0.11	
	[2.94]	[2.81]	(0.14)	[3.17]	[3.11]	[2.67]	(0.19)	[2.91]	[2.77]	[2.76]	(0.21)	
Sources of income	1.00	1.29	-0.30***	1.03	0.98	1.00	-0.00	1.30	1.30	1.29	-0.01	
	[0.61]	[0.60]	(0.03)	[0.59]	[0.60]	[0.63]	(0.04)	[0.62]	[0.61]	[0.58]	(0.04)	
Income primary activity	5,813.48	11,424.46	-5,610.97***	6,287.56	6.083.15	5,354.75	-822.23	11,853.55	9,699.53	12,457.76	1,827.97	
	[12,715.80]	[18,610.88]	(795.11)	[16.846.69]	[13,248.95]	[9.058.63]	(809.58)	[14,037.07]	[9,691.44]	[24,799.59]	(1,472.36)	
Owns a business	0.58	0.62	-0.04	0.65	0.57	0.55	-0.05	0.63	0.63	0.60	-0.04	
	[0.49]	[0.49]	(0.02)	[0.48]	[0.50]	[0.50]	(0.03)	[0.48]	[0.48]	[0.49]	(0.04)	
Primary Business	[0.20]	[0.20]	(0.0-)	[0.40]	[0.44]	[0.00]	(0.00)	[0.40]	[0.20]	[0.20]	(0.0-)	
Monthly sales (W.5%)	16,986.71	22,103.96	-5,117.25***	15,824.33	17,361.03	17,552.75	966.59	22,872.22	20,344.50	22,986.19	1,509.88	
([19,701.55]	[21,929.38]	(1,536.55)	[17,619.87]	[21,204.22]	[20,092.55]	(2,004.89)	[21,652.88]	[19,701.26]	[23,738.17]	(2,458.79)	
Monthly profits (W.5%)	4,814.85	6,787.80	-1,972.94***	5,125.63	5,132.14	4,371.11	-757.74	7.041.26	6,929.50	6.518.28	-461.26	
7 1 ([5,736.11]	[6,498.71]	(452.11)	[5,359.13]	[6,510.87]	[5,413.29]	(570.24)	[5,905.84]	[6,452.03]	[6,912.03]	(724.57)	
Γime Use	[0,100122]	[0,100.11]	()	[0,000120]	[0,020.01]	[0,00]	(****=*)	[0,000.00]	[0,10=100]	[0,0-=-00]	(1=101)	
Working hours	7.34	9.79	-2.46***	7.36	7.49	7.22	-0.21	10.12	9.86	9.56	-0.41**	
	[3.65]	[2.50]	(0.15)	[3.47]	[3.65]	[3.76]	(0.24)	[2.56]	[2.49]	[2.46]	(0.18)	
Domestic work hours	2.44	1.14	1.29***	2.51	2.38	2.43	-0.01	1.09	1.10	1.20	0.10	
	[1.42]	[0.99]	(0.06)	[1.42]	[1.46]	[1.40]	(0.09)	[0.95]	[1.06]	[0.96]	(0.07)	
Children hours	2.57	1.71	0.86***	2.61	2.57	2.56	-0.03	1.70	1.69	1.73	0.04	
	[1.83]	[1.50]	(0.08)	[1.91]	[1.82]	[1.80]	(0.12)	[1.42]	[1.45]	[1.58]	(0.11)	
Observations	937	778	()	239	286	412	V- /	189	253	336	V- /	

Notes: Columns (1) and (2) present sample means and standard deviations, in brackets, of the analytical sample for female and male respondents at baseline, respectively. Column (3) reports the OLS coefficient of a regression of the respondent's characteristic on a gender indicator variable, robust standard errors in parentheses. Columns (4) to (6) present sample means and standard deviations, in brackets, of the female respondents in the Grants only, Grants+BDS, and Pure Control/BDS only treatment groups, respectively. Column (7) reports the OLS coefficient of a regression of the female respondent's characteristic on a treatment indicator variable (equal to one if respondent assigned to pure control or BDS only), robust standard errors in parentheses. Columns (8) to (11), are analogous to (4) to (7) for male respondents. Income from primary activity includes estimates from in-kind payment. Primary business outcomes are restricted to those respondents reporting a maximum of one primary business at baseline. The number of observations with non-missing information varies per variable. * p < 0.10, ** p < 0.05, *** p < 0.01.

Table 2: COVID-19 Impact on Gender Gap in Business Ownership

	Business Ownership		Busines	s Survival	Business Entry	
	(1)	(2)	(3)	(4)	(5)	(6)
Covid $2020 \times \text{Female}$	-0.01 (0.03)	-0.05** (0.02)	-0.02 (0.02)	-0.03 (0.02)	-0.07* (0.04)	-0.07* (0.04)
Covid 2021 \times Female	-0.01 (0.03)	-0.05** (0.02)	-0.04^* (0.02)	-0.05** (0.03)	-0.05 (0.04)	-0.05 (0.04)
Individual FE	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
County*Survey FE	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
Baseline business sector*Survey FE		\checkmark		\checkmark		
Observations	5,145	5,145	3,075	3,075	2,070	2,070
Pre-Covid mean, male Covid 2020 mean, male Covid 2021 mean, male	0.62 0.79 0.75	0.62 0.79 0.75	1.00 0.89 0.83	1.00 0.89 0.83	0.00 0.62 0.61	0.00 0.62 0.61
Pre-Covid mean, female Covid 2020 mean, female Covid 2021 mean, female	0.58 0.73 0.70	0.58 0.73 0.70	1.00 0.87 0.80	1.00 0.87 0.80	0.00 0.54 0.56	0.00 0.54 0.56
$ [\ \text{Covid } 2020 \times \text{female} \] = \\ [\ \text{Covid } 2021 \times \text{female} \] \ \text{(p-value)} $	0.89	0.95	0.46	0.45	0.57	0.57

Notes: All the regressions include observations from the baseline and the two post-Covid follow-up surveys. OLS regressions where the dependent variable is an indicator variable = 1 if the respondent reported owning a business. Columns (1) and (2) include the 1,715 respondents in the three survey rounds (5,145 observations). Columns (3) and (4) restrict the sample to the 1,025 respondents that reported owning at least one business in the baseline period. Columns (5) to (6) restrict the sample to the 690 respondents that reported not owning any business in the baseline period. The table reports the coefficient of the interactions between the two post-Covid surveys time dummies and female. All regressions control for individual fixed effects and county-time trends. Columns (2), (4) and (6) also include pre-Covid business sector-time trends. Pre-Covid mean refers to the mean of males/females at baseline survey. Covid 2020 mean and Covid 2021 mean refer to the mean of males/females at the post-Covid follow-up surveys in 2020 and 2021, respectively. Standard errors, clustered at the individual level, in parentheses.* p < 0.10, ** p < 0.05, *** p < 0.05, *** p < 0.01.

Table 3: COVID-19 Impact on Gender Gap in Business Monthly Sales and Profits

	Sales (Wins. 5%)		Profits (V	Vins. 5%)	New Business		
	(1)	(2)	(3)	(4)	(5) Sales	(6) Profits	
Covid 2021 × Female	-3,837.02** (1,616.60)	-3,037.61* (1,787.01)	-1,437.09** (606.34)	-1,511.06** (680.60)	-6,189.84*** (1,871.91)	-3,290.08*** (806.56)	
Individual FE	\checkmark	\checkmark	\checkmark	\checkmark			
County*Survey FE	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	✓	
Baseline business sector*Survey FE		\checkmark		\checkmark			
Observations	1,466	1,466	1,466	1,466	384	384	
Pre-Covid mean, male Covid 2021 mean, male	22,087.28 22,099.10	22,087.28 22,099.10	6,766.43 7,448.21	6,766.43 7,448.21	24,108.86	9,200.05	
Pre-Covid mean, female Covid 2021 mean, female	17,079.99 13,730.90	17,079.99 13,730.90	4,864.84 4,290.57	4,864.84 4,290.57	18,487.84	5,980.67	

Notes: Columns (1) to (4) include observations from the baseline and the 2021 post-Covid follow-up survey. Columns (1), (2) and (5) present OLS regressions where the dependent variable are monthly sales winsorized at the 5% level on both tails reported in Kenyan Shillings. Columns (3), (4) and (6) present OLS regressions where the dependent variable are monthly profits winsorized at the 5% level on both tails reported in Kenyan Shillings. Columns (1) to (4) restrict the sample to the 733 respondents that reported owning one business in the baseline period and had non-missing sales and profits data. Columns (5) to (6) restrict the sample to those 384 respondents that reported not owning any business in the baseline period but opened a business by the time of the 2021 follow-up survey, only using data from this latter survey. The table reports the coefficient of the interactions between the 2021 post-Covid survey time dummies and female. All regressions control for individual fixed effects and county-time trends. Columns (2) and (4) also include and pre-Covid business sector-time trends. Pre-Covid mean refers to the mean of males/females at baseline survey. Covid 2021 mean refer to the mean of males/females at the post-Covid 2021 follow-up survey. Standard errors, clustered at the individual level, in parentheses. * p < 0.10, ** p < 0.05, *** p < 0.01.

Table 4: COVID-19 Impact on Gender Gap in Time Use

	(1) Childcare	(2) Work/study	(3) Domestic work	(4) Leisure	(5) Sleep	(6) Eating/self-care
Covid 2020 × Female	0.27*** (0.09)	-0.40** (0.17)	0.11* (0.06)	0.01 (0.07)	0.02 (0.08)	0.03 (0.04)
Covid 2021 \times Female	0.22** (0.11)	$0.05 \\ (0.18)$	-0.18** (0.08)	$0.09 \\ (0.08)$	-0.19** (0.09)	$0.00 \\ (0.05)$
Individual FE	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
County*Survey FE	\checkmark	\checkmark	✓	\checkmark	\checkmark	\checkmark
Baseline business sector*Survey FE	\checkmark	✓	✓	✓	\checkmark	\checkmark
Observations	5,145	5,145	5,145	5,145	5,145	5,145
Pre-Covid mean, male Covid 2020 mean, male Covid 2021 mean, male	1.71 1.85 2.27	9.79 9.58 9.48	1.14 1.14 1.29	2.05 2.06 2.00	7.79 7.80 7.39	1.47 1.47 1.39
Pre-Covid mean, female Covid 2020 mean, female Covid 2021 mean, female	2.57 3.01 3.38	7.34 6.70 7.07	2.44 2.54 2.39	1.76 1.78 1.81	8.21 8.25 7.63	1.61 1.64 1.55
$ [\ \text{Covid } 2020 \times \text{female} \] = \\ [\ \text{Covid } 2021 \times \text{female} \] \ \text{(p-value)} $	0.61	0.01	0.00	0.29	0.01	0.52

Notes: All the regressions include observations from the two post-Covid follow-up surveys for the 1,715 respondents. OLS regressions where the dependent variables are the number of hours the respondent reports spending on a typical working day in each activity. The baseline values were collected during the 2020 post-Covid follow-up survey retroactively. The table reports the coefficient of the interactions between the two post-Covid surveys time dummies and female. All regressions control for individual fixed effects, survey fixed effects, county-survey fixed effects, and pre-Covid business sector-survey fixed effects. Pre-Covid mean refers to the mean of males/females at baseline survey. Covid 2020 mean and Covid 2021 mean refer to the mean of males/females at the post-Covid follow-up surveys in 2020 and 2021, respectively. Standard errors, clustered at the individual level, in parentheses. * p < 0.10, ** p < 0.05, *** p < 0.01.

Table 5: Gendered Differences in Business Changes in Response to Covid-19

	(1) Sell/transfer	(2) Online/remote	(3) Changed products/services	(4) Changed location	(5) Govt. help	(6) Formal/informal loan
Female	-0.00 (0.01)	-0.14*** (0.03)	-0.04 (0.02)	0.02 (0.02)	-0.07** (0.03)	-0.08*** (0.02)
Age	0.00 (0.00)	-0.01** (0.00)	-0.00 (0.00)	-0.00 (0.00)	$0.00 \\ (0.01)$	-0.00 (0.00)
Secondary	0.01* (0.00)	0.04 (0.03)	0.05^* (0.03)	-0.02 (0.02)	0.06** (0.03)	0.03 (0.03)
Grants	0.00 (0.01)	0.02 (0.03)	-0.03 (0.03)	0.12*** (0.03)	0.06* (0.03)	-0.03 (0.03)
Grants and BDS	0.00 (0.01)	-0.02 (0.03)	0.01 (0.03)	0.10*** (0.02)	0.04 (0.03)	-0.07*** (0.03)
County FE	✓	✓	✓	✓	✓	✓
Business sector FE	✓	✓	✓	✓	✓	✓
Observations	1,351	1,348	1,348	1,345	1,348	1,348
Outcome mean, male Outcome mean, female	0.01 0.01	0.42 0.30	0.79 0.76	0.18 0.20	0.37 0.30	0.30 0.22

Notes: OLS regressions where the dependent variable is an indicator variable = 1 if the respondent answered yes to each of the business changes in any of the 2020 or 2021 post-Covid follow-up survey (see appendix for description of each question). In the first survey, the question was "Did your business experience the following change in response to the COVID-19 outbreak?", and in the second round in 2021 "Did your business experience the following change since December 2020?". For each possible business change k, we build an indicator variable $BC_i i^k$ equal to 1 if the answer is "Yes" in any of the two follow-up surveys. The questions were asked in each survey about the primary business to those that reported owning a business each of the follow-up survey rounds. Outcome mean refer to the mean of the males/female dependent variable. Standard errors, clustered at the individual level, in parentheses. * p < 0.10, ** p < 0.05, *** p < 0.05, *** p < 0.01.

Table 6: COVID-19 Impact on Gender Gap in Income Variables

	Incom	e Sources		Income Prin	nary Activity		Spousal Ir	Spousal Income Gap	
	(1) Any	(2) Number	(3) Raw	(4) Wins, 5%	Includin (5) Raw	g in kind (6) Wins, 5%	(7) Raw	(8) Wins. 5%	
Covid 2021 \times Female	-0.00 (0.02)	-0.13*** (0.04)	-6,669.39*** (2,188.47)	-1,706.59*** (507.17)	-6,598.25*** (2,185.81)	-1,576.81*** (507.15)	5,381.62*** (2,004.75)	2,818.49*** (727.45)	
Individual FE	\checkmark	✓	✓	✓	✓	✓	✓	✓	
Survey FE	✓	\checkmark	✓	✓	✓	\checkmark	✓	✓	
County*Survey FE	✓	✓	✓	✓	✓	✓	✓	✓	
Baseline business sector*Survey FE	\checkmark	\checkmark	\checkmark	✓	✓	\checkmark	✓	\checkmark	
Observations	3,430	3,430	3,300	3,300	3,304	3,304	2,608	2,608	
Pre-Covid mean, male Covid 2021 mean, male	0.96 0.99	1.29 1.50	11,169.61 19,259.83	9,536.92 13,609.68	11,379.94 19,509.68	9,715.53 13,773.19	-6,332.37 -13749.04	-4,661.21 -9,671.30	
Pre-Covid mean, female Covid 2021 mean, female	0.82 0.85	1.00 1.08	5,738.12 7,802.50	4,896.17 7,296.47	5,848.49 8,008.91	4,956.51 7,473.93	9,405.95 6,931.38	8,256.23 5,900.78	

Notes: All the regressions include observations from the baseline and the 2021 post-Covid follow-up survey. Columns (1) and (2) present OLS regressions where the dependent variable are an indicator variable equal to one if the respondent reports having any source of income and the number of sources of income, respectively, for the 1,715 respondents. Columns (3) and (4) present OLS regressions where the dependent variable is the respondent's income earned from their primary activity reported in Kenyan Shillings for the 1,650 respondents with available income information in both survey rounds. Columns (5) and (6) include the monetary value of any compensation they received in kind for the 1,650 respondents with available income information (including in-kind) in both survey rounds. Columns (4) and (6) are winsorized at the 5% level on both tails. Columns (7) and (8) dependent variable is the spousal income gap subtracting from the respondent's estimate of their spouse's monthly income their income as constructed in column (3) for the 1,304 respondents with available self-reported spousal income gap information. The table reports the coefficient of the interactions between the 2021 post-Covid survey time dummies and female. All regressions control for individual fixed effects and county and business sector-time trends. Pre-Covid mean refers to the mean of males/females at baseline survey. Covid 2021 mean refer to the mean of males/females at the post-Covid 2021 follow-up survey. Standard errors, clustered at the individual level, in parentheses. * p < 0.10, ** p < 0.05, *** p < 0.01.

Table 7: COVID-19 Impact on Gender Gap in Intra-Household Dynamics

	Vignette Index (1)	V1 Partner Control (2)	V2 Voice Heard (3)	V3 Partner Income (4)
Covid 2020 \times Female	0.58*** (0.05)	0.27*** (0.06)	0.44*** (0.05)	0.52*** (0.05)
Covid 2021 × Female	0.43*** (0.05)	0.12** (0.06)	0.38*** (0.05)	0.40*** (0.06)
Covid 2021	0.31 (0.26)	0.04 (0.31)	0.50^* (0.30)	0.10 (0.30)
Constant	-0.12 (0.11)	2.27*** (0.12)	2.25*** (0.11)	2.23*** (0.12)
County*Survey FE	\checkmark	\checkmark	\checkmark	\checkmark
Baseline business sector*Survey FE	\checkmark	✓	✓	✓
Observations	3,222	3,222	3,222	3,222
Covid 2020 mean, male Covid 2021 mean, male	-0.33 -0.22	2.24 2.28	2.01 2.05	2.08 2.23
Covid 2020 mean, female Covid 2021 mean, female	0.26 0.22	2.50 2.42	2.46 2.44	2.59 2.61
$ [\ \text{Covid} \ 2020 \times \text{female} \] = \\ [\ \text{Covid} \ 2021 \times \text{female} \] \ (\text{p-value}) $	0.03	0.06	0.42	0.14

Notes: All the regressions include observations from the two post-Covid follow-up surveys for the 1,611 respondents with non-missing information for all three vignettes in both survey rounds. Column (1) dependent variable is the standardized average of the three vignettes. Columns (2) to (4) present the answers to vignette 1, 2 and 3, respectively. The three vignettes are coded on a scale from one to four, with four indicating the largest decline in intra-household position as described by each vignette. The table reports the coefficient of the interactions between the two post-Covid surveys and female. All regressions control for county- and business sector-time trends. Covid 2020 mean and Covid 2021 mean refer to the mean of males/females at the post-Covid follow-up surveys in 2020 and 2021, respectively. Standard errors, clustered at the individual level, in parentheses. * p < 0.10, ** p < 0.05, *** p < 0.01.

Table 8: Grants and BDS Treatment Effects during COVID: Business Outcomes

	Busi	ness Owne	rship	Business Perfe	ormance (Wins. 5%)
	All (1)	Survival (2)	Entry (3)	Sales (4)	Profits (5)
Covid $2021 \times Grants$	0.19*** (0.04)	0.11*** (0.04)	0.32*** (0.07)	8,042.80*** (3,092.98)	2,606.59** (1,145.16)
Covid 2021 × Grants × Female	$0.03 \\ (0.05)$	0.02 (0.06)	0.02 (0.09)	-3,279.52 (3,821.30)	-1,724.87 (1,446.78)
Covid 2021 \times Grants and BDS	0.23*** (0.03)	0.15*** (0.04)	0.35*** (0.06)	8,437.25*** (2,779.56)	2,183.30* (1,118.01)
Covid 2021 \times Grants and BDS \times Female	0.03 (0.05)	-0.00 (0.06)	$0.05 \\ (0.08)$	-2,704.15 (3,832.16)	-1,349.83 (1,467.64)
Individual FE	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
Survey FE	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
County*Survey FE	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
Baseline business sector*Survey FE	\checkmark	\checkmark		\checkmark	\checkmark
Observations	3,430	2,050	1,380	1,466	1,466
Grant effect for females	0.22*** (0.03)	0.14*** (0.04)	0.33*** (0.06)	4763.28** (2258.83)	881.72 (883.83)
Grant and BDS effect for females	0.26*** (0.03)	0.15*** (0.04)	0.40*** (0.05)	5733.10** (2653.66)	833.46 (954.66)
Control+BDS only mean, male Control+BDS only mean, female	0.62 0.55	0.75 0.71	0.43 0.36	18114.76 11561.71	5715.89 3567.73
[Grant=Grant and BDS] male (p-value) [Grant=Grant and BDS] female (p-value)	0.32 0.28	0.39 0.76	0.61 0.29	0.90 0.71	0.73 0.96

Notes: All the regressions include observations from the baseline and the 2021 post-Covid follow-up survey. Columns (1) to (3) present OLS regressions where the dependent variable is an indicator variable = 1 if the respondent reported owning a business for the 1,715 respondents. Column (2) restricts the sample to the 1,025 respondents that reported owning at least one business in the baseline period. Column (3) restricts the sample to the 690 respondents that reported not owning any business in the baseline period. Columns (4) and (5) present OLS regressions where the dependent variable are monthly sales and monthly profits, respectively, winsorized at the 5% level on both tails reported in Kenyan Shillings among the 733 respondents that reported owning one business in the baseline period and had non-missing sales and profits data. The table reports the coefficient of the interactions between the post-Covid surveys time dummy and indicators for treatment (Grants only and Grants+BDS), as well as their triple interaction with female. All regressions control for individual fixed effects, county- and business sector-time trends. Control+BDS only mean refers to the mean of males/females of the pure control or BDS only groups at the 2021 follow-up survey. Standard errors, clustered at the individual level, in parentheses. * p < 0.10, ** p < 0.05, *** p < 0.01.

Table 9: Grants and BDS Treatment Effects during COVID: Income Variables

	Income	Sources		Income Prin	nary Activity		Spousal In	ncome Gap
	-				Includin	g in kind		
	(1) Any (1)	(2) Number (2)	(3) Raw (3)	(4) Wins. 5% (4)	(5) Raw (5)	(6) Wins. 5% (6)	(7) Raw (7)	(8) Wins. 5% (8)
Covid 2021 × Grants	0.01 (0.02)	0.07 (0.07)	1,601.29 (4,895.72)	1,075.43 (958.06)	1,795.39 (4,882.31)	1,133.92 (956.12)	-2,259.64 (4,336.65)	-853.56 (1,222.43)
Covid 2021 × Grants × Female	0.11** (0.04)	0.26*** (0.09)	-111.44 (4,827.67)	1,022.44 $(1,202.76)$	-226.27 (4,822.13)	1,053.71 (1,203.89)	639.41 (4,861.74)	-873.60 (1,745.25)
Covid 2021 \times Grants and BDS	0.02 (0.02)	0.20*** (0.07)	822.57 (4,018.61)	1,828.88** (871.80)	815.96 (3,997.82)	1,858.45** (871.17)	793.83 (2,731.51)	-726.07 (1,072.25)
Covid 2021 \times Grants and BDS \times Female	0.10** (0.04)	0.17* (0.09)	3,068.96 (4,190.00)	1,061.24 $(1,129.59)$	3,162.97 (4,177.77)	1,105.79 (1,133.97)	-3,252.44 (3,287.47)	-1,454.17 $(1,617.01)$
Individual FE	✓	✓	✓	✓	✓	✓	✓	✓
Survey FE	✓	✓	✓	✓	✓	✓	✓	✓
County*Survey FE	✓	✓	✓	✓	✓	✓	✓	✓
Baseline business sector*Survey FE	✓	✓	✓	✓	✓	✓	✓	✓
Observations	3,430	3,430	3,300	3,300	3,304	3,304	2,608	2,608
Grant effect for females Grant and BDS effect for females	0.11*** (0.04) 0.12***	0.33*** (0.06) 0.36***	1489.85 (1346.93) 3891.53***	2097.86*** (738.69) 2890.12***	1569.12 (1368.02) 3978.93***	2187.63*** (743.59) 2964.24***	-1620.22 (2549.47) -2458.60	-1727.17 (1240.95) -2180.23*
	(0.04)	(0.06)	(1098.11)	(734.84)	(1127.74)	(740.83)	(1839.41)	(1208.81)
Control+BDS only mean, male Control+BDS only mean, female	0.99 0.77	1.42 0.90	19711.62 5987.31	12861.01 5929.41	19846.88 6164.27	12979.16 6100.05	-14556.37 8615.17	-9221.61 7049.25
[Grant=Grant and BDS] male (p-value) [Grant=Grant and BDS] female (p-value)	0.51 0.90	0.11 0.59	0.84 0.13	0.46 0.33	0.80 0.14	0.47 0.34	0.42 0.76	0.92 0.75

Notes: All the regressions include observations from the baseline and the 2021 post-Covid follow-up survey. Columns (1) and (2) present OLS regressions where the dependent variable are an indicator variable equal to one if the respondent reports having any source of income and the number of sources of income, respectively, for the 1,715 respondents. Columns (3) and (4) present OLS regressions where the dependent variable is the respondent's income earned from their primary activity reported in Kenyan Shillings for the 1,650 respondents with available income information in both survey rounds. Columns (5) and (6) include the monetary value of any compensation they received in kind for the 1,650 respondents with available income information (including in-kind) in both survey rounds. Columns (4) and (6) are winsorized at the 5% level on both tails. Columns (7) and (8) dependent variable is the spousal income gap subtracting from the respondent's estimate of their spouse's monthly income their income as constructed in column (3) for the 1,304 respondents with available self-reported spousal income gap information in both survey rounds. The table reports the coefficient of the interactions between the post-Covid surveys time dummy and indicators for treatment (Grants only and Grants+BDS), as well as their triple interaction with female. All regressions control for individual fixed effects, county- and business sector-time trends. Control+BDS only mean refers to the mean of males/females of the pure control or BDS only groups at the 2021 follow-up survey. Standard errors, clustered at the individual level, in parentheses. Standard errors, clustered at the individual level, in parentheses. * p < 0.10, ** p < 0.05, *** p < 0.01.

Table 10: Grants and BDS Treatment Effects during COVID: Time Use

	(1) Childcare	(2) Work/study	(3) Domestic work	(4) Leisure	(5) Sleep	(6) Eating/self-care
Covid 2021 × Grants	-0.05 (0.16)	-0.16 (0.28)	0.04 (0.11)	0.13 (0.14)	0.13 (0.16)	-0.11 (0.09)
Covid 2021 × Grants × Female	0.01 (0.26)	0.78^* (0.45)	-0.40** (0.18)	-0.17 (0.19)	-0.08 (0.21)	-0.02 (0.13)
Covid 2021 \times Grants and BDS	-0.03 (0.16)	-0.34 (0.26)	0.23** (0.11)	0.07 (0.13)	0.10 (0.14)	-0.04 (0.08)
Covid 2021 \times Grants and BDS \times Female	-0.34 (0.24)	1.45*** (0.43)	-0.58*** (0.18)	-0.33* (0.19)	-0.08 (0.20)	-0.07 (0.12)
Individual FE	\checkmark	\checkmark	✓	\checkmark	\checkmark	✓
Survey FE	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	✓
County*Survey FE	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	✓
Baseline business sector*Survey FE	\checkmark	✓	✓	\checkmark	\checkmark	\checkmark
Observations	3,430	3,430	3,430	3,430	3,430	3,430
Grant effect for females Grant and BDS effect for females	-0.04 (0.20) -0.37**	0.62* (0.36) 1.10***	-0.35** (0.15) -0.35**	-0.05 (0.13) -0.26**	0.06 (0.14) 0.03	-0.13 (0.10) -0.11
	(0.18)	(0.34)	(0.14)	(0.13)	(0.15)	(0.09)
Control+BDS only mean, male Control+BDS only mean, female	2.32 3.49	9.39 6.47	1.26 2.58	2.02 1.93	7.37 7.70	1.42 1.59
[Grant=Grant and BDS] male (p-value) [Grant=Grant and BDS] female (p-value)	0.92 0.11	0.54 0.20	0.13 0.98	0.69 0.12	0.86 0.85	0.46 0.82

Notes: All the regressions include observations from the two post-Covid follow-up surveys for the 1,715 respondents. OLS regressions where the dependent variables are the number of hours the respondent reports spending on a typical working day in each activity. The baseline values were collected during the 2020 post-Covid follow-up survey retroactively. The table reports the coefficient of the interactions between the post-Covid surveys time dummy and indicators for treatment (Grants only and Grants+BDS), as well as their triple interaction with female. All regressions control for individual fixed effects, county- and business sector-time trends. Control+BDS only mean refers to the mean of males/females of the pure control or BDS only groups at the 2021 follow-up survey. Standard errors, clustered at the individual level, in parentheses. * p < 0.10, ** p < 0.05, *** p < 0.01.

Table 11: Grants and BDS Treatment Effects during COVID: Subjective Wellbeing

	10-ste	p ladder	Food security	Satisfaction work/life	Vignette Index
	(1) Perception	(2) Expectation	(3)	(4)	(5)
Female	0.10	0.18	-0.03	0.05	0.38***
	(0.11)	(0.13)	(0.08)	(0.08)	(0.08)
Grants	0.63***	0.38**	0.26***	0.30***	-0.18*
	(0.14)	(0.15)	(0.10)	(0.10)	(0.09)
$Grants \times Female$	-0.40**	-0.03	-0.01	-0.23*	0.11
	(0.18)	(0.21)	(0.13)	(0.13)	(0.12)
Grants and BDS	0.56***	0.65***	0.33***	0.30***	-0.19**
	(0.13)	(0.13)	(0.09)	(0.09)	(0.09)
Grants and BDS \times Female	-0.26	-0.51***	-0.14	-0.11	0.12
	(0.18)	(0.19)	(0.12)	(0.13)	(0.12)
County FE	✓	\checkmark	✓	✓	✓
Baseline business sector	\checkmark	✓	✓	✓	\checkmark
Observations	1,715	1,715	1,715	1,715	1,611
Grant effect for females Grant and BDS effect for females	0.23*	0.35**	0.25***	0.08	-0.07
	(0.12)	(0.14)	(0.08)	(0.09)	(0.08)
	0.30**	0.14	0.19**	0.19**	-0.07
	(0.13)	(0.14)	(0.08)	(0.09)	(0.08)
Control+BDS only mean, male	4.06	7.34	-1.30	2.85	-0.14
Control+BDS only mean, female	4.17	7.55	-1.32	2.91	0.26
[Grant=Grant and BDS] male (p-value) [Grant=Grant and BDS] female (p-value)	0.67	0.09	0.47	0.98	0.93
	0.60	0.17	0.55	0.22	0.99

Notes: All the regressions include observations from the 2021 post-Covid follow-up survey for the 1,715 respondents. Columns (1) to (4) are OLS regressions where the dependent variables are the answers to the different measures of individual subjective well-being. Column (5) dependent variable is the standardized average index of the three intra-household vignettes restricting to the 1,611 individuals with non-missing information for the three vignettes. The table reports the coefficient of female and interactions between female and the indicators for treatment (Grants only and Grants+BDS). All regressions control for county and business sector fixed effects. Control+BDS only mean refers to the mean of males/females of the pure control or BDS only groups at the 2021 follow-up survey. Standard errors, clustered at the individual level, in parentheses. * p < 0.10, ** p < 0.05, *** p < 0.01.

APPENDIX

Appendix A. Interventions

Table A1. Timeline of Interventions

	Grants' dis	bursement	В	DS
	Tranche 1	Tranche 2	Start	End
Cluster 1	3/17/2020	6/30/2020	February 2020	March 2021
Cluster 2	10/28/2020	3/4/2021	July 2020	December 2020
Cluster 3	11/17/2020	3/4/2021	July 2020	December 2020

Table A2: List of Counties by Cluster

Cluster 1	Cluster 2	Cluster 3
Mombasa	Kitui	Kilifi
Kwale	Nyandarua	Machakos
Nakuru	Kiambu	Kakamega
Kisumu	Turkana	Bungoma
Nairobi	Migori	Kisii

Appendix B. Survey Variables

Business adaptation strategies

"Did this establishment experience any of the following changes in response to the COVID-19 outbreak?". Response scale: Yes/No. Changes: sell the business or transfer ownership to another person? (If Yes, skip the rest); started online sales or remote work arrangement?; changed or decreased the type of products sold or increased delivery of goods or services?; changed business location?; received any national or local government support in response to the crisis?; took loan from formal or informal lenders to sustain business operations?

Time use

Now I am going to ask you about the number of hours you spend on a typical working day in different activities. We understand you may be at the same time taking care of children while you perform the following activities. Activities: sleep; work/studying/training (paid and unpaid), including transport/commute to workplace; eating/drinking/wash yourself/get dressed/other personal care; domestic work (e.g.

cooking, cleaning, shopping household goods, caring for elderly/ill, etc.); leisure and social activities (e.g. watching tv, listening to radio, reading, meeting friends/family, going to church, etc.).

- How many hours do you spend now on this activity on a typical working day in your household?
- How many of the [X] hours you spend on [activity] you are also watching over children?

Now, we will ask you about the number of hours you spent with children doing different activities. Please answer about the number of hours you were "just" doing that.

Activities: helping children with school activities; taking care of children (e.g., feeding, washing, dressing, watching over, putting to sleep); playing with children.

[Number of hours across activities must add up to 24]

Intra-household Vignettes

Now I am going to read you some stories about different individuals. This question format is different from the rest so take your time in answering. For each I will then ask you how much you are like or not like each of these people. We would like to know if you are completely different from them, similar to them, or somewhere in between. There are no right or wrong answers to these questions. [Randomization between "less" or "more" versions. Randomization occurs once and applies to all vignettes] Response code: Yes/No. If yes: Are you completely the same or somewhat the same? If no: Are you completely different or somewhat different?

<u>V1 Partner control.</u> "[Person's name] feels that, since the outbreak of COVID-19, her/his partner controls [less/more] than before how the household money is spent "

V2 Voice heard. "[Person's name] feels that [her/his] voice is heard [less/more] inside the household when it comes to making important decisions than it was 6 months ago".

<u>V3 Partner income:</u> "[Person's name] feels that [her/his] household's wellbeing depends [less/more] than before COVID-19 on [her/his] spouse/partner income"

Subjective Well-being

Ladder: life perception and expectation. Imagine for a minute that you are living the best life you can possibly imagine. Now imagine that your life is the worst it could possibly be. Imagine a ladder with 10 steps. Suppose we say that the top of the ladder (step 10) represents the best possible life for you and the bottom (step 1) represents the worst possible life for you. Which step on the ladder best represents where you personally stand at the present time? _Think about your life five years from today. Which step best represents where you personally believe you will be on the ladder five years from now? Response scale: 1-10.

<u>Food security</u>. How often did you eat a smaller meal than you felt you needed because there was not enough food in the last month? Response: never; rarely (1-2 days); sometimes (3-10 days); often (+10 days).

<u>Satisfaction with work/life balance</u>. In a scale from 1 to 5, where 5 is very satisfied and 1 is very dissatisfied, how satisfied are you with your current work-life balance? By work-life balance, we mean the time and space you have for other things you care that are not household or business responsibilities

Appendix C. Crisis Impacts: Additional Analysis

Table C1: Pre-COVID Business Sector

	Female	Female			Difference
	(1) Mean and SD	(2) Obs.	(3) Mean and SD	(4) Obs.	(5) [Female - Male]
Accomodation and food service activities	0.06	544	0.03	481	0.03**
	[0.24]		[0.18]		(0.01)
Administrative and support service activities	0.00	544	0.00	481	-0.00
	[0.04]		[0.06]		(0.00)
Agriculture, forestry and fishing	0.09	544	0.15	481	-0.06***
	[0.28]		[0.36]		(0.02)
Arts, entertainment and recreation	0.03	544	0.01	481	0.01
	[0.16]		[0.12]		(0.01)
Construction	0.00	544	0.01	481	-0.01**
	[0.00]		[0.09]		(0.00)
Education	0.01	544	0.02	481	-0.01
	[0.10]		[0.13]		(0.01)
Electricity,gas,steam, and air conditioning supply	0.00	544	0.00	481	-0.00
	[0.06]		[0.06]		(0.00)
Financial and insurance activities	0.02	544	0.01	481	0.01
	[0.15]		[0.11]		(0.01)
Human health and social work activities	0.17	544	0.15	481	0.02
	[0.38]		[0.36]		(0.02)
Information and communication	0.02	544	0.05	481	-0.03**
	[0.13]		[0.21]		(0.01)
Manufacturing	0.05	544	0.07	481	-0.02*
	[0.21]		[0.26]		(0.01)
Mining and quarrying	0.00	544	0.00	481	-0.00
	[0.04]		[0.05]		(0.00)
Other service activities	0.00	544	0.00	481	0.00
	[0.04]		[0.00]		(0.00)
Professional, scientific and technical activities	0.00	544	0.00	481	-0.00
	[0.06]		[0.06]		(0.00)
Real estate activities	0.02	544	0.02	481	-0.01
	[0.13]		[0.16]		(0.01)
Transportation and storage	0.00	544	0.12	481	-0.12***
	[0.00]	-	[0.32]	-	(0.01)
Water supply, sewerage, waste mngt. and remediation act.	0.00	544	0.01	481	-0.00
11 0,	[0.06]	~	[0.09]		(0.00)
Wholesale and retail trade, repair of motor vehicles	0.52	544	0.33	481	0.19***
	[0.50]	~	[0.47]		(0.03)

Notes: Columns (1) and (3) present sample means and standard deviations, in brackets, of the analytical sample for 544 female and 481 male respondents, respectively, who reported owning a business at baseline. Columns (2) and (4) present the number of of female and male respondents, respectively. Column (5) reports the OLS coefficient of a regression of the the respondent's characteristic on a gender indicator variable, robust standard errors in parentheses. * p < 0.10, *** p < 0.05, *** p < 0.01.

Table C2: COVID-19 Impact on Gender Gap in Business Ownership (Intensive Margin)

	Business Ownership		Business	Survival	Business Entry	
	(1)	(2)	(3)	(4)	(5)	(6)
Covid $2020 \times \text{Female}$	-0.07* (0.04)	-0.11*** (0.04)	-0.08 (0.05)	-0.11** (0.05)	-0.14** (0.06)	-0.14** (0.06)
Covid 2021 \times Female	-0.10** (0.04)	-0.15*** (0.04)	-0.16*** (0.05)	-0.19*** (0.05)	-0.11** (0.05)	-0.11^{**} (0.05)
Individual FE	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
County*Survey FE	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
Baseline business sector*Survey FE		\checkmark		\checkmark		
Observations	5,145	5,145	3,075	3,075	2,070	2,070
Pre-Covid mean, male Covid 2020 mean, male Covid 2021 mean, male	0.74 1.11 1.02	0.74 1.11 1.02	1.20 1.30 1.17	1.20 1.30 1.17	0.00 0.79 0.76	0.00 0.79 0.76
Pre-Covid mean, female Covid 2020 mean, female Covid 2021 mean, female	0.67 0.96 0.84	0.67 0.96 0.84	1.15 1.18 0.98	1.15 1.18 0.98	0.00 0.64 0.65	0.00 0.64 0.65
$ [\ \text{Covid } 2020 \times \text{female} \] = \\ [\ \text{Covid } 2021 \times \text{female} \] \ \text{(p-value)} $	0.40	0.30	0.15	0.10	0.64	0.64

Notes: All the regressions include observations from the baseline and the two post-Covid follow-up surveys. OLS regressions where the dependent variable is a continuous variable with the number of businesses the respondent reports owning. Columns (1) and (2) include the 1,715 respondents in the three survey rounds (5,145 observations). Columns (3) and (4) restrict the sample to the 1,025 respondents that reported owning at least one business in the baseline period. Columns (5) to (6) restrict the sample to the 690 respondents that reported not owning any business in the baseline period. The table reports the coefficient of the interactions between the two post-Covid surveys time dummies and female. All regressions control for individual fixed effects and county-time trends. Columns (2), (4) and (6) also include pre-Covid business sector-time trends. Pre-Covid mean refers to the mean of males/females at baseline survey. Covid 2020 mean and Covid 2021 mean refer to the mean of males/females at the post-Covid follow-up surveys in 2020 and 2021, respectively. Standard errors, clustered at the individual level, in parentheses. * p < 0.10, ** p < 0.05, *** p < 0.01.

Table C3: Non-Grant Recipients: COVID-19 Impact on Gender Gap in Business Ownership

	Business Ownership		Busines	s Survival	Busines	ss Entry
	(1)	(2)	(3)	(4)	(5)	(6)
Covid 2020 × Female	-0.02 (0.04)	-0.07** (0.03)	-0.01 (0.03)	-0.03 (0.04)	-0.10* (0.05)	-0.10* (0.05)
Covid 2021 \times Female	-0.02 (0.04)	-0.06^* (0.03)	-0.05 (0.04)	-0.06 (0.04)	-0.06 (0.06)	-0.06 (0.06)
Individual FE	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
County*Survey FE	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
Baseline business sector*Survey FE		\checkmark		\checkmark		
Observations	2,244	2,244	1,284	1,284	960	960
Pre-Covid mean, male	0.60	0.60	1.00	1.00	0.00	0.00
Covid 2020 mean, male Covid 2021 mean, male	$0.69 \\ 0.62$	$0.69 \\ 0.62$	$0.84 \\ 0.75$	$0.84 \\ 0.75$	$0.46 \\ 0.43$	$0.46 \\ 0.43$
Pre-Covid mean, female Covid 2020 mean, female	0.55 0.62	0.55 0.62	1.00 0.84	1.00 0.84	0.00 0.34	0.00 0.34
Covid 2021 mean, female	0.55	0.55	0.71	0.71	0.36	0.36
[Covid $2020 \times \text{female}$] =						
[Covid 2021 × female] (p-value)	0.93	0.83	0.36	0.53	0.53	0.53

Notes: All the regressions include observations from the baseline and the two post-Covid follow-up surveys for the 748 non-grant recipients. OLS regressions where the dependent variable is an indicator variable = 1 if the respondent reported owning a business. Columns (1) and (2) include the 748 respondents in the three survey rounds (2,244 observations). Columns (3) and (4) restrict the sample to the 428 respondents that reported owning at least one business in the baseline period. Columns (5) to (6) restrict the sample to the 320 respondents that reported not owning any business in the baseline period. The table reports the coefficient of the interactions between the two post-Covid surveys time dummies and female. All regressions control for individual fixed effects and county-time trends. Columns (2), (4) and (6) also include pre-Covid business sector-time trends. Pre-Covid mean refers to the mean of males/females at baseline survey. Covid 2020 mean and Covid 2021 mean refer to the mean of males/females at the post-Covid follow-up surveys in 2020 and 2021, respectively. Standard errors, clustered at the individual level, in parentheses.* p < 0.10, ** p < 0.05, *** p < 0.01.

Table C4: COVID-19 Impact on Gender Gap in Monthly Sales and Profits: Surviving Businesses

	Surviving						
	Sales (W	ins. 5%)	Profits (V	Vins. 5%)			
	(1)	(2)	(3)	(4)			
Covid 2021 × Female	-3,930.39** (1,781.39)	-2,945.71 (1,968.77)	-1,638.76** (694.89)	-1,644.78** (768.05)			
Individual FE	\checkmark	\checkmark	\checkmark	\checkmark			
County*Survey FE	\checkmark	\checkmark	\checkmark	\checkmark			
Baseline business sector*Survey FE		\checkmark		\checkmark			
Observations	1,174	1,174	1,174	1,174			
Pre-Covid mean, male Covid 2021 mean, male	23,230.17 27,107.17	23,230.17 27,107.17	7,031.22 9,136.12	7,031.22 9,136.12			
Pre-Covid mean, female Covid 2021 mean, female	17,543.03 17,419.13	17,543.03 17,419.13	4,949.37 5,443.05	4,949.37 5,443.05			

Notes: All the regressions include observations from the baseline and the 2021 post-Covid follow-up survey. Columns (1) and (2) present OLS regressions where the dependent variable are monthly sales winsorized at the 5% level on both tails reported in Kenyan Shillings. Columns (3) and (4) present OLS regressions where the dependent variable are monthly profits winsorized at the 5% level on both tails reported in Kenyan Shillings. All regressions restrict the sample to the 587 respondents that reported owning one business in the baseline period and are still business owners at the time of the 2021 follow-up survey. The table reports the coefficient of the interactions between the 2021 post-Covid survey time dummies and female. All regressions control for individual fixed effects and county-time trends. Columns (2) and (4) also include and pre-Covid business sector-time trends. Pre-Covid mean refers to the mean of males/females at baseline survey. Covid 2021 mean refer to the mean of males/females at the post-Covid 2021 follow-up survey. Standard errors, clustered at the individual level, in parentheses. * p < 0.10, ** p < 0.05, *** p < 0.01.

Table C5: Non-Grant Recipients: COVID-19 Impact on Gender Gap in Business Monthly Sales and Profits

	Sales (Wins. 5%)		Profits (Profits (Wins. 5%)		Business
	(1)	(2)	(3)	(4)	(5) Sales	(6) Profits
Covid 2021 × Female	-2,864.90 (2,499.69)	-1,361.20 (2,944.31)	-645.78 (950.04)	-548.53 (1,114.81)	-5,349.17* (3,131.80)	-3,639.75** (1,447.42)
Individual FE	\checkmark	\checkmark	\checkmark	\checkmark		
County*Survey FE	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
Baseline business sector*Survey FE		\checkmark		\checkmark		
Observations	604	604	604	604	120	120
Pre-Covid mean, male Covid 2021 mean, male	22,907.98 18,114.76	22,907.98 18,114.76	6,429.89 5,715.89	6,429.89 5,715.89	. 22,226.65	9,231.04
Pre-Covid mean, female Covid 2021 mean, female	17,809.38 11,561.71	17,809.38 11,561.71	4,476.25 3,567.73	4,476.25 3,567.73	16,480.32	5,370.26

Notes: Columns (1) to (4) include observations from the baseline and the 2021 post-Covid follow-up survey for non-grant recipients. Columns (1), (2) and (5) present OLS regressions where the dependent variable are monthly sales winsorized at the 5% level on both tails reported in Kenyan Shillings. Columns (3), (4) and (6) present OLS regressions where the dependent variable are monthly profits winsorized at the 5% level on both tails reported in Kenyan Shillings. Columns (1) to (4) restrict the sample to the 302 respondents that reported owning one business in the baseline period and had non-missing sales and profits data. Columns (5) to (6) restrict the sample to those 120 respondents that reported not owning any business in the baseline period but opened a business by the time of the 2021 follow-up survey, only using data from this latter survey. The table reports the coefficient of the interactions between the 2021 post-Covid survey time dummies and female. All regressions control for individual fixed effects and county-time trends. Columns (2) and (4) also include and pre-Covid business sector-time trends. Pre-Covid mean refers to the mean of males/females at baseline survey. Covid 2021 mean refer to the mean of males/females at the post-Covid 2021 follow-up survey. Standard errors, clustered at the individual level, in parentheses. * p < 0.10, ** p < 0.05, *** p < 0.01.

Table C6: The Role of Business Sector: COVID-19 Impact on Gender Gap in Business Outcomes

	Business Survival (1)	Sales (Wins. 5%) (2)	Profits (Wins. 5%) (3)
Covid 2020 × Female × Agriculture, forestry and fishing	0.05 (0.06)		
Covid 2020 \times Female \times Human health and social work activities	-0.08* (0.04)		
Covid 2020 × Female × Wholesale and retail trade	-0.04 (0.03)		
Covid 2020 × Female × Other	-0.00 (0.04)		
Covid 2021 \times Female \times Agriculture, forestry and fishing	-0.03 (0.08)	6,020.64 (4,052.91)	1,238.60 (1,938.26)
Covid 2021 × Female × Human health and social work activities	-0.09 (0.06)	-2,939.12 (3,849.50)	-2,568.37* (1,338.09)
Covid 2021 × Female × Wholesale and retail trade	-0.08** (0.04)	-5,556.49* (2,885.71)	-2,746.58*** (1,041.80)
Covid 2021 × Female × Other	0.05 (0.04)	-5,335.08* (3,029.94)	-619.45 (1,132.21)
Individual FE	\checkmark	✓	\checkmark
County*Survey FE	✓	✓	✓
Baseline business sector*Survey FE	✓	✓	✓
Observations	3,075	1,466	1,466
Pre-Covid mean, male Covid 2021 mean, male	1.00 0.83	22,087.28 22,099.10	6,766.43 7,448.21
Pre-Covid mean, female Covid 2021 mean, female	1.00 0.80	17,079.99 13,730.90	4,864.84 4,290.57

Notes: All the regressions include observations from the baseline and the 2021 post-Covid follow-up survey. The sample is restricted to the 1,025 respondents that reported owning a business in the baseline period. Column (1) also includes observations from the 2020 post-Covid follow-up survey. Columns (2) and (3) further restrict the sample to the 733 respondents that reported owning one business in the baseline period and had non-missing sales and profits data. Columns (1), (2) and (3) present OLS regressions where the dependent variable are an indicator variable = 1 if the respondent reported owning a business, and monthly sales and profits winsorized at the 5% level on both tails reported in Kenyan Shillings, respectively. The table reports the coefficient of the interactions between the 2021 post-Covid survey time dummies, female, and indicator variables categorizing the business sector they operated in at baseline. All regressions control for individual fixed effects and county-time trends. Pre-Covid mean refers to the mean of males/females at baseline survey. Covid 2021 mean refer to the mean of males/females at the post-Covid 2021 follow-up survey. Standard errors, clustered at the individual level, in parentheses. * p < 0.10, ** p < 0.05, *** p < 0.01.

Table C7: COVID-19 Impact on Gender Gap in Time Use (If Worked Before)

	(1)	(2)	(3)	(4)	(5)	(6)
	Childcare	Work/study	Domestic work	Leisure	Sleep	Eating/self-care
Covid 2020 × Female	0.39***	-0.85***	0.20***	0.13**	0.09	0.09**
	(0.09)	(0.16)	(0.06)	(0.07)	(0.08)	(0.04)
Covid $2021 \times \text{Female}$	0.38***	-0.58***	-0.04	0.23***	-0.12	0.07
	(0.11)	(0.18)	(0.07)	(0.08)	(0.09)	(0.05)
Individual FE	\checkmark	✓	\checkmark	\checkmark	\checkmark	\checkmark
County*Survey FE	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
Baseline business sector*Survey FE	\checkmark	\checkmark	✓	\checkmark	\checkmark	✓
Observations	4,851	4,851	4,851	4,851	4,851	4,851
Pre-Covid mean, male	1.71	9.84	1.13	2.04	7.77	1.46
Covid 2020 mean, male	1.85	9.60	1.14	2.05	7.79	1.47
Covid 2021 mean, male	2.26	9.48	1.29	2.00	7.39	1.39
Pre-Covid mean, female	2.36	8.15	2.23	1.59	8.13	1.52
Covid 2020 mean, female	2.90	7.06	2.42	1.73	8.24	1.60
Covid 2021 mean, female	3.32	7.22	2.33	1.79	7.63	1.54
[Covid $2020 \times \text{female}$] =						
[Covid $2021 \times \text{female}$] (p-value)	0.91	0.13	0.00	0.23	0.02	0.73

Notes: The sample is restricted to those 1,617 individuals that reported positive working hours on a typical day in February 2020. All the regressions include observations from the two post-Covid follow-up surveys for the 1,617 respondents. OLS regressions where the dependent variables are the number of hours the respondent reports spending on a typical working day in each activity. The baseline values were collected during the 2020 post-Covid follow-up survey retroactively. The table reports the coefficient of the interactions between the two post-Covid surveys time dummies and female. All regressions control for individual fixed effects, survey fixed effects, county-survey fixed effects, and pre-Covid business sector-survey fixed effects. Pre-Covid mean refers to the mean of males/females at baseline survey. Covid 2020 mean and Covid 2021 mean refer to the mean of males/females at the post-Covid follow-up surveys in 2020 and 2021, respectively. Standard errors, clustered at the individual level, in parentheses. * p < 0.10, ** p < 0.05, *** p < 0.01.

Table C8: Non-Grant Recipients: COVID-19 Impact on Gender Gap in Time Use

	(1)	(2)	(3)	(4)	(5)	(6)
	Childcare	Work/study	Domestic work	Leisure	Sleep	Eating/self-care
Covid $2020 \times \text{Female}$	0.15	-0.82***	0.16^{*}	0.21**	0.19	0.08
	(0.15)	(0.26)	(0.10)	(0.10)	(0.12)	(0.07)
Covid $2021 \times \text{Female}$	0.27	-0.48	0.10	0.20	-0.15	0.02
	(0.17)	(0.30)	(0.11)	(0.13)	(0.13)	(0.08)
Individual FE	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
County*Survey FE	\checkmark	\checkmark	✓	\checkmark	\checkmark	\checkmark
Baseline business sector*Survey FE	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
Observations	2,244	2,244	2,244	2,244	2,244	2,244
Pre-Covid mean, male	1.73	9.56	1.20	2.13	7.84	1.47
Covid 2020 mean, male	2.03	9.36	1.24	2.06	7.73	1.50
Covid 2021 mean, male	2.32	9.39	1.26	2.02	7.37	1.42
Pre-Covid mean, female	2.56	7.22	2.43	1.80	8.29	1.59
Covid 2020 mean, female	3.05	6.13	2.67	1.91	8.39	1.70
Covid 2021 mean, female	3.49	6.47	2.58	1.93	7.70	1.59
[Covid $2020 \times \text{female}$] =						
[Covid 2021 × female] (p-value)	0.46	0.28	0.60	0.97	0.01	0.45

Notes: All the regressions include observations from the two post-Covid follow-up surveys for the 748 non-grant recipients. OLS regressions where the dependent variables are the number of hours the respondent reports spending on a typical working day in each activity. The baseline values were collected during the 2020 post-Covid follow-up survey retroactively. The table reports the coefficient of the interactions between the two post-Covid surveys time dummies and female. All regressions control for individual fixed effects, survey fixed effects, county-survey fixed effects, and pre-Covid business sector-survey fixed effects. Pre-Covid mean refers to the mean of males/females at baseline survey. Covid 2020 mean and Covid 2021 mean refer to the mean of males/females at the post-Covid follow-up surveys in 2020 and 2021, respectively. Standard errors, clustered at the individual level, in parentheses. p < 0.10, presented to the post-Covid to the post-Covid follow-up surveys in 2020 and 2021, respectively. Standard errors, clustered at the individual level, in parentheses.

Table C9: Non-Grant Recipients: COVID-19 Impact on Gender Gap in Time Use (If Worked Before)

	(1) Childcare	(2) Work/study	(3) Domestic work	(4) Leisure	(5) Sleep	(6) Eating/self-care
Covid 2020 × Female	0.27* (0.15)	-1.33*** (0.26)	0.24** (0.10)	0.37*** (0.10)	0.28** (0.12)	0.15** (0.07)
Covid 2021 \times Female	0.45*** (0.17)	-1.21*** (0.29)	0.25** (0.11)	0.35^{***} (0.13)	-0.06 (0.13)	0.12 (0.08)
Individual FE	\checkmark	\checkmark	\checkmark	✓	\checkmark	✓
County*Survey FE	\checkmark	✓	✓	\checkmark	\checkmark	✓
Baseline business sector*Survey FE	\checkmark	✓	✓	✓	\checkmark	\checkmark
Observations	2,100	2,100	2,100	2,100	2,100	2,100
Pre-Covid mean, male Covid 2020 mean, male Covid 2021 mean, male	1.73 2.03 2.32	9.56 9.36 9.39	1.20 1.24 1.26	2.13 2.06 2.02	7.84 7.73 7.37	1.47 1.50 1.42
Pre-Covid mean, female Covid 2020 mean, female Covid 2021 mean, female	2.35 2.91 3.43	8.17 6.64 6.74	2.18 2.49 2.47	1.59 1.86 1.88	8.17 8.35 7.65	1.46 1.64 1.57
$ [\ \text{Covid } 2020 \times \text{female} \] = \\ [\ \text{Covid } 2021 \times \text{female} \] \ \text{(p-value)} $	0.28	0.72	0.90	0.86	0.01	0.73

Notes: All the regressions include observations from the two post-Covid follow-up surveys for the 748 non-grant recipients individuals that reported positive working hours on a typical day in February 2020. OLS regressions where the dependent variables are the number of hours the respondent reports spending on a typical working day in each activity. The baseline values were collected during the 2020 post-Covid follow-up survey retroactively. The table reports the coefficient of the interactions between the two post-Covid surveys time dummies and female. All regressions control for individual fixed effects, survey fixed effects, county-survey fixed effects, and pre-Covid business sector-survey fixed effects. Pre-Covid mean refers to the mean of males/females at baseline survey. Covid 2020 mean and Covid 2021 mean refer to the mean of males/females at the post-Covid follow-up surveys in 2020 and 2021, respectively. Standard errors, clustered at the individual level, in parentheses. * p < 0.10, ** p < 0.05, *** p < 0.01.

Table C10: The Role of Chilcare Needs: COVID-19 Impact on Gender Gap in Business Outcomes

	Busi	ness Owne	rship	Pre-Covid B	usiness Owners	New I	Business
	All (1)	Survival (2)	Entry (3)	Sales (Wins. 5%) (4)	Profits (Wins. 5%) (5)	Sales (Wins. 5%) (6)	Profits (Wins. 5%) (7)
Covid $2020 \times \text{Female}$	0.06* (0.04)	0.03 (0.04)	0.13* (0.07)				
Covid 2020 × Childcare	-0.02 (0.08)	-0.01 (0.10)	-0.04 (0.09)				
Covid 2020 × Female × Childcare	-0.04*** (0.01)	-0.02 (0.02)	-0.07*** (0.02)				
Covid 2021 × Female	0.08^* (0.05)	0.17*** (0.05)	-0.03 (0.08)	539.05 (3,635.43)	-614.31 (1,445.28)	-4,390.52 (3,701.61)	-4,587.43*** (1,590.36)
Covid 2021 × Childcare	0.06 (0.05)	0.08 (0.05)	$0.00 \\ (0.08)$	5,007.48 (8,086.31)	691.00 (2,416.94)	1,087.31 (1,721.57)	-15.69 (746.78)
Covid 2021 × Female × Childcare	-0.04** (0.02)	-0.07*** (0.02)	$0.00 \\ (0.03)$	-995.38 (1,329.15)	-210.06 (560.02)	175.11 (1,287.58)	858.50 (527.66)
Individual FE	✓	\checkmark	✓	√	✓		
County*Survey FE	✓	\checkmark	✓	 	✓	√	✓
Baseline business sector *Survey FE	✓	✓		·	✓		
Observations	5,145	3,075	2,070	1,466	1,466	384	384
Pre-Covid mean, male Covid 2020 mean, male Covid 2021 mean, male	0.62 0.79 0.75	1.00 0.89 0.83	0.00 0.62 0.61	22,087.28 22,099.10	6,766.43 7,448.21		9.200.05
Pre-Covid mean, female	0.58	1.00	0.00	17,079.99	4,864.84	24,100.00	9,200.05
Covid 2020 mean, female Covid 2021 mean, female	0.73 0.70	0.87 0.80	0.54 0.56	13,730.90	4,290.57	18,487.84	5,980.67

Notes: Columns (1) to (3) present OLS regressions including observations from the baseline and the two post-Covid follow-up surveys for the 1,715 respondents, where the dependent variable is an indicator variable = 1 if the respondent reported owning a business. Column (2) restricts the sample to the 1,025 respondents that reported owning at least one business in the baseline period. Column (3) restricts the sample to the 690 respondents that reported not owning any business in the baseline period. Columns (4) and (5) present OLS regressions including observations from the baseline and the 2021 post-Covid follow-up survey, where the dependent variable are monthly sales and monthly profits, respectively, winsorized at the 5% level on both tails reported in Kenyan Shillings for the 733 respondents that reported owning one business in the baseline period. Columns (6) and (7) restrict the sample to the 384 respondents that reported not owning any business in the baseline period but opened a business by the time of the 2021 follow-up survey, only using data from this latter survey. The regression results estimate equation (1) fully interacting with the number of hours respondent report spending in childcare. The table reports the coefficient of the interactions between the post-Covid surveys time dummies and the number of childcare hours, as well as their triple interaction with female. All regressions control for individual fixed effects, county- and business sectortime trends. Pre-Covid mean refers to the mean of males/females at baseline survey. Covid 2020 mean and Covid 2021 mean refer to the mean of males/females at the post-Covid follow-up surveys in 2020 and 2021, respectively. Standard errors, clustered at the individual level, in parenthesessym* p < 0.10, ** p < 0.05, *** p < 0.01.

Table C11: The Role of Post-Covid Business Changes: COVID-19 Impact on Gender Gap in Business Outcomes

	Busir	ness Own	nership	Sa	les (Wins. 5	%)	Profits (Wins. 5%)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Covid $2021 \times \text{Female}$	-0.01 (0.02)	-0.04* (0.02)	-0.04** (0.02)	-28.87 (2,326.85)	-3,227.04 (2,592.21)	-2,136.00 (2,240.11)	-546.13 (860.63)	-2,153.61** (961.35)	-1,573.21* (887.95)
Covid 2021 × Female × Online/remote	-0.06* (0.03)			-7,385.46* (3,809.51)			-2,678.97* (1,578.73)		
Covid 2021 × Female × Govt. help		0.05^* (0.03)			6.02 $(3,859.59)$			$\substack{1,398.17 \\ (1,536.52)}$	
Covid 2021 × Female × Formal/informal loan			-0.02 (0.04)			-5,551.76 (4,749.49)			-1,284.31 (1,682.28)
Individual FE	✓	✓	✓	✓	\checkmark	✓	✓	✓	\checkmark
County*Survey FE	\checkmark	\checkmark	✓	✓	✓	✓	✓	✓	\checkmark
Baseline business sector*Survey FE	✓	\checkmark	\checkmark	√	✓	✓	√	✓	✓
Observations	2,696	2,696	2,696	1,318	1,318	1,318	1,318	1,318	1,318
Pre-Covid mean, male Covid 2021 mean, male	0.68 0.92	0.68 0.92	0.68 0.92	22,992.39 25,203.32	22,992.39 25,203.32	22,992.39 25,203.32	6,891.50 8,494.45	6,891.50 8,494.45	6,891.50 8,494.45
Pre-Covid mean, female Covid 2021 mean, female	$0.67 \\ 0.89$	$0.67 \\ 0.89$	$0.67 \\ 0.89$	17,524.19 14,951.42	$17,524.19 \\ 14,951.42$	$17,524.19 \\ 14,951.42$	4,983.27 4,671.95	$\begin{array}{c} 4,983.27 \\ 4,671.95 \end{array}$	4,983.27 4,671.95

Notes: All the regressions include observations from the baseline and the 2021 post-Covid follow-up survey for the respondents for which the business change variables are available in the follow-up survey. Columns (1) to (3) present OLS regressions where the dependent variable is an indicator variable = 1 if the respondent reported owning a business. Columns (4) to (6) and (6) to (8) present OLS regressions where the dependent variable are monthly sales and monthly profits, respectively, winsorized at the 5% level on both tails reported in Kenyan Shillings among respondents that reported owning one business in the baseline period. The regression results estimate equation (1) fully interacting with indicator variables equal to one if the respondent adopted the business change specified in the variable list by the time of the 2020 or 2021 follow-up surveys. The table reports the coefficient of the interactions between the post-Covid surveys time dummies, the business change, and female. All regressions control for individual fixed effects, county- and business sector-time trends. Pre-Covid mean refers to the mean of males/females at baseline survey. Covid 2021 mean refer to the mean of males/females at the 2021 post-Covid follow-up surveys. Standard errors, clustered at the individual level, in parentheses * p < 0.10, ** p < 0.05, *** p < 0.01.

Table C12: COVID-19 Impact on Gender Gap in Income from Primary Activity

		Wins. 5%		Follow-up # Work Activities ≤ 1 Wins. 5%
	(1)	(2)	(3)	(4)
Covid 2021 \times Female	-10142.31** (3,946.38)	-1,736.85** (699.42)	-5,017.36*** (1,552.19)	-2,512.75*** (814.74)
	(3,940.36)	(099.42)	(1,552.19)	(814.74)
Individual FE	✓	\checkmark	✓	\checkmark
Survey FE	\checkmark	\checkmark	✓	✓
County*Survey FE	\checkmark	✓	✓	\checkmark
Baseline business sector*Survey FE	\checkmark	\checkmark	✓	\checkmark
Observations	1,784	1,784	786	786
Pre-Covid mean, male	9,558.26	8,769.72	8.510.12	7,782.29
Covid 2021 mean, male	22,715.62	14,418.61	14,066.55	11,159.73
Pre-Covid mean, female	3,969.96	3,558.26	3,223.20	3,064.45
Covid 2021 mean, female	7,834.01	7,243.20	4,141.37	4,007.44

Notes: All the regressions include observations from the baseline and the 2021 post-Covid follow-up survey. The sample is restricted to the 892 respondents that reported a maximum of one working activity at baseline and with available income information in both survey rounds. OLS regressions where the dependent variable is the respondent's income earned from their primary activity reported in Kenyan Shillings, including the monetary value of any compensation they received in kind. Columns (2) and (4) are winsorized at the 5% level on both tails. Columns (3) and (4) further restrict the sample to the 393 respondents who also report a maximum of one working activity in 2021. The table reports the coefficient of the interactions between the 2021 post-Covid survey time dummies and female. All regressions control for individual fixed effects and county and business sector-time trends. Pre-Covid mean refers to the mean of males/females at baseline survey. Covid 2021 mean refer to the mean of males/females at the post-Covid 2021 follow-up survey. Standard errors, clustered at the individual level, in parentheses. * p < 0.10, ** p < 0.05, *** p < 0.01.

Appendix D Treatment Effects: Additional Analysis

Table D1: ANCOVA Grants and BDS Treatment Effects: Business Outcomes

	Busi	ness Owne	rship	Business P	erformance
	All (1)	Survival (2)	Entry (3)	Sales (4)	Profits (5)
Grants	0.19*** (0.04)	0.11*** (0.04)	0.32*** (0.07)	6,117.27** (2,526.84)	2,349.37** (993.57)
Grants \times Female	$0.03 \\ (0.05)$	0.02 (0.06)	0.02 (0.09)	-3,581.15 (2,968.21)	-1,618.05 (1,187.69)
Grants and BDS	0.23*** (0.03)	$0.15^{***} (0.04)$	$0.35^{***} (0.06)$	$4,405.96^*$ $(2,258.23)$	1,652.68* (895.43)
Grants and BDS \times Female	$0.03 \\ (0.05)$	-0.00 (0.06)	$0.05 \\ (0.08)$	-338.52 $(2,875.77)$	-803.27 (1,094.78)
County	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
Baseline business sector	\checkmark	\checkmark		\checkmark	\checkmark
Observations	1,715	1,025	690	851	851
Grant effect for females	0.22*** (0.03)	0.14*** (0.04)	0.33*** (0.06)	2536.12* (1510.93)	731.32 (634.09)
Grant and BDS effect for females	0.26*** (0.03)	0.15^{***} (0.04)	0.40^{***} (0.05)	4067.45** (1789.17)	849.41 (645.80)
Control+BDS only mean, male Control +BDS only mean, female	0.62 0.55	0.75 0.71	0.43 0.36	18888.05 11690.11	6043.32 3662.43
[Grant=Grant and BDS] male (p-value) [Grant=Grant and BDS] female (p-value)	0.33 0.28	0.39 0.76	0.62 0.29	0.50 0.39	0.49 0.86

Notes: All the regressions include observations from the baseline and the 2021 post-Covid follow-up survey in an ANCOVA specification. Columns (1) to (3) present OLS regressions where the dependent variable is an indicator variable = 1 if the respondent reported owning a business for the 1,715 respondents. Column (2) restricts the sample to the 1,025 respondents that reported owning at least one business in the baseline period. Column (3) restricts the sample to the 690 respondents that reported not owning any business in the baseline period. Columns (4) and (5) present OLS regressions where the dependent variable are monthly sales and monthly profits, respectively, winsorized at the 5% level on both tails reported in Kenyan Shillings for the 851 respondents that reported owning one business in the baseline period and had non-missing sales and profits data at follow-up. The table reports the coefficient of the indicators for treatment (Grants only and Grants+BDS), as well as their interaction with female. All regressions control for county- and business sector. Control+BDS only mean refers to the mean of males/females of the pure control or BDS only groups at the 2021 follow-up survey. Standard errors, clustered at the individual level, in parentheses. * p < 0.10, ** p < 0.05, *** p < 0.01.

Table D2: Grants only, BDS only, and Grants and BDS Treatment Effects: Business Outcomes

	Busi	ness Owne	rship	Business P	erformance
	All (1)	Survival (2)	Entry (3)	Sales (4)	Profits (5)
Covid 2021 × Grants	0.22*** (0.06)	0.13 (0.08)	0.33*** (0.10)	11,391.15** (5,699.71)	6,080.38*** (2,228.27)
Covid 2021 × Grants × Female	-0.02 (0.09)	-0.02 (0.11)	$0.01 \\ (0.15)$	-4,337.80 (7,101.50)	-4,020.70 $(2,621.61)$
Covid 2021 \times BDS	$0.03 \\ (0.07)$	0.02 (0.09)	0.02 (0.10)	3,909.89 $(5,694.83)$	$4,060.81^*$ $(2,184.48)$
Covid 2021 × BDS × Female	-0.06 (0.09)	-0.05 (0.11)	-0.01 (0.15)	-1,134.20 (7,181.62)	-2,636.37 $(2,594.11)$
Covid 2021 \times Grants and BDS	0.26*** (0.06)	0.17** (0.08)	0.36*** (0.10)	11,785.53** (5,586.19)	$5,658.45^{**}$ $(2,207.09)$
Covid 2021 \times Grants and BDS \times Female	-0.02 (0.09)	-0.04 (0.11)	0.04 (0.15)	-3,752.12 $(7,152.04)$	-3,641.67 $(2,619.36)$
Individual FE	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
Survey FE	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
County*Survey FE	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
Baseline business sector*Survey FE	\checkmark	\checkmark		\checkmark	\checkmark
Observations	3,430	2,050	1,380	1,466	1,466
Grant effect for females	0.20*** (0.06)	0.11 (0.07)	0.34*** (0.11)	7053.35 (4376.52)	2059.68 (1405.43)
BDS effect for females	-0.03 (0.06)	-0.03 (0.08)	0.01 (0.11)	2775.69 (4484.88)	1424.44 (1426.04)
Grant and BDS effect for females	0.23*** (0.06)	0.12* (0.07)	0.41*** (0.11)	8033.40* (4617.82)	2016.78 (1463.52)
Control mean, male Control mean, female	$0.57 \\ 0.59$	0.70 0.73	$0.41 \\ 0.37$	11175.00 9918.75	4209.52 3061.61
[Grant=Grant and BDS] male (p-value) [Grant=Grant and BDS] female (p-value)	0.33 0.28	0.39 0.76	0.61 0.29	0.90 0.71	0.73 0.96

Notes: All the regressions include observations from the baseline and the 2021 post-Covid follow-up survey. Columns (1) to (3) present OLS regressions where the dependent variable is an indicator variable = 1 if the respondent reported owning a business for the 1,715 respondents. Column (2) restricts the sample to the 1,025 respondents that reported owning at least one business in the baseline period. Column (3) restricts the sample to the 690 respondents that reported not owning any business in the baseline period. Columns (4) and (5) present OLS regressions where the dependent variable are monthly sales and monthly profits, respectively, winsorized at the 5% level on both tails reported in Kenyan Shillings among the 733 respondents that reported owning one business in the baseline period and had non-missing sales and profits data. The table reports the coefficient of the interactions between the post-Covid surveys time dummy and indicators for treatment (Grants only, BDS only, and Grants+BDS), as well as their triple interaction with female. All regressions control for individual fixed effects, county- and business sector-time trends. Control mean refers to the mean of males/females of the pure control group at the 2021 follow-up survey. Standard errors, clustered at the individual level, in parentheses. * p < 0.10, ** p < 0.05, *** p < 0.01.

Table D3: ANCOVA Grants and BDS Treatment Effects: Income Variables

	Income	Sources		Income Prin	nary Activity		Spousal Income Gap		
					Includin	g in kind			
	(1) Any (1)	(2) Number (2)	(3) Raw (3)	(4) Win 5% (4)	(5) Raw (5)	(6) Win 5% (6)	(7) Raw (7)	(8) Win 5% (8)	
Grants	-0.00 (0.01)	0.06 (0.06)	864.31 (4,711.73)	1,354.55* (791.62)	1,162.32 (4,706.34)	1,450.87* (791.69)	-1,019.97 (3,909.22)	-989.79 (882.33)	
Grants \times Female	0.13*** (0.03)	0.26*** (0.08)	1,286.11 $(4,512.49)$	636.36 (996.14)	1,039.46 $(4,510.29)$	592.93 (998.85)	-1,986.86 (3,887.10)	-1,032.83 (1,317.11)	
Grants and BDS	0.01 (0.01)	0.19*** (0.05)	-1,541.49 (3,757.70)	1,266.83* (729.34)	-1,428.99 (3,745.95)	1,350.71* (727.28)	2,450.33 $(2,173.37)$	-1,000.02 (734.25)	
Grants and BDS \times Female	0.11*** (0.03)	0.14** (0.07)	5,793.12 (3,883.55)	1,588.09* (958.05)	5,790.93 (3,876.46)	1,543.50 (961.66)	-5,221.24** (2,627.57)	-1,032.12 (1,226.91)	
County	\checkmark	✓	✓	✓	✓	✓	✓	✓	
Baseline business sector	\checkmark	✓	✓	✓	✓	✓	✓	✓	
Observations	1,715	1,715	1,681	1,681	1,682	1,682	1,378	1,378	
Grant effect for females Grant and BDS effect for females	0.13*** (0.03) 0.12***	0.32*** (0.05) 0.34***	2150.41*** (823.31) 4251.62***	1990.90*** (609.36) 2854.91***	2201.78*** (825.02) 4361.93***	2043.79*** (613.70) 2894.21***	-3006.83** (1315.57) -2770.91*	-2022.62** (977.29) -2032.14**	
	(0.03)	(0.05)	(950.68)	(630.15)	(970.31)	(636.89)	(1490.86)	(991.21)	
Control+BDS only mean, male Control+BDS only mean, female									
[Grant=Grant and BDS] male (p-value) [Grant=Grant and BDS] female (p-value)	0.35 0.70	$0.04 \\ 0.70$	0.52 0.06	0.92 0.23	$0.49 \\ 0.05$	0.91 0.24	0.34 0.88	0.99 0.99	

Notes: All the regressions include observations from the baseline and the 2021 post-Covid follow-up survey in an ANCOVA specification. Columns (1) and (2) present OLS regressions where the dependent variable are an indicator variable equal to one if the respondent reports having any source of income and the number of sources of income, respectively, for the 1,715 respondents. Columns (3) and (4) present OLS regressions where the dependent variable is the respondent's income earned from their primary activity reported in Kenyan Shillings for the 1,681 respondents with available income information in the follow-up survey. Columns (5) and (6) include the monetary value of any compensation they received in kind for the 1,682 respondents with available income information (including in-kind) in the follow-up survey. Columns (4) and (6) are winsorized at the 5% level on both tails. Columns (7) and (8) dependent variable is the spousal income gap subtracting from the respondent's estimate of their spouse's monthly income their income as constructed in column (3) for the 1,378 respondents with available self-reported spousal income gap information in the follow-up survey. The table reports the coefficient of the indicators for treatment (Grants only and Grants+BDS), as well as their interaction with female. All regressions control for county- and business sector. Control+BDS only mean refers to the mean of males/females of the pure control or BDS only groups at the 2021 follow-up survey. Standard errors, clustered at the individual level, in parentheses. * p < 0.10, ** p < 0.05, *** p < 0.01.

Table D4: Grants only, BDS only, and Grants and BDS Treatment Effects: Income Variables

	Income	e Sources		Income Prin	nary Activity		Spousal In	ncome Gap
	(1) Any (1)	(2) Number (2)	(3) Raw (3)	(4) Win 5% (4)	Includin (5) Raw (5)	g in kind (6) Win 5% (6)	(7) Raw (7)	(8) Win 5% (8)
Covid 2021 × Grants	0.02 (0.03)	0.17 (0.11)	4,926.59 (3,511.40)	1,611.17 (1,556.75)	4,842.30 (3,533.15)	1,551.16 (1,556.64)	-3,075.73 (4,010.33)	-535.40 (1,841.42)
Covid 2021 × Grants × Female	0.12* (0.07)	0.27* (0.14)	-715.71 (3,917.50)	2,813.89 $(2,078.74)$	-589.80 (3,955.64)	2,869.35 $(2,090.35)$	693.64 (5,465.65)	-3,648.81 (2,902.09)
Covid 2021 \times BDS	0.02 (0.03)	0.12 (0.10)	$4,044.79 \\ (4,526.27)$	655.26 (1,503.24)	3,702.34 $(4,504.77)$	510.70 (1,500.70)	-998.03 (3,779.65)	399.12 (1,782.12)
Covid 2021 × BDS × Female	0.02 (0.07)	0.02 (0.13)	-786.23 (4,923.78)	2,122.72 $(2,016.07)$	-489.94 (4,912.85)	2,154.29 $(2,028.69)$	$108.38 \\ (5,024.19)$	-3,250.97 (2,806.41)
Covid 2021 \times Grants and BDS	0.03 (0.03)	0.30*** (0.10)	$4,132.29 \\ (2,761.69)$	2,363.36 $(1,507.11)$	3,848.71 $(2,781.76)$	2,274.98 $(1,507.89)$	-17.82 (2,663.23)	-407.64 (1,773.53)
Covid 2021 \times Grants and BDS \times Female	0.11 (0.07)	0.18 (0.14)	2,494.23 (3,301.88)	2,860.75 (2,042.86)	2,826.76 (3,344.09)	2,928.43 (2,056.48)	-3,205.95 (4,118.98)	-4,234.60 (2,852.15)
Individual FE	✓	✓	✓	✓	✓	✓	✓	\checkmark
Survey FE	✓	✓	✓	✓	✓	✓	✓	\checkmark
County*Survey FE	✓	✓	✓	\checkmark	✓	✓	\checkmark	✓
Baseline business sector*Survey FE	✓	✓	✓	✓	✓	✓	✓	✓
Observations	3,430	3,430	3,300	3,300	3,304	3,304	2,608	2,608
Grant effect for females	0.14** (0.07)	0.44*** (0.10)	4210.88** (1964.12)	4425.07*** (1384.86)	4252.50** (2000.22)	4420.51*** (1403.55)	-2382.09 (3599.13)	-4184.21* (2224.20)
BDS effect for females Grant and BDS effect for females	0.03 (0.07) 0.15**	0.14 (0.09) 0.48***	3258.56* (1706.12) 6626.52***	2777.98** (1360.54) 5224.11***	3212.40* (1738.30) 6675.47***	2664.99* (1382.38) 5203.41***	-889.65 (3166.83) -3223.78	-2851.85 (2150.92) -4642.24**
Control mean, male Control mean, female	0.98 0.75	(0.10) 1.38 0.82	(1854.50) 12379.66 5012.70	(1395.95) 11108.47 5012.70	(1897.25) 12747.63 5315.08	(1414.48) 11256.10 5315.08	(3252.93) -10237.25 6546.25	(2228.08) -8479.07 6261.25
[Grant=Grant and BDS] male (p-value) [Grant=Grant and BDS] female (p-value)	0.51 0.90	0.11 0.59	0.83 0.13	0.46 0.33	$0.79 \\ 0.14$	$0.47 \\ 0.34$	0.42 0.76	0.92 0.74

Notes: All the regressions include observations from the baseline and the 2021 post-Covid follow-up survey. Columns (1) and (2) present OLS regressions where the dependent variable are an indicator variable equal to one if the respondent reports having any source of income and the number of sources of income, respectively, for the 1,715 respondents. Columns (3) and (4) present OLS regressions where the dependent variable is the respondent's income earned from their primary activity reported in Kenyan Shillings for the 1,650 respondents with available income information in both survey rounds. Columns (5) and (6) include the monetary value of any compensation they received in kind for the 1,650 respondents with available income information (including in-kind) in both survey rounds. Columns (4) and (6) are winsorized at the 5% level on both tails. Columns (7) and (8) dependent variable is the spousal income gap subtracting from the respondent's estimate of their spouse's monthly income their income as constructed in column (3) for the 1,304 respondents with available self-reported spousal income gap information in both survey rounds. The table reports the coefficient of the interactions between the post-Covid surveys time dummy and indicators for treatment (Grants only, BDS only, and Grants+BDS), as well as their triple interaction with female. All regressions control for individual fixed effects, county- and business sector-time trends. Control mean refers to the mean of males/females of the pure control group at the 2021 follow-up survey. Standard errors, clustered at the individual level, in parentheses. * p < 0.10, ** p < 0.05, *** p < 0.01.

Table D5: ANCOVA Grants and BDS Treatment Effects during COVID: Time Use

	(1)	(2)	(3)	(4)	(5)	(6)
	Childcare	Work/study	Domestic work	Leisure	Sleep	Eating/self-care
Grants	-0.08	0.25	-0.03	-0.08	0.05	-0.09
	(0.13)	(0.21)	(0.08)	(0.10)	(0.11)	(0.06)
Grants \times Female	0.08 (0.20)	0.43 (0.34)	-0.24* (0.14)	-0.07 (0.14)	-0.10 (0.15)	0.05 (0.09)
Grants and BDS	-0.09 (0.13)	-0.10 (0.20)	0.15* (0.09)	0.03 (0.09)	0.04 (0.10)	-0.02 (0.06)
Grants and BDS \times Female	-0.27 (0.19)	1.41*** (0.32)	-0.53*** (0.13)	-0.29** (0.13)	-0.15 (0.15)	-0.09 (0.09)
County	\checkmark	✓	✓	\checkmark	\checkmark	✓
Baseline business sector	✓	✓	✓	✓	\checkmark	✓
Observations	1,715	1,715	1,715	1,715	1,715	1,715
Grant effect for females	0.00	0.68**	-0.27**	-0.15	-0.05	-0.05
	(0.15)	(0.28)	(0.11)	(0.10)	(0.10)	(0.07)
Grant and BDS effect for females	-0.36***	1.31***	-0.38***	-0.26***	-0.11	-0.11*
	(0.14)	(0.26)	(0.10)	(0.09)	(0.11)	(0.06)
Control+BDS only mean, male	2.32	9.39	1.26	2.02	7.37	1.42
Control +BDS only mean, female	3.49	6.47	2.58	1.93	7.70	1.59
[Grant=Grant and BDS] male (p-value)	0.94	0.10	0.06	0.33	0.96	0.26
[Grant=Grant and BDS] female (p-value)	0.02	0.02	0.29	0.25	0.61	0.38

Notes: All the regressions include observations from the baseline and the 2021 post-Covid follow-up survey for the 1,715 respondents in an ANCOVA specification. OLS regressions where the dependent variables are the number of hours the respondent reports spending on a typical working day in each activity. The baseline values were collected during the 2020 post-Covid follow-up survey retroactively. The table reports the coefficient of the indicators for treatment (Grants only and Grants+BDS), as well as their interaction with female. All regressions control for county- and business sector. Control+BDS only mean refers to the mean of males/females of the pure control or BDS only groups at the 2021 follow-up survey. Standard errors, clustered at the individual level, in parentheses. * p < 0.10, ** p < 0.05, *** p < 0.01.

Table D6: Grants only, BDS only, and Grants and BDS Treatment Effects: Time Use

	(1) Childcare	(2) Work/study	(3) Domestic work	(4) Leisure	(5) Sleep	(6) Eating/self-care
Covid 2021 × Grants	-0.08 (0.27)	-0.23 (0.47)	0.17 (0.19)	0.04 (0.23)	0.07 (0.24)	-0.11 (0.15)
Covid 2021 × Grants × Female	-0.09 (0.40)	1.58** (0.78)	-0.81*** (0.31)	-0.30 (0.33)	0.03 (0.34)	0.01 (0.22)
Covid 2021 \times BDS	-0.03 (0.27)	-0.08 (0.46)	0.16 (0.19)	-0.10 (0.23)	-0.07 (0.23)	0.00 (0.14)
Covid 2021 × BDS × Female	-0.12 (0.39)	0.97 (0.75)	-0.50* (0.29)	-0.15 (0.32)	0.13 (0.33)	0.05 (0.21)
Covid 2021 \times Grants and BDS	-0.06 (0.26)	-0.41 (0.46)	0.36* (0.19)	-0.02 (0.23)	0.04 (0.23)	-0.04 (0.14)
Covid 2021 \times Grants and BDS \times Female	-0.44 (0.39)	2.25*** (0.76)	-0.99*** (0.30)	-0.46 (0.33)	$0.03 \\ (0.34)$	-0.03 (0.21)
Individual FE	✓	✓	✓	\checkmark	\checkmark	\checkmark
Survey FE	\checkmark	✓	\checkmark	\checkmark	\checkmark	✓
County*Survey FE	\checkmark	✓	\checkmark	\checkmark	\checkmark	\checkmark
Baseline business sector*Survey FE	\checkmark	✓	\checkmark	\checkmark	✓	\checkmark
Observations	3,430	3,430	3,430	3,430	3,430	3,430
Grant effect for females	-0.17 (0.30)	1.35** (0.62)	-0.64*** (0.24)	-0.26 (0.24)	0.10 (0.25)	-0.09 (0.16)
BDS effect for females	-0.16 (0.29)	0.89 (0.60)	-0.34 (0.23)	-0.25 (0.23)	0.06 (0.24)	0.05 (0.15)
Grant and BDS effect for females	-0.50* (0.29)	1.84*** (0.61)	-0.64*** (0.23)	-0.47** (0.24)	0.07 (0.25)	-0.07 (0.16)
Control mean, male	2.31	9.52	1.17	1.89	7.54	1.33
Control mean, female	3.79	5.60	2.79	2.24	7.71	1.60
[Grant=Grant and BDS] male (p-value) [Grant=Grant and BDS] female (p-value)	0.92 0.11	0.54 0.19	0.14 0.98	0.69 0.12	0.86 0.84	0.46 0.82

Notes: All the regressions include observations from the two post-Covid follow-up surveys for the 1,715 respondents. OLS regressions where the dependent variables are the number of hours the respondent reports spending on a typical working day in each activity. The baseline values were collected during the 2020 post-Covid follow-up survey retroactively. The table reports the coefficient of the interactions between the post-Covid surveys time dummy and indicators for treatment (Grants only, BDS only, and Grants+BDS), as well as their triple interaction with female. All regressions control for individual fixed effects, county- and business sector-time trends. Control mean refers to the mean of males/females of the pure control group at the 2021 follow-up survey. Standard errors, clustered at the individual level, in parentheses. * p < 0.10, ** p < 0.05, *** p < 0.01.

Table D7: Grants only, BDS only, and Grants and BDS Treatment Effects: Wellbeing

	10-ste	p ladder	Food security	Satisfaction work/life	Vignette Index
	(1) Perception	(2) Expectation	(3)	(4)	(5)
Grants	1.08*** (0.22)	1.00*** (0.26)	-0.41** (0.16)	0.32* (0.18)	-0.18 (0.16)
$Grants \times Female$	-0.97*** (0.29)	-0.53 (0.34)	-0.04 (0.21)	-0.31 (0.23)	0.07 (0.21)
BDS	0.55*** (0.21)	0.75^{***} (0.25)	-0.18 (0.15)	$0.02 \\ (0.17)$	-0.00 (0.16)
$BDS \times Female$	-0.68** (0.28)	-0.60^* (0.33)	-0.06 (0.20)	-0.10 (0.23)	-0.05 (0.20)
Grants and BDS	1.02*** (0.21)	1.26*** (0.25)	-0.48*** (0.15)	0.32^* (0.17)	-0.19 (0.16)
Grants and BDS \times Female	-0.83*** (0.29)	-1.00*** (0.33)	0.08 (0.20)	-0.19 (0.23)	0.08 (0.21)
Female	0.66*** (0.25)	0.68** (0.30)	0.09 (0.18)	0.13 (0.21)	0.42** (0.19)
County FE	\checkmark	\checkmark	✓	\checkmark	\checkmark
Baseline business sector	\checkmark	\checkmark	✓	\checkmark	✓
Observations	1,715	1,715	1,715	1,715	1,611
Grant effect for females	0.12 (0.19)	0.47** (0.22)	-0.45*** (0.13)	0.01 (0.15)	-0.12 (0.13)
BDS effect for females	-0.13 (0.19)	(0.22) 0.14 (0.21)	-0.25* (0.13)	-0.15) -0.07 (0.15)	-0.05 (0.13)
Grant and BDS effect for females	0.19 (0.19)	0.26 (0.21)	-0.40*** (0.13)	0.13 (0.15)	-0.12 (0.13)

Notes: All the regressions include observations from the 2021 post-Covid follow-up survey for the 1,715 respondents. Columns (1) to (4) are OLS regressions where the dependent variables are the answers to the different measures of individual subjective well-being. Column (5) dependent variable is the standardized average index of the three intrahousehold vignettes restricting to the 1,611 individuals with non-missing information for the three vignettes. The table reports the coefficient of female and interactions between female and the indicators for treatment (Grants only, BDS only, and Grants+BDS). All regressions control for county and business sector fixed effects. Control mean refers to the mean of males/females of the pure control group at the 2021 follow-up survey. Standard errors, clustered at the individual level, in parentheses. * p < 0.10, ** p < 0.05, *** p < 0.01.

Table D8: Grants and BDS Treatment Effects: Business Outcomes. Heterogeneity by Spouse's Business Ownership

	Busi	ness Owne	rship	Business Performance (Wins. 5%)		
	All (1)	Survival (2)	Entry (3)	Sales (4)	Profits (5)	
Covid $2021 \times Grant$	0.24*** (0.03)	0.14*** (0.04)	0.38*** (0.06)	10,166.99*** (2,807.61)	2,889.68*** (1,061.61)	
Covid 2021 × Grant × Female	$0.00 \\ (0.05)$	0.02 (0.06)	-0.05 (0.08)	-4,768.02 (3,779.43)	-2,136.15 (1,424.23)	
Covid 2021 × Grant × Spouse had business at baseline	-0.11 (0.07)	-0.02 (0.09)	-0.18 (0.14)	-9,059.73 (6,100.62)	-2,422.58 (2,364.76)	
Covid 2021 × Grant × Spouse had business at baseline × Female	0.12 (0.10)	-0.04 (0.11)	0.33^* (0.17)	8,618.08 (7,475.64)	2,737.70 (2,866.92)	
Individual FE	\checkmark	\checkmark	\checkmark	✓	✓	
Survey FE	✓	\checkmark	\checkmark	✓	✓	
County*Survey FE	✓	\checkmark	\checkmark	\checkmark	✓	
Baseline business sector*Survey FE	✓	\checkmark		\checkmark	✓	
Observations	3,430	2,050	1,380	1,466	1,466	
Grant effect for females	0.24*** (0.03)	0.16*** (0.04)	0.33*** (0.06)	5398.97** (2532.72)	753.53 (959.62)	
Grant effect for females with entrepreneur spouse	0.25*** (0.05)	0.10* (0.06)	0.47*** (0.08)	4957.31 (3598.15)	1068.65 (1337.82)	
Control+BDS only mean, male Control+BDS only mean, female	0.62 0.55	0.75 0.71	0.43 0.36	18114.76 11561.71	5715.89 3567.73	

Notes: All the regressions include observations from the baseline and the 2021 post-Covid follow-up survey. Columns (1) to (3) present OLS regressions where the dependent variable is an indicator variable = 1 if the respondent reported owning a business for the 1,715 respondents. Column (2) restricts the sample to the 1,025 respondents that reported owning at least one business in the baseline period. Column (3) restricts the sample to the 690 respondents that reported not owning any business in the baseline period. Columns (4) and (5) present OLS regressions where the dependent variable are monthly sales and monthly profits, respectively, winsorized at the 5% level on both tails reported in Kenyan Shillings among the 733 respondents that reported owning one business in the baseline period and had non-missing sales and profits data. The table reports the coefficient of the interactions between the 2021 post-Covid survey time dummy, grant indicators for treatment, female, and an indicator variable equal to one if the respondent's partner owned a business at baseline. All regressions control for individual fixed effects, county- and business sector-time trends. Control+BDS only mean refers to the mean of males/females of the pure control or BDS only groups at the 2021 follow-up survey. Standard errors, clustered at the individual level, in parentheses. * p < 0.10, ** p < 0.05, *** p < 0.05, *** p < 0.01.

Table D9: Grant and BDS Treatment Effects: Business Outcomes. Heterogeneity by Bank Account at Baseline

	Busi	ness Owne	rship	Business Performance		
	All (1)	Survival (2)	Entry (3)	Sales (4)	Profits (5)	
Covid $2021 \times Grant$	0.26*** (0.05)	0.15*** (0.06)	0.39*** (0.08)	16,142.20*** (4,255.72)	4,699.43*** (1,607.62)	
Covid 2021 × Grant × Female	-0.05 (0.06)	-0.06 (0.08)	-0.03 (0.10)	-13471.59*** (5,138.16)	-4,379.68** (1,935.04)	
Covid 2021 × Grant × Bank savings account at baseline	-0.08 (0.06)	-0.03 (0.07)	-0.11 (0.11)	-12411.54** (5,286.68)	$-3,801.35^*$ (2,000.80)	
Covid 2021 × Grant × Bank savings account at baseline × Female	0.14* (0.08)	0.14 (0.10)	0.14 (0.15)	18,170.39*** (6,685.12)	5,000.61** (2,532.53)	
Individual FE	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	
Survey FE	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	
County*Survey FE	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	
Baseline business sector*Survey FE	\checkmark	✓		✓	✓	
Observations	3,430	2,050	1,380	1,466	1,466	
Grant effect for females	0.21*** (0.04)	0.09* (0.05)	0.36*** (0.06)	2670.61 (2855.67)	319.76 (1092.64)	
Grant effect for females with bank savings account at baseline	0.27*** (0.04)	0.20*** (0.05)	0.39*** (0.07)	8429.46*** (2953.33)	1519.02 (1083.90)	
Control+BDS only mean, male Control+BDS only mean, female	0.62 0.55	0.75 0.71	0.43 0.36	18114.76 11561.71	5715.89 3567.73	

Notes: All the regressions include observations from the baseline and the 2021 post-Covid follow-up survey. Columns (1) to (3) present OLS regressions where the dependent variable is an indicator variable = 1 if the respondent reported owning a business for the 1,715 respondents. Column (2) restricts the sample to the 1,025 respondents that reported owning at least one business in the baseline period. Column (3) restricts the sample to the 690 respondents that reported not owning any business in the baseline period. Columns (4) and (5) present OLS regressions where the dependent variable are monthly sales and monthly profits, respectively, winsorized at the 5% level on both tails reported in Kenyan Shillings among the 733 respondents that reported owning one business in the baseline period and had non-missing sales and profits data. The table reports the coefficient of the interactions between the 2021 post-Covid survey time dummy, grant indicators for treatment, female, and an indicator variable equal to one if the respondent had a personal savings account at baseline. All regressions control for individual fixed effects, county-and business sector-time trends. Control+BDS only mean refers to the mean of males/females of the pure control or BDS only groups at the 2021 follow-up survey. Standard errors, clustered at the individual level, in parentheses. * p < 0.10, ** p < 0.05, *** p < 0.05, *** p < 0.01.