Social Learning among Urban Manufacturing Firms: Energy-Efficient Motors in Bangladesh*

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ONLINE APPENDIX

A Implementation Details

A.1 Willingness-to-Pay Elicitation

As described in Section 3.3, we used the Becker-DeGroot-Marschak (BDM) procedure to elicit firms' willingness-to-pay (WTP) for a servo motor at baseline, midline, and endline. We chose the ascending auction format because our field tests suggested that respondents would find it easier to understand than the more traditional BDM approach, which asks them to state a maximum price on a continuous scale. Burchardi et al. (2021) compare the ascending auction format with the conventional alternative and find that they perform similarly.

To strengthen respondents' understanding of the procedure, we first conducted a practice BDM elicitation round with a small item (a pen). We also presented the respondent with two hypothetical examples of how the exercise might work. In the first example, a hypothetical respondent understates their true WTP and has cause for regret when the randomly drawn price is below the true WTP but above the stated WTP. In the second example, the hypothetical respondent overstates WTP, draws a price between the true and stated WTP, and regrets having to purchase the item at that price.

Before eliciting WTP for a servo motor, we showed the respondent a one-page brochure with an image of a servo motor and a brief description: "A servo motor is a modern type of motor, and it can replace a clutch motor on a stitching machine easily." We then stated

a very low price and asked the respondent if he or she would be willing to purchase the servo motor at that price; if the answer was yes, we raised the price in small increments until the respondent said no. We then presented the respondent with a bag, explained that it contained chits with random prices for the product, and asked him or her to pick a chit from the bag. The respondent was informed up front that the prices on the chits would range between BDT 0 and BDT 10,000.[32] If the price drawn from the bag was equal to or lower than the respondent's stated maximum price, the respondent received the servo motor at the price displayed on the chit, and we reduced the incentive payment by that price. If the respondent's maximum price was lower than the price on the chit, then he or she did not receive the servo motor and received the full 10,000 BDT incentive payment.

We embedded the randomization into the baseline BDM procedure by varying the distribution from which the BDM price was drawn across the treatment arms. We aimed to offer servo motors at a very low price to firms in the T2 arm. Hence we drew the T2 arm's BDM prices from a distribution with almost all prices at or very near zero. The control and T1 arm price was drawn from a distribution, with almost all prices near the maximum of the support of the distribution (10,000 BDT). As a result, the BDM price was almost always above the stated baseline WTP, and almost no control and T1 firm received the servo motor. The exact distributions of the prices on the chits used in the baseline WTP elicitation are as follows.

- T2: 50% at BDT 0; 49% at BDT 100; 1% at BDT 10,000.
- T1 and C: 1% at BDT 0; 19% at BDT 8,000; 20% at BDT 8.500; 20% at BDT 9,000; 20% at BDT 9,500; 20% at BDT 10,000.

At midline and endline, we no longer sought to give out servo motors at a low price. Consequently, we applied the distribution with almost all prices at or near the maximum (the second distribution above for all groups, T1, T2, and C.

A.2 Belief Elicitation

As described in Section 3.4, in all three survey waves (baseline, midline, endline) we asked managers to imagine a firm similar to theirs and state their beliefs about: (i) the number of units of electricity (in kWh) used in an average day with an eight-hour shift

[32] Burchardi et al. (2024) found that respondents make similar choices whether or not they are informed of the distributions from which prices are drawn.

and normal scheduled break by a typical sewing machine with a clutch motor, (ii) the number of units of electricity (in kWh) used in an average day with an eight-hour shift and normal scheduled break if that clutch motor were replaced by a servo motor, and (iii) the price paid per unit of electricity (BDT per kWh). In addition, at midline and endline we also elicited beliefs about the payback period of a servo motor.[33]

We implemented a cross-cutting randomization in which half of the sample in each treatment arm participated in an incentivized belief-elicitation exercise, and the other half did not. In the incentivized belief elicitation, participants received a reward based on how close their response was to the true answer. The reward was determined by the Quadratic Scoring Rule (QSR). The QSR rule is suitable for eliciting entire distributions (as we have done) and belongs to the class of scoring rules that induce subjects to report their true subjective beliefs (Schotter and Trevino, 2014). The QSR induces subjects to report their true subjective beliefs if (a) individuals are expected utility maximizers, and (b) they are risk-neutral (Schotter and Trevino, 2014). Harrison et al. (2017) show that the bias from risk-aversion is small in practice when eliciting beliefs about a full distribution, as we have done. The generic formula for the QSR is as follows. The range of answers is divided into n bins, where r_k is the probability assigned to bin k, and $\sum_{k=1}^{n} r_k = 1$. We define $I_k = 0/1$ indicator if bin is correct. The reward is determined by:

$$\begin{aligned} QSR(\vec{r}) &= \alpha - \beta\left[\sum_{k=1}^{n}(I_k - r_k)^2\right] \\ &= \alpha - \beta(1 - r_j)^2 - \beta\left(\sum_{k\neq j} r_k^2\right) \end{aligned}$$

where j is the correct bin. In our exercise, we divided the range of possible answers into 10 bins and set $\alpha = 500$, and $\beta = 250$. Figure 5 shows an example of the incentivized belief elicitation exercise on the tablet app.

To help the respondents understand the exercise, we conducted two practice rounds before moving to the main belief elicitation questions.[34] In the incentivized group, the practice questions also were incentivized, helping the respondents understand how they would be rewarded for participating in the main BE exercise.[35] We discuss whether there

[33] We asked the subject to "....imagine a firm similar to yours that paid 10,000 Tk for a servo motor. In how many months do you believe the cost savings from the servo motor would be able to pay for the investment?"

[34] The first practice round asked about the total number of wins by Bangladesh's national cricket team in its 396 international one-day cricket matches (as of July 2022). The second practice round asked about the percent of population with access to electricity in Bangladesh (as of 2022).

[35] We take averages of our T2 arm smart meter readings at endline to determine the correct answers to the BE questions and calculate the rewards due to the respondents. Incentivized BE respondents were informed

were differential effects on beliefs for the incentivized and non-incentived groups in Appendix C.2.

B Details on Randomization Inference

We follow Borusyak and Hull (2023) in constructing p-values using randomization inference for the coefficient on the "exposure" term. For regressions using the control function approach, under the null hypothesis of no spillover effect, the test statistic is the sample covariance between the simulated exposure variable and the implied residual obtained after estimating equation 1 without the realized exposure.[36] We simulate the treatment assignment 1000 times, calculate the corresponding exposure, and get a distribution for the test statistic. If the original value (from the realized exposure) of the test statistic is far in the tails of the simulated distribution, we reject the null. The p-value is the proportion of test statistic values that are larger (or smaller) than the value of the test statistic from the realized exposure.

C Additional Results

C.1 Adoption

C.1.1 IV Approach

Following the instrumental variable approach suggested by Borusyak and Hull (2023), we use re-centered exposure = $Exposure^d_{T2}$ - $\mathbb{E}[Exposure^d_{T2}]$, the difference between the observed exposure and expected exposure, as an instrument for $\mathbb{I}[Exposure^d_{T2}]$. In Appendix Table A.2, we present the IV results corresponding to Table 3. In panel A, columns 1 (including T2) and 4 (excluding T2) show the first stage regression results, with large F-statistics (439.6 and 328.2). The corresponding reduced form results are in panel A in columns 2, 3 (including T2) and 5, 6 (excluding T2). In panel B, we show the IV results. Across columns, we find quantitatively similar coefficient estimates of treatment effects and exposure to T2 firms in a 500 m radius as in Table 3. The IV estimates for all

that their total reward from the main baseline, midline and endline BE rounds would be disbursed to them after the endline survey.

[36] For the IV regression specifications, under the null hypothesis, the test statistic is the sample covariance between the recentered instrument ($\mathbb{I}[Exposure^d_{T2}]$ - $\mathbb{E}[Exposure^d_{T2}]$, i.e. the difference between the observed exposure and expected exposure) and the implied residual obtained after estimating equation 1 without the realized exposure or expected exposure.

other outcome variables are also similar to those discussed in the main paper, using the control-function approach; we omit them for brevity.

C.1.2 Separating T1a & T1b

As discussed in Section 3.2.1, we randomly subdivided firms in T1 (information-only arm) into two subgroups. In the first subgroup (T1a), we only showed the informational video; in the second subgroup (T1b), we showed the video and installed an electrical meter on the stitching machine with a clutch motor. T1b firms also received monthly meter reading reports on electricity consumption of the metered clutch-motor machine. Note that unlike the electricity meter readings provided to T2 firms, those provided to T1b firms did not include comparisons between clutch and servo motors. To test whether a single electricity meter and monthly meter reading reports have an effect on adoption, we estimate equation 1, but instead of a single T1 indicator, we include separate indicators for firms in T1a and T1b.

The results for adoption are in Appendix Table A.3. Although we find that adoption was statistically significant for T1a firms (in columns 1, 2, 3, and 4) and statistically significant for T1b firms (in column 2), we fail to reject the null of a test of equivalence of the coefficients on T1a and T1b across the different columns. It appears that the single electricity meter given to T1b firms had no differential effect on adoption compared to T1a firms. For all other outcome variables discussed in the main paper, we do not find a statistically significant difference between T1a and T1b; we omit them for brevity.

C.1.3 Controlling Flexibly for Location Instead of Expected Exposure

The non-random location of firms may have resulted in some firms being systematically more likely to be exposed to a treated firm, for example, if they were located in a dense neighborhood. As discussed in Section 4, this could lead to omitted variable bias in estimating the effects of exposure to a treated firm. For our main results, we use the control function approach suggested in Borusyak and Hull (2023). When we focus on geographic spillovers, an alternative approach is to flexibly control for each firm's location coordinates (latitude and longitude). We do so by estimating equation 1, but instead of controlling for $\mathbb{E}[Exposure^{d}_{T2}]$, we control for a firm's latitude and longitude, as well as their quadratic terms. We present the results in Appendix Table A.4, where the outcome variable and the organization of the table are the same as Table 3. Generally the results are very similar to those in Table 3. We find statistically significant and quantitatively

similar effects on T1 and T2 firms in columns 1 and 2 as in Table 3. In columns 3 and 4, we again find similar effects as before, except that intensive adoption of servo motors is no longer statistically significant at conventional levels for T1 firms in column 4. In columns 1 through 4, exposure to T2 firms is statistically significant and has a magnitude similar to that in Table 3.

C.1.4 Heterogeneity in Treatment Effects and Spillovers on Adoption

In this section, we consider how treatment and spillover effects on adoption vary by characteristics of managers and their firms. We consider heterogeneity on a number of dimensions: manager experience in the industry (above/below median of 14 years), manager schooling (primary or lower vs. secondary or higher), manager's performance on a standard cognitive task (all 3 questions correct on a 3-question Raven's matrices test vs. 2 or fewer correct), the size of the firm as measured by the number of stitching machines (above/below median of 4 machines), and whether the firm had a servo motor at baseline. Appendix Table A.5 reports the results. We exclude T2 from the sample to focus on spillover effects and use the indicator for purchasing one or more servo motors as the dependent variable, as in column 3 of Table 3.

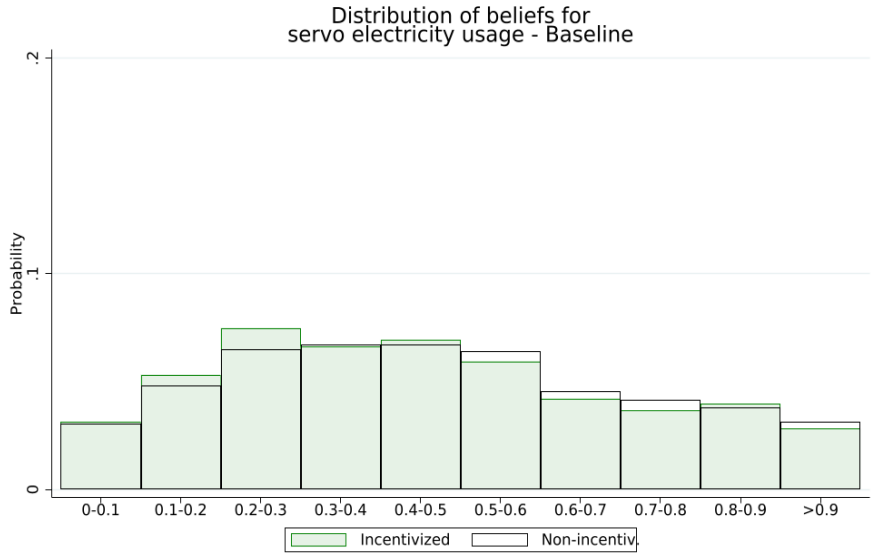
Although no clear overarching narrative emerges from these heterogeneity results, there are some interesting patterns. Less-experienced managers were more likely to be influenced by the T1 (video) treatment. More-experienced managers were more likely to be influenced by neighbors. There is suggestive evidence that managers with more schooling were more likely to learn from neighbors than those with less experience, although the difference is not significant at conventional levels. Individuals with lower scores on the Raven's test were more likely to be influenced by their neighbors than those with higher scores. Larger firms were a bit more likely to respond to T1 and local exposure than smaller firms. Firms with a servo motor at baseline were more likely to be affected by exposure than those with no servo motors.

C.2 Beliefs

As discussed in Section 3.4, half of the firms were randomly assigned to participate in incentivized belief elicitation. In Appendix Figure A.1, we show that the distributions of beliefs for servo motor electricity usage at baseline for the two groups (incentivized and non-incentivized) are very similar. In Appendix Table A.6, we check whether the in-

centivization procedure resulted in differential direct or indirect effects on beliefs. We estimate a regression where we interact an indicator variable for whether the firm was randomly allocated to participate in the incentivized belief elicitation process with the indicator variables T1, T2, and $Exposure^d_{T2}$, as well as $\mathbb{E}[Exposure^d_{T2}]$ in equation 1. We find no differential effects on beliefs across firms in T1 and T2. We conclude that the incentivized belief elicitation generated no meaningful differences in beliefs and that pooling the incentivized and non-incentivized groups, as we do in the main text, is not inappropriate.

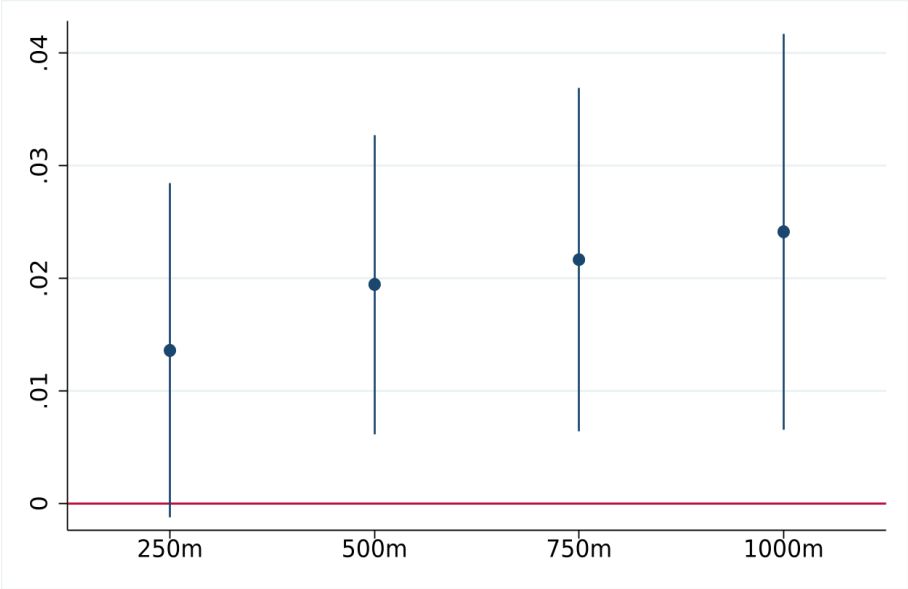
Figure A.1. Incentivized vs. Non-Incentivized Beliefs at Baseline



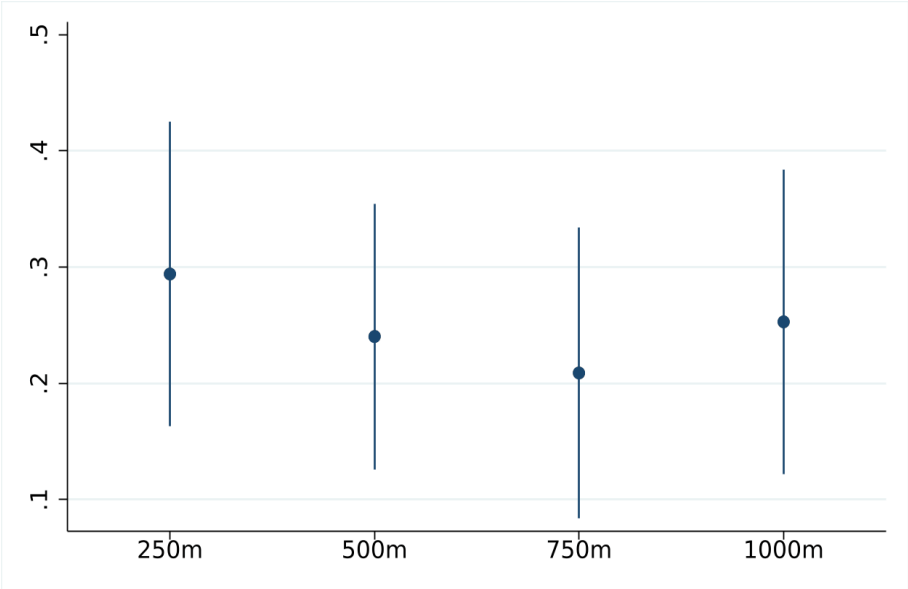
Notes: The figure plots the average of respondents' allocations in response to question about the electricity usage of servo motors. See Section 3.4 and Appendix C.2 for details.

Figure A.2. Spillovers in Information Flows, by Distance

A. Shown report by a T2 firm



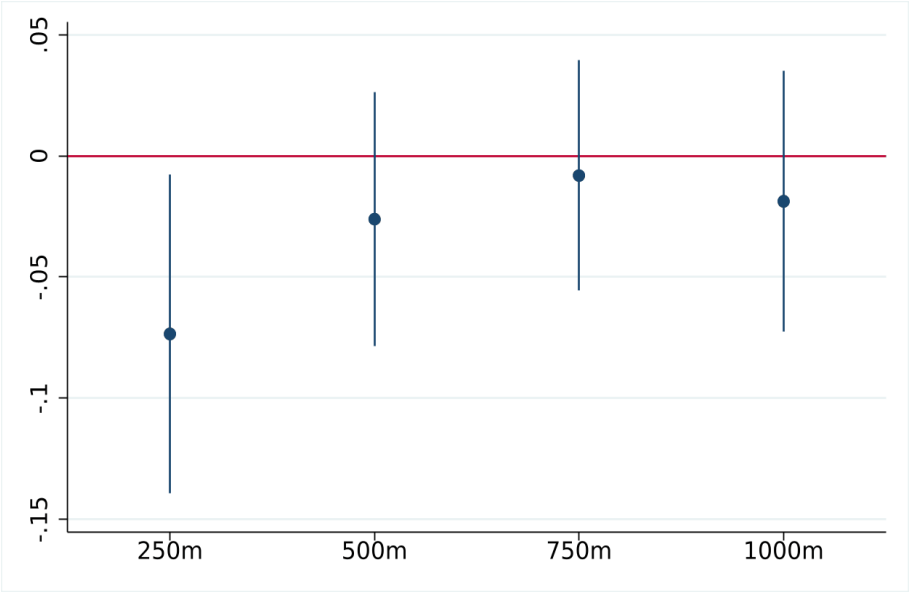
B. Discussed servomotors with a T2 firm



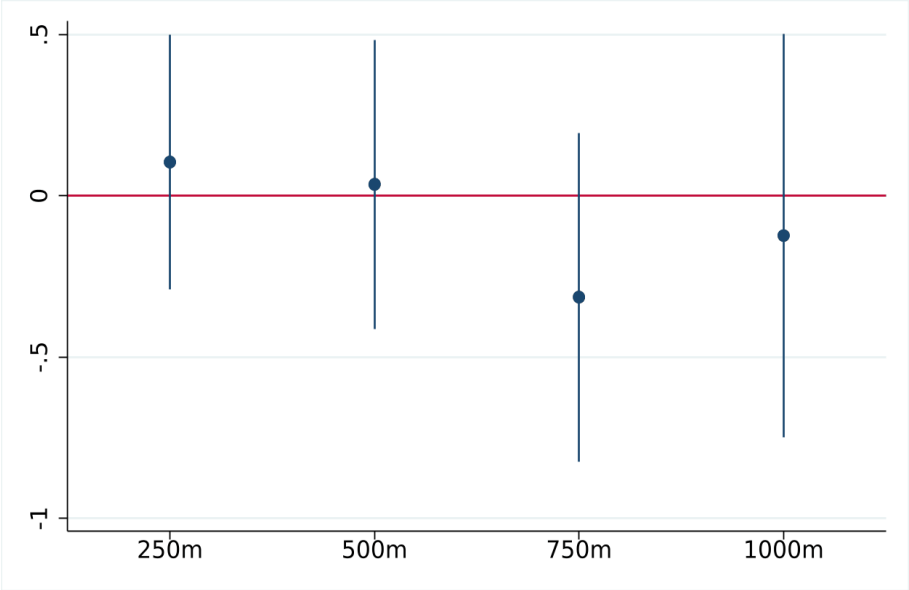
Notes: The figure plots the coefficient estimates and 90% confidence intervals on the exposure term from equation 1 in text, at various distances, excluding T2 firms (similar to columns 3 and 4 of Table 6). The dependent variable in the top panel is a 0/1 indicator for whether the firm reported having seen an electricity report from a T2 firm. The dependent variable in the bottom panel is a 0/1 indicator for whether the firm reported discussing servo motors with a T2 firm. The standard errors use the spatial correction from Conley (1999).

Figure A.3. Spillovers in Beliefs and Willingness-to-Pay, by Distance

A. Beliefs about servo electricity usage



B. Willingness-to-Pay



Notes: The figure plots the estimates and 90% confidence intervals on the exposure term from equation 1 in text, at various distances, excluding T2 firms (similar to column 3 and 4 of Tables 7). The dependent variable in the top panel is the mean of the distribution of beliefs about the electricity use of a servo motor. The dependent variable in the bottom panel is a firm's willingness-to-pay for a servo motor in levels (000s of BDT), elicited using the Becker, DeGroot and Marschak (1964, BDM) procedure. The standard errors use the spatial correction from Conley (1999).

Table A.1. Balance Table, Non-Attriters

	Control	T1	T2	P-value, C=T1	P-value, C=T2
	(1)	(2)	(3)	(4)	(5)
A. Number of Machines					
Num. machines (total)	5.89	6.22	6.78	(0.42)	(0.37)
Num. machines (non-motorized)	0.26	0.17	0.16	(0.20)	(0.13)
Num. machines (w/ ext. motor)	0.19	0.19	0.26	(0.97)	(0.49)
Num. machines (w/ clutch motor)	4.91	4.87	5.51	(0.96)	(0.57)
Num. machines (w/ servo motor)	0.64	0.85	0.83	(0.42)	(0.71)
Firm has Servo at Baseline (0/1)	0.14	0.20	0.15	(0.12)	(0.82)
B. Beliefs					
Beliefs, elec usage (kwh/day) for clutch motor	0.65	0.67	0.70	(0.56)	(0.15)
Beliefs, elec usage (kwh/day) for servo motor	0.47	0.46	0.47	(0.82)	(0.96)
BDM bid ('000 BDT)	3.05	3.09	3.18	(0.71)	(0.60)
Beliefs, price of electricity (BDT/kwh)	11.18	10.93	11.03	(0.26)	(0.47)
Knows servo can swap for clutch (0/1)	0.58	0.52	0.54	(0.30)	(0.36)
C. Firm Characteristics					
Num. employees (paid and unpaid)	10.52	10.64	12.37	(0.89)	(0.42)
Production costs, last month ('000,000 BDT)	0.47	0.40	0.52	(0.43)	(0.87)
Profits, last month ('000 BDT)	34.32	26.15	36.81	(0.44)	(0.95)
Sales, last month ('000,000 BDT)	0.53	0.42	0.56	(0.27)	(0.94)
Electricity costs, last month ('000 BDT)	5.77	4.75	5.15	(0.52)	(0.51)
Direct exports, as % of sales	1.91	1.45	1.69	(0.64)	(0.72)
Exporter, direct (0/1)	0.04	0.05	0.03	(0.67)	(0.30)
D. Respondent Characteristics					
Respondent is male (0/1)	0.96	0.98	0.96	(0.18)	(0.89)
Respondent's years of education	5.96	6.65*	6.64	(0.10)	(0.20)
Respondent's age	36.17	36.40	35.58	(0.88)	(0.45)
Respondent's experience	15.58	15.87	15.16	(0.75)	(0.49)
Number of Firms	159	166	148		

Notes: Table is similar to Table 2 but for 473 respondents in randomization sample that remained in the sample at endline. Information is from baseline survey.

Table A.2. Treatment & Local Spillover Effects on Adoption, Re-Centered IV

	Including T2			Excluding T2		
	Exposure (500 m)	Purchased 1+ servo motors	Purchased 2+ servo motors	Exposure (500 m)	Purchased 1+ servo motors	Purchased 2+ servo motors
	(1)	(2)	(3)	(4)	(5)	(6)
A: First Stage and Reduced Form						
T1	0.006	0.091	0.058	0.005	0.100	0.048
	(0.022)	(0.035)**	(0.018)***	(0.021)	(0.033)***	(0.018)***
	[0.023]	[0.042]**	[0.034]*	[0.023]	[0.042]**	[0.034]
T2	0.007	0.811	0.092			
	(0.018)	(0.079)***	(0.026)***			
	[0.022]	[0.032]***	[0.039]**			
Exposure (Recentered)	1.070	0.169	0.115	1.074	0.207	0.111
	(0.066)***	(0.048)***	(0.046)**	(0.080)***	(0.064)***	(0.052)**
	[0.051]***	[0.062]***	[0.062]*	[0.059]***	[0.078]***	[0.066]*
F-statistic	[439.608]			[328.199]		
B: IV						
T1		0.090	0.057		0.099	0.048
		(0.035)**	(0.018)***		(0.033)***	(0.018)***
		[0.041]**	[0.034]*		[0.041]**	[0.034]
T2		0.809	0.092			
		(0.079)***	(0.025)***			
		[0.032]***	[0.039]**			
Exposure (500m)		0.158	0.107		0.193	0.104
		(0.046)***	(0.045)**		(0.066)***	(0.051)**
		[0.058]***	[0.058]*		[0.072]***	[0.061]*
Observations	473	473	473	325	325	325
Upazila FE	Y	Y	Y	Y	Y	Y
Strata FE	Y	Y	Y	Y	Y	Y
Rand. Inf. p-value (Exposure)		[0.006]	[0.054]		[0.010]	[0.046]

Notes: Estimates are of equation 1 in text. Data are from endline survey. Exposure (500 m) is a 0/1 indicator for having one or more T2 firm within a walking distance of 500 m. Exposure (Recentered) is the difference between Exposure and Expected Exposure, the mean of Exposure from 1,000 counterfactual treatment assignment draws. Dependent variables are 0/1 indicators for having purchased or received (from us) 1+ or 2+ servo motors between baseline and endline. (Means of the dependent variables at baseline are zero and are omitted.) Panel A reports reports the first stage in columns 1 and 4 and reduced-form results in columns 2–3 and 5-6. Panel B reports the corresponding IV regressions. The standard errors in parentheses use the spatial correction from Conley (1999). The standard errors in square brackets are heteroskedasticity-robust (without the correction for spatial correlation). *p <0.10; **p <0.05; ***p <0.01. The randomization inference p-values for the coefficient on the realized exposure term are based on the test statistic recommended by Borusyak and Hull (2023) (the sample covariance of the difference between Exposure and Exp. Exposure).

Table A.3. Treatment & Local Spillover Effects on Adoption, Separating T1a & T1b

	Including T2		Excluding T2	
	Purchased 1+ servo motors (1)	Purchased 2+ servo motors (2)	Purchased 1+ servo motors (3)	Purchased 2+ servo motors (4)
T1a	0.117	0.064	0.125	0.060
	(0.040)***	(0.027)**	(0.038)***	(0.027)**
	[0.053]**	[0.042]	[0.054]**	[0.043]
T1b	0.059	0.049	0.068	0.033
	(0.044)	(0.023)**	(0.043)	(0.023)
	[0.050]	[0.040]	[0.049]	[0.039]
T2	0.810	0.091		
	(0.079)***	(0.025)***		
	[0.032]***	[0.039]**		
Exposure (500m)	0.158	0.106	0.193	0.103
	(0.050)***	(0.049)**	(0.072)***	(0.057)*
	[0.063]**	[0.062]*	[0.079]**	[0.067]
Exp. Exposure (500m)	-0.009	0.030	0.002	0.017
	(0.089)	(0.093)	(0.118)	(0.093)
	[0.099]	[0.090]	[0.135]	[0.102]
Observations	473	473	325	325
P-value, T1a=T1b	0.346	0.747	0.356	0.570
Upazila FE	Y	Y	Y	Y
Strata FE	Y	Y	Y	Y
Rand. Inf. p-value (Exposure)	[0.012]	[0.394]	[0.012]	[0.222]

Notes: Estimates are of equation 1 in text. Data are from endline survey. Exposure (500 m) is a 0/1 indicator for having one or more T2 firm within a walking distance of 500 m. Exp. Exposure (500 m) is mean of Exposure from 1,000 counterfactual treatment assignment draws. Dependent variables are 0/1 indicators for having purchased or received (from us) 1+ or 2+ servo motors between baseline and endline. (Means of the dependent variables at baseline are zero and are omitted.) The standard errors in parentheses use the spatial correction from Conley (1999). The standard errors in square brackets are heteroskedasticity-robust (without the correction for spatial correlation). *p <0.10; **p <0.05; ***p <0.01. The randomization inference p-values for the coefficient on the realized exposure term are based on the test statistic recommended by Borusyak and Hull (2023) (the sample covariance of the difference between Exposure and Exp. Exposure).

Table A.4. Adoption, Controlling for Latitude and Longitude

	Including T2		Excluding T2	
	Purchased 1+ servo motors (1)	Purchased 2+ servo motors (2)	Purchased 1+ servo motors (3)	Purchased 2+ servo motors (4)
T1	0.086	0.056	0.091	0.043
	(0.040)**	(0.033)*	(0.040)**	(0.032)
	[0.041]**	[0.034]*	[0.041]**	[0.034]
T2	0.803	0.091		
	(0.032)***	(0.038)**		
	[0.033]***	[0.039]**		
Exposure (500m)	0.136	0.128	0.161	0.097
	(0.044)***	(0.042)***	(0.058)***	(0.041)**
	[0.045]***	[0.043]***	[0.060]***	[0.043]**
Latitude	0.789	-0.027	0.585	0.814
	(1.134)	(1.259)	(1.422)	(1.263)
	[1.162]	[1.291]	[1.473]	[1.308]
Longitude	2.250	0.190	3.452	2.706
	(1.394)	(1.551)	(1.677)**	(1.382)*
	[1.430]	[1.590]	[1.736]**	[1.431]*
Latitude	-9.902	-8.094	-16.126	-15.157
x Latitude	(6.316)	(6.518)	(7.602)**	(6.584)**
	[6.476]	[6.683]	[7.873]**	[6.818]**
Longitude	-3.466	-6.800	-6.910	-9.796
x Longitude	(3.084)	(3.459)**	(3.409)**	(2.351)***
	[3.161]	[3.546]*	[3.531]*	[2.435]***
Observations	473	473	325	325
Upazila FE	Y	Y	Y	Y
Strata FE	Y	Y	Y	Y

Notes: Estimates are of equation 1 in text. Data are from endline survey. Exposure (500 m) is a 0/1 indicator for having one or more T2 firm within a walking distance of 500 m. Exp. Exposure (500 m) is mean of Exposure from 1,000 counterfactual treatment assignment draws. Dependent variables are 0/1 indicators for having purchased or received (from us) 1+ or 2+ servo motors between baseline and endline. Latitude and longitude are in deviations from mean latitude and longitude in our sample. (Means of the dependent variables at baseline are zero and are omitted.) The standard errors in parentheses use the spatial correction from Conley (1999). The standard errors in square brackets are heteroskedasticity-robust (without the correction for spatial correlation). *p <0.10; **p <0.05; ***p <0.01. The randomization inference p-values for the coefficient on the realized exposure term are based on the test statistic recommended by Borusyak and Hull (2023) (the sample covariance of the difference between Exposure and Exp. Exposure).

Table A.5. Heterogeneity in Treatment and Spillover Effects on Adoption by Manager Characteristics

	Dep. var.: purchased/received any motor									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
T1	0.17	0.06	0.12	0.10	0.12	0.08	0.07	0.12	0.11	-0.00
	(0.04)***	(0.05)	(0.05)**	(0.06)	(0.05)**	(0.06)	(0.07)	(0.07)*	(0.04)***	(0.17)
	[0.07]***	[0.06]	[0.05]**	[0.07]	[0.05]**	[0.08]	[0.05]	[0.07]*	[0.04]**	[0.15]
Exposure (500m)	0.01	0.28	0.16	0.28	0.31	0.00	0.14	0.25	0.09	0.50
	(0.10)	(0.11)***	(0.07)**	(0.12)**	(0.11)***	(0.10)	(0.05)***	(0.08)***	(0.05)*	(0.19)***
	[0.15]	[0.10]***	[0.11]	[0.12]**	[0.09]***	[0.15]	[0.11]	[0.11]**	[0.08]	[0.20]**
Exp. Exposure (500m)	-0.02	0.07	0.07	-0.11	-0.12	0.20	-0.30	0.03	0.06	0.15
	(0.17)	(0.21)	(0.17)	(0.19)	(0.18)	(0.14)	(0.18)	(0.16)	(0.08)	(0.40)
	[0.22]	[0.20]	[0.19]	[0.18]	[0.17]	[0.23]	[0.28]	[0.18]	[0.13]	[0.48]
Observations	147	178	182	143	209	116	142	183	269	56
Upazila FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Strata FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Subsample	Less experienced	More experienced	Primary school or lower	Secondary school or higher	Raven's, ≤ 2 correct	Raven's, all correct	Smaller firm	Larger firm	No servo use at baseline	1+ servo at baseline
Rand. Inf. p-value (Exposure)	[0.92]	[0.02]	[0.12]	[0.04]	[0.00]	[0.97]	[0.29]	[0.02]	[0.28]	[0.02]

Notes: Estimates are of equation 1 in text, but without dependent variable at baseline. T2 firms excluded. Dependent variable is a 0/1 indicator for having purchased or received (from us) 1+ servo motor(s) between baseline and endline. The sample in columns 1-2 is firms where the manager's reported years of experience in the sector is below (column 1) or above (column 2) the median reported experience in the full sample, which is 14 years. The sample in column 3 is firms where the manager has formal educational qualifications up to primary school, which is the median educational qualification for a manager in our sample. The sample in column 4 is firms where the manager has formal educational qualifications above at least the secondary school level. The sample in columns 5-6 is firms where the managers got at most 2 of 3 questions correct (column 7) or all 3 correct on a 3-question Raven's matrices test. The sample in columns 7-8 is firms with fewer (column 1) or more (column 2) than 4 sewing machines, which is the median number of machines in the full sample. The sample in columns 9-10 is firms which at baseline reported having no machines (column 3) or at least one machine (column 4) with servo motors installed. The standard errors in parentheses use the spatial correction from Conley (1999). The standard errors in square brackets are heteroskedasticity-robust (without the correction for spatial correlation). *p <0.10; **p <0.05; ***p <0.01. The randomization inference p-values for the coefficient on the realized exposure term are based on the test statistic recommended by Borusyak and Hull (2023) (the sample covariance of the difference between Exposure and Exp. Exposure).

Table A.6. Effects on Beliefs, Incentivized vs. Non-Incentivized

	beliefs about servo kWh/day	
	Including T2 (1)	Excluding T2 (2)
T1	-0.018	-0.026
	(0.019)	(0.019)
	[0.026]	[0.026]
T1 x Incentivized (0/1)	-0.005	0.011
	(0.031)	(0.034)
	[0.032]	[0.032]
T2	-0.092	
	(0.018)***	
	[0.027]***	
T2 x Incentivized (0/1)	0.023	
	(0.020)	
	[0.032]	
Exposure (500m)	-0.051	-0.066
	(0.046)	(0.044)
	[0.042]	[0.046]
Exp. Exposure (500m)	-0.013	-0.014
	(0.052)	(0.051)
	[0.061]	[0.067]
Incentivized x Exposure	0.073	0.072
	(0.061)	(0.063)
	[0.053]	[0.060]
Incentivized x Exp Exposure	-0.108	-0.145
	(0.065)*	(0.067)**
	[0.061]*	[0.065]**
Dep. var at baseline	0.083	0.060
	(0.032)**	(0.035)*
	[0.044]*	[0.055]
Incentivized x Dep. var at base	-0.075	-0.040
	(0.047)	(0.044)
	[0.054]	[0.064]
Observations	473	325
Baseline mean	0.466	0.465
Upazila FE	Y	Y
Strata FE	Y	Y

Notes: Estimates are of equation 1 in text. Data are from endline survey. Exposure (500 m) is a 0/1 indicator for having one or more T2 firm within a walking distance of 500 m. Exp. Exposure (500 m) is mean of Exposure from 1,000 counterfactual treatment assignment draws. Dependent variable is the mean of the distribution of beliefs about electricity use of a servo motor, in levels or logs. The standard errors in parentheses use the spatial correction from Conley (1999). The standard errors in square brackets are heteroskedasticity-robust (without the correction for spatial correlation). *p <0.10; **p <0.05; ***p <0.01. The randomization inference p-values for the coefficient on the realized exposure term are based on the test statistic recommended by Borusyak and Hull (2023) (the sample covariance of the difference between Exposure and Exp. Exposure).