Do capital grants improve microenterprise productivity?

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May 7, 2025

Online Appendix

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A Data construction

We use the public data sets and replication files available from the author's web sites. Wherever possible, we use variables as cleaned and processed by DMW and FMQW. We refer the reader to de Mel, McKenzie, and Woodruff (2013) and McKenzie, Fafchamps, Quinn, and Woodruff (2015) for further details. Here we summarise the main aspects of data construction, in particular of the variables used in production function estimation.

Revenue (output) is the total sales during the reference month – the last month before the survey – across all respective activities of a business: manufacturing, trade, and services. The precise questions are in Sri Lanka: "What was the total sales last month of products your business makes or alters?", "What was the total sales last month of products your business did not make?" and "What was the total business revenue last month from selling services?" and in Ghana: "What were the total monthly sales of your business? Include sales of services".

Capital is the total current value of business assets, excluding land. This follows the variable construction by DMW and FMQW. The value of capital is constructed using the perpetual inventory method: initial value of capital stock + new additions to capital stock + repairs and improvements to existing capital stock − sales and damages of capital stock. Assets are elicited item by item, in a number of categories. Respondents estimate the value of each item; the total is then calculated by summing over all items. In Sri Lanka – but not in Ghana – the name of the item is additionally recorded.

Labour is the total number of hours worked in the last week by the business owner, family members, other unpaid workers, and any paid workers in the business.

Materials is the total value of business expenses, in the reference month, for the purchase of materials and items for resale, and the purchase of electricity, water, gas, and fuels.

Nominal currency values are deflated by the respective monthly consumer price indices. We winsorise all these variables, over the pooled data in each survey, at the respective top and bottom 1%. We then use log values to estimate production functions.

B Implementation of production function estimation

We construct our estimate of TFP with factor elasticity estimates that we obtain from a gross output production function[1] estimated using the Blundell and Bond (1998) "system GMM" estimator and the approach developed by GNR. Here we review these methods in more detail than in the main text, and discuss a number of choices that we make in implementation, as well as evidence that guides our choices.

B.1 Linear panel System GMM

Blundell and Bond (1998) develop a set moment conditions under which the parameters of an autoregressive linear panel data model are identified. Applying this more general method to production functions places a restriction on equation 1 – namely, that the evolution of ω_{it} over time follows a linear AR(1) process, and not some arbitrary Markovian process. As outlined in the main body of the paper, we take steps to ensure this is true and test this empirically, in addition to the structural assumptions that literature makes by default, such as that the production function is Cobb-Douglas. In addition to the three error term component specific in equation 2 of the main text, the dynamic linear panel approach is able to accommodate firm-level fixed effects η_i. A second additional assumption in Blundell and Bond (1998) restricts the 'initial condition' – namely initial *growth* of inputs and outputs of the firm needs to be uncorrelated with the firm fixed effect.

The GMM estimator relies on two sets of moment conditions, of the respective form:

$$E(x_{i,t-s}\,\Delta e_{it}) = 0 \qquad s \geq S \tag{A.1}$$
$$E(\Delta x_{i,t-m}\,e_{it}) = 0 \qquad m \geq M \tag{A.2}$$

where Δe_{it} is the error term from a first-differenced dynamic specification, which includes a lagged dependent variable. Similarly, e_{it} the error term from the levels equation. What these moment conditions say is that suitable lags of variables x_{it} (inputs and output) of the production function serve can serve as instruments in the difference equation; and lags in differences can serve as instruments in the levels equation.

The lag structure (i.e. how many periods s or m we have to lag variables such that they become valid instruments) in Blundell and Bond (1998) estimation tends to be informed by empirical specification tests, not by a priori assumptions about the structure of production process in the firm. Our choice of lag structure is informed by three such

[1] The alternative would be to denote Y_{it} as value added. In a value-added production function, the contribution of intermediate inputs is netted out and the production of value added is expressed in terms of capital and labour only. This transformation can be theoretically justified in the special case where the production function is Leontieff in materials (Gandhi, Navarro, and Rivers, 2020); however, we do not view that as a reasonable restriction for this context.

specification tests. First, since the model includes many more instruments than endogenous regressors, the Hansen (1982) test of overidentifying restrictions helps judge the validity of the moment conditions. Under the null hypothesis that the moment conditions hold, the test statistic follows an asymptotic chi-squared distribution. Hence the test passes if we do not reject the null.

Second, the Arellano and Bond (1991) test for serial correlation in the residuals helps us judge whether the estimated model is dynamically complete, i.e. whether the assumption of an AR(1) structure of productivity is satisfied. The null hypothesis is that that there is no correlation in the residuals in the dynamic model. This means that the inclusion of a lagged dependent variable makes the model dynamically complete. In other words, the lagged dependent variable is a sufficient control for any correlation in the residual. Under the null, the first-differenced residuals are negatively autocorrelated, but the residuals of higher order are uncorrelated. The Arellano and Bond (1991) test therefore passes if we do not reject the null hypothesis of an AR(1) process, but reject the null hypothesis of an AR(2) process.

Third, the Windmeijer (2024) underidentification test is informative about the strength and relevance of instruments. Whereas the choice of the first suitable lags S and M are primarily guided by the need to satisfy the moment conditions, further lags will generally satisfy these conditions even more comfortably. However, increasing the distance of lags means that lags tend to lose their predictive power over current variables. Windmeijer (2024) develops a test which extends the Cragg-Donald and Kleibergen-Papp weak instruments tests to models with clustered and heteroskedastic errors, with a particular application to linear dynamic panel models. The test procedure allows for testing instruments for each endogenous variable in turn. The Windmeijer (2024) test passes if we reject the null hypothesis that instruments have no predictive power.

Our choice of lag structure in Table 1 is informed by these three sets of test, by coefficient stability in Appendix Tables A.2 to A.7, and by a preference for parsimony. Our preferred specifications include the following set of lags as instruments:

Variable	Output	Capital	Labour	Materials
Sri Lanka lags	{2, 3}	{3, 4}	{1, 2}	{2, 3}
Ghana lags	{1, 2}	{2, 3}	{1, 2}	{2, 3}

In total, this gives us 79 instruments (in differences and levels) in Sri Lanka, and 51 instruments in Ghana. In both cases, each of the specification test passes at conventional levels of significance.

B.2 Gandhi, Navarro and Rivers estimator

The production function approach suggested by GNR responds to the concern that flexible inputs (materials, electricity, etc.) are not adequately identified in the above structural estimators, because the invertibility assumption may not hold. This means that flexible inputs cannot be used to proxy for unobserved productivity. To solve this, GNR develop an empirical strategy that, relying on the first order conditions of the firm, nonparametrically identifies the flexible input elasticity. This solves for the missing source of identification for the production function within a proxy variable structure. Within the context of informal firms, one might, on conceptual grounds, expect measurement error and financial constraints to pose a challenge to invertibility.

We implement the GNR approach using code shared by the authors. We utilise this specification exactly without custom changes, so the methodology remains consistent with that of the authors. The estimator follows a two-step approach. The first stage estimates a nonparametric regression of the flexible input's revenue share on all inputs (labor, capital, and intermediate inputs) and identifies the flexible input elasticity. The second stage then uses dynamic panel/proxy variable conditional moment restrictions based on lagged input decisions for the remaining inputs. In this way, the gross output production function and productivity can be non-parametrically identified. We utilise the Cobb-Douglas specification of the production function, consistent with our other estimates.

Once we have established the parameters of the production function, we manually calculate the TFP residual using the estimated coefficients on inputs, consistent with our approach across all estimators.

B.3 Pre-partialling of covariates

B.3.1 Summary of our method

We use a three-step method to estimate treatment effects on TFP:

1. Pre-partialling of treatment status and fixed effects: To partial out treatment status and fixed effects, we run a set of auxiliary regressions:

$$y_{isct} = \delta_0 + \delta_1 \cdot T_{it} + \mu_{1s} + \theta_{1t} + \varepsilon_{1it}; \quad (A.3)$$
$$k_{isct} = \delta_2 + \delta_3 \cdot T_{it} + \mu_{2s} + \theta_{2t} + \varepsilon_{2it}; \quad (A.4)$$
$$l_{isct} = \delta_4 + \delta_5 \cdot T_{it} + \mu_{3s} + \theta_{3t} + \varepsilon_{3it}; \quad (A.5)$$
$$m_{isct} = \delta_6 + \delta_7 \cdot T_{it} + \mu_{4s} + \theta_{4t} + \varepsilon_{4it}. \quad (A.6)$$

   We then use the estimates from these auxiliary regressions to obtain residualised transformations of all input and output variables, which we denote as $\tilde{y}_{it}$, $\tilde{k}_{it}$, $\tilde{l}_{it}$ and $\tilde{m}_{it}$.

2. Estimation of the pre-partialled production function: We then estimate the following production function:

$$\tilde{y}_{it} = \beta_0 + \beta_k \cdot \tilde{k}_{it} + \beta_l \cdot \tilde{l}_{it} + \beta_m \cdot \tilde{m}_{it} + \tilde{\omega}_{it} + \tilde{v}_{it}. \quad (A.7)$$

   We do this using the estimation methods described earlier (namely, the method of Blundell and Bond (1998) and the method of Gandhi et al. (2020)).

3. Estimation of the treatment effect: We then recover the residual of this estimation as:

$$\log \widehat{TFP}_{it} = y_{it} - \hat{\beta}_k \cdot k_{it} - \hat{\beta}_l \cdot l_{it} - \hat{\beta}_m \cdot m_{it}, \quad (4)$$

   The treatment effect estimation is then:

$$\log \widehat{TFP}_{isct} = \beta_T \cdot T_{it} + \gamma_{ct} + \mu_{sc} + \varepsilon_{isct}. \quad (5)$$

B.3.2 Justification for our method

The following discussion explains the rationale for using this three-stage process (rather than attempting a one-step estimation). First, consider a production function where all inputs k, l and m are included alongside the treatment effect T:

$$y_{it} = \rho \cdot y_{it-1} + \beta_k \cdot k_{it} + \beta_l \cdot l_{it} + \beta_m \cdot m_{it} + \beta_T \cdot T_{it} + tfp_{it} \quad (A.8)$$

where $tfp_{it} \equiv \mu_{sc} + \gamma_{st} + \omega_{it} + v_{it}$. Denote by period 2 the first period after treatment. In this period, the estimation is:

$$y_{i2} = \rho \cdot y_{i1} + \beta_k \cdot k_{i2} + \beta_l \cdot l_{i2} + \beta_m \cdot m_{i2} + \beta_T \cdot T_{i2} + tfp_{i2}, \quad (A.9)$$

where y_{i1} does not contain T (as treatment was only introduced after the first period).

For period 3, the equivalent expression is:

$$y_{i3} = \rho \cdot y_{i2} + \beta_k \cdot k_{i3} + \beta_l \cdot l_{i3} + \beta_m \cdot m_{i3} + \beta_T \cdot T_{i3} + tfp_{i3}, \quad (A.10)$$

where y_{i2} now contains T_{i2}. That is, T_{i2} is weakly collinear with y_{i2}. The same holds for all future periods; that is, the effect of treatment is only identified – in the practical sense – from the transition from period 1 to period 2.[2] Our approach avoids this problem – in the sense that equation 5 is able to exploit information from all periods in estimating β_T.

A potential concern with estimating equation 5 is that this residual may no longer follow a Markov process, as it contains components additional to ω_{it} (namely, time effects,

[2] For clarification, we model treatment status to directly affect productivity in future periods through the coefficient β_T, rather than affecting ω_{it} and then being propagated by the autoregressive error structure. For an alternative based on the latter approach, see Dorazelski and Jaumandreu (2013).

firm effects and treatment effects). This is the key justification for the pre-partialling in equations A.3, A.4, A.5 and A.6. (We note that the partialled-out regressors are strictly exogenous to the error term ω_{it}; this exogeneity is important for the proof that follows.) We are now left with a 'standard' production function problem, where output is a function of inputs and unobserved productivity (since the observed productivity shifters have been partialled out), and where the productivity innovation that is observed by the firm, ω_{it} remains a first-order Markov process. (We test this autocorrelation empirically through the Arellano and Bond (1991) method as part of the Blundell and Bond (1998) production function estimation; this assumption passes comfortably.) We note that this approach essentially treats predicted TFP as data (that is, $\log \widehat{TFP}_{it}$ in equation 5); an alternative implementation – and one that would be substantially more numerically intensive – would be to bootstrap the entire three-step process in order to allow for sampling variation in the first two stages.

B.3.3 Proof of the validity of pre-partialled moments

We have a linear panel model (specifically, a Blundell-Bond production function estimator), which we represent generically as follows (where $\boldsymbol{W}$ is a matrix of valid instruments):

$$\boldsymbol{y} = \boldsymbol{X} \cdot \boldsymbol{\beta}_1 + \boldsymbol{Z} \cdot \boldsymbol{\beta}_2 + \boldsymbol{\varepsilon}; \tag{A.11}$$

$$\mathbb{E}\left(\boldsymbol{\varepsilon}' \cdot \boldsymbol{Z}\right) = \boldsymbol{0}; \tag{A.12}$$

$$\mathbb{E}\left(\boldsymbol{\varepsilon}' \cdot \boldsymbol{W}\right) = \boldsymbol{0}. \tag{A.13}$$

Here, $\boldsymbol{X}$ has dimensions $n \times m$, $\boldsymbol{Z}$ has dimensions $n \times j$, $\boldsymbol{W}$ has dimensions $n \times k$ and $\boldsymbol{\varepsilon}$ is $n \times 1$.

We allow the possibility that $\boldsymbol{X}$ is endogenous:

$$\mathbb{E}\left(N^{-1} \cdot \boldsymbol{\varepsilon}' \cdot \boldsymbol{X}\right) = \boldsymbol{\alpha}, \tag{A.14}$$

where some or more elements of $\boldsymbol{\alpha}$ may be non-zero.

Denote by $\boldsymbol{M_Z}$ the 'annihilator matrix' for $\boldsymbol{Z}$:

$$\boldsymbol{M_Z} \equiv \boldsymbol{I} - \boldsymbol{Z}\left(\boldsymbol{Z}'\boldsymbol{Z}\right)^{-1} \cdot \boldsymbol{Z}'. \tag{A.15}$$

Rather than estimating equation A.11 directly, we prefer instead to pre-partial $\boldsymbol{Z}$; that is, to estimate the following model:

$$\boldsymbol{M_Z} \cdot \boldsymbol{y} = \boldsymbol{M_Z} \cdot \boldsymbol{X} \cdot \boldsymbol{\beta}_1 + \boldsymbol{M_Z} \cdot \boldsymbol{\varepsilon}. \tag{A.16}$$

The question is whether we can use $\boldsymbol{M_Z} \cdot \boldsymbol{W}$ as a valid instrument; that is, whether we can say that $\mathbb{E}\left(\boldsymbol{\varepsilon}' \cdot \boldsymbol{M_Z}' \cdot \boldsymbol{M_Z} \cdot \boldsymbol{W}\right) = \boldsymbol{0}$.

Denote the linear projection of $\boldsymbol{W}$ on $\boldsymbol{Z}$ as:

$$\boldsymbol{W} = \boldsymbol{Z} \cdot \gamma + \boldsymbol{\mu}, \tag{A.17}$$

so that, for any given finite sample, $\hat{\gamma} = \left(\boldsymbol{Z}'\boldsymbol{Z}\right)^{-1} \cdot \boldsymbol{Z}'\boldsymbol{W}$. Denote by $\widehat{\boldsymbol{W}}$ the predicted value of $\boldsymbol{W}$ after projecting on $\boldsymbol{Z}$; that is, $\widehat{\boldsymbol{W}} \equiv \boldsymbol{Z} \cdot \hat{\gamma}$. Note that $\hat{\gamma}$ has dimensions $j \times k$.

Then we can say the following (noting immediately the symmetry and idempotence of the annihilator):

$$\begin{aligned}
\varepsilon' \cdot \boldsymbol{M}_{\boldsymbol{Z}}' \cdot \boldsymbol{M}_{\boldsymbol{Z}} \cdot \boldsymbol{W} &= \varepsilon' \cdot \boldsymbol{M}_{\boldsymbol{Z}} \cdot \boldsymbol{W} && \text{(A.18)}\\
&= \varepsilon' \cdot \boldsymbol{W} - \varepsilon' \cdot \boldsymbol{Z}\left(\boldsymbol{Z}'\boldsymbol{Z}\right)^{-1} \cdot \boldsymbol{Z}' \cdot \boldsymbol{W} && \text{(A.19)}\\
&= \varepsilon' \cdot \boldsymbol{W} - \varepsilon' \cdot \widehat{\boldsymbol{W}}. && \text{(A.20)}
\end{aligned}$$

Taking the expectation of this object, and relying upon the maintained assumption that $\mathbb{E}\left(\varepsilon' \cdot \boldsymbol{W}\right) = \boldsymbol{0}$, we have:

$$\mathbb{E}\left(\varepsilon' \cdot \boldsymbol{M}_{\boldsymbol{z}} \cdot \boldsymbol{W}\right) = -\mathbb{E}\left(\varepsilon' \cdot \widehat{\boldsymbol{W}}\right). \tag{A.21}$$

We now consider the finite-sample analogue to this object; we can say:

$$\begin{aligned}
-\frac{1}{N} \cdot \boldsymbol{\varepsilon}'\widehat{\boldsymbol{W}} &= -\sum_{p=1}^{j} \boldsymbol{S}_p && \text{(A.22)}\\
\text{where } \ \boldsymbol{S}_p &\equiv \sum_{p=1}^{j} \hat{\gamma}_p \cdot \left(\frac{1}{N} \cdot \sum_{i=1}^{N} \varepsilon_i Z_{ip}\right), && \text{(A.23)}
\end{aligned}$$

where $\hat{\gamma}_p$ is the p-th column of the matrix $\hat{\gamma}$ and Z_{ip} is the element at the i-th row and p-th column of $\boldsymbol{Z}$ (that is, the p-th exogenous variable that is being partialled out).

Now, we know that $\hat{\gamma}_p$ converges in distribution to $\boldsymbol{\gamma}_p$ and (by the Law of Large Numbers and the moment condition $\mathbb{E}\left(\varepsilon' \cdot \boldsymbol{Z}\right) = \boldsymbol{0}$), we know that $N^{-1} \cdot \sum_{i=1}^{N} \varepsilon_i Z_{ip}$ converges in probability to zero. By Slutsky's Theorem, it follows that $\boldsymbol{S}_p$ converges to zero in probability – and, by the sum of convergent sequences in probability, that $\sum_{p=1}^{j} \boldsymbol{S}_p$ converges to zero in probability. From this, it follows that $N^{-1} \cdot \boldsymbol{\varepsilon}'\widehat{\boldsymbol{W}}$ converges to 0 in probability and – by the Law of Large Numbers and standard regularity assumptions – it follows that $\mathbb{E}\left(\varepsilon' \cdot \widehat{\boldsymbol{W}}\right) = \boldsymbol{0}$ and, therefore, that $\mathbb{E}\left(\varepsilon' \cdot \boldsymbol{M}_{\boldsymbol{z}} \cdot \boldsymbol{W}\right) = \boldsymbol{0}$. ■

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Online Appendix Tables and Figures

Table A.1: **Test for differential non-response and attrition**

	(1)	(2)	(3)	(4)	(5)	(6)
	Missing data on ...					Attrition
	Capital	Labour	Materials	Output	Any	
A. Sri Lanka						
ln(TFP)	0.01*	-0.01	-0.00	-0.00	-0.01	-0.00
	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)	(0.00)
Dummy: Treated	-0.00	-0.01	-0.00	-0.01	-0.01	0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)
ln(TFP) $\times$ **treated**	-0.03**	-0.00	-0.00	-0.01	-0.01	-0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)
Control mean	0.057	0.059	0.023	0.027	0.101	0.005
Observations	2,688	2,688	2,688	2,688	2,688	2,374
Microenterprises	385	385	385	385	385	385
B. Ghana						
ln(TFP)	0.00	-0.00	0.01	0.00	0.01	0.01*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Dummy: Treated	0.00	-0.01	-0.02	-0.00	-0.02*	-0.01*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
ln(TFP) $\times$ **treated**	0.02**	-0.00	-0.01	-0.01	-0.01	-0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)
Control mean	0.068	0.112	0.091	0.081	0.158	0.040
Observations	2,485	2,485	2,485	2,485	2,485	1,878
Microenterprises	742	742	742	742	742	729

Note: This table tests for patterns of missing TFP data and survey attrition by treatment status and TFP, as well as its interaction. Time-varying treatment status and TFP refer to the period immediately before the firm attrited or failed to respond. Each regression controls for wave dummies. *, ** and *** denote significance at the 10, 5 and 1 per cent levels.

Table A.2: **Production functions: Alternative specifications (Sri Lanka)**

Specification:	(1) OLS (no lag)	(2) OLS (with lag)	(3) FE (no lag)	(4) FE (with lag)	(5) Blundell-Bond (more IVs)	(6) Blundell-Bond (with lags)	(7) Blundell-Bond (lags; more IVs)	(8) Wooldridge	(9) Ackerberg-Caves-Frazer
Log capital	0.09***	0.03*	0.13***	0.11***	0.07	0.07	0.11	0.15***	0.07**
	(0.02)	(0.02)	(0.03)	(0.03)	(0.06)	(0.10)	(0.11)	(0.03)	(0.03)
Log labour	0.22***	0.14***	0.11***	0.10***	0.26**	0.13***	0.11	0.19***	0.25**
	(0.03)	(0.02)	(0.03)	(0.03)	(0.10)	(0.04)	(0.14)	(0.03)	(0.12)
Log materials	0.62***	0.42***	0.39***	0.37***	0.53***	0.62***	0.53***	0.46***	0.65***
	(0.02)	(0.02)	(0.02)	(0.03)	(0.06)	(0.08)	(0.06)	(0.03)	(0.05)
L.Log revenue		0.42***		0.13***	0.21***	0.42***	0.41***		
		(0.02)		(0.02)	(0.06)	(0.06)	(0.09)		
L.Log capital						0.03	-0.00		
						(0.08)	(0.09)		
L.Log labour						0.06	0.01		
						(0.04)	(0.06)		
L.Log materials						-0.19***	-0.12**		
						(0.04)	(0.05)		
Observations	3036	2610	3033	2607	2610	2493	2493	2499	2505
Microenterprises	385	382	382	379	382	378	378	.	385
Hansen (p-value)					0.49	0.70	0.78		
$\hat{\beta}_k + \hat{\beta}_l + \hat{\beta}_m$	0.93	0.59	0.63	0.59	0.86	1.25	1.08		0.97
Constant returns (p)	0.04	0.00	0.00	0.00	0.21	0.04	0.33		0.75
AR(1) (p)					0.00	0.00	0.00		
AR(2) (p)					0.22	0.90	0.88		
Instruments					115	77	108		
Common factor (p)						0.00	0.00		
Underidentification (p-values):									
Log capital					0.00	0.03	0.03		
Log labour					0.02	0.00	0.64		
Log materials					0.00	0.00	0.01		
L.Log revenue					0.01	0.00	0.30		
L.Log capital						0.00	0.01		
L.Log labour						0.00	0.36		
L.Log materials						0.00	0.10		

Note: Estimators employed are OLS, firm fixed effects, Blundell and Bond (1998) System GMM, Wooldridge (2009) and the Ackerberg, Caves, and Frazer (2015) estimator. We report p-values for the Hansen (1982) test of over-identifying restrictions, the Arellano and Bond (1991) autocorrelation test, test of common factor restrictions in models with lagged inputs, and the Windmeijer (2024) test of instrument informativeness. Data are from Sri Lanka. Samples are equivalent to the preferred sample in the original study. *, ** and *** denote significance at the 10, 5 and 1 per cent levels.

Table A.3: **Production function: Separate by treatment (Sri Lanka)**

Specification:	(1) Splitting all factors	(2) Splitting capital	(3) Splitting labour	(4) Splitting materials	(5) Splitting capital & materials
Log capital × Treated	0.08	0.11*			0.05
	(0.05)	(0.07)			(0.06)
Log capital × Control	0.05	0.11*			0.01
	(0.09)	(0.07)			(0.09)
Log capital			0.05	0.05	
			(0.07)	(0.07)	
Log labour × Treated	0.13***		0.15***		
	(0.05)		(0.05)		
Log labour × Control	0.16**		0.15***		
	(0.07)		(0.05)		
Log labour		0.14***		0.15***	0.13***
		(0.05)		(0.05)	(0.04)
Log materials × Treated	0.47***			0.42***	0.45***
	(0.06)			(0.05)	(0.05)
Log materials × Control	0.49***			0.42***	0.49***
	(0.07)			(0.05)	(0.07)
Log materials		0.44***	0.42***		
		(0.05)	(0.05)		
L.Log revenue	0.27***	0.31***	0.32***	0.32***	0.31***
	(0.05)	(0.06)	(0.05)	(0.05)	(0.05)
Observations	2610	2610	2610	2610	2610
Microenterprises	382	382	382	382	382
Hansen (p-value)	0.15	0.21	0.18	0.18	0.14
Equality by treatment (p)	0.91	0.88	0.88	0.90	0.65

Note: All specification utilise the Blundell and Bond (1998) System GMM estimator. We report p-values for the Hansen (1982) test of over-identifying restrictions, and tes for the equality of treatments. Data are from Sri Lanka. Samples are equivalent to the preferred sample in the original study. *, ** and *** denote significance at the 10, 5 and 1 per cent levels.

Table A.4: **Production function: Separate by sector (Sri Lanka)**

Specification:	(1) Splitting all factors	(2) Splitting capital	(3) Splitting labour	(4) Splitting materials	(5) Splitting capital & materials
Log capital × Trade	0.25**	0.27**			0.22**
	(0.11)	(0.11)			(0.11)
Log capital × Non-trade	0.14**	0.12*			0.12*
	(0.07)	(0.07)			(0.07)
Log capital			0.15**	0.14**	
			(0.06)	(0.06)	
Log labour × Trade	0.09		-0.11		
	(0.08)		(0.15)		
Log labour × Non-trade	0.16***		0.24***		
	(0.06)		(0.09)		
Log labour		0.13***		0.12**	0.13***
		(0.05)		(0.05)	(0.05)
Log materials × Trade	0.44***			0.44***	0.44***
	(0.09)			(0.08)	(0.10)
Log materials × Non-trade	0.42***			0.44***	0.43***
	(0.05)			(0.06)	(0.06)
Log materials		0.42***	0.43***		
		(0.06)	(0.06)		
L.Log revenue	0.31***	0.30***	0.32***	0.32***	0.30***
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)
Observations	2610	2610	2610	2610	2610
Microenterprises	382	382	382	382	382
Hansen (p-value)	0.23	0.14	0.13	0.14	0.25
Equality by treatment (p)	0.69	0.20	0.10	0.91	0.60

Note: All specification utilise the Blundell and Bond (1998) System GMM estimator. We report p-values for the Hansen (1982) test of over-identifying restrictions, and tes for the equality of treatments. Data are from Sri Lanka. Samples are equivalent to the preferred sample in the original study. *, ** and *** denote significance at the 10, 5 and 1 per cent levels.

Table A.5: **Production functions: Alternative specifications (Ghana)**

Specification:	(1) OLS (no lag)	(2) OLS (with lag)	(3) FE (no lag)	(4) FE (with lag)	(5) Blundell-Bond (more IVs)	(6) Blundell-Bond (with lags)	(7) Blundell-Bond (lags; more IVs)	(8) Wooldridge	(9) Ackerberg-Caves-Frazer
Log capital	0.11***	0.05***	0.09***	0.09***	0.41***	0.20	0.23	0.11***	0.09***
	(0.02)	(0.01)	(0.02)	(0.02)	(0.14)	(0.16)	(0.16)	(0.02)	(0.02)
Log labour	0.17***	0.13***	0.11***	0.09***	0.25	0.12	0.23	0.20***	0.19*
	(0.03)	(0.02)	(0.03)	(0.03)	(0.27)	(0.08)	(0.29)	(0.03)	(0.10)
Log materials	0.64***	0.46***	0.45***	0.43***	0.40***	0.40***	0.41***	0.56***	0.66***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.12)	(0.15)	(0.14)	(0.02)	(0.04)
L.Log revenue		0.37***		0.02	0.18**	0.53***	0.33*		
		(0.02)		(0.02)	(0.08)	(0.14)	(0.20)		
L.Log capital						0.11	0.17		
						(0.12)	(0.12)		
L.Log labour						-0.10	-0.13*		
						(0.07)	(0.08)		
L.Log materials						-0.18**	-0.09		
						(0.07)	(0.09)		
Observations	3253	3105	3219	3058	3105	2301	2301	2313	2326
Microenterprises	779	770	745	723	770	720	720	.	793
Hansen (p-value)					0.23	0.24	0.14		
$\hat{\beta}_k + \hat{\beta}_l + \hat{\beta}_m$	0.92	0.64	0.65	0.61	1.06	1.18	1.23		0.94
Constant returns (p)	0.02	0.00	0.00	0.00	0.80	0.18	0.49		0.50
AR(1) (p)					0.00	0.00	0.00		
AR(2) (p)					0.15	0.41	0.67		
Instruments					42	37	37		
Common factor (p)						0.19	0.59		
Underidentification (p-values):									
Log capital					0.55	0.61	0.49		
Log labour					0.44	0.00	0.60		
Log materials					0.22	0.56	0.36		
L.Log revenue					0.00	0.00	0.00		
L.Log capital						0.11	0.12		
L.Log labour						0.00	0.00		
L.Log materials						0.00	0.00		

Note: Estimators employed are OLS, firm fixed effects, Blundell and Bond (1998) System GMM, Wooldridge (2009) and the Ackerberg et al. (2015) estimator. We report p-values for the Hansen (1982) test of over-identifying restrictions, the Arellano and Bond (1991) autocorrelation test, test of common factor restrictions in models with lagged inputs, and the Windmeijer (2024) test of instrument informativeness. Data are from Ghana. Samples are equivalent to the preferred sample in the original study. *, ** and *** denote significance at the 10, 5 and 1 per cent levels.

Table A.6: **Production function: Separate by treatment (Ghana)**

Specification:	(1) Splitting all factors	(2) Splitting capital	(3) Splitting labour	(4) Splitting materials	(5) Splitting capital & materials
Log capital × Treated	0.07**	0.06			0.06**
	(0.03)	(0.05)			(0.03)
Log capital × Control	0.05	0.11*			0.09*
	(0.07)	(0.06)			(0.05)
Log capital			0.19**	0.19**	
			(0.09)	(0.08)	
Log labour × Treated	0.18***		0.20***		
	(0.05)		(0.05)		
Log labour × Control	0.40***		0.18		
	(0.16)		(0.23)		
Log labour		0.19***		0.20***	0.19***
		(0.05)		(0.05)	(0.05)
Log materials × Treated	0.52***			0.43***	0.53***
	(0.06)			(0.08)	(0.06)
Log materials × Control	0.67***			0.54***	0.61***
	(0.11)			(0.12)	(0.13)
Log materials		0.52***	0.44***		
		(0.10)	(0.08)		
L.Log revenue	0.21***	0.20***	0.21***	0.20***	0.19***
	(0.05)	(0.04)	(0.04)	(0.04)	(0.04)
Observations	3105	3105	3105	3105	3105
Microenterprises	770	770	770	770	770
Hansen (p-value)	0.02	0.07	0.04	0.04	0.03
Equality by treatment (p)	0.10	0.25	0.92	0.19	0.21

Note: All specification utilise the Blundell and Bond (1998) System GMM estimator. We report p-values for the Hansen (1982) test of over-identifying restrictions, and tes for the equality of treatments. Data are from Sri Lanka. Samples are equivalent to the preferred sample in the original study. *, ** and *** denote significance at the 10, 5 and 1 per cent levels.

Table A.7: **Production function: Separate by sector (Ghana)**

Specification:	(1) Splitting all factors	(2) Splitting capital	(3) Splitting labour	(4) Splitting materials	(5) Splitting capital & materials
Log capital × Trade	0.12	0.22**			0.06
	(0.10)	(0.10)			(0.11)
Log capital × Non-trade	0.13	0.14			0.17*
	(0.10)	(0.10)			(0.10)
Log capital			0.18**	0.13*	
			(0.09)	(0.08)	
Log labour × Trade	0.22***		0.15		
	(0.07)		(0.28)		
Log labour × Non-trade	0.19***		0.22*		
	(0.07)		(0.13)		
Log labour		0.20***		0.21***	0.21***
		(0.05)		(0.05)	(0.05)
Log materials × Trade	0.56***			0.58***	0.59***
	(0.07)			(0.10)	(0.09)
Log materials × Non-trade	0.39***			0.35***	0.40***
	(0.10)			(0.11)	(0.10)
Log materials		0.46***	0.44***		
		(0.08)	(0.09)		
L.Log revenue	0.20***	0.19***	0.21***	0.21***	0.21***
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Observations	3105	3105	3105	3105	3105
Microenterprises	770	770	770	770	770
Hansen (p-value)	0.25	0.21	0.12	0.18	0.16
Equality by treatment (p)	0.38	0.59	0.86	0.08	0.27

Note: All specification utilise the Blundell and Bond (1998) System GMM estimator. We report p-values for the Hansen (1982) test of over-identifying restrictions, and tes for the equality of treatments. Data are from Ghana. Samples are equivalent to the preferred sample in the original study. *, ** and *** denote significance at the 10, 5 and 1 per cent levels.

Table A.8: **TFP Effects: Alternative production function estimators (Sri Lanka and Ghana - pooled)**

TFP estimation method:	(1) OLS (no lag)	(2) OLS (with lag)	(3) FE (no lag)	(4) FE (with lag)	(5) Blundell-Bond (more IVs)	(6) Blundell-Bond (with lags)	(7) Blundell-Bond (lags; more IVs)	(8) Wooldridge	(9) Ackerberg-Caves-Frazer
Regression: OLS (mean)	0.04	0.08**	0.07**	0.08**	0.04	0.05*	0.05	0.05	0.03
	(0.03)	(0.03)	(0.03)	(0.04)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Regression: Quantile (0.2)	-0.02	0.03	0.02	0.02	-0.02	0.00	0.01	-0.01	-0.01
	(0.04)	(0.05)	(0.05)	(0.05)	(0.05)	(0.04)	(0.04)	(0.04)	(0.04)
Regression: Quantile (0.4)	0.03	0.09**	0.08**	0.09**	0.05	0.06*	0.05	0.04	0.03
	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)	(0.03)	(0.04)	(0.04)	(0.03)
Regression: Quantile (0.5)	0.06**	0.11**	0.09**	0.09**	0.07*	0.07*	0.08**	0.06*	0.06**
	(0.03)	(0.04)	(0.04)	(0.05)	(0.04)	(0.03)	(0.04)	(0.04)	(0.03)
Regression: Quantile (0.6)	0.07**	0.12***	0.10**	0.11**	0.08**	0.08**	0.08**	0.09**	0.07***
	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)	(0.03)	(0.04)	(0.04)	(0.03)
Regression: Quantile (0.8)	0.05*	0.08*	0.08**	0.08**	0.07*	0.07**	0.08**	0.08**	0.05*
	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)	(0.03)	(0.03)	(0.03)	(0.03)

Note: This table reports robustness of the TFP effects of capital grants to additional alternative production function estimators. Each column corresponds to a different TFP measure, constructed using the corresponding production function estimates from Table A.2 for Sri Lanka and A.5 for Ghana. Each row corresponds to a different outcome variable in the regression, corresponding to the models in Table 2. As before, all regressions include wave-times-survey and industry-times-country fixed effects. *, ** and *** denote significance at the 10, 5 and 1 per cent levels.

Table A.9: **TFP Effects: Alternative functional form of production function (translog) (Sri Lanka and Ghana – pooled)**

	(1) OLS	(2) Quantile (0.2)	(3) Quantile (0.4)	(4) Quantile (0.5)	(5) Quantile (0.6)	(6) Quantile (0.8)
Dummy: Treated	0.04	-0.02	0.04*	0.06**	0.06**	0.06**
	(0.03)	(0.04)	(0.03)	(0.02)	(0.02)	(0.03)
Observations	4777	4777	4777	4777	4777	4777
Microenterprises	1114	1114	1114	1114	1114	1114

Note: This table reports the robustness to functional form of the effect of treatment on TFP at different moments of the distribution, for microenterprises in Ghana and Sri Lanka. TFP is estimated using a translog functional form and via OLS. Regressions include wave-times-survey fixed effects, and control for baseline TFP. *, ** and *** denote significance at the 10, 5 and 1 per cent levels.

Table A.10: **Production Function: Alternative functional form of production function (translog)**

	Sri Lanka				Ghana			
Specification:	(1) OLS	(2) OLS Translog	(3) Blundell-Bond	(4) BB Translog	(5) OLS	(6) OLS Translog	(7) Blundell-Bond	(8) BB Translog
Log capital	0.17***	0.47***	0.12*	-0.03	0.11***	0.08	0.23***	0.18
	(0.01)	(0.10)	(0.07)	(0.39)	(0.01)	(0.08)	(0.09)	(0.19)
Log labour	0.37***	0.44***	0.13***	0.49	0.39***	0.90***	0.20***	0.24
	(0.02)	(0.16)	(0.05)	(0.48)	(0.01)	(0.11)	(0.05)	(0.35)
Log materials	0.65***	0.45***	0.42***	0.54	0.67***	0.43***	0.39***	0.19
	(0.01)	(0.09)	(0.06)	(0.35)	(0.01)	(0.09)	(0.10)	(0.16)
(Log capital)^2		0.00		-0.01		0.03***		0.02
		(0.01)		(0.04)		(0.01)		(0.01)
(Log materials)^2		0.09***		0.05**		0.10***		0.04***
		(0.01)		(0.02)		(0.01)		(0.01)
(Log labour)^2		-0.03		0.08		-0.04		-0.03
		(0.02)		(0.05)		(0.03)		(0.05)
(Log capital) × (Log materials)		-0.10***		-0.00		-0.06***		-0.04**
		(0.01)		(0.05)		(0.01)		(0.02)
(Log capital) × (Log labour)		0.09***		0.06		0.02		0.00
		(0.02)		(0.07)		(0.02)		(0.04)
(Log labour) × (Log materials)		-0.09***		-0.19**		-0.10***		0.03
		(0.02)		(0.09)		(0.02)		(0.04)
L.Log revenue				0.30***				0.16***
				(0.05)				(0.02)
Observations	2610	2610	2610	2610	3105	3105	3105	3105
Microenterprises			382	382			770	770
Hansen (p-value)			0.12				0.29	
$\hat{\beta}_k + \hat{\beta}_l + \hat{\beta}_m$			0.67				0.82	
Constant returns (p)			0.00				0.05	
AR(1) (p)			0.00				0.00	
AR(2) (p)			0.42				0.18	
Instruments			77				45	

Note: Estimators employed are Blundell and Bond (1998) System GMM and the Wooldridge (2009) implementation of Ackerberg et al. (2015). All models partial out for wave dummies and post-treatment status (not reported). We report p-values for the Hansen (1982) test of over-identifying restrictions, the Arellano and Bond (1991) autocorrelation test, and the Windmeijer (2024) test of instrument informativeness. Samples are equivalent to the preferred samples in the respective original studies. *, ** and *** denote significance at the 10, 5 and 1 per cent levels.

Table A.11: **TFP effects: Assumed depreciation 5% per year (Sri Lanka and Ghana - pooled)**

	(1) OLS	(2) Quantile (0.2)	(3) Quantile (0.4)	(4) Quantile (0.5)	(5) Quantile (0.6)	(6) Quantile (0.8)
A. Dependent variable: log(TFP) estimated using Blundell-Bond estimator						
Dummy: Treated	0.05	0.02	0.07	0.06	0.08*	0.08**
	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Observations	4726	4726	4726	4726	4726	4726
Microenterprises	1108	1108	1108	1108	1108	1108
B. Dependent variable: log(TFP) estimated using Ghandi-Navarro-Rivers estimator						
Dummy: Treated	0.02	0.00	0.03	0.04	0.04	0.03
	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Observations	4726	4726	4726	4726	4726	4726
Microenterprises	1108	1108	1108	1108	1108	1108
C. Dependent variable: log(revenue/hours worked)						
Dummy: Treated	0.04	-0.00	0.00	0.03	0.04	0.04
	(0.03)	(0.03)	(0.03)	(0.02)	(0.02)	(0.03)
Log(Capital/labour)	0.08***	0.04***	0.04***	0.04***	0.06***	0.09***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Log(Materials/labour)	0.64***	0.82***	0.80***	0.78***	0.74***	0.64***
	(0.02)	(0.02)	(0.02)	(0.01)	(0.01)	(0.01)
Log labour	-0.05*	0.01	-0.01	-0.02	-0.04*	-0.09***
	(0.02)	(0.03)	(0.02)	(0.02)	(0.02)	(0.03)
Observations	4726	4726	4726	4726	4726	4726
Microenterprises	1108	1108	1108	1108	1108	1108

Note: This table reports the effect of treatment on TFP assuming that capital depreciates at 5% per year, instead of at 0% as in the baseline data. The regression pools microenterprises in Ghana and Sri Lanka. In Panel A, TFP is estimated using the Blundell and Bond (1998) System GMM estimator. In Panel B, TFP is estimated using the **?** control function estimator. In panel C, the dependent variable is the standard measure of labor productivity. All regressions include wave-times-survey and industry-times-country fixed effects.

Table A.12: **TFP effects: Assumed depreciation 10% per year (Sri Lanka and Ghana - pooled)**

	(1) OLS	(2) Quantile (0.2)	(3) Quantile (0.4)	(4) Quantile (0.5)	(5) Quantile (0.6)	(6) Quantile (0.8)
A. Dependent variable: log(TFP) estimated using Blundell-Bond estimator						
Dummy: Treated	0.05	0.02	0.07	0.06	0.08*	0.08**
	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Observations	4726	4726	4726	4726	4726	4726
Microenterprises	1108	1108	1108	1108	1108	1108
B. Dependent variable: log(TFP) estimated using Ghandi-Navarro-Rivers estimator						
Dummy: Treated	0.02	-0.01	0.03	0.04	0.04	0.04
	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Observations	4726	4726	4726	4726	4726	4726
Microenterprises	1108	1108	1108	1108	1108	1108
C. Dependent variable: log(revenue/hours worked)						
Dummy: Treated	0.04	-0.00	0.00	0.03	0.04	0.04
	(0.03)	(0.03)	(0.03)	(0.02)	(0.02)	(0.03)
Log(Capital/labour)	0.08***	0.04***	0.04***	0.05***	0.06***	0.09***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Log(Materials/labour)	0.64***	0.82***	0.80***	0.78***	0.74***	0.64***
	(0.02)	(0.02)	(0.02)	(0.01)	(0.01)	(0.01)
Log labour	-0.05*	0.01	-0.02	-0.02	-0.04*	-0.09***
	(0.02)	(0.03)	(0.02)	(0.02)	(0.02)	(0.03)
Observations	4726	4726	4726	4726	4726	4726
Microenterprises	1108	1108	1108	1108	1108	1108

Note: This table reports the effect of treatment on TFP assuming that capital depreciates at 10% per year, instead of at 0% as in the baseline data. The regression pools microenterprises in Ghana and Sri Lanka. In Panel A, TFP is estimated using the Blundell and Bond (1998) System GMM estimator. In Panel B, TFP is estimated using the **?** control function estimator. In panel C, the dependent variable is the standard measure of labor productivity. All regressions include wave-times-survey and industry-times-country fixed effects.

Table A.13: **TFP effects: Assumed depreciation 15% per year (Sri Lanka and Ghana - pooled)**

	(1) OLS	(2) Quantile (0.2)	(3) Quantile (0.4)	(4) Quantile (0.5)	(5) Quantile (0.6)	(6) Quantile (0.8)
A. Dependent variable: log(TFP) estimated using Blundell-Bond estimator						
Dummy: Treated	0.05	0.01	0.07*	0.06	0.08*	0.08**
	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Observations	4726	4726	4726	4726	4726	4726
Microenterprises	1108	1108	1108	1108	1108	1108
B. Dependent variable: log(TFP) estimated using Ghandi-Navarro-Rivers estimator						
Dummy: Treated	0.02	-0.01	0.03	0.03	0.04	0.04
	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Observations	4726	4726	4726	4726	4726	4726
Microenterprises	1108	1108	1108	1108	1108	1108
C. Dependent variable: log(revenue/hours worked)						
Dummy: Treated	0.04	-0.01	0.00	0.03	0.04	0.04
	(0.03)	(0.03)	(0.03)	(0.02)	(0.02)	(0.03)
Log(Capital/labour)	0.08***	0.04***	0.04***	0.05***	0.06***	0.09***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Log(Materials/labour)	0.64***	0.81***	0.80***	0.78***	0.74***	0.64***
	(0.02)	(0.02)	(0.02)	(0.01)	(0.01)	(0.01)
Log labour	-0.05*	0.01	-0.02	-0.02	-0.04*	-0.09***
	(0.02)	(0.03)	(0.02)	(0.02)	(0.02)	(0.03)
Observations	4726	4726	4726	4726	4726	4726
Microenterprises	1108	1108	1108	1108	1108	1108

Note: This table reports the effect of treatment on TFP assuming that capital depreciates at 15% per year, instead of at 0% as in the baseline data. The regression pools microenterprises in Ghana and Sri Lanka. In Panel A, TFP is estimated using the Blundell and Bond (1998) System GMM estimator. In Panel B, TFP is estimated using the **?** control function estimator. In panel C, the dependent variable is the standard measure of labor productivity. All regressions include wave-times-survey and industry-times-country fixed effects.

Table A.14: **TFP effects: Assumed depreciation 20% per year (Sri Lanka and Ghana - pooled)**

	(1) OLS	(2) Quantile (0.2)	(3) Quantile (0.4)	(4) Quantile (0.5)	(5) Quantile (0.6)	(6) Quantile (0.8)
A. Dependent variable: log(TFP) estimated using Blundell-Bond estimator						
Dummy: Treated	0.05	0.01	0.07*	0.06	0.08*	0.09**
	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Observations	4723	4723	4723	4723	4723	4723
Microenterprises	1108	1108	1108	1108	1108	1108
B. Dependent variable: log(TFP) estimated using Ghandi-Navarro-Rivers estimator						
Dummy: Treated	0.02	-0.01	0.03	0.03	0.04	0.04
	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Observations	4723	4723	4723	4723	4723	4723
Microenterprises	1108	1108	1108	1108	1108	1108
C. Dependent variable: log(revenue/hours worked)						
Dummy: Treated	0.04	-0.00	0.00	0.03	0.04	0.04
	(0.03)	(0.03)	(0.03)	(0.02)	(0.02)	(0.03)
Log(Capital/labour)	0.08***	0.04***	0.04***	0.05***	0.06***	0.09***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Log(Materials/labour)	0.64***	0.82***	0.79***	0.78***	0.74***	0.64***
	(0.02)	(0.02)	(0.02)	(0.01)	(0.01)	(0.01)
Log labour	-0.05*	0.01	-0.02	-0.02	-0.04*	-0.09***
	(0.02)	(0.03)	(0.02)	(0.02)	(0.02)	(0.03)
Observations	4723	4723	4723	4723	4723	4723
Microenterprises	1108	1108	1108	1108	1108	1108

Note: This table reports the effect of treatment on TFP assuming that capital depreciates at 20% per year, instead of at 0% as in the baseline data. The regression pools microenterprises in Ghana and Sri Lanka. In Panel A, TFP is estimated using the Blundell and Bond (1998) System GMM estimator. In Panel B, TFP is estimated using the **?** control function estimator. In panel C, the dependent variable is the standard measure of labor productivity. All regressions include wave-times-survey and industry-times-country fixed effects.

Table A.15: **TFP effects: Assumed depreciation 25% per year (Sri Lanka and Ghana - pooled)**

	(1) OLS	(2) Quantile (0.2)	(3) Quantile (0.4)	(4) Quantile (0.5)	(5) Quantile (0.6)	(6) Quantile (0.8)
A. Dependent variable: log(TFP) estimated using Blundell-Bond estimator						
Dummy: Treated	0.05	0.01	0.07	0.06	0.08*	0.09**
	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Observations	4723	4723	4723	4723	4723	4723
Microenterprises	1108	1108	1108	1108	1108	1108
B. Dependent variable: log(TFP) estimated using Ghandi-Navarro-Rivers estimator						
Dummy: Treated	0.02	-0.01	0.04	0.03	0.03	0.04
	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Observations	4723	4723	4723	4723	4723	4723
Microenterprises	1108	1108	1108	1108	1108	1108
C. Dependent variable: log(revenue/hours worked)						
Dummy: Treated	0.04	-0.00	0.00	0.03	0.04	0.04
	(0.03)	(0.03)	(0.03)	(0.02)	(0.02)	(0.03)
Log(Capital/labour)	0.08***	0.04***	0.04***	0.05***	0.06***	0.09***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Log(Materials/labour)	0.64***	0.82***	0.79***	0.78***	0.74***	0.64***
	(0.02)	(0.02)	(0.02)	(0.01)	(0.01)	(0.01)
Log labour	-0.05*	0.01	-0.02	-0.02	-0.03*	-0.09***
	(0.02)	(0.03)	(0.02)	(0.02)	(0.02)	(0.03)
Observations	4723	4723	4723	4723	4723	4723
Microenterprises	1108	1108	1108	1108	1108	1108

Note: This table reports the effect of treatment on TFP assuming that capital depreciates at 25% per year, instead of at 0% as in the baseline data. The regression pools microenterprises in Ghana and Sri Lanka. In Panel A, TFP is estimated using the Blundell and Bond (1998) System GMM estimator. In Panel B, TFP is estimated using the **?** control function estimator. In panel C, the dependent variable is the standard measure of labor productivity. All regressions include wave-times-survey and industry-times-country fixed effects.

Table A.16: **TFP effects: Sri Lanka**

	(1) OLS	(2) Quantile (0.2)	(3) Quantile (0.4)	(4) Quantile (0.5)	(5) Quantile (0.6)	(6) Quantile (0.8)
A. Dependent variable: log(TFP) estimated using Blundell-Bond estimator						
Dummy: Treated	0.07	0.02	0.11*	0.11*	0.12**	0.08*
	(0.05)	(0.07)	(0.06)	(0.06)	(0.06)	(0.05)
Observations	3036	3036	3036	3036	3036	3036
Microenterprises	385	385	385	385	385	385
B. Dependent variable: log(TFP) estimated using Ghandi-Navarro-Rivers estimator						
Dummy: Treated	0.00	-0.03	0.03	0.02	0.02	0.02
	(0.04)	(0.06)	(0.05)	(0.05)	(0.04)	(0.04)
Observations	3036	3036	3036	3036	3036	3036
Microenterprises	385	385	385	385	385	385
C. Dependent variable: log(revenue/hours worked)						
Dummy: Treated	0.04	-0.01	0.03	0.05	0.05	0.02
	(0.04)	(0.05)	(0.03)	(0.03)	(0.04)	(0.04)
Log(Capital/labour)	0.09***	-0.00	0.01	0.04**	0.08***	0.12***
	(0.02)	(0.03)	(0.02)	(0.02)	(0.02)	(0.02)
Log(Materials/labour)	0.61***	0.83***	0.80***	0.75***	0.70***	0.62***
	(0.02)	(0.03)	(0.02)	(0.02)	(0.03)	(0.02)
Log labour	-0.07**	-0.01	-0.05**	-0.06**	-0.08***	-0.11***
	(0.03)	(0.04)	(0.03)	(0.03)	(0.03)	(0.03)
Observations	3036	3036	3036	3036	3036	3036
Microenterprises	385	385	385	385	385	385

Note: This table reports the effect of treatment on TFP at different moments of the distribution, for microenterprises in Sri Lanka only. In Panel A, TFP is estimated using the Blundell and Bond (1998) System GMM estimator. In Panel B, TFP is estimated using the **?** estimator. In panel C, the dependent variable is the standard measure of labor productivity. All regressions include wave and industry fixed effects.

Table A.17: **TFP effects: Ghana**

	(1) OLS	(2) Quantile (0.2)	(3) Quantile (0.4)	(4) Quantile (0.5)	(5) Quantile (0.6)	(6) Quantile (0.8)
A. Dependent variable: log(TFP) estimated using Blundell-Bond estimator						
Dummy: Treated	0.05	0.02	0.05	0.04	0.05	0.09
	(0.04)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
Observations	3142	3142	3142	3142	3142	3142
Microenterprises	753	753	753	753	753	753
B. Dependent variable: log(TFP) estimated using Ghandi-Navarro-Rivers estimator						
Dummy: Treated	0.05	0.03	0.04	0.04	0.06	0.09
	(0.04)	(0.05)	(0.05)	(0.05)	(0.05)	(0.06)
Observations	3142	3142	3142	3142	3142	3142
Microenterprises	753	753	753	753	753	753
C. Dependent variable: log(revenue/hours worked)						
Dummy: Treated	0.03	0.00	0.01	0.03	0.03	0.06
	(0.04)	(0.05)	(0.03)	(0.03)	(0.03)	(0.05)
Log(Capital/labour)	0.10***	0.03	0.05***	0.05***	0.06***	0.09***
	(0.02)	(0.02)	(0.01)	(0.01)	(0.01)	(0.02)
Log(Materials/labour)	0.62***	0.75***	0.79***	0.78***	0.75***	0.64***
	(0.02)	(0.03)	(0.02)	(0.02)	(0.02)	(0.02)
Log labour	-0.10***	-0.09*	-0.04	-0.06**	-0.08***	-0.13***
	(0.03)	(0.05)	(0.03)	(0.03)	(0.02)	(0.03)
Observations	3142	3142	3142	3142	3142	3142
Microenterprises	753	753	753	753	753	753

Note: This table reports the effect of treatment on TFP at different moments of the distribution, for microenterprises in Ghana only. In Panel A, TFP is estimated using the Blundell and Bond (1998) System GMM estimator. In Panel B, TFP is estimated using the **?** estimator. In panel C, the dependent variable is the standard measure of labor productivity. All regressions include wave and industry fixed effects.

Table A.18: **TFP effects: Separate by gender (Sri Lanka)**

	(1) OLS	(2) Quantile (0.2)	(3) Quantile (0.4)	(4) Quantile (0.5)	(5) Quantile (0.6)	(6) Quantile (0.8)
A. Dependent variable: log(TFP) estimated using Blundell-Bond estimator						
Dummy: Male × Treated	0.10*	0.08	0.12	0.13*	0.11*	0.07
	(0.06)	(0.08)	(0.08)	(0.07)	(0.06)	(0.06)
Dummy: Female × Treated	0.04	-0.04	0.05	0.05	0.09	0.06
	(0.07)	(0.10)	(0.09)	(0.08)	(0.10)	(0.06)
Female	-0.23***	-0.19**	-0.24***	-0.24***	-0.25***	-0.26***
	(0.06)	(0.08)	(0.08)	(0.08)	(0.07)	(0.06)
Observations	3036	3036	3036	3036	3036	3036
Microenterprises	385	385	385	385	385	385
B. Dependent variable: log(TFP) estimated using Ghandi-Navarro-Rivers estimator						
Dummy: Male × Treated	0.02	-0.04	0.02	0.05	0.01	0.05
	(0.05)	(0.08)	(0.06)	(0.05)	(0.05)	(0.05)
Dummy: Female × Treated	-0.02	-0.06	-0.00	0.01	0.01	-0.00
	(0.06)	(0.08)	(0.08)	(0.07)	(0.07)	(0.06)
Female	-0.08	-0.04	-0.11*	-0.10	-0.09*	-0.08
	(0.05)	(0.08)	(0.06)	(0.06)	(0.06)	(0.06)
Observations	3036	3036	3036	3036	3036	3036
Microenterprises	385	385	385	385	385	385
C. Dependent variable: log(revenue/hours worked)						
Dummy: Male × Treated	0.05	0.03	0.04	0.04	0.08*	0.00
	(0.05)	(0.07)	(0.04)	(0.05)	(0.05)	(0.05)
Dummy: Female × Treated	0.03	-0.03	0.02	0.05	0.04	-0.02
	(0.05)	(0.07)	(0.04)	(0.04)	(0.04)	(0.05)
Female	-0.12**	-0.04	-0.09**	-0.12***	-0.11**	-0.17***
	(0.05)	(0.06)	(0.04)	(0.04)	(0.05)	(0.06)
Log(Capital/labour)	0.08***	-0.01	0.00	0.03	0.06***	0.10***
	(0.02)	(0.03)	(0.02)	(0.02)	(0.02)	(0.02)
Log(Materials/labour)	0.61***	0.83***	0.80***	0.75***	0.70***	0.61***
	(0.02)	(0.03)	(0.02)	(0.02)	(0.02)	(0.02)
Log labour	-0.09***	-0.04	-0.06**	-0.07***	-0.09***	-0.13***
	(0.03)	(0.05)	(0.03)	(0.03)	(0.03)	(0.03)
Observations	3036	3036	3036	3036	3036	3036
Microenterprises	385	385	385	385	385	385

Note: This table reports heterogeneous effects by gender of treatment on TFP at different moments of the distribution, for microenterprises in Ghana only. In Panel A, TFP is estimated using the Blundell and Bond (1998) System GMM estimator. In Panel B, TFP is estimated using the **?** estimator. In panel C, the dependent variable is the standard measure of labor productivity. All regressions include wave and industry fixed effects.

Table A.19: **TFP effects: Separate by gender (Ghana)**

	(1) OLS	(2) Quantile (0.2)	(3) Quantile (0.4)	(4) Quantile (0.5)	(5) Quantile (0.6)	(6) Quantile (0.8)
A. Dependent variable: log(TFP) estimated using Blundell-Bond estimator						
Dummy: Male × Treated	0.00	-0.05	-0.02	0.01	0.01	0.01
	(0.06)	(0.07)	(0.07)	(0.08)	(0.07)	(0.08)
Dummy: Female × Treated	0.07	0.05	0.08	0.05	0.08	0.15**
	(0.05)	(0.06)	(0.07)	(0.07)	(0.07)	(0.06)
Female	-0.13*	-0.12	-0.19**	-0.14	-0.12	-0.18**
	(0.07)	(0.09)	(0.09)	(0.08)	(0.08)	(0.09)
Observations	3142	3142	3142	3142	3142	3142
Microenterprises	753	753	753	753	753	753
B. Dependent variable: log(TFP) estimated using Ghandi-Navarro-Rivers estimator						
Dummy: Male × Treated	0.00	-0.04	-0.02	0.01	0.00	0.01
	(0.06)	(0.08)	(0.07)	(0.08)	(0.07)	(0.08)
Dummy: Female × Treated	0.07	0.06	0.07	0.05	0.09	0.15**
	(0.05)	(0.06)	(0.06)	(0.07)	(0.07)	(0.07)
Female	-0.13*	-0.12	-0.18**	-0.14	-0.12	-0.18**
	(0.07)	(0.09)	(0.09)	(0.09)	(0.08)	(0.09)
Observations	3142	3142	3142	3142	3142	3142
Microenterprises	753	753	753	753	753	753
C. Dependent variable: log(revenue/hours worked)						
Dummy: Male × Treated	-0.00	-0.04	0.00	-0.02	-0.02	0.01
	(0.06)	(0.08)	(0.05)	(0.04)	(0.05)	(0.08)
Dummy: Female × Treated	0.05	0.03	0.03	0.03	0.06	0.10**
	(0.05)	(0.07)	(0.04)	(0.04)	(0.04)	(0.05)
Female	-0.16**	-0.12*	-0.12***	-0.13***	-0.16***	-0.20***
	(0.06)	(0.06)	(0.04)	(0.04)	(0.04)	(0.06)
Log(Capital/labour)	0.09***	0.03	0.04***	0.05***	0.05***	0.08***
	(0.02)	(0.02)	(0.01)	(0.01)	(0.01)	(0.02)
Log(Materials/labour)	0.62***	0.76***	0.79***	0.78***	0.75***	0.66***
	(0.02)	(0.03)	(0.02)	(0.02)	(0.02)	(0.02)
Log labour	-0.12***	-0.09*	-0.05*	-0.07***	-0.09***	-0.15***
	(0.03)	(0.05)	(0.03)	(0.02)	(0.03)	(0.03)
Observations	3142	3142	3142	3142	3142	3142
Microenterprises	753	753	753	753	753	753

Note: This table reports heterogeneous effects by gender of treatment on TFP at different moments of the distribution, for microenterprises in Ghana only. In Panel A, TFP is estimated using the Blundell and Bond (1998) System GMM estimator. In Panel B, TFP is estimated using the **?** estimator. In panel C, the dependent variable is the standard measure of labor productivity. All regressions include wave and industry fixed effects.

Table A.20: **TFP effects: Separate by treatment (Sri Lanka)**

	(1) OLS	(2) Quantile (0.2)	(3) Quantile (0.4)	(4) Quantile (0.5)	(5) Quantile (0.6)	(6) Quantile (0.8)
A. Dependent variable: log(TFP) estimated using Blundell-Bond estimator						
Dummy: Cash treatment	0.12*	0.05	0.15**	0.18**	0.16**	0.14**
	(0.06)	(0.08)	(0.07)	(0.08)	(0.07)	(0.06)
Dummy: Equipment treatment	0.04	-0.04	0.07	0.07	0.07	0.04
	(0.06)	(0.10)	(0.07)	(0.07)	(0.07)	(0.05)
Observations	3036	3036	3036	3036	3036	3036
Microenterprises	385	385	385	385	385	385
B. Dependent variable: log(TFP) estimated using Ghandi-Navarro-Rivers estimator						
Dummy: Cash treatment	0.03	-0.02	0.04	0.07	0.05	0.07
	(0.05)	(0.06)	(0.07)	(0.06)	(0.05)	(0.05)
Dummy: Equipment treatment	-0.02	-0.08	0.00	-0.01	-0.03	-0.01
	(0.05)	(0.08)	(0.06)	(0.05)	(0.05)	(0.05)
Observations	3036	3036	3036	3036	3036	3036
Microenterprises	385	385	385	385	385	385
C. Dependent variable: log(revenue/hours worked)						
Dummy: Cash treatment	0.06	-0.01	0.06	0.08*	0.08*	0.06
	(0.05)	(0.08)	(0.04)	(0.04)	(0.04)	(0.04)
Dummy: Equipment treatment	0.02	-0.00	0.01	0.03	0.02	-0.00
	(0.05)	(0.06)	(0.04)	(0.04)	(0.04)	(0.04)
Log(Capital/labour)	0.09***	-0.00	0.01	0.04**	0.08***	0.12***
	(0.02)	(0.03)	(0.02)	(0.02)	(0.02)	(0.02)
Log(Materials/labour)	0.61***	0.83***	0.80***	0.75***	0.70***	0.62***
	(0.02)	(0.03)	(0.03)	(0.02)	(0.03)	(0.02)
Log labour	-0.07**	-0.01	-0.05**	-0.06**	-0.08***	-0.12***
	(0.03)	(0.05)	(0.03)	(0.03)	(0.03)	(0.03)
Observations	3036	3036	3036	3036	3036	3036
Microenterprises	385	385	385	385	385	385

Note: This table reports heterogeneous effects by treatment arm on TFP at different moments of the distribution, for microenterprises in Sri Lanka only. In Panel A, TFP is estimated using the Blundell and Bond (1998) System GMM estimator. In Panel B, TFP is estimated using the **?** estimator. In panel C, the dependent variable is the standard measure of labor productivity. All regressions include wave and industry fixed effects.

Table A.21: **TFP effects: Separate by treatment (Ghana)**

	(1) OLS	(2) Quantile (0.2)	(3) Quantile (0.4)	(4) Quantile (0.5)	(5) Quantile (0.6)	(6) Quantile (0.8)
A. Dependent variable: log(TFP) estimated using Blundell-Bond estimator						
Dummy: Cash treatment	0.01	0.00	-0.01	-0.02	-0.03	0.10
	(0.05)	(0.06)	(0.06)	(0.06)	(0.07)	(0.07)
Dummy: Equipment treatment	0.08	0.04	0.08	0.12	0.13**	0.08
	(0.05)	(0.06)	(0.07)	(0.07)	(0.06)	(0.06)
Observations	3142	3142	3142	3142	3142	3142
Microenterprises	753	753	753	753	753	753
B. Dependent variable: log(TFP) estimated using Ghandi-Navarro-Rivers estimator						
Dummy: Cash treatment	0.01	0.01	-0.00	-0.02	-0.02	0.10
	(0.05)	(0.06)	(0.06)	(0.06)	(0.07)	(0.08)
Dummy: Equipment treatment	0.09	0.04	0.09	0.12	0.13**	0.09
	(0.05)	(0.06)	(0.07)	(0.07)	(0.06)	(0.06)
Observations	3142	3142	3142	3142	3142	3142
Microenterprises	753	753	753	753	753	753
C. Dependent variable: log(revenue/hours worked)						
Dummy: Cash treatment	-0.01	-0.06	-0.04	-0.02	-0.01	0.05
	(0.05)	(0.08)	(0.04)	(0.04)	(0.04)	(0.06)
Dummy: Equipment treatment	0.07	0.05	0.04	0.06*	0.06	0.09*
	(0.05)	(0.06)	(0.05)	(0.04)	(0.04)	(0.05)
Log(Capital/labour)	0.10***	0.04*	0.05***	0.05***	0.06***	0.09***
	(0.02)	(0.02)	(0.01)	(0.01)	(0.01)	(0.02)
Log(Materials/labour)	0.62***	0.75***	0.79***	0.78***	0.76***	0.64***
	(0.02)	(0.03)	(0.02)	(0.02)	(0.02)	(0.02)
Log labour	-0.10***	-0.08	-0.05	-0.06**	-0.08***	-0.13***
	(0.03)	(0.05)	(0.03)	(0.03)	(0.02)	(0.03)
Observations	3142	3142	3142	3142	3142	3142
Microenterprises	753	753	753	753	753	753

Note: This table reports heterogeneous effects by treatment arm on TFP at different moments of the distribution, for microenterprises in Ghana only. In Panel A, TFP is estimated using the Blundell and Bond (1998) System GMM estimator. In Panel B, TFP is estimated using the **?** estimator. In panel C, the dependent variable is the standard measure of labor productivity. All regressions include wave and industry fixed effects.

Table A.22: **TFP effects: Lee (2009) Bounds on non-response and attrition (Sri Lanka and Ghana - pooled)**

	Bounds: Missing data		Bounds: Missing + Attrition	
	Lower	Upper	Lower	Upper
A. Raw productivity differences				
log(TFP) estimated using Blundell-Bond	0.05*	0.11***	0.04*	0.11***
	(0.03)	(0.03)	(0.03)	(0.03)
log(TFP) estimated using Gandhi-Navarro-Rivers	0.00	0.07***	0.00	0.07***
	(0.03)	(0.03)	(0.03)	(0.03)
log(revenue/hours worked)	0.51***	0.68***	0.51***	0.68***
	(0.07)	(0.07)	(0.07)	(0.07)
Non-missing observations	4,777	4,777	4,777	4,777
Total observations	5,673	5,673	5,708	5,708
B. Productivity with controls from Table 2 partialled out				
log(TFP) estimated using Blundell-Bond	0.03	0.09***	0.03	0.09***
	(0.02)	(0.03)	(0.02)	(0.03)
log(TFP) estimated using Gandhi-Navarro-Rivers	-0.00	0.06**	-0.00	0.06**
	(0.02)	(0.03)	(0.02)	(0.02)
log(revenue/hours worked)	-0.00	0.07***	-0.00	0.07***
	(0.02)	(0.02)	(0.02)	(0.02)
Non-missing observations	4,777	4,777	4,777	4,777
Total observations	5,673	5,673	5,708	5,708

Note: This estimates Lee (2009) bounds for the treatment effect on TFP. Panel A bounds raw TFP differences between treatment and control groups in the post-treatment periods used previously for analysis. Panel B bounds residual TFP differences, with control variables as specified in Table 2 partialled out. The large differences for log(revenue/hours worked) are explained by the fact that Panel B controls for other production factors (capital and materials intensity of production) whereas Panel A does not. *, ** and *** denote significance at the 10, 5 and 1 per cent levels.

Table A.23: **Effects of grants on capital: intensive and extensive margin by category (Sri Lanka)**

	(1) Total	(2) Tools	(3) Machinery	(4) Furniture	(5) Vehicles	(6) Other
A. Total value of assets						
Dummy: Treated	3594.79***	657.41**	100.32	-64.15	526.10**	2107.95***
	(961.61)	(321.47)	(565.24)	(107.61)	(224.37)	(568.90)
Control mean	15,555	2,538	7,197	1,809	584	3,179
Observations	3,341	3,341	3,333	3,358	3,345	3,345
Microenterprises	385	385	385	385	385	385
B. Total value of higher-technology assets						
Dummy: Treated	2814.05***	182.50	244.97	0.00	426.08**	2026.89***
	(892.88)	(219.12)	(512.25)	(.)	(211.49)	(560.07)
Control mean	10,838	433	6,864	0	273	2,920
Observations	3,341	3,341	3,333	3,358	3,345	3,345
Microenterprises	385	385	385	385	385	385
C. Ownership of higher-technology assets						
Dummy: Treated	0.08***	0.03	0.01	0.00	0.03**	0.09***
	(0.03)	(0.02)	(0.02)	(.)	(0.01)	(0.02)
Control Mean	0.61	0.13	0.33	0	0.02	0.25
Observations	3,358	3,358	3,358	3,358	3,358	3,358
Microenterprises	385	385	385	385	385	385

Note: This table provides an additional breakdown of the effect of capital grants on microenterprise capital in Sri Lanka. Categories of assets are as defined in DMW's questionnaire. Technology component of assets is coded according to our specifications in the text. No item within the furniture category is coded as higher-technology. Asset ownership is a dummy whether any item within a category is owned by the microenterprise. All regressions include baseline values of the dependent variable and control for wave dummies. *, ** and *** denote significance at the 10, 5 and 1 per cent levels.

Table A.24: **Long-term effects of grants on different categories of capital: (Sri Lanka)**

	(1) Machines, tools & furniture	(2) Vehicles & other durables	(3) Low-tech capital	(4) High-tech capital
Dummy: Treated × Year 1	911.48	2724.53***	518.52	3152.31***
	(647.42)	(656.59)	(315.93)	(874.13)
Dummy: Treated × Year 2	376.51	2509.45***	705.97*	2588.89**
	(1012.61)	(695.56)	(416.44)	(1111.41)
Dummy: Treated × Year 3	-50.22	2408.94***	862.84	2300.13*
	(1203.57)	(834.26)	(548.47)	(1339.14)
Control mean: baseline	9,239	3,191	3,941	8,683
Control mean: 3 years	14,398	6,631	6,929	14,646
Observations	4,172	4,191	4,186	4,186
Microenterprises	385	385	385	385
p-value: Year 1 = Year 2	0.38	0.52	0.33	0.39
p-value: Year 1 = Year 3	0.30	0.64	0.38	0.44

Note:

Table A.25: **Categorisation of individual asset items**

Low technology	**Higher technology component**

Note: The column-wise categorisation of asset items into 'low technology' and 'higher technology' component was done by the authors. The categorisation of asset items into different functional categories (the row-blocks, e.g. 'Tools', 'Machinery', 'Other durables') corresponds to different sections on the survey questionnaire asset module and was undertaken by enumerators and/or respondents in the field. We take that latter categorisation at face value and assume it corresponds to a distinction by functional categories of items.

Low technology	**Higher technology component**
Tools	
Water Production related items	Industrial equipment
Carpentry tools	Electronic Scales
Fabric painting tools	Welding equipment
Cosmetics	Steamer
Cake making tools	Air Pump
Types of Keys	Computer
Staves	Bower fan
Tool set	Iron
Scale Weights	Hydrometer
String hop	Battery Charger
Fisheries related products	Battery Testers
Motor spare parts	Multi meter
Tires & Tubes	Iron
Basin	Curtain cutting machine
Plastic Items	Calculator
Household equipment	Coir industry related machinery
Bucket	Gold Furnance
Firestone	Rippon meter
Bottle	Video camera
Hanger	Highvoltage meter
Brass	
Iron rod	
Other business equipment	
Aluminum equipment	
Bicycle spare parts	
Bacale rim rapire tools	
Pencil, Glue & Rulers	
Sewing equipment	
Leather Products	
Toddy Production equpment	

Table A.25: **Categorisation of individual asset items**

Low technology	Higher technology component
Service Diagram	
Tools required for packing	
Materials required for fishing	
Buildings related tools	
Spare parts required for telephone repairs	
Drink crate	
Oil containers	
Musical Equipment	
Sports Equipment	
Blackboard	
Coil waring tools	
Equipment used to manufacture books	
Toys	
Machinery	
Spoke cutter	Router Machine
String hopper mould	Sander
Spanner	Drill
Rubber wheel	Welding drill
Hand drill	Compressor
Watch repair kits	IC Paint Machine
Polish sealer	Heater
Hitskit	Season machine
Bacal rim tools	Water pump
Curtain for machine	Building block machine
Nescafe filter	Oxygen Plant
	Air conditioner
	Sawing machine
	Carpentry machine
	Air machine
	Hair cutter
	Hair dryer
	Gickshaw
	Hair Iron
	Machine motor
	Key cutting machine
	Button hole machine
	Aluminum cutting machine
	Timber lathe machine
	Scanner machine
	Polisher cutting machine

Table A.25: **Categorisation of individual asset items**

Low technology	Higher technology component
	Vulcanizing
	Washing machine
	Letter cover machine
	Coir spinning wheel
	Spray gun
	Steel cutter
	Bottling machine
	Labeling machine
	Grinder
	Pop rivet gun
	Toaster
	Vehicle Service machine
	Tire removing machine
	Display checker
	Gem cutting machine
	Coir spinner
	Paper cutting machine
	Glass cutter
	Cashew peeler
	Gold Pressing machine
	Digital printer
	Cain Cleaner
	Batik printer
	Electric Cutter (Clothes)
	The machine for shapes the eyebrows
Furniture	
Table	
Shelves	
Cupboard	
Types of chairs	
Wooden Boxes	
Frames	
Wooden Door	
Plywood	
Picces of wood	
Wooden Cabinets	
Dressing table	
Vehicles	
Bicycle	Catamaran/Boat

Table A.25: **Categorisation of individual asset items**

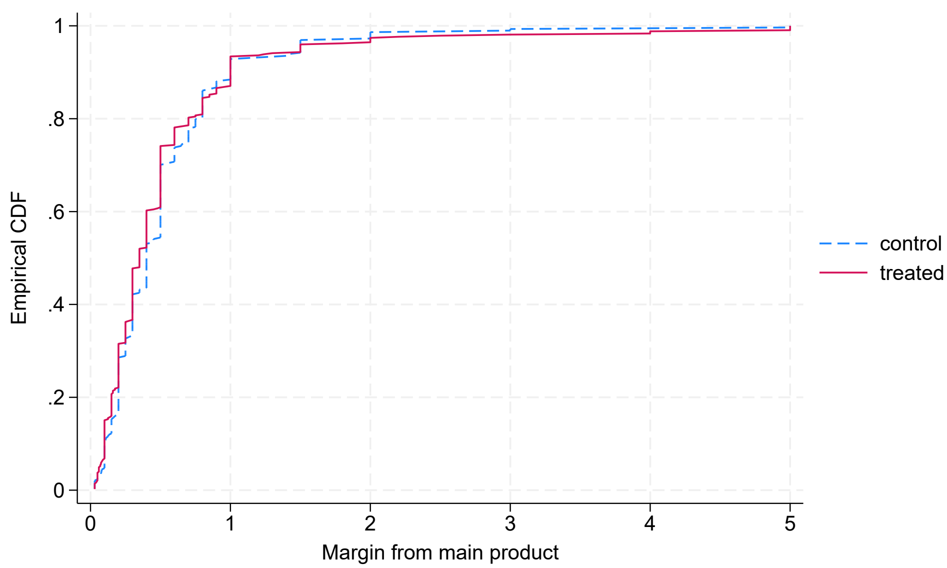
Low technology	Higher technology component
Bullock Cart	Motor Bike
Wheelbarrow	Lorry
	Tree wheeler
	Van
Other durables	
Clock	Refrigerator
Wedding reception equipment	Oven
Almera	Gas Cooker
Iron tools	Rice Cooker
Petrol max	Showcase
Bell	Blender
Plastic Chairs	Fan
Rig foam boxes	Roll Cage
Gas cylinder	Steamer iron board
Pipe rings	Beater
Tent material	Lathe work
Rotti stone	Phones
Boxer wheel	Lightmeter
Plastic racks	Furnance
Fiber related other assets	Radio
Nameboards	
Workers	
Eylashes	
Barrels	
Cement tank	
Flower pot comoflauge nets	
Oxygen Cylinders	
Roofing sheets	
Fishing hooks	

Table A.26: **TFP Effects: Separate by location of the business (Sri Lanka)**

	(1) OLS	(2) Quantile (0.2)	(3) Quantile (0.4)	(4) Quantile (0.5)	(5) Quantile (0.6)	(6) Quantile (0.8)
A. Dependent variable: log(TFP) estimated using Blundell-Bond estimator						
Treated × business at home	0.08	0.05	0.10	0.11	0.12*	0.06
	(0.06)	(0.08)	(0.07)	(0.07)	(0.07)	(0.06)
Treated × business in other location	0.08	-0.04	0.11	0.15*	0.10	0.13*
	(0.07)	(0.13)	(0.10)	(0.09)	(0.08)	(0.07)
Business at home	-0.15**	-0.13	-0.12	-0.12	-0.17*	-0.13*
	(0.07)	(0.09)	(0.09)	(0.09)	(0.09)	(0.07)
Observations	3036	3036	3036	3036	3036	3036
Microenterprises	385	385	385	385	385	385
Treatments equal (p)	0.98	0.55	0.91	0.71	0.85	0.45
Treatments zero (p)	0.25	0.78	0.21	0.10	0.10	0.12
B. Dependent variable: log(TFP) estimated using Ghandi-Navarro-Rivers estimator						
Treated × business at home	-0.02	-0.01	0.00	0.01	0.00	-0.03
	(0.05)	(0.07)	(0.06)	(0.05)	(0.05)	(0.05)
Treated × business in other location	0.05	-0.09	0.03	0.05	0.05	0.16***
	(0.06)	(0.09)	(0.08)	(0.07)	(0.06)	(0.06)
Business at home	-0.04	-0.08	-0.03	-0.05	-0.04	-0.01
	(0.06)	(0.08)	(0.08)	(0.07)	(0.06)	(0.06)
Observations	3036	3036	3036	3036	3036	3036
Microenterprises	385	385	385	385	385	385
Treatments equal (p)	0.39	0.44	0.78	0.67	0.57	0.01
Treatments zero (p)	0.68	0.58	0.94	0.77	0.75	0.02
C. Dependent variable: log(revenue/hours worked)						
Treated × business at home	0.03	0.01	0.02	0.03	0.02	-0.01
	(0.04)	(0.07)	(0.04)	(0.04)	(0.04)	(0.05)
Treated × business in other location	0.06	-0.00	0.08*	0.09*	0.11**	0.06
	(0.06)	(0.08)	(0.05)	(0.05)	(0.05)	(0.06)
Business at home	-0.05	-0.08	-0.03	-0.06	-0.05	-0.10*
	(0.05)	(0.07)	(0.04)	(0.05)	(0.06)	(0.06)
Observations	3036	3036	3036	3036	3036	3036
Microenterprises	385	385	385	385	385	385
Treatments equal (p)	0.61	0.89	0.30	0.40	0.18	0.36
Treatments zero (p)	0.46	0.98	0.22	0.20	0.11	0.59

Note: This table reports heterogeneous treatment effects by location of the business on productivity at different moments of the distribution, for microenterprises in Sri Lanka only. In Panel A, TFP is estimated using the Blundell and Bond (1998) System GMM estimator. In Panel B, TFP is estimated using the **?** estimator. In panel C, the dependent variable is the standard measure of labor productivity, and we control for capital and materials per hour worked (not reported). All regressions include wave and industry fixed effects.

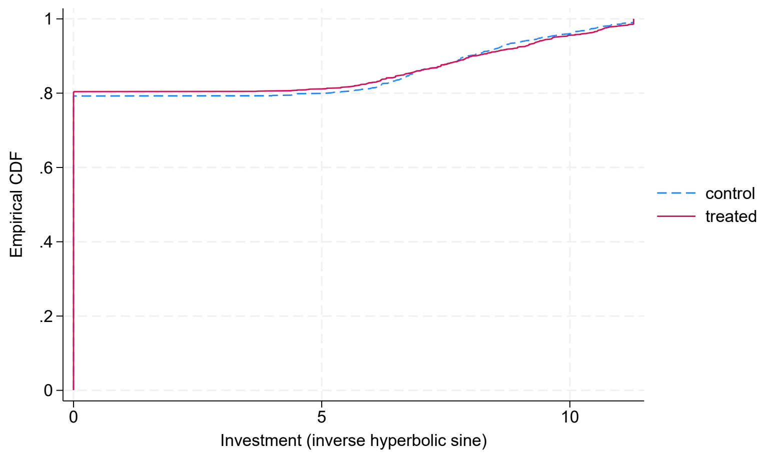
Figure A.1: **Effects on sales margins (Sri Lanka)**



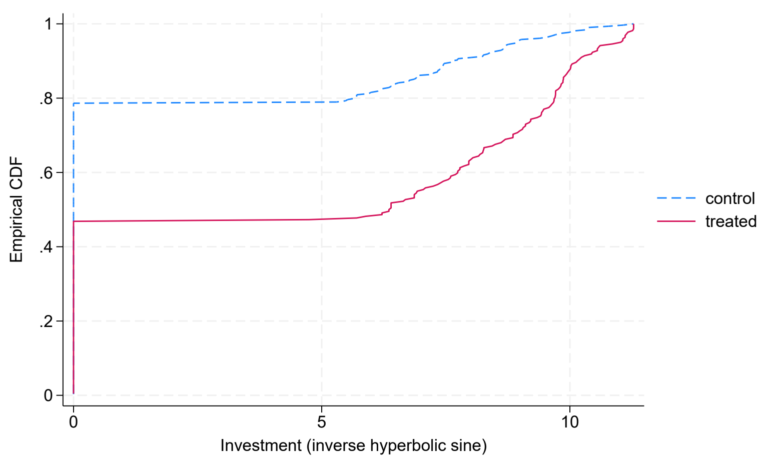
Note: CDFs of sales margins for the most important product, separate by treatment and control. Data from Sri Lanka, survey waves 7 and 8. Wilcoxon rank-sum test of equality of distribution p-values: 0.099.

Figure A.2: **Investments upon treatment and follow-up investments (Sri Lanka)**

(a) CDF of investment upon treatment

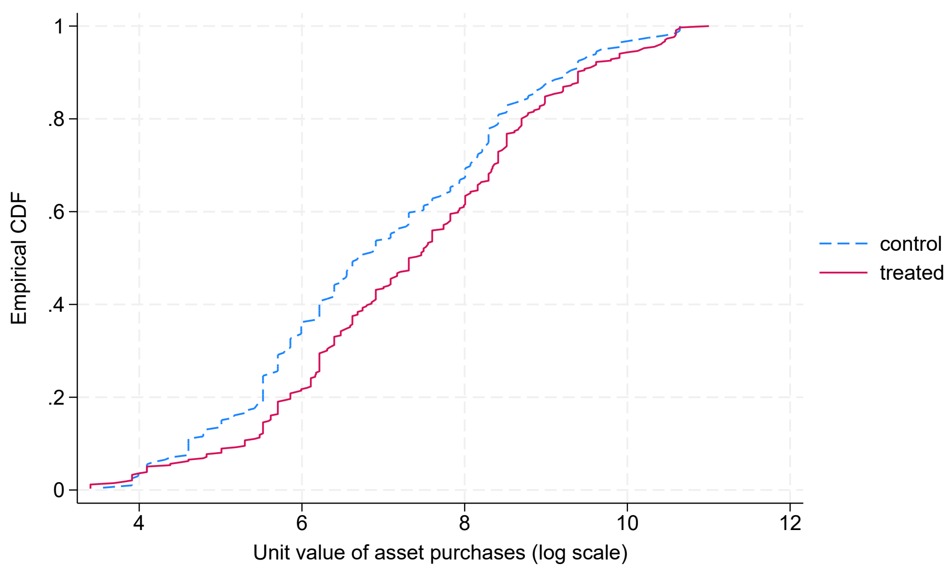


(b) CDF of follow-up investment



Note: Figure shows CDF of investment (after inverse hyperbolic sine transformation) in fixed capital for treated and control firms, in Sri Lanka. Top figure (a) shows investment in the waves immediately after the capital grants (waves 2 and 4). Bottom figure shows investment in subsequent waves (waves 3-9 for the early treatment group, and waves 5-9 for the late treatment group). Wilcoxon rank-sum test: $p < 0.001$ (top panel), $p = 0.58$ (bottom panel).

Figure A.3: **Unit value of new asset purchases (Sri Lanka)**



Note: CDFs unit value of new fixed assets microenterprises purchased by treated and untreated firms in Sri Lanka. Excludes initial asset stock listed in baseline survey. Wilcoxon rank-sum test of equality of distribution p-values = 0.0067.