

Final report

# Female managers and well-being in the Bangladeshi garment industry

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## Executive Summary

This report summarizes findings from a cross-sectional study looking at differences in management styles and worker wellbeing on production lines in eight Bangladeshi ready-made garments factories by supervisor gender. The study's goals are to understand the impacts of female leadership in RMG factories on the aspiration, wellbeing, and productivity of sewing production line-level workers, particularly female workers. A further goal is to better understand attitudes towards female managers and where female supervisors could use further support and training. Our assumption is that women supervisors, having a better understanding of female worker needs, impact female worker aspirations and wellbeing more positively than male supervisors do. As the industry begins to shift towards female leadership as a norm, understanding the positive impacts of female leadership as well as the areas where female workers need increased training and support is important for industry policy.

To understand aspiration, wellbeing, and productivity among female-supervised lines, we draw from the following sources of data: surveys with workers on female and male-led lines, diagnostic testing with female and male supervisors, administrative data on migration and absenteeism, production data, and focus group discussions with workers. We randomly selected workers from production lines to generate a representative sample of the wider workforce within these eight factories.

The following are highlights of the project's findings:

1. Female supervisors have significantly shorter supervisor tenures, lower education levels, lower aspiration, and less family support than male supervisors. All the while, female supervisors do not score significantly differently from male supervisors in garments knowledge, machine knowledge, line balancing knowledge, or numeracy.
2. Workers express that their expectations of female supervisors are not met by their experiences of working with female supervisors. This may speak to workers, particularly female workers, having unrealistic expectations of female supervisors.
3. We had hypothesized that female managers would improve the wellbeing, aspiration and satisfaction of workers, particularly female workers. From our surveys, we generally did not find significant evidence to support this. However, we also do not find significant evidence to suggest that female supervisors harm the wellbeing, aspiration and satisfaction of workers.
4. We find significantly lower levels of line efficiency on female-supervised lines. However, we also find that efficiency significantly increases on female-led lines as the female supervisor's tenure increases. While workers rate female and male supervisors similarly for eight of a set of ten common supervisor skills, workers rated female supervisors significantly worse for meeting targets and possessing machine knowledge.
5. From the diagnostic surveys, female supervisors are significantly more likely to agree with authoritarian management style practices. In focus group discussions, workers discussed that female supervisors can sometimes use more slang and aggressive language, particularly towards female workers, than male supervisors. However, we also find evidence of workers, particularly male workers, not listening to female supervisors or being influenced by their direction to the extent that male supervisors influence. Further, workers report that they observe female supervisors having significantly less support from management than male supervisors. Given these findings, we may infer that female supervisors require more support and respect to allow them to practice more empowering management styles.
6. Our findings indicate that most workers are more comfortable working with female managers. This is particularly the case for more vulnerable workers. While workers say they prefer working with male supervisors and female supervisors on male-led lines and female-led lines respectively,

less educated, less tenured and younger workers on both male-led lines and female-led lines are more likely to report preferring to work with a female supervisor.

7. Our findings also show that to promote female leadership and to support female supervisors in reaching their highest potential, it is critical that factory management address harmful social norms around gender and leadership among workers across all levels and demographics.

The following sections outline our methods and our results on worker aspiration, worker wellbeing, worker-supervisor communication, and productivity on female-led production lines. We then discuss and contextualize these findings while recommending increased support and training for female line supervisors in firms.

## Background

The readymade garment sector in Bangladesh accounts for eighty per cent of the country's export earnings and around one-eighth of GDP. The sector has played a central role in the rapid growth of Bangladesh's economy. The sector has grown by 15 per cent annually and currently employs more than 4 million workers. Rapid growth in garment production has fueled an overall GDP growth of 6 per cent annually over the past three decades. The growth of the garment and textile industry has also helped raise incomes of less-skilled people living in poverty in Bangladesh, and, in particular, is one of the few sources of job opportunities for women. Around two-thirds of the industry's workers and almost 80 percent of the sewing line workers are female.<sup>i</sup>

While the overwhelming majority of sewing floor workers in the Bangladeshi garment sector are female, managers are still almost all male. In a series of projects, we have examined the challenges of transitioning women into supervisory roles. Our research has helped factories select better female candidates for supervisory positions, helped training providers hone the content of their training, and led to an increase in female supervisors in the sector.<sup>ii</sup>

This approach to building and analyzing female leadership is novel in the academic literature. Previous work in low- and middle-income countries focuses on the effects of female employment on outcomes in the household. Studies have shown that female employment leads to higher incomes and increased female bargaining power. Additionally, higher opportunity costs of marriage and children leads to an increase in girls' education, lower fertility and marriage rates, and improved child health and living standards.<sup>iiiivvvvii</sup> In contrast, studies in high-income countries have mainly analyzed the effects of women entering corporate executive roles on firm performance or female employment, with mixed results.<sup>viiiixxxi</sup> Non-experimental evidence from India, indicates that that pre-conceptions about management styles lead to female garment supervisors receiving lower evaluations and wages while eliciting higher productivity<sup>xii</sup>.

The transition to female leadership is important from both an equity and productivity perspective. The sector has traditionally drawn supervisors from the 20 per cent of sewing floor workers who are male. But the growing economy has opened many alternative employment options for males. Surveys with several thousand sewing machine operators indicate that the sector is drawing less skilled males compared with 10 years ago. Males surveyed years ago who entered the sector between 2000 and 2010 had education levels significantly higher than the average for their cohort in the broader population. This positive selection of males has disappeared among those entering the sector in recent years. Therefore, understanding best practices for training and supporting women into leadership roles is important for the industry generally, as well as from an equity standpoint.

Data we have gathered in past projects provide a mixed picture of the effect of female leadership on the beliefs and attitudes of female workers. Previous work shows that female supervisors often face challenges and discrimination in the workplace, from their peers, line workers, and upper management. We've also found that female workers have significantly lower confidence in their ability to be managers as compared to male workers, which is compounded by general negative attitudes of both male and female workers towards female technical ability. Our past studies have shown that female supervised lines perform similarly to male supervised lines in terms of efficiency. However, data on female supervisor impacts on worker wellbeing are less conclusive.

These past results were generated from either very small sample sizes or from workers who were only working with a new trialing female supervisor, rather than a fully promoted, established female supervisor. Given this, we were inspired to conduct a study with a larger sample of workers and firms to understand in which areas female leadership improves the circumstances for workers and in which areas female leaders on the production floor may require increased support or training.

## Methodology

This study is cross-sectional and exploratory. While inspiration for this study comes from impact evaluations in firms, this research aims to generate general knowledge on attitudes and skills to inform factory practices and supervisor training interventions going forward. Where relevant, we note when our results are significant given the sample sizes to inform decision-making based on these findings. However, it must be recognized that all findings are based on correlation; we are therefore unable to comment on causation in this report.

### Sample

The study draws from survey data with 1,030 garments workers and administrative data from eight ready-made garment firms in the Dhaka area. All eight factories were participants of former projects with University of Oxford/ IPA. The sample of workers were surveyed from 104 unique production lines, on which 505 workers are led by male supervisors and 525 are led by female supervisors. While the majority of sampled workers are female, 155 participants (15%) of the sample is male, which is about representative of a typical production line. About 17% of the male-led line sample is male, whereas 13.4% of the female-led line sample is male. We find that compared to male workers, female workers are significantly less educated, work at lower-level grades, have less industry tenure, have greater factory tenure, have more children, and are more likely to be unmarried. There are no significant differences in age between our samples of male and female workers.

Table 1 outlines the sample demographics by line type. Male and female-led lines do not have any significant differences in demographics of workers. Limiting the sample to only female workers, there continues to be no significant differences in demographics of operators on female-led lines as compared to male-led lines.

**Table 1: Line operator demographics**

<b>Male supervised line</b>	<b>Female supervised line</b>	<b>P-value</b>
Mean	Mean	
(SE)	(SE)	

Age	27.03 (0.24)	26.88 (0.23)	0.6773
Year of Schooling	5.95 (0.12)	5.82 (0.13)	0.4586
Grade	4.72 (0.06)	4.9 (0.06)	0.3949
Married	1.83 (0.02)	1.85 (0.02)	0.4351
Industry tenure (days)	2158 (69.19)	2111 (64.94)	0.6199
Factory tenure (days)	1229 (50.29)	1305 (51.28)	0.2946
Children	1.30 (0.04)	1.27 (0.04)	0.5736
Observations	505	525	
Note: t-test analysis			

### Data collection

Survey data collection was conducted in two waves, with four factories surveyed in each wave. Since factories typically have very few female supervisors, we sampled from all lines supervised by females and randomly selected a comparable set of lines led by male supervisors. The team interviewed randomly selected workers from the identified lines in the sewing department.

Data on demographics, workplace satisfaction measures, workplace communication, and management practices were collected through in-person surveys at the factory. During the in-person survey, respondents were asked to provide their phone number for the survey team to conduct a follow-up phone survey. One to two weeks after the in-person survey, the survey team conducted the phone survey to collect data on worker wellbeing, workplace harassment, and supervisor assessments.

Production reports, salary reports, and other forms of administrative data were collected from all eight factories to collect information on worker absenteeism, line-level efficiency and quality. We further conducted seven focus group discussions about attitudes and experiences towards female supervisors. Two of these focus group discussions sessions were with all male operators and five were with all female operators.

## Analysis

Our analysis is focused on indicators of worker career aspiration, wellbeing, and productivity. In the below table, we outline the impact measures that are used in this report. In the following sections, we compare the differences in these indicators between male and female lines, controlling for supervisor tenure, worker grade, and other demographics and variables where appropriate. For certain variables, we compare impacts on only female workers. In other cases, we compare the differences between male and female attitude and experiences working with female supervisors.

**Table 2: Impact Indicators**

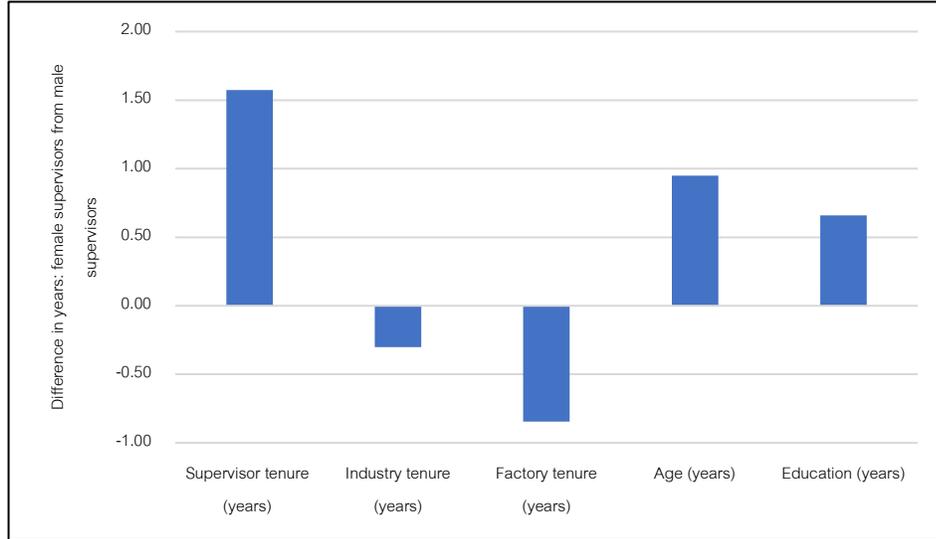
Aspiration		Wellbeing		Productivity	
Measure	Source	Measure	Source	Measure	Source
1. Worker promotion	Factory HR reports	1. Mental health	Phone survey	1. Supervisor diagnostics	Diagnostics exam
2. Career plans and Confidence	In-person survey	2. Worker absenteeism	Factory HR reports	2. Line efficiency and quality	Factory production reports
3. Family support	Phone survey	3. Worker satisfaction	Phone survey, Focus group discussions	3. Operator assessments of supervisors	In-person survey, Focus group discussions
4. Attitudes towards gender	In-person survey, Focus group discussions	4. Grievance reporting	In-person survey		
		5. Workplace harassment	Phone survey, Focus group discussions		

## Productivity

### Supervisor diagnostics

Male and female supervisors in our sample have a similar age, industry tenure, and factory tenure. However, female supervisors have significantly shorter supervisor tenures and significantly lower education levels (Figure 1). Controlling for education, age and tenure, significant differences between male and female supervisors in diagnostic scoring are that female supervisors are less likely to aspire to become line chiefs, female supervisors have less family support, and female supervisors have stronger agreement with authoritarian management practices as compared to their male counterparts (Table 3).

**Figure 1: Male supervisors are older and more educated, and have greater supervisor tenure, shorter industry tenure, and shorter factory tenure**



There is no significant difference in how female and male supervisors self-rate their overall ability to be a supervisor. Male supervisors self-rate their ability higher than female supervisors do to motivate operators, interact with operators, correspond with management, be confident, teach new techniques, meet targets, manage machines, help operators, and correct mistakes. Women self-rate their ability to remain calm higher than male supervisors do. However, the only measure that is significant among these supervisor skills is male supervisors' higher self-rating in their ability to correct mistakes.

**Table 3: SV diagnostics scoring by gender with female supervisor tenure**

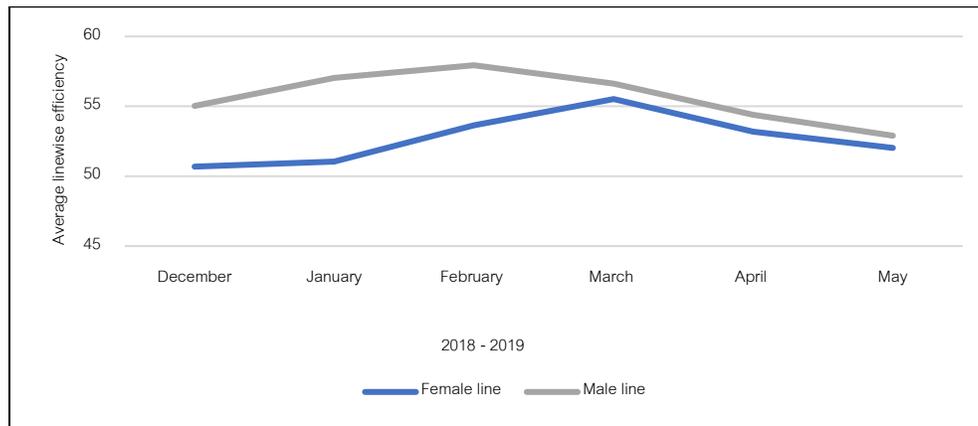
	(1) Garments knowledge score	(2) Machine knowledge test	(3) Line balancing test	(4) Numeracy test	(5) Aspiration	(6) Family support	(7) Self- efficacy	(8) Empowerin g managemen t style	(9) Work satisfacti on
Female	-0.49 (4.85)	-2.82 (2.50)	-2.87 (3.12)	-6.46 (7.65)	-1.54* (0.85)	-12.82* (8.73)	1.48 (2.21)	-1.93** (0.97)	0.13 (0.27)
Education	2.85**	-0.16	-1.29	1.42	0.68***	-0.48	-0.21	0.39	-0.06

	(1.30)	(0.67)	(0.84)	(2.06)	(0.21)	(2.35)	(0.59)	(0.26)	(0.07)
Age	-1.25***	-0.11	0.11	-0.36	0.13	0.31	0.24	-0.03	0.03
	(0.51)	(0.26)	(0.33)	(0.81)	(0.09)	(0.92)	(0.23)	(0.10)	(0.03)
SV tenure	0.14	-0.42	-0.11	1.37	-0.01	0.75	-0.54	0.01	-0.09**
	(0.80)	(0.41)	(0.51)	(1.26)	(0.01)	(1.44)	(0.36)	(0.16)	(0.04)
Obvs	105	105	105	105	105	105	105	105	105
R-squared	0.15	0.03	0.03	0.03	0.16	0.04	0.03	0.07	0.05
*p-value<0.1 **p-value<0.05 ***p-value<0.01									

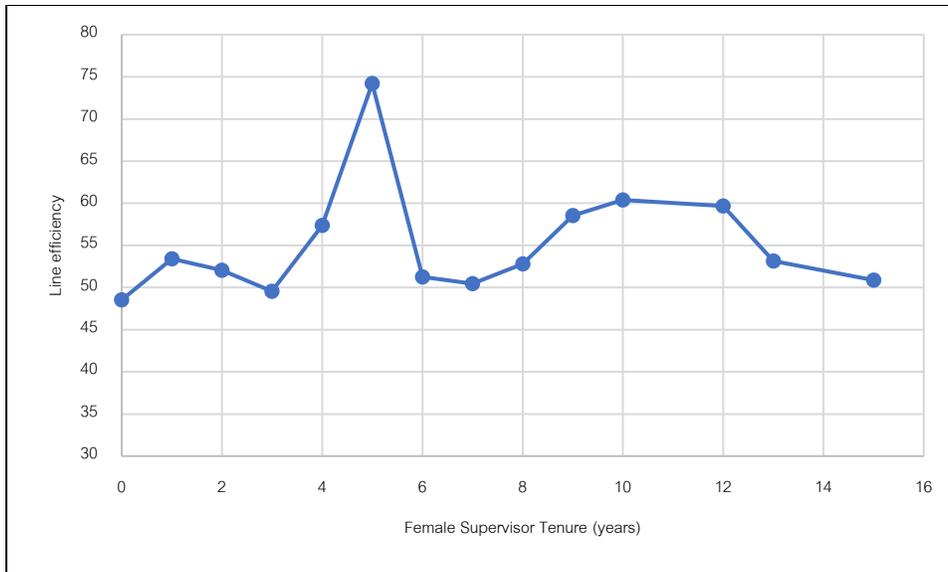
### Line efficiency and quality

Controlling for running days and factory differences, female lines have significantly lower efficiency than male lines on average across the full set of lines in the eight factories (Figure 2). One female-led lines, we find that increases in efficiency are positively and significantly correlated with increases in tenure as a supervisor, as shown in Figure 3.

**Figure 2: Average line-wise efficiency is lower on female-led lines**



**Figure 3: Among female supervised lines, line efficiency increases significantly with supervisor tenure**



Controlling for running days and factory differences, the percentage of garments that requires alteration is significantly higher on female-led lines than male-led lines. Further, it should be noted that the female supervisors have significantly shorter managerial tenures than male supervisors do, which may account for the differences we see here. When controlling for supervisor tenure on a smaller set of lines where we have that information, the difference in the alteration rate (garment quality) between male and female-led lines becomes insignificant.

### Operator assessments of supervisors

In surveys with line workers, we asked participants to rate their supervisors across a set of ten skills that are important for the supervisor position: motivating operators, interacting with operators, interacting with managers, being confident, remaining calm, teaching techniques, meeting targets, possessing machine knowledge, helping operators, and correcting mistakes. Controlling for whether the supervisor was trained, supervisor tenure, participant ratings of a typical supervisor, and worker demographics, workers on female-supervised lines rated their supervisor lower for each of the ten skills as compared to workers working on male-supervised lines. However, all these measures are insignificant except for two: female supervisors are rated significantly lower than male supervisors for meeting targets and possessing machine knowledge.

As shown in Table 4, when doing the same regression as described above while controlling for operator gender and the interaction of female operator on a female-led line, the only significant finding is that workers rate female supervisors significantly worse for “helping operators.” Female supervisors overall are significantly more likely to rate female supervisors higher for correcting mistakes, whereas female supervisors on female-led lines are significantly more likely to rate their supervisor worse for correcting mistakes.

**Table 4: Supervisor Assessments**

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
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	Motivating Operators	Interacting with Operators	Interacting with managers	Confidence	Remaining calm	Teaching Techniques	Meeting Targets	Machine Knowledge	Helping Operators	Correcting Mistakes
Female-led line	-0.18 (0.21)	-0.25 (0.30)	0.00 (0.32)	-0.00 (0.29)	-0.09 (0.25)	-0.30 (0.27)	-0.25 (0.20)	0.07 (0.18)	-0.32* (0.21)	0.27 (0.23)
Female operators	0.01 (0.15)	0.07 (0.23)	0.02 (0.25)	0.09 (0.24)	0.09 (0.18)	-0.03 (0.22)	-0.02 (0.16)	0.18 (0.20)	-0.03 (0.15)	0.34** (0.19)
Female operator, Female line interaction	0.19 (0.21)	0.06 (0.34)	-0.06 (0.34)	-0.10 (0.32)	-0.01 (0.27)	0.12 (0.30)	0.01 (0.22)	-0.40 (0.28)	0.37 (0.25)	-0.46** (0.25)
SV trained	-0.08 (0.19)	-0.02 (0.22)	-0.09 (0.17)	-0.12 (0.2)	-0.31 (0.21)	-0.22 (0.17)	-0.12 (0.15)	-0.19 (0.17)	-0.18 (0.18)	-0.10 (0.15)
SV tenure	0.01 (0.02)	0.02 (0.02)	-0.01 (0.02)	-0.01 (0.02)	0.03 (0.02)	-0.01 (0.02)	0.01 (0.01)	0.01 (0.04)	0.03* (0.02)	-0.01 (0.02)
Rating of typical supervisor	0.51*** (0.04)	0.52*** (0.04)	0.58*** (0.02)	0.53*** (0.03)	0.65*** (0.04)	0.65*** (0.03)	0.57*** (0.04)	0.50*** (0.04)	0.58*** (0.03)	0.58*** (0.02)
Worker grade	-0.07* (0.04)	-0.02 (0.04)	-0.04 (0.04)	0.05 (0.04)	-0.03 (0.04)	-0.04 (0.04)	-0.05* (0.03)	-0.01 (0.04)	-0.01 (0.04)	0.03 (0.04)
Age	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.00 (0.01)	-0.01 (0.01)	-0.00 (0.01)	-0.00 (0.01)	0.00 (0.01)	0.00 (0.01)
Education	0.01 (0.02)	-0.01 (0.02)	-0.01 (0.02)	-0.03 (0.02)	0.01 (0.02)	-0.03*** (0.02)	-0.01 (0.01)	0.01 (0.02)	0.01 (0.01)	-0.01 (0.02)
Observations	958	958	958	958	958	958	958	958	958	958
R-squared	0.32	0.30	0.35	0.31	0.40	0.44	0.44	0.28	0.38	0.42

\*p-value<0.1 \*\*p-value<0.05 \*\*\*p-value<0.01

**Figure 4: Differences in how workers rate supervisors based on worker gender**

Rate female supervisors		Rate male supervisors higher
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<b>higher</b>		
	<b>Motivating operators</b>	
	<b>Interacting with operators</b>	 
 	<b>Corresponding with management</b>	
	<b>Confidence</b>	
	<b>Remaining calm</b>	 
	<b>Teaching new techniques</b>	 
	<b>Meeting targets</b>	 
	<b>Understanding machines</b>	
	<b>Helping operators</b>	
	<b>Correcting mistakes</b>	

\*\*\*indicates significant finding

Figure 4 outlines differences in how workers rate female versus male supervisors by skill by worker gender. Significant findings are that both female and male workers rate male supervisors higher for being able to meet targets. Female workers rate male supervisors significantly higher for understanding machines, while male workers rate female supervisors insignificantly higher for understanding machine. Male workers rate male supervisors significantly higher than female supervisors for helping operators. For correcting mistakes, female workers rate male supervisors significantly higher whereas male workers rate female supervisors significantly higher. For half of the ten skills, male and female workers rated opposite genders as better performing.

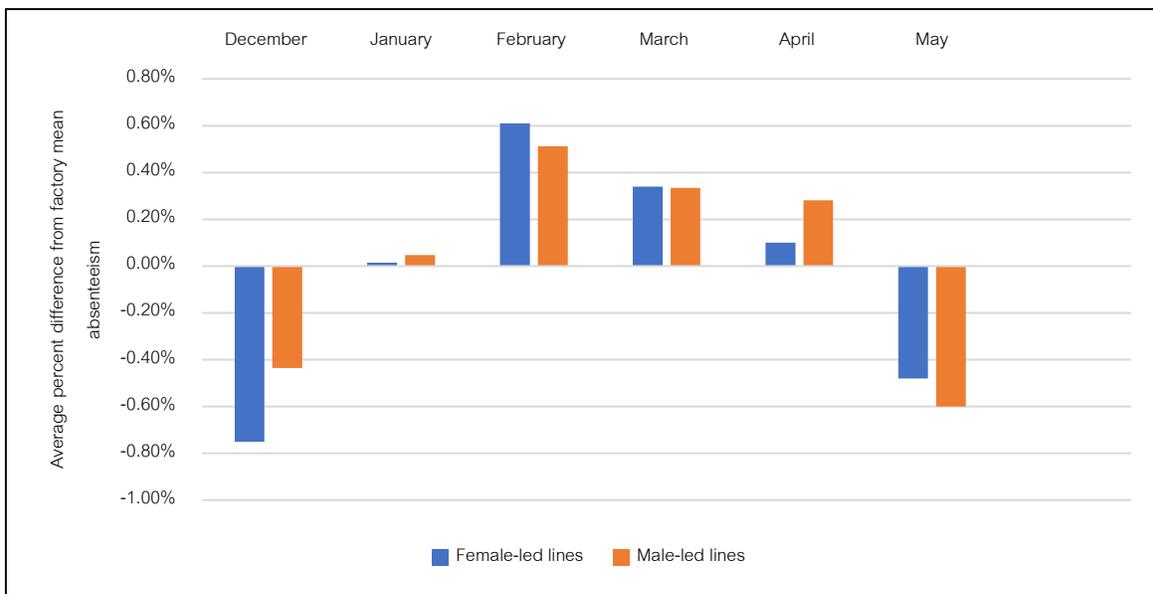
We also asked participants how many times their supervisor praised and practically demonstrated skills in the past month. Controlling for the participant’s grade, whether the supervisor was trained, and the supervisor’s tenure, workers on female-led lines report that their supervisor praises and practically demonstrates skills less than workers on male-led lines report. However, these measures are insignificant.

## Worker Wellbeing

### Worker absenteeism

There is no significant difference in worker absenteeism between male and female-supervised production lines in our sample. As shown in Figure 5, lines led by males and females follow a similar trend of absenteeism across the six months in which data was collected.

**Figure 5: Absenteeism is similar on female-led lines as compared to male-led lines**



### Workplace satisfaction and grievance reporting

Indicators of satisfaction were key areas of focus in our surveys with workers. In the surveys, we asked workers if they were “very satisfied,” “satisfied,” “unsatisfied”, or “very unsatisfied” with feeling listened to, treated with respect, having career opportunities, feeling appreciated, and with training and support at the workplace. We also asked workers about communication; how often they approach their supervisor about issues at work, how often they share personnel concerns with their supervisor, and whether they feel that they can share personal issues with their supervisor.

Looking at specific aspects of workplace satisfaction, displayed in Table 5, there are no significant differences in male and female-led line workers. This is the same result when limiting the sample to only female workers. However, workers on female-led lines are significantly more likely to agree with the statement: “I feel like I can share personal issues with my supervisor.” The likelihood of agreeing with this statement is not significantly higher on female-lines for male workers, but is significantly higher on female-lines for female workers.

**Table 5: Workplace satisfaction**

	(1)	(2)	(3)	(4)	(5)	(6)
	Feeling Listened to	Treated with respect	Career Opportunity	Feelings appreciated	Training & Support	Feel like can share issues with SV
Female line	-0.08 (0.06)	-0.03 (0.06)	-0.08 (0.08)	0.02 (0.05)	-0.11 (0.07)	0.11** (0.05)
Worker grade	0.03 (0.02)	0.00 (0.02)	0.04 (0.03)	0.01 (0.02)	0.06** (0.03)	0.06** (0.02)
SV tenure	-0.01 (0.01)	-0.01 (0.01)	0.01 (0.01)	-0.01 (0.01)	0.01 (0.01)	0.00 (0.01)
Observations	958	958	958	958	958	958
R-squared	0.01	0.01	0.01	0.02	0.01	0.02

\*p-value<0.1 \*\*p-value<0.05 \*\*\*p-value<0.01

Female operators are significantly more likely to report sharing concerns with their supervisor on female-led lines as compared to male-led lines. Female operators on female-led lines are significantly more likely to agree with the statement “if I have a personal issue affecting my work, I feel I could share this issue with my supervisor” than female operators on male-led lines. However, among male operators, there is no significant difference in reports of sharing personal issues or feeling like one could share personal issues on male-led lines as compared to female-led lines.

When asked how many times do you approach supervisors to tell them about issues that affect workers, there are no significant differences between how often male operators and female operators speak to male supervisors, nor between how often male operators and female operators speak to female supervisors, controlling for worker grade and supervisor tenure. Both male and female operators are not significantly more likely to speak with their supervisor about issues on female or male led lines.

Across lines, female workers are significantly more satisfied with being treated with respect as compared to male workers. Female workers also report being significantly more satisfied with feeling appreciated and recognized than male workers. However, it should be noted that male and female workers may not have comparable standards for these measures.

The focus group discussions with workers speak significantly to the openness that workers, particularly female workers, feel with female supervisors as compared to male supervisors. Participants gave several examples of being able to share personal issues or family emergencies with female supervisors. In most cases, workers found their female supervisor to be supportive and reactive to their needs. Two workers provide examples of their female supervisor assisting them with personal issues:

*“If we say a female supervisor that I have a problem with my child, then she gives more sympathy than a male. She understands the situation, but the male does not. If she can't give the leave then she tries to manage” -Male operator*

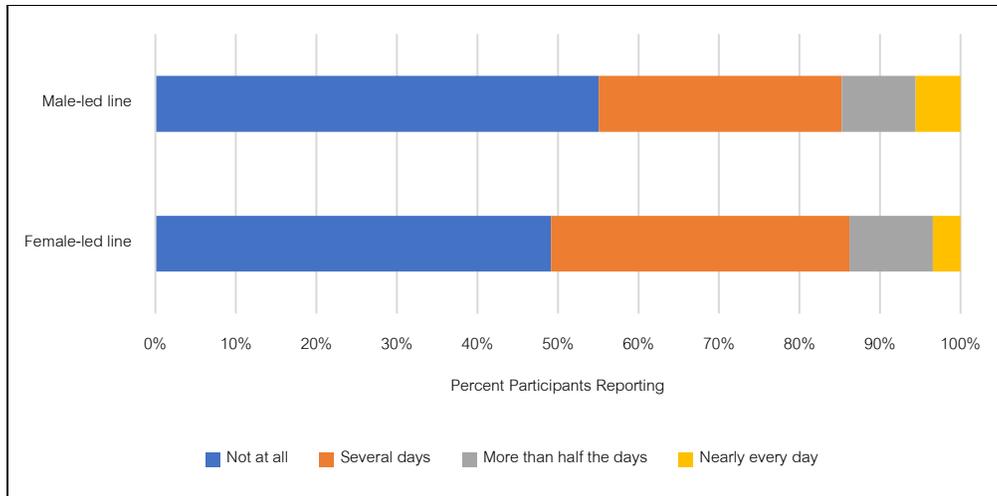
*“I am sharing my experience. In our line all operator does not get same wages. I was a general operator then become junior operator. I told madam that I can't run myself with this salary. Madam told me to not worry. After one-month madam changed my work and also increased my salary. I can't share my problem with male supervisor but with female supervisor. She will solve my problem. We can get help from a female supervisor or can share our secret with her. It is not possible with a male” – Female operator*

### **Workplace harassment**

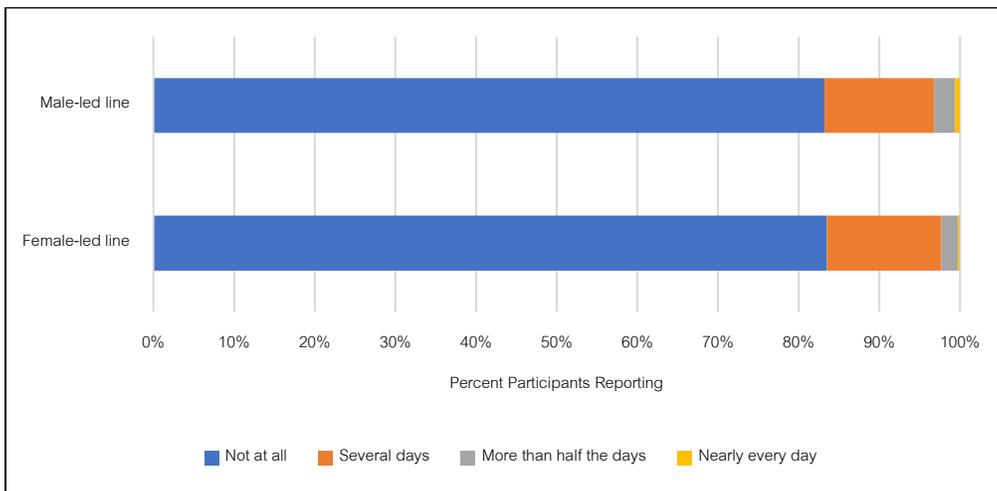
In the phone surveys, we asked workers about the frequency of shouting and of uncomfortable behaviors (such as flirting, whistling, unwelcome touching) (Figure 6, 7). We also asked workers if they have ever experienced sexual talk or touch by their own supervisor and by managers generally. For workers generally and for just female workers specifically, there are no significant differences in reports of shouting, uncomfortable behaviors/ harassment, and sexual talk or touch by managers on female-led lines as compared to male-led lines.

Workers on lower grades are significantly more likely to experience sexual talk or touch from their managers, as compared to workers at higher up grades. A total of 70 workers (6.85%) reported that they had ever experienced sexual talk or touch by their primary supervisor. Of these 70, 59 were female and 11 were male. Twenty-one workers (20 female, 1 male) reported that they were ever touched or talked to sexually by another manager. Of these, only 4 said that they told someone that this happened to them.

**Figure 6: Reports of shouting are similar between male and female-led lines**



**Figure 7: Reports of harassment are similar between male and female-led lines**



Focus group discussions with workers revealed varying experiences with verbal harassment and authoritarian attitudes by male versus female supervisors. On the one hand, workers discussed that female supervisors can be aggressive and use bad language to scare workers into working hard. This is particularly the case for female workers, who shared while male supervisors do not feel comfortable using slang and derogatory language with females, female supervisors are more comfortable with this in the female-to-female interaction. Two workers discuss this here:

*“A female supervisor can use slang but a male supervisor can’t” – Female operator*

*“It is difficult to hear bad thing about parents. Female supervisor sometimes uses extremely bad language but male does not. Male doesn’t use bad language even though production is low. Female supervisor thinks that we both are female so she does not think about the language which she is using. But a male supervisor is careful about his language so, he does not use any inappropriate language easily” -Female operator*

Other workers discussed that female supervisors tend to stay on the line more and be more involved with operators, which is experienced as increased strictness by workers:

*“When we work under a male supervisor, he doesn't visit the line very frequently. Once or twice he comes and instructs to work. But a female supervisor always stays at line to look after the work. Female shouts more to get production but male shouts less” - Female operator*

On the other hand, several participants discussed how female workers have less authority on the line and therefore are more encouraging and calmer. However, participants highlighted that female supervisors are more less aggressive with male workers, and it isn't clear whether they are less aggressive with both male and female workers:

*“Females are cool but males are angry. Male gives more pressure but female can't. Female gives pressure to females but she can't give pressure to male” – Male operator*

*As male are angry so she can't scold them much. As we female are weak so they scold us. Male supervisor sends us to line chief if we can't work. But female supervisor first consoles us and then if we don't listen then she takes us to line chief. First, she tries herself to manage if she can't then take us to line chief. -Female Operator*

Some workers, particularly those in the male focus groups, shared that it is inappropriate for females to speak loudly or aggressively:

*“Male says loudly but the female says politely. If she also says loudly like him then it seems unusual” -Male operator*

## **Mental health**

We surveyed on several different indicators of mental health: 1) anxiety using the Generalized Anxiety Disorder Patient Questionnaire 2) number of times felt hurt or stressed in the past two weeks 2) number of times felt happy or cared for in the past two weeks 3) number of times thought about quitting your job in the past two weeks and 4) level of happiness in the past two weeks.

There are no significant differences in any of these indicators for workers generally and for female workers specifically between male-supervised lines and female-supervised lines, controlling for demographics and supervisor tenure. Though all insignificant, female workers on female-led lines report a higher number of incidences of feeling hurt or stressed, lower number of instances of feeling happy or cared for, higher number of instances of thinking about quitting their job, higher rates of anxiety, and lower happiness levels.

## **Aspiration**

### **Worker promotion**

There is some evidence from the focus group discussions that female workers feel more comfortable asking female supervisors for skill-development opportunities, pay raises, and promotions. The following quote describes some female workers attitudes towards asking for support in learning a new work task:

*“I can say her everything. Even if she is angry we can say her easily, but we can't say to male. We feel confusion to share with male he can rebuke us or can say something. If I want to learn a work task but I feel nervous to say it to a male supervisor because he can rebuke me as he taught it before. But to female we say it easily. We are afraid of males” - Female operator*

### Career paths and confidence

There is no significant difference, controlling for worker grade and supervisor tenure, in career aspiration among female workers on male-led and female-led lines. The proportion of female workers who would accept a promotion in the future is comparable across the two types of production lines, though female workers on female-led lines are insignificantly more likely to say that they would accept an offer for promotion in the future, as shown in Table 6. Female operators working with female supervisors are insignificantly more likely to rate their ability to be a supervisor higher than female operators working with male supervisors.

**Table 6: Table 6: Confidence and Aspiration**

	(1) Accept Promotion to SV	(2) Self-rated SV ability (operators)	(3) Self-rated operator ability (helpers)
Female line	0.13 (0.16)	0.01 (0.17)	-0.27 (0.43)
Worker grade	0.12 (0.09)	0.08 (0.10)	
Age	-0.02 (0.02)	0.01 (0.02)	-0.04 (0.04)
Education	0.01 (0.03)	0.02 (0.03)	0.07 (0.09)
Factory tenure	-0.00*** 0.00	0.00 0.00	0.00 0.00
SV tenure	0.05*** 0.02	0.02 0.03	-0.10 0.07
Observations	680	680	125
R-squared	0.04	0.00	0.03

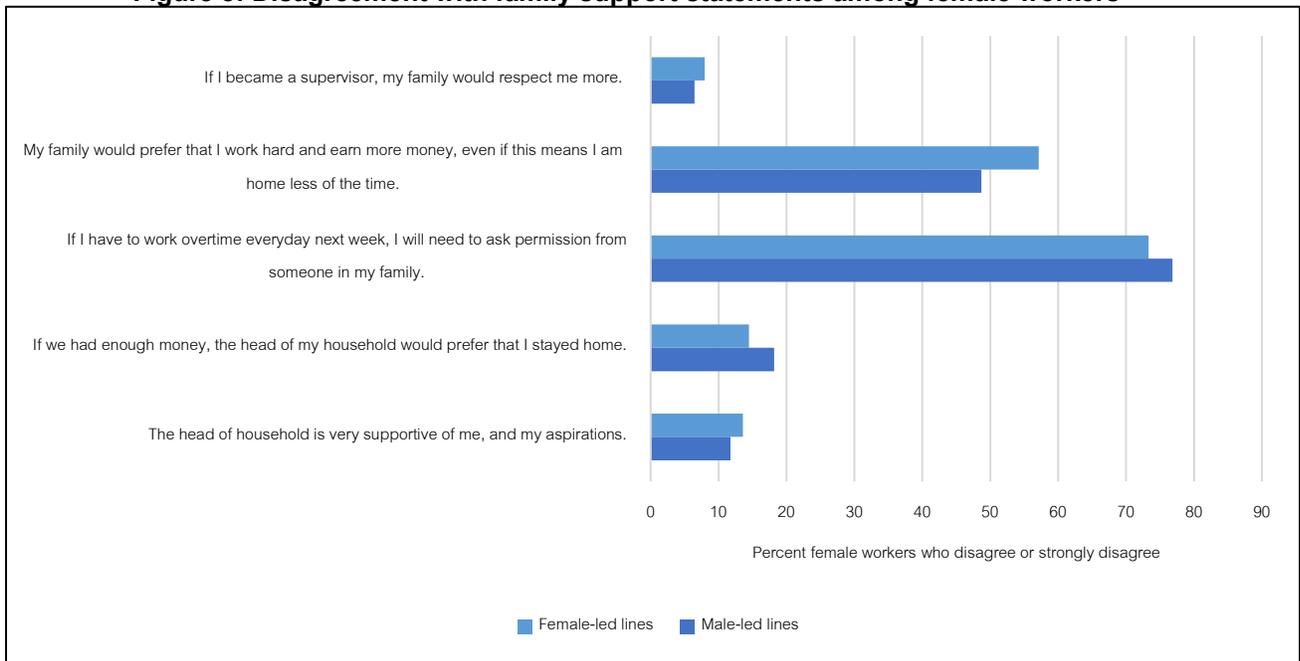
### Family support

In the surveys we asked workers their agreement level with the following statements: 1) The head of my household is supportive of me and my aspirations 2) If we had enough money, the head of my household would prefer that I stayed home 3) My family would prefer that I work hard and earn more money, even if this means I am home less 4) If I became a supervisor, my family would respect me more 5) If I was promoted to supervisor today, my household members would disapprove.

Findings on female leadership’s impact on family support for female workers are inconclusive. Female workers on female-led lines are significantly more likely to agree with the statement “the head of my household is supportive of me and my aspirations.” Female workers on female-led lines are insignificantly more likely to disagree with the statement, “if I was promoted to supervisor today, my household members would disapprove.”

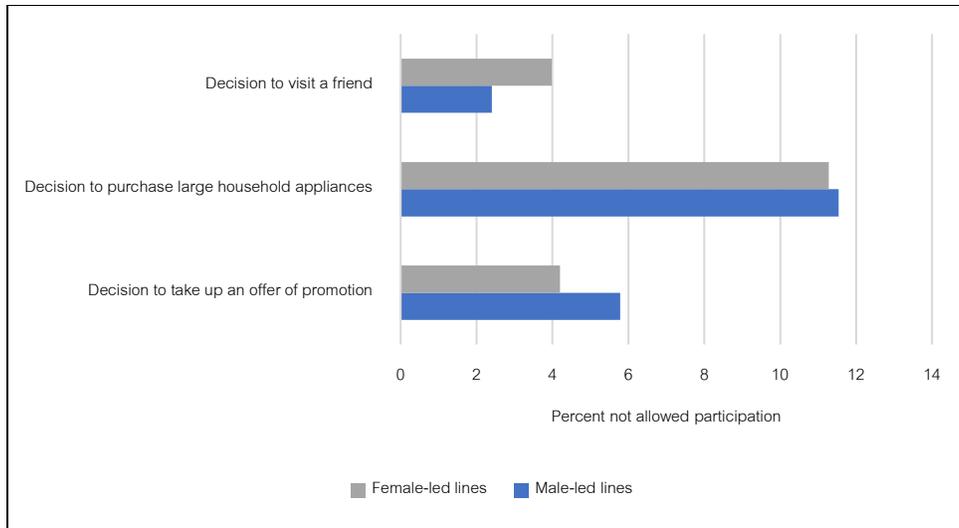
On the less supportive side, female workers on female-led lines are insignificantly more likely to agree with the statement “if we had enough money, the head of my household would prefer that I stayed home.” Female workers on female-led lines are insignificantly more likely to disagree with the statements “My family would prefer that I work hard and earn more money, even if this means I am home not as much” and “if I became a supervisor, my family would respect me more.” Figure 8 outlines the percent of female workers overall that disagree with certain statements about family support by supervisor gender.

**Figure 8: Disagreement with family support statements among female workers**



In the surveys, we also asked workers about the level of participation they are allowed in certain decisions: the decision to visit a friend, the decision to purchase large household appliances, and the decision to take up an offer of promotion. Controlling for education, age, and marital status, there are no significant differences in the level of household decision-making participation between female workers working on female-led lines and female workers working on male-led lines, as shown in Figure 9.

**Figure 9: Percent of female workers reporting not being allowed participation in decisions**



### Attitudes towards gender

Workers on female lines significantly prefer working for a female supervisor, while the opposite is true for workers working on male lines. Less educated workers and workers with less tenure also prefer working for a female supervisor. Among those who are working on a male-led line currently, less educated, less tenured, and younger workers are more likely to prefer working with a female supervisor. Workers, from both male and female-led lines, perceive that female supervisors receive significantly less support from management than male supervisors do.

As shown in Table 7, workers have experiences with female supervisors that do not meet their expectations for female supervisors. The level of agreement with a description, such as “female supervisors give more personalized training” is significantly lower when asking about their experience of this as compared to their expectation of this happening. The questions about expectations were asked in the in-person survey, whereas the questions about experience were asked on the phone-survey.

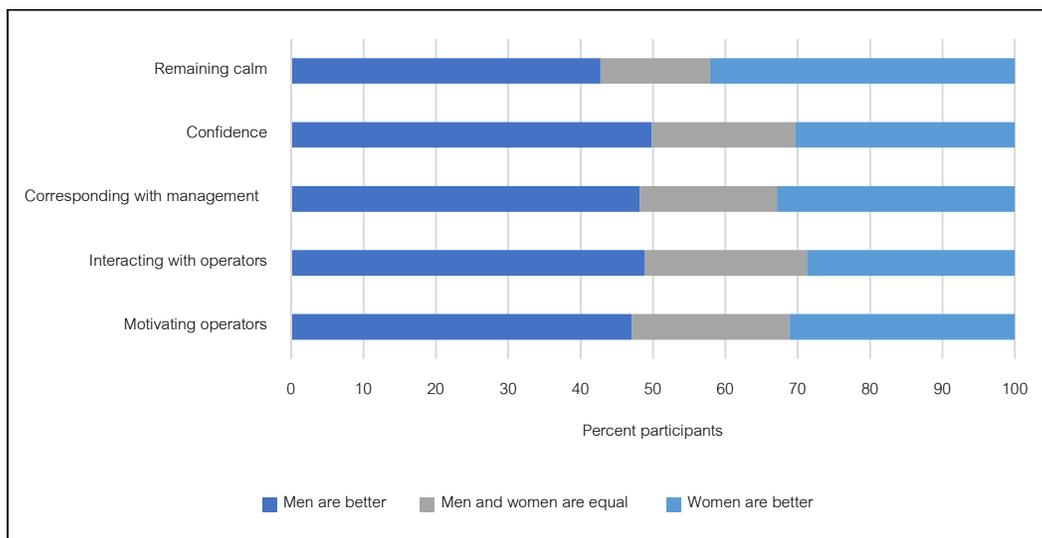
Across a set of skills (remaining calm, being confidence, corresponding with management, interacting with operators, and motivating operators) female workers on both male and female-supervised lines are significantly more likely to say that women supervisors are better than male supervisors, as compared to male operators. Controlling for worker grade, whether they work on a female-led line or not, worker tenure, and supervisor tenure, for each skill apart from remaining calm, female workers are significantly more likely than male workers to say women are better or women and men are equal. For remaining calm, there was no significant difference in reports by male workers as compared to female workers. Figure 10 outlines the percent participants overall who responding to “who better” by supervisor skill.

**Table 7: Expectations of female supervisors**

Expectation	Experience	P-value
Mean	Mean	

	SE	SE	
Female supervisors give more personalized training to female operators	2.03 (0.04)	2.52 (0.05)	0.0000
Female supervisors provide more support during production pressure	2.20 (0.04)	2.70 (0.05)	0.0000
Female supervisors provide more opportunities for promotion to female operators	2.35 (0.05)	2.80 (0.05)	0.0000
Female supervisors use less aggressive language on the production lines	2.70 (0.05)	2.89 (0.05)	0.0069
Workers on female-supervised lines experience less physical and verbal harassment	2.55 (0.05)	2.76 (0.05)	0.0023
*t-test analysis			
*Higher indicates greater disagreement with statement			

**Figure 10: Attitudes towards gender by skill across full worker sample**



## Discussion

Our study indicates several workplace factors that are unsupportive of, if not resistant to, female managers. To preface, we find that female supervisors on average have shorter supervisor tenures, lower education levels, and less family support. These findings alone indicate an increased need for training

and support for female workers. Further, we find that female supervisors, like female operators, are significantly less likely to aspire towards further promotion to higher level positions, as compared to their male counterparts.

Focus group discussions revealed a social norm around cross-gender communication. Workers shared that while female supervisors can be assertive with female workers, this is less acceptable with male workers. This finding is further substantiated by male workers rating female supervisors significantly worse for correcting mistakes, while female workers rate female supervisors significantly better for correcting mistakes. It appears that female supervisors may not feel it appropriate to engage fully with the male workers on their line. This norm likely contributes to frustration for female managers and may potentially impact productivity.

Our data findings also reveal that expectations of working with female supervisors are not met by the experiences of working with female supervisors, as shared by workers. Since female supervisors are rare, one could assume that workers, particularly female workers, would have certain expectations of workplace improvements when working with a female supervisor, such as increased promotion and skills opportunity or better treatment for personal issues. For five different actions, such as “female supervisors give more personalized training,” workers were significantly more likely to say they expected this to happen than to say that it does happen in their experience. This may speak to workers, particularly female workers, having unrealistic expectations of female supervisors. This result is limited in that we are not controlling for length of time working with a female supervisor and we did not measure expectations of male supervisors for comparative purposes. However, this finding does speak to a potential unfair judgement of female supervisors which may contribute to less satisfaction and biased ratings of female managers in firms.

In terms of limitations of female supervisors, we do find significantly lower levels of line efficiency and higher alteration rates on female-supervised lines. However, we also find that efficiency significantly increases as female supervisors increase their tenures in the position. Therefore, efficiency comparisons between male and female lines should be contextualized by the fact that female supervisors have significantly lower supervisor tenure than male supervisors (however, controlling for supervisor tenure, we still see significantly less efficiency on male led lines). While workers rate female and male supervisors similarly for eight of a set of ten common supervisor skills, workers rate female supervisors significantly worse for meeting targets and possessing machine knowledge. It should be noted that in past studies we have found negative attitudes towards females’ abilities to understand machines and to meet targets, even among those who have not worked with female supervisors. These findings may therefore be compounded by social norms around these skillsets.

From the diagnostic surveys, female supervisors are significantly more likely to agree with authoritarian management style practices. These attitudes include views such as workers need to be told what to do, workers are not intrinsically motivated to do well, and if subordinates influence you, you lose influence over them. In focus group discussions, workers discussed that female supervisors can sometimes use more slang and aggressive language, particularly towards female workers, than male supervisors. However, we also find evidence of workers, particularly male workers, not listening to female supervisors or being influenced by their direction to the extent that male supervisors influence. Further, workers report that they observe that female supervisors have significantly less support than male supervisors. Given these findings, we may assume that female supervisors require more support and respect in order to encourage more empowering management styles.

We had hypothesized that female managers would improve the wellbeing, aspiration and satisfaction of workers, particularly female workers. From our surveys, we generally did not find significant evidence to support this. However, we also do not find significant evidence to suggest that female supervisors harm the wellbeing, aspiration and satisfaction of workers. We find that there are no significant differences in levels of work satisfaction between male and female-supervised lines, for workers generally and female workers specifically. Further, we find no significant differences in reports of shouting or verbal and sexual harassment for female-supervised versus male-supervised female workers. We find no significance in happiness, mental health, or aspiration to be promoted among female workers on female-led lines as compared to those on male-led lines. Lastly, we were interested in whether female leadership impacts the household decision-making participation and family support of female workers. We find no significant increases among female-supervised workers in decision-making participation or family support.

While workers do not report significantly higher satisfaction levels on female-led lines, we find that communication and grievance reporting may be benefited by female leadership. Both workers generally and female workers specifically are significantly more likely to report sharing concerns with their supervisor on female-led lines as compared to male-led lines. Further, there is some evidence from the focus group discussions that female workers feel more comfortable asking female supervisors for skill-development opportunities, pay raises and promotions. Generally, our findings indicate that most workers are more comfortable working with female managers. This is particularly the case for more vulnerable workers. While workers say they prefer working with male supervisors and female supervisors on male-led lines and female-led lines respectively, less educated, less tenured and younger workers on both male-led lines and female-led lines are more likely to report preferring to work with a female supervisor.

## Conclusions and Policy Recommendations

Our study findings overall suggest that there are noteworthy positive impacts of female leadership on production floors. Further, there are no significant differences in male and female supervisor scores on garments knowledge, machine knowledge or line balancing knowledge. We find similar wellbeing and satisfaction indicators on male and female-led lines.

However, productivity-wise female supervisors are overall performing worse than their male counterparts. This understood, given the importance of gender equity in the context of a mostly female workforce, as well as the significant findings on positive communication between workers and female supervisors, it is important to effectively promote female leadership and skills. Further, efficiency on female-led lines significantly increases with female supervisor tenure. Our findings here highlight a significant need for increased technical training for female supervisors, particularly those starting out at the job.

This report identifies a stark presence of social norms that may limit female aspiration and performance. We find that workers have high expectations for female line managers relative to experiences; we also find that female workers receive less support from management and less respect from workers, particularly male workers. We have evidence to support the importance of promoting female leadership in firms. Our findings also show that to promote female leadership and to support female supervisors in reaching their highest potential, it is critical that factory management address harmful social norms around gender and leadership among workers across all levels and demographics.

## References

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- <sup>i</sup> Heath, Rachel, and A. Mushfiq Mobarak. 2015. "Manufacturing growth and the lives of Bangladeshi women." *Journal of Development Economics* 115, 1-15
- <sup>ii</sup> Williams, Anaise and Christopher Woodruff, 2018. "New Patterns: Findings on Female Leadership and Support for Change in Bangladeshi RMG Factories." (<https://drive.google.com/file/d/1F0i3lujflkpsc4iussryEXfKjgkep7h7/view>)
- <sup>iii</sup> Heath, Rachel, and A. Mushfiq Mobarak. 2015. "Manufacturing growth and the lives of Bangladeshi women." *Journal of Development Economics* 115, 1-15
- <sup>iv</sup> Asian Center for Development, "Garment Workers in Bangladesh: Social Impact of the Garment Industry." 2015. (<http://acdonline.org/wp-content/uploads/2015/03/Garment-Worker-Survey-Summary-Report-2015.pdf>)
- <sup>v</sup> Atkin, David, "Endogenous Skill Acquisition and Export Manufacturing in Mexico", *American Economic Review*: Vol. 106 No. 8 (August 2016), pp. 2046-85.
- <sup>vi</sup> Jensen, R. (2012). Do labor market opportunities affect young women's work and family decisions? Experimental evidence from India. *Quarterly Journal of Economics*, 127(2):753–792.
- <sup>viii</sup> Bertrand, M., Black, S. E., Jensen, S. Lleras-Muney, A. 2019. Breaking the Glass Ceiling? The Effect of Board Quotas on Female Labour Market Outcomes in Norway, *The Review of Economic Studies*, 86(1):191–239.
- <sup>ix</sup> Dale-Olsen, H., Schøne, P., and Verner, M. (2013). Diversity among Norwegian Boards of Directors: Does a Quota for Women Improve Firm Performance? *Feminist Economics*, 19(4):110–135.
- <sup>x</sup> Marinova, J., Plantenga, J., and Remery, C. (2016). Gender diversity and firm performance: evidence 40 from Dutch and Danish boardrooms. *The International Journal of Human Resource Management*, 27(15):1777–1790.
- <sup>xi</sup> Deszö, C. and Ross, D. G. (2012). Does female representation in top management improve firm performance? A panel data investigation. *Strategic Management Journal*, 33:1072–1089.
- <sup>xii</sup> Ranganathan, A. and Shivaram, R. (2016). (Managerial) Style over Substance: Determinants of Devaluation for Female Supervisors in an Indian Garment Factory.

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