

## Do Management Interventions Last: Evidence From India – Nick Bloom, Aprajit Mahajan, David McKenzie, John Roberts

### Online Appendix:

**Table A1: The textile management practices adoption rates**

Area	Specific Practice	2008	2011	2017
Factory Operations	1 Preventive maintenance is carried out for the machines	0.40	0.74	0.95
	2 Preventive maintenance is carried out per manufacturer's recommendations	0.10	0.17	0.15
	3 The shop floor is marked clearly for where each machine should be	0.10	0.30	0.25
	4 The shop floor is clear of waste and obstacles	0.05	0.30	0.30
	5 Machine downtime is recorded	0.60	0.87	0.90
	6 Machine downtime reasons are monitored daily	0.45	0.87	0.85
	7 Machine downtime analyzed at least fortnightly & action plans implemented to try to reduce this	0.05	0.65	0.60
	8 Daily meetings take place that discuss efficiency with the production team	0.05	0.70	0.80
	9 Written procedures for warping, drawing, weaving & beam gaiting are displayed	0.10	0.39	0.00
	10 Visual aids display daily efficiency loomwise and weaverwise	0.25	0.65	0.40
	11 These visual aids are updated on a daily basis	0.15	0.57	0.25
	12 Spares stored in a systematic basis (labeling and demarked locations)	0.10	0.22	0.40
	13 Spares purchases and consumption are recorded and monitored	0.50	0.52	0.35
	14 Scientific methods are used to define inventory norms for spares	0.00	0.04	0.10
Quality Control	15 Quality defects are recorded	0.95	1.00	1.00
	16 Quality defects are recorded defect wise	0.25	0.85	0.95
	17 Quality defects are monitored on a daily basis	0.30	0.91	0.50
	18 There is an analysis and action plan based on defects data	0.05	0.65	0.30
	19 There is a fabric gradation system	0.55	0.87	1.00
	20 The gradation system is well defined	0.45	0.78	0.45
	21 Daily meetings take place that discuss defects and gradation	0.15	0.70	0.30
	22 Standard operating procedures are displayed for quality supervisors & checkers	0.05	0.52	0.00
	23 Yarn transactions (receipt, issues, returns) are recorded daily	0.89	1.00	1.00
	24 The closing stock is monitored at least weekly	0.28	0.79	0.56
Inventory Control	25 Scientific methods are used to define inventory norms for yarn	0.00	0.00	0.00
	26 There is a process for monitoring the aging of yarn stock	0.28	0.71	0.72
	27 There is a system for using and disposing of old stock	0.06	0.57	0.56
	28 There is location wise entry maintained for yarn storage	0.28	0.57	0.50
Loom Planning	29 Advance loom planning is undertaken	0.35	0.48	0.10
	30 There is a regular meeting between sales and operational management	0.50	0.61	0.45
Human Resources	31 There is a reward system for non-managerial staff based on performance	0.60	0.70	0.60
	32 There is a reward system for managerial staff based on performance	0.30	0.43	0.20
	33 There is a reward system for non-managerial staff based on attendance	0.35	0.52	0.50
	34 Top performers among factory staff are publicly identified each month	0.15	0.26	0.20
	35 Roles & responsibilities are displayed for managers and supervisors	0.05	0.52	0.50
Sales and Orders	36 Customers are segmented for order prioritization	0.00	0.00	0.11
	37 Orderwise production planning is undertaken	0.67	0.90	1.00
	38 Historical efficiency data is analyzed for business decisions regarding designs	0.00	0.11	0.07
All	Average of all practices	0.27	0.56	0.47

**Notes:** Reports the 38 individual management practices for all treatment plants (both experimental and non-experimental, unbalanced panel) in 2008, 2011 and 2017.

**Table A2: Plant count**

	2008	2011	2014	2017
Treatment – experimental	14	14	11	11
Treatment – non-experimental	6	9	9	9
Control – experimental	6	6	6	6
Control – non-experimental	2	2	4	4
<b>Total</b>	<b>28</b>	<b>31</b>	<b>30</b>	<b>30</b>

**Notes:** Lists the total number of plants in 2008 to 2017, including all dead and alive plants. One firm closed in 2014, so the total number of firms was 17, 17, 16 and 16 across the first four columns.

**Table A3: Practice stickiness**

		Adopted	Dropped	Share Dropped
9	Written procedures for warping, drawing, weaving & beam gaiting are displayed	7	7	1.00
22	Standard operating procedures are displayed for quality supervisors & checkers	11	10	0.91
11	These visual aids are updated on a daily basis	11	7	0.64
10	Visual aids display daily efficiency loomwise and weaverwise	11	6	0.55
21	Daily meetings take place that discuss defects and gradation	13	7	0.54
18	There is an analysis and action plan based on defects data	14	7	0.50
17	Quality defects are monitored on a daily basis	16	6	0.38
4	The shop floor is clear of waste and obstacles	6	2	0.33
33	There is a reward system for non-managerial staff based on attendance	9	3	0.33
20	The gradation system is well defined	8	2	0.25
24	The closing stock is monitored at least weekly	13	3	0.23
7	Machine downtime analyzed at least fortnightly & action plans implemented to try to reduce this	15	3	0.20
8	Daily meetings take place that discuss efficiency with the production team	19	3	0.16
5	Machine downtime is recorded	9	1	0.11
6	Machine downtime reasons are monitored daily	13	1	0.08
27	There is a system for using and disposing of old stock	15	1	0.07
1	Preventive maintenance is carried out for the machines	10	0	0.00
12	Spares stored in a systematic basis (labeling and demarked locations)	6	0	0.00
16	Quality defects are recorded defect wise	20	0	0.00
19	There is a fabric gradation system	9	0	0.00
26	There is a process for monitoring the aging of yarn stock	11	0	0.00
28	There is location wise entry maintained for yarn storage	7	0	0.00
35	Roles & responsibilities are displayed for managers and supervisors	9	0	0.00
37	Orderwise production planning is undertaken	6	0	0.00

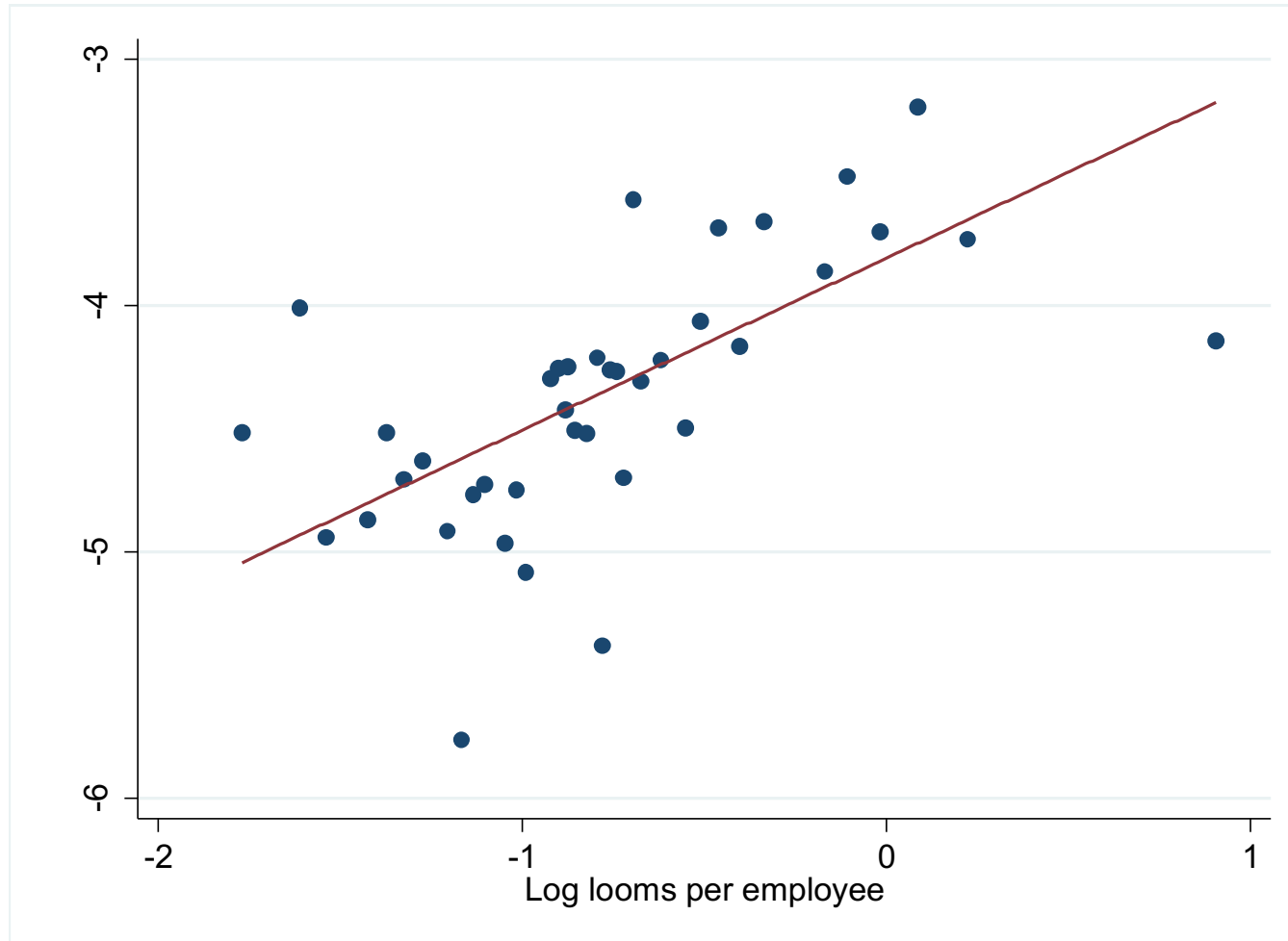
**Notes:** Lists the practices ordered by the share of adopters between 2008 and 2011 that subsequently dropped them by 2017.

**Table A4: Looms per employee and labor productivity**

Dependent variable: Log(output/employees)	(1)	(2)	(3)	(4)
Log(looms/employee)	0.759 (0.121)	0.759 (0.122)	0.736 (0.113)	0.734 (0.114)
Year fixed effects	No	Yes	No	Yes
Firm fixed effects	No	No	Yes	Yes
Firms	94	94	94	94
Observations	366	366	366	366

**Notes:** Regression results from the 2011 survey (detailed in Appendix A2). Only firms with non-zero and non-missing production picks, looms and employment are included. The dependent variable is production picks per employee (in logs). Regressions clustered at the firm level.

**Figure A1: Labor productivity is correlated with Looms per Employee**



**Note:** Data from 366 observations on 94 Indian textile firms. Points are from bin scatterplot which plots means within each of 40 quantiles. Least squares fitted line shown.