

Table 1: Impact of Training on Working Conditions Index - Before Matching

	Standardized values of working conditions index					
	(1)	(2)	(3)	(4)	(5)	(6)
Trainee Status	0.272*** (0.058)	0.375*** (0.103)	0.302*** (0.076)	0.567*** (0.155)	0.388*** (0.064)	0.456*** (0.102)
Supervisor's work experience	0.002 (0.002)	0.003 (0.002)	0.004 (0.002)	0.006** (0.002)	0.002 (0.002)	0.002 (0.002)
Comparison Supervisor = Female					0.439*** (0.103)	0.430*** (0.104)
Supervisor's age	0.002 (0.007)	0.003 (0.006)	-0.004 (0.008)	-0.003 (0.008)	0.007 (0.006)	0.007 (0.006)
Supervisor's education	-0.010 (0.012)	-0.008 (0.012)	-0.028 (0.017)	-0.022 (0.017)	-0.012 (0.012)	-0.010 (0.012)
Supervisor's marital status	0.006 (0.101)	-0.012 (0.101)	0.052 (0.116)	0.026 (0.114)	0.047 (0.094)	0.034 (0.095)
Operator's age	-0.019*** (0.006)	-0.019*** (0.006)	-0.014* (0.007)	-0.015** (0.007)	-0.019*** (0.006)	-0.019*** (0.006)
Operator's gender	-0.036 (0.081)	-0.041 (0.082)			-0.049 (0.081)	-0.052 (0.081)
Operator's education	-0.004 (0.012)	-0.004 (0.012)	0.005 (0.014)	0.005 (0.014)	-0.006 (0.011)	-0.006 (0.011)
Operator's marital status	0.117 (0.088)	0.118 (0.088)	0.135 (0.116)	0.136 (0.116)	0.116 (0.088)	0.117 (0.088)
Trainee status*Supervisor's work experience		-0.004 (0.003)		-0.012* (0.006)		-0.003 (0.003)
Constant	0.482 (0.394)	0.456 (0.395)	0.372 (0.489)	0.288 (0.492)	0.235 (0.396)	0.223 (0.396)
Control Mean	-0.124	-0.124	-0.124	-0.124	-0.124	-0.124
Factory Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	963	963	702	702	963	963
R ²	0.077	0.078	0.071	0.078	0.090	0.090
Adjusted R ²	0.042	0.042	0.024	0.029	0.054	0.054
Residual Std. Error	0.979 (df = 927)	0.979 (df = 926)	0.984 (df = 667)	0.981 (df = 666)	0.973 (df = 926)	0.973 (df = 925)
F Statistic	2.202*** (df = 35; 927)	2.173*** (df = 36; 926)	1.510** (df = 34; 667)	1.609** (df = 35; 666)	2.530*** (df = 36; 926)	2.475*** (df = 37; 925)

Note:

*p<0.1; **p<0.05; ***p<0.01

1. Outcome variable is the working conditions index.

2. The following control variables are used: Supervisor characteristics – age, education, marital status, and work experience; Line Operator characteristics – age, gender, education, and marital status.

3. Reference categories are: Line operator's gender – male, Supervisor and Line operator's marital status – unmarried.

4. The standard errors are robust and clustered at the supervisor's level.

5. Factory level fixed effects are included in all regressions.

6. Columns (1) and (2) show OLS fixed effects regression results before matching. In addition to all the controls in the first model, the second model includes the interaction between the trainee status and supervisor's work experience. Columns (3) and (4) show results for the same model but restrict the sample to female line operators. Columns (5) and (6) show results after adding a dummy for female comparison supervisors.

Table 2: Impact of Training on Management Practices Index - Before Matching

	Standardized values of management practices index					
	(1)	(2)	(3)	(4)	(5)	(6)
Trainee Status	0.139** (0.062)	0.224** (0.106)	0.187** (0.075)	0.230* (0.135)	0.231*** (0.068)	0.288*** (0.105)
Supervisor's work experience	0.004** (0.002)	0.004** (0.002)	0.007*** (0.002)	0.007*** (0.002)	0.004** (0.001)	0.004** (0.002)
Comparison Supervisor = Female					0.350*** (0.112)	0.343*** (0.112)
Supervisor's age	0.003 (0.008)	0.003 (0.008)	-0.002 (0.008)	-0.002 (0.008)	0.006 (0.008)	0.006 (0.008)
Supervisor's education	0.001 (0.013)	0.003 (0.013)	0.003 (0.016)	0.004 (0.017)	-0.001 (0.013)	0.001 (0.013)
Supervisor's marital status	-0.060 (0.084)	-0.075 (0.088)	-0.031 (0.105)	-0.035 (0.107)	-0.027 (0.082)	-0.038 (0.085)
Operator's age	-0.012* (0.006)	-0.012* (0.006)	-0.007 (0.007)	-0.007 (0.007)	-0.012* (0.006)	-0.012* (0.006)
Operator's gender	0.092 (0.080)	0.088 (0.080)			0.082 (0.080)	0.079 (0.080)
Operator's education	0.004 (0.012)	0.004 (0.011)	0.012 (0.014)	0.012 (0.014)	0.002 (0.011)	0.002 (0.011)
Operator's marital status	0.127 (0.088)	0.128 (0.088)	0.044 (0.113)	0.044 (0.114)	0.127 (0.088)	0.127 (0.088)
Trainee status*Supervisor's work experience		-0.004 (0.003)		-0.002 (0.004)		-0.003 (0.003)
Constant	0.003 (0.386)	-0.018 (0.386)	-0.086 (0.428)	-0.100 (0.431)	-0.193 (0.394)	-0.204 (0.394)
Control Mean	-0.053	-0.053	-0.053	-0.053	-0.053	-0.053
Factory Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	963	963	702	702	963	963
R ²	0.054	0.055	0.075	0.075	0.062	0.062
Adjusted R ²	0.018	0.018	0.027	0.026	0.026	0.025
Residual Std. Error	0.991 (df = 927)	0.991 (df = 926)	0.966 (df = 667)	0.966 (df = 666)	0.987 (df = 926)	0.987 (df = 925)
F Statistic	1.510** (df = 35; 927)	1.489** (df = 36; 926)	1.582** (df = 34; 667)	1.538** (df = 35; 666)	1.703*** (df = 36; 926)	1.665*** (df = 37; 925)

Note:

*p<0.1; **p<0.05; ***p<0.01

1. Outcome variable is the management practices index.

2. The following control variables are used: Supervisor characteristics – age, education, marital status, and work experience; Line Operator characteristics – age, gender, education, and marital status.

3. Reference categories are: Line operator's gender – male, Supervisor and Line operator's marital status – unmarried.

4. The standard errors are robust and clustered at the supervisor's level.

5. Factory level fixed effects are included in all regressions.

6. Columns (1) and (2) show OLS fixed effects regression results before matching. In addition to all the controls in the first model, the second model includes the interaction between the trainee status and supervisor's work experience. Columns (3) and (4) show results for the same models but restrict the sample to female line operators. Columns (5) and (6) show results after adding a dummy for female comparison supervisors.

Table 3: Impact of Training on Working Conditions Index - After Matching

	Standardized values of working conditions index			
	Mahalanobis		Propensity Score	
	(1)	(2)	(3)	(4)
Trainee Status	0.253*** (0.055)	0.399*** (0.095)	0.255*** (0.055)	0.420*** (0.106)
Supervisor's work experience	0.003 (0.002)	0.005** (0.002)	0.003 (0.002)	0.006** (0.002)
Supervisor's age	0.006 (0.007)	0.007 (0.007)	0.005 (0.008)	0.006 (0.008)
Supervisor's education	-0.005 (0.014)	-0.001 (0.014)	-0.004 (0.014)	0.00003 (0.014)
Supervisor's marital status	-0.005 (0.108)	-0.032 (0.109)	-0.007 (0.101)	-0.038 (0.103)
Operator's age	-0.019*** (0.007)	-0.020*** (0.007)	-0.019*** (0.007)	-0.020*** (0.007)
Operator's gender	-0.034 (0.079)	-0.041 (0.080)	-0.034 (0.083)	-0.042 (0.084)
Operator's education	-0.010 (0.012)	-0.010 (0.012)	-0.010 (0.012)	-0.011 (0.012)
Operator's marital status	0.077 (0.089)	0.080 (0.088)	0.075 (0.089)	0.078 (0.089)
Trainee status*Supervisor's work experience		-0.006* (0.003)		-0.007** (0.004)
Constant	0.431 (0.433)	0.379 (0.432)	0.458 (0.434)	0.396 (0.434)
Control Mean	-0.124	-0.124	-0.124	-0.124
Factory Fixed Effects	Yes	Yes	Yes	Yes
Observations	906	906	906	906
R ²	0.075	0.077	0.076	0.079
Adjusted R ²	0.037	0.039	0.039	0.040
Residual Std. Error	0.976 (df = 870)	0.975 (df = 869)	0.977 (df = 870)	0.976 (df = 869)
F Statistic	2.006*** (df = 35; 870)	2.010*** (df = 36; 869)	2.039*** (df = 35; 870)	2.058*** (df = 36; 869)

Note:

*p<0.1; **p<0.05; ***p<0.01

1. Outcome variable is the working conditions index.

2. The following control variables are used: Supervisor characteristics – age, education, marital status, and work experience; Line Operator characteristics – age, gender, education, and marital status.

3. Reference categories are: Line operator's gender – male, Supervisor and Line operator's marital status – unmarried.

4. To find doubly robust measures of estimates, 1:1 Nearest Neighbour Matching without replacement is used with two distance metrics: Mahalanobis Distance and Propensity Score.

5. The standard errors are robust and clustered at the supervisor's level.

6. Factory level fixed effects are included in all regressions.

7. Columns (1) and (2) show OLS fixed effects regression results after Mahalanobis Distance matching. In addition to all the controls in the first model, the second model includes the interaction between the trainee status and supervisor's work experience. Columns (3) and (4) show results for the same models using Propensity Score matching.

Table 4: Impact of Training on Management Practices Index - After Matching

	Standardized values of management practices index			
	Mahalanobis		Propensity Score	
	(1)	(2)	(3)	(4)
Trainee Status	0.120** (0.059)	0.230** (0.106)	0.117* (0.060)	0.244** (0.106)
Supervisor's work experience	0.004** (0.002)	0.006*** (0.002)	0.005** (0.002)	0.007*** (0.002)
Supervisor's age	0.004 (0.009)	0.005 (0.010)	0.004 (0.009)	0.004 (0.010)
Supervisor's education	0.006 (0.015)	0.009 (0.015)	0.006 (0.015)	0.009 (0.015)
Supervisor's marital status	-0.072 (0.087)	-0.093 (0.092)	-0.073 (0.089)	-0.097 (0.094)
Operator's age	-0.012* (0.007)	-0.012* (0.007)	-0.011* (0.007)	-0.012* (0.007)
Operator's gender	0.079 (0.084)	0.074 (0.084)	0.081 (0.082)	0.075 (0.082)
Operator's education	-0.002 (0.011)	-0.002 (0.011)	-0.001 (0.011)	-0.002 (0.011)
Operator's marital status	0.049 (0.085)	0.051 (0.085)	0.049 (0.082)	0.051 (0.082)
Trainee status*Supervisor's work experience		-0.005 (0.003)		-0.006* (0.003)
Constant	0.055 (0.420)	0.016 (0.422)	0.052 (0.406)	0.004 (0.404)
Control Mean	-0.053	-0.053	-0.053	-0.053
Factory Fixed Effects	Yes	Yes	Yes	Yes
Observations	906	906	906	906
R ²	0.045	0.046	0.046	0.048
Adjusted R ²	0.007	0.007	0.008	0.008
Residual Std. Error	0.996 (df = 870)	0.996 (df = 869)	0.996 (df = 870)	0.995 (df = 869)
F Statistic	1.174 (df = 35; 870)	1.172 (df = 36; 869)	1.197 (df = 35; 870)	1.206 (df = 36; 869)

Note:

*p<0.1; **p<0.05; ***p<0.01

1. Outcome variable is the management practices index.

2. The following control variables are used: Supervisor characteristics – age, education, marital status, and work experience; Line Operator characteristics – age, gender, education, and marital status.

3. Reference categories are: Line operator's gender – male, Supervisor and Line operator's marital status – unmarried.

4. To find doubly robust measures of estimates, 1:1 Nearest Neighbour Matching without replacement is used with two distance metrics: Mahalanobis Distance and Propensity Score.

5. The standard errors are robust and clustered at the supervisor's level.

6. Factory level fixed effects are included in all regressions.

7. Columns (1) and (2) show OLS fixed effects regression results after Mahalanobis Distance matching. In addition to all the controls in the first model, the second model includes the interaction between the trainee status and supervisor's work experience. Columns (3) and (4) show results for the same models using Propensity Score matching.

Table 5: Impact of Training on individual components of Working Conditions Index

	Operator Reported Outcomes of Working Conditions							
	Supervisor gives extra support to less skilled operators		Supervisor uses praise to motivate operators		Supervisor uses less shouting or abusive language to motivate operators		Supervisor involve sewing operators in solving problems on the line	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Trainee Status	1.322* (0.180)	1.713** (0.401)	1.534*** (0.194)	1.843** (0.406)	1.526*** (0.205)	1.582* (0.353)	1.740*** (0.248)	1.697* (0.364)
Supervisor's work experience	1.002 (0.004)	1.005 (0.005)	1.000 (0.004)	1.002 (0.005)	1.000 (0.004)	1.001 (0.004)	1.000 (0.003)	1.000 (0.004)
Supervisor's age	1.010 (0.016)	1.011 (0.015)	1.004 (0.016)	1.004 (0.016)	0.999 (0.014)	0.999 (0.014)	1.016 (0.016)	1.015 (0.016)
Supervisor's education	1.010 (0.030)	1.017 (0.030)	0.983 (0.027)	0.987 (0.027)	1.016 (0.031)	1.016 (0.031)	0.945 (0.031)	0.945 (0.032)
Supervisor's marital status	1.069 (0.218)	1.022 (0.211)	1.064 (0.208)	1.031 (0.208)	0.849 (0.175)	0.844 (0.175)	0.981 (0.226)	0.985 (0.229)
Operator's age	0.961*** (0.014)	0.961*** (0.014)	0.975* (0.013)	0.975* (0.013)	0.980 (0.013)	0.980 (0.013)	0.957*** (0.017)	0.957*** (0.017)
Operator's gender	0.872 (0.157)	0.862 (0.155)	1.000 (0.175)	0.993 (0.175)	0.999 (0.166)	0.997 (0.166)	1.326 (0.246)	1.327 (0.248)
Operator's education	0.978 (0.025)	0.978 (0.025)	0.975 (0.025)	0.975 (0.025)	0.992 (0.025)	0.992 (0.025)	1.040 (0.030)	1.040 (0.030)
Operator's marital status	1.357 (0.249)	1.360 (0.249)	1.294 (0.250)	1.298 (0.251)	1.055 (0.208)	1.056 (0.208)	1.385 (0.288)	1.385 (0.288)
Trainee status*Supervisor's work experience		0.989 (0.007)		0.992 (0.007)		0.998 (0.008)		1.001 (0.007)
Constant	1.458 (1.165)	1.360 (1.087)	0.774 (0.613)	0.736 (0.587)	0.928 (0.684)	0.920 (0.679)	0.642 (0.553)	0.647 (0.556)
Control Mean	0.339	0.339	0.313	0.313	0.351	0.351	0.22	0.22
Factory Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	959	959	961	961	940	940	961	961
Log Likelihood	-604.575	-603.803	-603.646	-603.268	-607.286	-607.270	-528.311	-528.305
Akaike Inf. Crit.	1,281.150	1,281.605	1,279.293	1,280.536	1,286.572	1,288.540	1,128.622	1,130.609
Wald Chi Sq	44.495	45.829	40.208	40.881	47.373*	47.412*	52.520**	52.534**

Note:

*p<0.1; **p<0.05; ***p<0.01

1. Outcome variables are the individual components of the working conditions index.

2. The following control variables are used: Supervisor characteristics – age, education, marital status, and work experience; Line Operator characteristics – age, gender, education, and marital status.

3. Reference categories for binary covariates are: Line operator's gender – male, Supervisor and Line operator's marital status – unmarried.

4. The standard errors are robust and clustered at the supervisor's level.

5. Factory level fixed effects are included in all regressions.

6. The estimates are in odds ratios and using the delta method, the standard errors also correspond to the odds ratios.

Table 6: Impact of Training on individual components of Management Practices Index

	Operator Reported Outcomes of Management Practices							
	My supervisor is more confident		My supervisor is better at remaining calm in stressful situations		My supervisor is better at motivating operators		My supervisor is better at correcting mistakes and ensuring product quality	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Trainee Status	1.451*** (0.193)	1.301 (0.294)	1.601*** (0.214)	1.454 (0.332)	1.334* (0.172)	1.245 (0.268)	1.367** (0.186)	1.750** (0.395)
Supervisor's work experience	1.002 (0.003)	1.001 (0.003)	1.001 (0.003)	1.000 (0.003)	1.005 (0.003)	1.005 (0.003)	1.002 (0.004)	1.004 (0.005)
Supervisor's age	1.004 (0.017)	1.003 (0.017)	0.993 (0.017)	0.992 (0.017)	0.988 (0.015)	0.988 (0.015)	0.990 (0.017)	0.991 (0.017)
Supervisor's education	0.968 (0.033)	0.965 (0.033)	0.994 (0.031)	0.992 (0.031)	0.980 (0.031)	0.978 (0.032)	1.018 (0.032)	1.024 (0.032)
Supervisor's marital status	0.873 (0.199)	0.890 (0.204)	0.794 (0.147)	0.807 (0.152)	1.036 (0.207)	1.050 (0.216)	1.237 (0.271)	1.190 (0.264)
Operator's age	0.988 (0.013)	0.988 (0.013)	1.001 (0.014)	1.001 (0.014)	0.999 (0.012)	0.999 (0.012)	0.984 (0.013)	0.984 (0.013)
Operator's gender	0.961 (0.161)	0.965 (0.162)	1.376* (0.238)	1.383* (0.240)	1.148 (0.216)	1.152 (0.217)	1.015 (0.169)	1.005 (0.167)
Operator's education	1.016 (0.026)	1.016 (0.026)	1.021 (0.026)	1.021 (0.026)	1.036 (0.027)	1.036 (0.027)	1.021 (0.026)	1.021 (0.026)
Operator's marital status	0.988 (0.182)	0.986 (0.182)	1.053 (0.192)	1.052 (0.191)	1.184 (0.212)	1.183 (0.212)	1.072 (0.202)	1.074 (0.202)
Trainee status*Supervisor's work experience		1.005 (0.007)		1.004 (0.007)		1.003 (0.007)		0.989 (0.007)
Constant	1.386 (1.095)	1.426 (1.128)	0.532 (0.409)	0.547 (0.422)	0.691 (0.530)	0.704 (0.544)	0.895 (0.684)	0.836 (0.636)
Control Mean	0.357	0.357	0.308	0.308	0.308	0.308	0.345	0.345
Factory Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	958	958	963	963	961	961	959	959
Log Likelihood	-625.014	-624.870	-601.215	-601.108	-588.692	-588.639	-608.033	-607.351
Akaike Inf. Crit.	1,322.028	1,323.739	1,274.430	1,276.215	1,249.384	1,251.278	1,288.066	1,288.702
Wald Chi Sq	36.334	36.561	48.631*	48.709*	45.414	45.502	48.701*	49.857*

Note:

*p<0.1; **p<0.05; ***p<0.01

1. Outcome variables are the individual components of the management practices index.

2. The following control variables are used: Supervisor characteristics – age, education, marital status, and work experience; Line Operator characteristics – age, gender, education, and marital status.

3. Reference categories for binary covariates are: Line operator's gender – male, Supervisor and Line operator's marital status – unmarried.

4. The standard errors are robust and clustered at the supervisor's level.

5. Factory level fixed effects are included in all regressions.

6. The estimates are in odds ratios and using the delta method, the standard errors also correspond to the odds ratios.