Regulations, Monitoring, and Working Conditions: Evidence from Better Factories Cambodia and Better Work Vietnam

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I. INTRODUCTION

One of the more vexing dilemmas in the area of labor standards and wellbeing is the frequent disconnect between legislated standards and actual working conditions. The standard economic model for thinking about enforcement (Willborn, this volume) posits that the plant manager (the "employer" in Willborn's terminology) will comply with legal standards as long as the probability, p, of enforcement times the damages if caught, D, are greater than the expected cost savings of non-compliance (equal to $(1-p)$ times C). As Willborn points out, the model is elegant in its simplicity, but fraught with complication in application due to uncertainty about the values of all of the variables in the manager's calculation.

In developing countries, the application of the model is even more complicated. Traditional enforcement, as Willborn describes it, relies on either public (government) or private (workers) action. In the standard model, the government chooses the (optimal) level of inspections and enforcement. Private individuals, such as unjustly fired workers, may pursue private enforcement by appealing to the courts. Both of these enforcement mechanisms, however, require functioning institutions. They require governments with sufficient resources to choose sufficiently high level of enforcement to raise the manager's perception of p. Alternatively, they require a functioning judicial system with enough resources to handle the cases workers bring in a sufficiently expeditious manner such that the expected benefit to the worker from bringing a case (the expected benefit minus the expected costs) are high enough to make the worker think that bring the case is worthwhile. Otherwise, private enforcement, as defined by Willborn, fails.

Almost by definition, developing countries lack sufficient resources to justify the standard economic model's appeal to public and private enforcement. While regulations in some developing countries may seem more than adequate to protect workers from the worst conditions, the lack of resources for enforcement remains problematic. The scarcity of resources for enforcing regulations raises the question of the effectiveness of outside involvement in the form of pressure or monitoring programs.

As Oka (this volume) describes, the Better Work (Better Work) program (and its predecessor, Better Factories Cambodia (Better Factories Cambodia)) represents an alternative to public and private enforcement as defined in the standard economic model. In addition to bringing together unions (a common agent of worker-level "private" enforcement of standards) and government, the Better Work program also incorporates market forces by including active participation of the buyers. In the modern globalized value chain model of apparel production, the buyers constitute an important third dimension of potential enforcement that affects the calculus of factory manager. The program also takes advantage of other dimensions of enforcement, such as public disclosure. At the factory level, recent evidence suggests that public exposure in the form of anti-sweatshop agitation has improved working conditions in global supply chains (Harrison and Scorse 2010), but such outside pressure differs from programs that provide systematic monitoring and enforcement.

The Better Factories Cambodia and Better Work programs represent alternatives to the traditional mechanisms of public and private enforcement. There is, therefore, considerable interest in evaluating this approach. We suggest that the ultimate measures of the success of this multipartite approach are i) compliance with national and

international labor standards and ii) factory and worker wellbeing. The goal of this chapter is to examine the role of empirical strategies in investigating and evaluating non-traditional enforcement mechanisms. These non-traditional enforcement mechanisms potentially provide insights to problems beyond apparel – such as the range of situations covered in this volume – that should have broad appeal. To achieve this goal, we present empirical evidence of the changes in compliance and wellbeing in Cambodia and Vietnam.

These two cases provide excellent opportunities to address regulatory indeterminacy in an uncertain world because both developing countries have struggled with insufficient resources for both public and private enforcement of labor standards. As two of the lowest-wage apparel producers, Cambodia and Vietnam are focal points for concerns about human resource practices in apparel supply chains.

Cambodia's experience was pioneering in many ways. The U.S.-Cambodia Textile and Apparel Trade Agreement provided gave Cambodian factories increased access (higher quotas) if working conditions in apparel factories improved (Kolbin 2004, Polaski 2006 Berik and van der Meulen Rogers 2010). As such, the case of Cambodia fits well into the broader debate about the role of labor standards in trade agreements (Elliott and Freeman 2003). With exports restricted by the Multi-Fibre Arrangement (MFA) and the Agreement on Textiles and Clothing (ATC), apparel factories were especially interested in increasing market access.

In 2001, the International Labor Organization (ILO) established the *Better Factories Cambodia* program. The ILO had international credibility that they put behind their monitoring program. The ILO credibility was combined with a multipartite

approach. Multi-stakeholder participation that included the ILO, national government, labor, factory owners, and international buyers[1] distinguished this program from others and increased the receptiveness of factory managers to monitoring.

The program complements monitoring with remediation and training by employing ILO-trained Cambodian monitors that enter factories on unannounced visits. The monitors assess the factory's working conditions and wage requirements and compare them to national law and international standards. Factories then can receive feedback and suggestions to help them address identified concerns.[2] The U.S. government used documented compliance when determining Cambodia's apparel export quota allocation and may have also affected the sourcing decisions of major international buyers.[3] The Better Factories Cambodia program has received considerable attention in policy circles[4] as well as enthusiastic support for applying the model to other countries.

Vietnam is one such case. Operational since 2009, Better Work Vietnam (Better Work Vietnam) is part of what is now known as the Better Work global program. Better Work builds on the Better Factories Cambodia model and synthesizes the ILO expertise in labor standards with the International Finance Corporation (IFC) expertise in private sector development. It is important to note that, unlike Better Factories Cambodia, the Better Work Vietnam program is not tied to quota incentives and remains a voluntary program.

Our results generate several important lessons. First, we find that that the term "working conditions" is perhaps best described as the product of compliance and worker

[1] More information about the Better Factories program can be found at http://www.betterfactories.org/.
[2] For more information, see (Oka, this volume).
[3] The resulting improvements in working conditions were anecdotally credited with Nike's decision to resume production in Cambodia.
[4] See Polaski 2004 and Polaski 2006 as examples.

wellbeing. As such, the term "working conditions" encompasses many areas of compliance that vary over time, across plants, and between workers. Recent research, summarized in the first part of this paper, suggests that factors beyond the standard economic model including the Better Factories Cambodia program, public disclosure, and reputation sensitivity (of buyers) play a critical role in improving compliance.

Given that the connection between Better Factories Cambodia and compliance is very strong, we then turn to measures of wellbeing. The new, albeit preliminary, empirical results from Vietnam suggest that exposure to the Better Work Vietnam program is correlated with improvements in several areas of worker wellbeing. Together the results from Cambodia and Vietnam suggest that the comprehensive model represented by Better Factories Cambodia and Better Work may be successful at overcoming the vexing problems of uncertainty that complicate the application of the standard enforcement model and improving compliance and wellbeing.

2. Compliance: A Review of Evidence from Better Factories Cambodia

Several recent papers analyze compliance in Cambodia in the context of the Better Factories Cambodia program. The Better Factories Cambodia program monitors factories using an instrument with more than 200 questions that cover a very wide range of compliance areas. These question are all evaluated relative to national and international standards and then coded accordingly as binary variables (1 for compliant, 0 for non-compliant). These binary measures are then used to assess overall compliance and compliance in specific areas for each factory.

The literature has formed a clear consensus that compliance improved in Cambodia, at least until the Financial Crisis. Analyzing aggregate reports, Shea et al.

(2010) conclude that Cambodia succeeded in both improving labor standards and preventing their deterioration. While identifying some specific concerns about the monitoring process (such as the difficulty in detecting mandatory overtime and a perception that changes are not implemented quickly enough), they find a strong correlation between the issues identified in the Better Factories Cambodia reports and those identified in personal interviews. Beresford (2009) finds that compliance did not fall in response to an increasingly competitive environment that emerged after the rise of Chinese apparel exports and the end of the MFA/ATC. Berik and van der Meulen Rogers (2010) compare Cambodia to Bangladesh and suggest that the incentives tied to Cambodia's trade agreement explain the improvements in compliance. However, it is important to point out that both exports and compliance continued to improve after MFA/ATC incentives disappeared, suggesting that perhaps additional factors explain improved compliance.

Analysis of factory-level data, such as summarized in Brown et al. (2011b), show broad improvement in compliance over time. In particular, they document a wide range of average compliance across groups – especially in the first visit. They also analyze changes over time and show that, on average, compliance improves across visits, with the categories with the lowest initial compliance demonstrating the greatest improvement. The factories also demonstrate considerable upward convergence over time by showing that among those in the lowest group in the first visit, over 90% move up to the first or second most compliant groups by their fourth visit.

Other results suggest that the increases in compliance have not come at the expense of factory competitiveness. For example, there is a clear and steady increase in

the share of U.S. apparel imports coming from Cambodia. This increase in share is clearly driven by the increase in total value from Cambodia (as opposed to falling values from other countries). Even after the crisis, U.S. imports of apparel from Cambodia recovered and are nearly at pre-crisis levels by early 2011. This recovery is important because it shows that Cambodia remains an important (and seemingly increasingly important) source of U.S. apparel imports after both the end of the MFA/ATC in 2004 and the end of China-specific safeguards that limited that country's apparel exports in 2008. While other countries have been losing U.S. apparel market share (perhaps most notably Mexico), Cambodia's Better Factories Program does not seem to have deterred buyers. Beresford (2009) in particular makes this point, noting that "the application of labour standards has not imposed a cost disadvantage on Cambodian producers."

Another way to approach the question of compliance and competitiveness is to analyze factory closures. Brown et al. (2011c) use survival analysis to identify the potential role that improvements in compliance may have played in the probability of factory closures. Contrary to a model in which improvements in compliance are a net loss for factories (and the benefits mostly accrue to the workers), Brown et al. (2011c) find that these improvements in several areas, such as wage policies, are positively associated with factory survival.

There seems to be a general consensus in the literature that the Better Factories Cambodia period in Cambodia included improvements in many areas, including compliance, exports, wages, and productivity. As noted earlier, many researchers and policy makers have concluded that together these factors are indicative of Better Factories Cambodia success. But exactly what elements of the program have been the

most important for this perceived success? Several possibilities have been identified in the literature that deviate from the standard economic model of compliance. Three of the most prominent include public disclosure, reputation sensitivity, and unions/industrial relations.

Robertson et al. (2011) find that public disclosure encourages compliance. Oka (2010a and 2010b) finds that association with a reputation-sensitive buyer encourages compliance. Together these papers highlight some of the critical variables that factories consider when evaluating the compliance decision. Union development has also received attention. Breseford (2009), for example, suggests that unions are considered separate from working conditions in a World Bank survey of buyers. Miller et al. (2009) echoes this point, noting that factory owners continue to present "dogged resistance" to collective bargaining, even while improving compliance as part of the Better Factories Cambodia program. Indeed, the union protests in Cambodia in July and September 2010, and the outcomes of those job actions, have raised concerns about the prospects for collective bargaining. Even in this environment, however, analysis of the factory-level data suggests improvements in several key areas of industrial relations. For example, Rossi and Robertson (2011) find that compliance in the areas of Collective Agreements, Disputes, and Liaison Officers were either high initially or improved dramatically between the first and fifth visits. Compliance in the area of shop stewards, however, remains relatively low, raising concerns about worker-elected representation within factories.

Willborn (this volume) suggests that economic downturns should reduce compliance. In the context of apparel exporters, one variable that might represent market

conditions is the output price. Since the industry is very competitive, global apparel prices, often measured as unit values, drive the price received by the factory. If falling unit values represent price pressure on firms, it seems likely that their fall would put pressure on firms to regress on compliance. But the opposite seems to be the case in Cambodia. Unit values fell after the end of the MFA, perhaps due to the significant increase in global supply coming from China. Brown et al. (2011a) analyze retrogression in compliance at the factory level and find that retrogression rates are very low. This is consistent with the conjecture that either firms realized that the improvements in compliance were somehow beneficial or that the Better Factories Cambodia program was a binding constraint that kept compliance from worsening.

One potential reason why compliance rarely fell might be that the Better Factories Cambodia involvement improved industrial relations. Rossi and Roberson (2011) conclude that Better Factories Cambodia's monitoring and advisory services aimed at remediation have helped create an environment conducive to improving industrial relations. These improvements in industrial relations (especially in the case of improved communication between management and workers), seem to have facilitated improvements in other compliance areas, such as occupational safety and health, wages, working time, and weekly rest.

Furthermore, factories did not seem to trade off wage compliance for other forms of compliance (Warren and Robertson 2010). This result is consistent with the idea that factories were not operating efficiently along their frontier and therefore were able to increase both wages and compliance. Improvements in compliance may have increased

productivity in a way that allowed firms to also increase wages (at least in the form of compliance with minimum wage laws).

Such increases in productivity have been found elsewhere in the literature. Ichniowski et al. (1997) find that improvements in human resource practices can improve productivity much like improvements in capital or process technology. In Cambodia, the lack of combined data on productivity and compliance has meant that a direct test of the link between compliance and productivity has not yet been carried out. Asuyama et al. (2010), however, collected productivity-level data from Cambodian firms. They argue that within-firm improvements in productivity were correlated with rising profitability and rising wages.

Rising wages are often important for worker wellbeing in developing countries. Increases in productivity that are not passed along to workers represent clear benefits for factory owners and dubious, if any, benefits to workers. Therefore, other analyses have focused on wages and wage growth in Cambodia. Cambodian apparel-worker wages are very low by international standards. Workers earn a base salary of $55 per month and senior workers earn $61 per month. In March 2011, the Labor Advisory Committee (the body that arbitrates apparel sector issues) approved an increase in attendance bonuses from $5 to $7 per month, an increase for meals, and a "seniority" wage increase from $2 to $11 per month (Sothanarith, 2011).

Low wages in apparel reflect low wages in Cambodia generally. Although wages are generally low in many developing countries, Powell and Skarbek (2006) suggest that apparel wages in many countries are often *higher* than domestic alternatives. Robertson et al. (2009) make a similar point, finding positive wage premiums (wages in the apparel

industry that remain after controlling for other factors that affect wages, such as gender, age, and others) in apparel in all five countries examined (Honduras, El Salvador, Madagascar, Indonesia, and Cambodia).

Among these five countries, however, Cambodia stands out in that it is the only country with an operating Better Work program (Better Factories Cambodia) during the period covered by the analysis. Cambodia also stands out as having the highest apparel-specific wage premium -- nearly 35% higher than the average domestic wage -- after controlling for other demographic characteristics. While these premiums fell with the prices of apparel exports (a fall that is largely attributed to falling global prices after the surge of Chinese apparel exports), they remained much higher than before the bilateral trade agreement with the United States.

3. WORKER WELLBEING: NEW EVIDENCE FROM VIETNAM

The previous section demonstrates that there is practically a consensus in the literature of a positive effect of Better Factories Cambodia on compliance (at least until the financial crisis). It is often assumed that compliance translates into improved worker wellbeing, but there are many reasons why this intuitive link may not hold in practice (workers may not value the improvements made by factories, the legal mandates may be too low to improve worker wellbeing, and so on). Like Better Factories Cambodia, BFV uses an instrument with more than 200 questions to asses compliance relative to national and international standards. In this section, we present new results that take advantage of independent worker surveys to measure worker wellbeing and we use formal regression

analysis to identify the relationship between participation in the Better Work Vietnam program and several worker wellbeing measures.

Better Work Vietnam became operational in June 2009 and factory visits began in December 2009. Between January 2009 and April 2011, a team of researchers from Tufts University undertook baseline data collection in Vietnam with the goal of monitoring the Better Work Vietnam (Better Work Vietnam) program. This survey constitutes the first formal external evaluation of the Better Work model, and the first evaluation outside the context of quota incentives. The team collected survey data from a random sample of 30 workers per firm. As of April 2011, 1759 respondents had participated. Respondents were interviewed on a range of topics that included, but were not limited to, basic demographics, workplace conditions (including wages, relationships with supervisors, and factory communication), and health information (of both the individual and the family).

Brown et al. (2011) describes some of the characteristics of workers and their experience in the sample. That document describes the survey instrument and worker characteristics and conditions in more detail. The goal of this paper is to provide some preliminary assessment of how the Better Work program affects many of outcome variables.

The exposure to Better Work is measured in two ways. The first is the number of months since a factory formed a Performance Improvement Consultative Committee (PICC). The PICC is an enterprise-level advisory committee formed to help the factory come into compliance and to improve workplace cooperation. The committee consists of an equal number of management and union representatives and is the key vehicle through

which Better Work Vietnam works with factories to improve compliance. The second measure is the number of months since the first visit. This captures a "dosage" effect. The dosage effect measures the time exposed to Better Work Vietnam. The premise of this measure is that it takes time to learn and apply lessons from Better Work Vietnam. This second measure helps identify additional effects (beyond the PICC) of the Better Work Vietnam program.

To systematically analyze the relationship between the different treatment measures of the Better Work Vietnam program, we use a combination of Ordinary Least Squares[5] and, where appropriate, estimate linear probability models as appropriate (when the particular variables of analysis are dichotomous). The variables analyzed in this preliminary report fall into five categories: remuneration, remittances, factory conditions, factory health care, and supervisors. Each category includes a set of control variables as well as the two treatment variables.

Summary Statistics

The data reveal patterns common to apparel production in developing countries. Workers participating in this study are 81.6% female and 18.4% male. Workers report a wide range of educational attainment. More than half (58.4%) completed lower secondary school and 26.4% completed upper secondary school. A very small number (11.2%) have either no formal education or completed only primary school. Table 1 presents the summary statistics for gender and education.

[5] Ordinary Least Squares (OLS) is the most common regression analysis technique. This statistical approach is used to identify statistical relationships between variables conditional on other variables and allows for straightforward hypothesis testing.

Table 2 presents some other summary statistics for the sample. The data show that 71.4% have been working for their current employer for over one year. This result is consistent with an annual workforce turnover rate of 25%. Over half the workers are currently or have been married. 52.5% report that they are currently married and 1.5% report that they are widowed, divorced or separated. Overwhelmingly, participating workers are from rural areas. 83.6% report growing up in the country and 4.7% grew up near a city. Only 11.6% grew up in a city.

Results

Tables 3-7 contain the (preliminary) results. These results are discussed below in five subsections.

Remuneration

Surveyed workers are asked about concerns in the workplace and what actions they took to address their concerns. With regard to remuneration, workers were asked about concerns with low wages and concern with late payment of wages. Workers also report the (log of the) last payment the worker received and the (log of the) usual payment reported by the worker. Table 3 reflects expected relationships between demographic characteristics and remuneration. In particular, as can be seen in column (3) older and more educated workers receive higher wages. Controlling for other observable variables, female workers earn less, though gender is not statistically significant. Piece-rate workers earn more than other workers.

More educated workers tend to be more concerned about low wages (column 1) and late wage payments (column 2). Workers who have stayed with the factory tend to

be less concerned about low wages (which is consistent with the expectation that the most dissatisfied workers are more likely to leave). Workers that have been promoted are more likely to be concerned about low wages and late payments.

Table 3 shows that, in terms of Better Work Vietnam, the results in the remuneration section that the two treatment variables are positively associated with earnings. The effects on concerns about low wages and late payments are very small and not statistically significant. This result is consistent with the results from Cambodia that find rising productivity and higher wages through time in Cambodia.

Remittances

Remittances are an important part of the worker experience because workers in garment factories are often an important source of support for families (especially families in rural areas). Table 4 shows the results of four different estimation equations: the (log of) the amount sent home and three categories capturing how that money is expected to be used (food, health care, and luxury goods). Table 4 shows that the role of marriage is especially important: married workers send much less money back home (column 1). When they do send money home, however, they are much more likely to send money for food, indicating that poorer families receive more support.

Given the effects on wages, it is probably not surprising that workers in factories with a PICC remit more money (column 1). There is no significant difference between the different categories of support (for either measure of Better Work Vietnam). This result, however, suggests that the PICCs are having positive effects that go beyond the factories and individual workers.

Factory Conditions

There are three variables representing factory conditions shown in Table 5: temperature (whether or not the factory is too hot or too cold), concerns about dangerous equipment, and accidents and injuries. The results in Table 5 show no statistically significant differences between men and women in their concerns about factory conditions. Workers with higher education are more likely to report poor conditions, and piece-rate and married workers are less likely to report poor conditions. Otherwise, however, few of the controls seem to matter for these conditions.

Likewise, there are few statistically significant relationships between Better Work Vietnam treatment variables and compliance. One possible interpretation of these results is that workers are more likely to address other concerns, such as earnings, before addressing factory conditions. Future waves of the survey, therefore, may indicate different results.

Factory Health Care

In developing countries, health care is often difficult to secure. Factories may provide important access to health care facilities by offering a clinic or other services. Table 6 shows that the PICC and months since the first visit have opposite effects. The PICC is associated with more concern about clinic quality, while months since the first visit is associated with perceptions of higher clinic quality. This may be the result of concerns about clinic quality being addressed outside the context of the PICCs. The PICC, however, is associated with increased access to free medicine.

Supervisors

The relationship with supervisors is a very important part of the work experience. In traditional sweatshop models this relationship is very different than in more modern human resource arrangements. To shed some light about the supervisor role and worker relationships, we analyze four variables. Whether or not the supervisor is perceived as one who follows rules (ranked on a 1-5 scale, with 1 being "All of the time" and 5 being "Never"), is an obstacle to promotion, is fair and respectful, and whether or not there workers express concerns about verbal abuse in the factory.

Table 7 shows that females are much more likely to see supervisors as obstacles for promotion (column 2). Piece-rate workers are less likely to report supervisors as following rules (column 1), and younger workers perceive their supervisor as being fair and respectful less often (column 3). Workers that have been promoted are less likely to see supervisors as following rules, being fair and respectful, and are more likely to report verbal abuse (column 4).

Interestingly, Table 7 also shows that piece-rate workers are much less likely to report verbal abuse. The alternative to being paid piece-rate is being paid a straight hourly (or some other time period) wage. But then workers do not have an incentive to produce more per hour. To motivate workers to be more productive, some managers may resort to what might be interpreted as verbal abuse (yelling at workers). This result is quite significant because it suggests that the piece-rate system may be a more efficient way to align incentives in garment factories.

Months since first assessment is positively related to perceptions of supervisors being fair and respectful, but the months since PICC was formed seems to have the opposite effect. The PICC variable is also associated with a lower perception that supervisors are fair and respectful. These results may be consistent with an increased consciousness of factory rules among the workers that comes from the PICC. The months since the first visit is also associated with less verbal abuse, a lower perception of supervisors being obstacles to promotion, and an increased the sense that supervisors are fair and respectful, which suggests that the Better Work Vietnam dosage may be improving relationships in the factory.

6. CONCLUSIONS

If there is any message that emerges from this chapter, it is that more empirical research on effective enforcement strategies is clearly necessary. The Better Work model seems to be successful in improving compliance and worker wellbeing, but many hypotheses about these relationships remain untested. The Better Factories Cambodia program is considered to have been successful in improving compliance in Cambodia's garment sector, and the preliminary evidence from Vietnamese worker surveys reveal several possible positive benefits of participation in the Better Work Vietnam program. Overall the results seem to suggest that both the Better Factories Cambodia and Better Work Vietnam programs successfully improved compliance and worker wellbeing. Analysts from a wide range of perspectives agree that compliance have improved.

In Cambodia, these improvements did not seem to necessarily require quota access, reputation sensitivity, public disclosure, or a significant tradeoff with wage

compliance (although the first three of these did affect compliance). There is considerable evidence that public disclosure plays an important role, but it does not explain all of the improvement in compliance. In fact, compliance still improved when this factor was removed or controlled for in empirical analysis. Furthermore, retrogression is limited, but is affected by factors that also affect initial compliance. Productivity in the industry as a whole and within factories improved, although this has yet to be specifically linked to improvements in compliance. While far from definitive, these results are consistent with the hypothesis that improvements in compliance may bring real gains to factories, perhaps in the form of productivity improvements. Of course other hypotheses are also possible and continued research is critical to further differentiate between the various hypotheses.

In Vietnam, these preliminary results suggest that the Better Work Vietnam program is associated with improvements in worker wellbeing, especially in the areas of worker rights and worker health. The results distinguish between the dosage and treatment effects and reveal an interesting pattern that suggests that the treatment might be important in identifying problems and the dosage effect helps resolve them. To the extent that these areas capture worker wellbeing, these preliminary signs are supportive of the hypothesis that the Better Work Vietnam program is improving worker wellbeing.

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Table 1: Gender and Education in Vietnam Sample

Education Level	Male	Female	Total
None	3	13	16
Primary	38	236	274
Lower 2nd	199	1,166	1,365
Upper 2nd	143	481	624
Short-term Tech	1	6	7
Long-term Tech	10	13	23
Prof. 2ndary	12	38	50
Junior College	3	14	17
BA/BS	7	11	18
Total	416	1,978	2,394

Table 2: Additional Summary Statistics

Variable	Obs	Mean	Std. Dev
Age	2394	27.271	6.630
Married	2394	0.537	0.499
Occupation: Sewer	2392	0.476	0.662
Paid Piece Rate	2392	0.144	0.723
Tenure	2392	4.188	3.285

Table 3: Remuneration

VARIABLES	(1) Low Wages	(2) Late Payment	(3) Log Last Payment	(4) Log Usual Payment
Female	-0.140	-0.071	-0.181	-0.167
	(0.086)	(0.059)	(0.113)	(0.119)
Age in Years	0.002	0.005	0.033***	0.041***
	(0.006)	(0.004)	(0.008)	(0.009)
Highest Education Level	0.078**	0.056***	0.086**	0.154***
	(0.030)	(0.021)	(0.040)	(0.043)
Married	-0.060	-0.097*	0.082	-0.068
	(0.073)	(0.050)	(0.095)	(0.103)
Occupation: Sewer	0.019	0.024	-0.033	-0.015
	(0.049)	(0.033)	(0.063)	(0.066)
Paid Piece-rate	-0.186***	-0.099***	0.124**	0.265***
	(0.044)	(0.030)	(0.063)	(0.068)
Factory Tenure	-0.021*	0.000	0.001	0.006
	(0.011)	(0.007)	(0.014)	(0.015)
Has Been Promoted	0.142	0.106*	-0.369***	-0.362***
	(0.087)	(0.060)	(0.113)	(0.121)
Months since PICC formed	-0.006	-0.001	0.042***	0.007
	(0.012)	(0.008)	(0.015)	(0.016)
Months since 1st visit	-0.000	-0.004	-0.005	0.030**
	(0.011)	(0.008)	(0.014)	(0.015)
Constant	0.254	-0.074	13.373***	12.653***
	(0.212)	(0.145)	(0.278)	(0.300)
Observations	1,667	1,667	1,634	1,462
R-squared	0.024	0.020	0.049	0.058

Notes: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 4: Remittances

VARIABLES	(1) Log Amt Sent Home Past 12mo	(2) Remit for Food	(3) Remit for Health Care	(4) Remit for Luxury Goods
Female	0.167	-0.003	0.022	0.020
	(0.122)	(0.033)	(0.021)	(0.015)
Age in Years	0.004	0.004*	-0.005***	-0.001
	(0.009)	(0.002)	(0.001)	(0.001)
Highest Education Level	0.049	-0.030***	0.003	0.003
	(0.042)	(0.011)	(0.007)	(0.005)
Married	-0.342***	0.156***	-0.068***	-0.027**
	(0.104)	(0.027)	(0.017)	(0.012)
Occupation: Sewer	-0.085	-0.045**	0.005	0.009
	(0.096)	(0.020)	(0.013)	(0.009)
Paid Piece-rate	-0.094	0.015	0.010	-0.008
	(0.069)	(0.017)	(0.011)	(0.008)
Factory Tenure	0.023	0.006	0.000	0.001
	(0.016)	(0.004)	(0.003)	(0.002)
Has Been Promoted	-0.129	-0.134***	0.006	0.003
	(0.117)	(0.032)	(0.020)	(0.015)
Months since PICC formed	0.036**	-0.001	-0.002	-0.002
	(0.016)	(0.004)	(0.003)	(0.002)
Months since 1st visit	-0.002	-0.000	-0.003	-0.002
	(0.015)	(0.004)	(0.003)	(0.002)
Constant	14.789***	0.331***	0.266***	0.072**
	(0.307)	(0.080)	(0.050)	(0.036)
Observations	1,069	1,610	1,610	1,610
R-squared	0.043	0.059	0.051	0.025

Notes: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 5: Factory Conditions

VARIABLES	(1) Too hot/cold?	(2) Dangerous Equipment?	(3) Accidents/Injuries
Female	0.005	-0.004	0.010
	(0.039)	(0.037)	(0.055)
Age in Years	-0.003	0.005*	0.001
	(0.003)	(0.003)	(0.004)
Highest Education Level	0.051***	0.022*	0.049**
	(0.014)	(0.013)	(0.019)
Married	-0.023	-0.071**	-0.132***
	(0.033)	(0.032)	(0.047)
Occupation: Sewer	-0.017	-0.000	0.002
	(0.022)	(0.021)	(0.031)
Paid Piece-rate	-0.100***	-0.180***	-0.175***
	(0.020)	(0.019)	(0.028)
Factory Tenure	0.006	-0.001	-0.002
	(0.005)	(0.005)	(0.007)
Has Been Promoted	0.005	-0.019	-0.013
	(0.040)	(0.038)	(0.055)
Months since PICC formed	-0.006	0.002	0.004
	(0.005)	(0.005)	(0.007)
Months since 1st visit	0.006	-0.006	-0.007
	(0.005)	(0.005)	(0.007)
Constant	0.028	-0.020	0.066
	(0.097)	(0.092)	(0.135)
Observations	1,667	1,667	1,667
R-squared	0.031	0.060	0.037

Notes: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 6: Factory Health Care

VARIABLES	(1) Factory Clinic Quality	(2) Can Cover Health Fees	(3) Free Medicine
Female	-0.043	-0.035	-0.035
	(0.046)	(0.024)	(0.027)
Age in Years	0.002	-0.002	0.000
	(0.003)	(0.002)	(0.002)
Highest Education Level	0.050***	-0.022**	0.011
	(0.016)	(0.009)	(0.010)
Married	0.076*	-0.008	0.047**
	(0.039)	(0.021)	(0.023)
Occupation: Sewer	-0.010	-0.010	0.010
	(0.026)	(0.014)	(0.015)
Paid Piece-rate	-0.071***	-0.027**	0.038***
	(0.023)	(0.012)	(0.015)
Factory Tenure	0.005	-0.001	-0.002
	(0.006)	(0.003)	(0.003)
Has Been Promoted	-0.128***	0.028	-0.026
	(0.046)	(0.024)	(0.028)
Months since PICC formed	-0.015**	0.003	0.008**
	(0.006)	(0.003)	(0.004)
Months since 1st visit	0.022***	-0.003	0.002
	(0.006)	(0.003)	(0.003)
Constant	1.845***	1.355***	0.719***
	(0.113)	(0.060)	(0.067)
Observations	1,657	1,635	1,652
R-squared	0.032	0.011	0.032

Notes: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 7: Supervisors

VARIABLES	(1) Follows Rules	(2) Obstacle to Promotion	(3) Fair and Respectful	(4) Verbal Abuse
Female	-0.051	0.119***	0.025	0.045
	(0.047)	(0.036)	(0.064)	(0.064)
Age in Years	-0.005	-0.002	-0.008*	0.005
	(0.003)	(0.002)	(0.004)	(0.004)
Highest Education Level	0.015	-0.029**	0.048**	0.090***
	(0.017)	(0.013)	(0.023)	(0.023)
Married	0.002	-0.003	-0.003	-0.137**
	(0.040)	(0.030)	(0.054)	(0.054)
Occupation: Sewer	0.033	0.047*	-0.028	0.024
	(0.027)	(0.025)	(0.036)	(0.036)
Paid Piece-rate	-0.069***	0.011	-0.043	-0.296***
	(0.025)	(0.021)	(0.034)	(0.033)
Factory Tenure	0.014**	0.000	0.001	0.008
	(0.006)	(0.004)	(0.008)	(0.008)
Has Been Promoted	-0.182***	-0.021	-0.157**	0.142**
	(0.048)	(0.036)	(0.064)	(0.065)
Months since PICC formed	-0.017***	0.002	-0.056***	0.006
	(0.006)	(0.005)	(0.009)	(0.009)
Months since 1st visit	0.032***	-0.008*	0.060***	-0.016**
	(0.006)	(0.004)	(0.008)	(0.008)
Constant	1.793***	0.554***	1.504***	-0.129
	(0.117)	(0.087)	(0.159)	(0.158)
Observations	1,659	1,414	1,635	1,667
R-squared	0.049	0.028	0.042	0.073

Notes: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.