

Working Conditions, Productivity and Profitability

Evidence from Better Work Vietnam

March 2015



BETTER WORK

The paper summarized in this brief contributes strong evidence supporting the business case for better working conditions. Recent research from the Better Work impact assessment in Vietnam demonstrates profitability of garment factories increases as working conditions improve. The boost in profitability is driven by increased productivity among workers in better working environments, and the financial benefit accrued by the factory from this productivity improvement is shared with workers in the form of higher wages.

I. SUMMARY OF KEY FINDINGS

Among apparel factories enrolled in Better Work Vietnam, recent research finds profitability is significantly higher in factories where there are better working conditions, greater compliance with labour standards and more innovative human resource management practices. Better working conditions result in increased productivity among workers, which leads to the improvement in profitability in these factories. Furthermore, instead of suppressing wages, more profitable factories with more productive workers also pay workers more. Recent research combines data from compliance assessments conducted by Better Work and from survey responses given directly by factory workers and managers to yield the following results:

- Factories experience a 5.9% boost in profitability when workers perceive improvements in working conditions traditionally associated with 'sweatshops' including improvements in their sense of physical security and assurance in wage payments. Similarly, profitability is 7.6% higher where workers experience a comfortable environment and trusting workplace.
- Greater compliance with labour standards is associated with higher profitability.
- Profitability improves in factories with better working conditions because workers are more productive. Workers in factories with better working conditions reach their daily production targets up to 40 minutes faster than similar workers who are working in factories with worse conditions.
- In Better Work Vietnam factories studied, a 1% increase in wage levels is associated with a 0.6% increase in revenues relative to their costs.

- Productivity gains that increase profitability of the factory are shared with workers in the form of higher wages. Factories with statistically significant better working conditions also offer statistically significant higher wages, holding demographics, hours and productivity constant.
- Effective implementation of improved conditions among workers is crucial to induce higher profitability. In contrast to the worker perception finding, working conditions improvements have only a mixed impact on profitability when measured from the perspective of managers.
- Higher productivity predicts a factory will have a better position in the supply chain.

II. BACKGROUND

The global apparel sector has long been associated with harsh working conditions characteristic of 'sweatshops'. Apparel workers in such factories often face the threat of workplace injuries, low and unreliable pay, forced overtime hours and verbal and physical abuse. These sweatshop conditions are often viewed as the inevitable consequence of the fine division of labour common in the early stages of industrialization in developing countries, where global pressure drives apparel production in pursuit of ever-lower costs.

A contrasting view suggests that sweatshop conditions in the garment sector are not inevitable. Instead, poor conditions persist because garment factory managers lack knowledge of best-practices in human resources management - such as positive motivational techniques or multi-dimensional pay packages - and resort to strategies like verbal and physical abuse to elicit the greatest effort from workers. A study examining management operations supports this contrasting view. The study showed a 17 percent increase in productivity among a subset of Indian textile firms whose managers received previously unavailable information on international best-practice management techniques, such as quality control and inventory tracking. Researchers conducting the study found that information barriers had prevented these factories from adopting such changes earlier. Similarly, other studies have shown that human resources innovations, including incentive and multi-dimensional pay, team work, communication and problem-solving all increase productivity and profits.

Despite evidence that improved conditions can support business operations, poor working conditions persist in the garment industry. Unlike management innovations such as inventory tracking, better management practices related to labour conditions may not necessarily translate into better business outcomes and higher profitability. For example, if factories were previously able to coerce effort from workers through harsh treatment and pay workers significantly below the value factories received from that work effort, they may see no profit advantage in moving away from a sweatshop model of operation. Furthermore, factory managers may believe that the only way to keep their firms profitable while meeting high-pressure time, quality and cost demands of international buyers is through coercing effort from workers through harsh treatment, low pay and little to no investment in basic improvements in the factory environment. With this mindset, using abuse or irregular pay practices to maintain profits represent a “low road” to development, in contrast to steps such as linking compensation to work effort or implementing other human resources innovations.

The analysis summarized here investigates whether improving human resource practices and factory working conditions can compete with sweatshop practices to maximize business profits. Using survey response data collected by independent research teams from apparel workers and managers in Vietnam, as well as data from Better Work compliance assessments, researchers find that factories increase their profitability as they move away from sweatshop conditions to more humane and innovative labour management practices.

III. RESEARCH APPROACH

Better Work impact assessment surveys collect data on factory characteristics, performance and workplace practices from factory managers. Workers are surveyed on topics including working conditions, hours, compensation and mental and physical health. Better Work staff regularly complete unannounced compliance assessment visits, where factories are assessed for compliance with core international labour standards and national labour laws. The data elicited directly from workers and managers used in the current analysis were collected from 2010-2013 in apparel factories enrolled in Better Work Vietnam. More than 5,100 workers in 185 factories provided responses.

Reserachers used factor analysis, a statistical technique commonly used in social science research when compiling large amounts of individual survey data, to analyze survey responses. Factor analysis unites closely-related variables under a larger, single ‘factor’ that captures the essential elements of the related variables and represents the driving force behind relationships of interest within the data.

Tables 1 and 2 show working conditions grouped into each factor, from the perspective of workers and from the perspective of HR managers, respectively. The first factor in the analysis of worker responses is characterized by variables that represent ‘sweatshop’ working conditions: it includes conditions such as verbal and physical abuse, dangerous workplaces and unreliable payment of wages. A second factor includes variables that are related to the factory environment. Finally, a third factor combines variables that constitute a multi-dimensional pay package, including benefits, bonuses and training. The working conditions listed in each of the factors in Tables 1-2 are listed in order of the relative weight they have on the factor.

Table 1. Factors for working conditions assessed by workers

Factor 1 “Sweatshop conditions”	Factor 2 “Working environment and trust”	Factor 3 “Multi-dimensional pay and benefits”
Accidents and Injuries Physical Abuse Verbal Abuse Sexual Harassment Excess Pay Deductions Air Quality Chemical Smells Concern with faulty Punch Clock Concern with Equipment Safety	Canteen Satisfaction Restroom Satisfaction Water Satisfaction Clinic Treatment Quality Approachability of trade union rep Supervisor Fairness and Respect Temperature Excess Deductions Low Wages	Bonuses Benefits Induction Training Health Services Pay Statement Information Training in Last Six Months Access to Drinking Water Religious Obstacles to Promotion Excess Pay Deductions

For HR managers, Factor 1 similarly relates to the harshest aspects of work. Issues related to pay emerge in Factor 2. Factor 3 captures issues related to communication and problem solving.

¹ Bloom, N.; Eifert, B.; Mahajan, A.; McKenzie, D.; and Roberts, J. (2013) “Does Management Matter? Evidence from India” *Quarterly Journal of Economics* 128(1): 1-51.
 2 Bandiera, O. I. Barankay and I. Rasul. 2007. “Incentives for Managers and Inequality Among Workers: Evidence from a Firm-Level Experiment,” *Quarterly Journal of Economics* 122(2),

729-773;
 Ichniowski, Casey, Shaw, Kathryn L. and Prennushi, Giovanna. 1995. *The Effects of Human Resource Management Practices on Productivity* (November). NBER Working Paper Series, Vol w5333

Table 2. Factors for working conditions assessed by HR managers

Factor 1 “Sweatshop conditions”	Factor 2 “Pay practices”	Factor 3 “Communication and problem solving”
Sexual Harassment Chemical smells Equipment Safety Physical Abuse Poor Air Quality Too much In-kind Compensation Accidents Concern with faulty Punch Clock Late Wages Excessive Deductions	Tet holiday Bonus Low Wages Late Wages Excessive Deductions Concern with faulty Punch Clock Meal Allowance Too much In-kind Compensation Factory Temperature Supervisor Skills Training Verbal Abuse	Worker Committee Effectiveness Trade Union Effectiveness Worker Committees Verbal Abuse Induction Training Factory Temperature Supervisor Skills Training Collective Bargaining Agreement Tet holiday Bonus Health Services

While the factors for workers and managers can be grouped into categories that are easy to classify, working conditions for analysis of compliance assessments data do not fall into such neat categories. The exception for compliance assessment data is that Factor 3 can be characterized by conditions related to communication and union rights.

IV. FINDINGS

Factories with more humane labour management practices are more profitable. Factories experience a 5.9% boost in profitability when workers perceive improvements in working conditions traditionally associated with ‘sweatshops’ (factor 1), including improvements in their sense of physical security and assurance in wage payments. Similarly, factories do better when they go beyond merely avoiding conditions associated with sweatshops and instead create an environmentally comfortable and trusting workplace (factor 2). Profitability is 7.6% higher where workers are comfortable raising workplace concerns, where workers express greater satisfaction with water and air quality, and where there is greater satisfaction with restrooms, canteens and health services provided in the factory, holding other factors constant. Improvements in factor 3 - which is related to multi-dimensional pay and benefits - also has a positive impact on profitability.

Factories are more profitable if they are more compliant with labour standards. While two of the factors used to analyze compliance assessment data collected by Better Work enterprise advisors produce mixed results on profitability, the third factor - related to communication and union rights - shows a significant and positive effect on profitability.

Better working conditions raise profitability by increasing productivity among workers. To measure productivity, workers are asked to report how long it takes them to reach their production target on a typical Friday. Holding all other demographic and job factors constant, as well as total hours, workers in factories that have significantly better working conditions - particularly in the area of working environment - reach their production target nearly 40 minutes faster than workers in factories with relatively worse conditions. In addition, as would be expected, multi-skilled workers reach their production targets 30-40 minutes faster than their unskilled counterparts.

Working conditions improvements from the perspective of managers has mixed impact on profitability. Analysis of manager responses shows that when managers perceive improvements in the harshest conditions of work (factor 1), profitability increases. However, when managers perceive improvements in pay practices and communication (factors 2 and 3), profitability decreases. These results suggest that although managers may believe improvements are being made in the factory, if workers do not also perceive these improvements, the positive benefits to profitability will not materialize.

More profitable factories pay higher wages than less profitable factories. Factories need not sacrifice profitability to pay decent wages. A 1% increase in wage levels is associated with a 0.6% increase in revenues relative to their costs in Better Work Vietnam factories.

Productivity gains that increase profitability of the factory are shared with workers in the form of higher wages. One could hypothesize that factories with better compliance with working conditions could offer workers less in the form of wages, thereby increasing profitability. In fact, the opposite is seen in the Better Work Vietnam factories studied. Factories with statistically significant better working conditions also offer statistically significant higher wages, holding demographics, hours, and productivity constant. Productivity gains from better working conditions benefit both the factory, in the form of higher profitability, and workers, in the form of higher wages.

Higher productivity predicts a factory will have a better position in the supply chain. The higher the productivity among workers, the more likely their factory will be a preferred supplier to their most important customers. While productivity has a clear impact on the supply chain position of a factory, compliance with working conditions has a mixed impact on supply chain position. In other words, the current evidence available shows that compliance matters for the relationship factories have with buyers through its impact on productivity.

Higher worker productivity improves a factory’s position in the supply chains with important buyers, and productivity can be improved through improved compliance with labour standards.

V. CONCLUSIONS AND RECOMMENDATIONS

Current research undertaken by the impact assessment of Better Work has found that the presence of better working conditions predicts higher profitability in garment factories. Researchers tested three hypothesized causal mechanisms for why improved working conditions lead to improved factory financial performance, as summarized in the following table.

Table 3.	
Hypothesized mechanism for improved profitability	Current evidence
Better working conditions improves worker productivity?	Yes
Factories save costs by paying workers less in exchange for better working conditions?	No
Factories become more profitable by improving supply chain position?	Yes, through improved worker productivity

Researchers find that workers in factories with more compliant and better working conditions are more productive than their otherwise similar counterparts, which leads to greater profitability. In addition, factories that gain financially from more productive workers do not lower wages in exchange for better working conditions. Finally, although evidence is mixed that greater compliance leads directly to a better supply chain position, as a factory’s workers become more productive, its supply chain position improves.

For full results, see: Brown, Drusilla; Domat George; Veeraragoo, Selven; Dehejia, Rajeev; Robertson, Raymond (2014) “Are Sweatshops Profit-Maximizing? Answer: No. Evidence from Better Work Vietnam,” Better Work Discussion Paper no.17

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