

# Training, financing, and matching between workers and firms: Evidence from Bangladesh

## Occupational Health and Safety: The Role of Information and Financial Linkage

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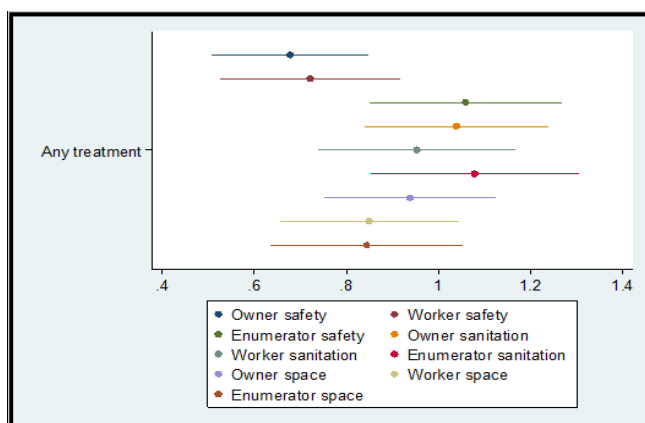


Occupational health and safety training improved the safety measures in the firms. Financial linkage did not have added effects.

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### Topic at a Glance

A field experiment in Bangladesh provides informal firms information on occupational health and safety (OHS). A sub-treatment arm provides firms with financial linkages to address credit constraints. Two years after the intervention, treated firms are more likely to invest in health and safety measures and firm owners and workers have increased health and safety knowledge. Treated firms are also more likely to hire new apprentices and more experienced skilled workers and foremen. However, we find no effect on profit. We find no additional effect due to financial linkages, suggesting that addressing the information gap is key to improving OHS.



*Caption:* Figure 1: The effects of OHS and financial linkage. This figure shows estimated effects with 95% confidence intervals (reported in terms of standard deviations (SD), control group mean=0 and SD= 1).

### New Insights

#### Effect on safety measures and safety outcomes

The results show that owners, workers, and enumerators report safety improvements, with effects ranging from 0.68 to 1.2 SDs. Treated firms also improved the provision of water and sanitation in the workshops, with effects ranging from 0.99 to 1.19 SDs. Similarly, treated firms improved workspace for workers, with effects ranging from 0.79 to 0.92 SDs. The estimated effect on safety measures, water and sanitation, and workspace is similar among owners, workers, and enumerators, suggesting that the changes are verifiable. We find no significant additional effect due to access to financing, which suggests that the OHS training is the main driver of improvements in the workplace. We also examine accidents in the workplace. On the one hand, better safety measures should reduce the number of accidents. However, if firms hire inexperienced workers as a result of the intervention, we may see an increased number of accidents. We find no significant changes in the number of accidents.

#### Effect on worker outcomes

We first examine firms' pay conditions for workers as a set of markers of a decent work environment. We find that owners and workers are more likely to report better pay conditions, which includes timely salary payment, festival pay, having sick days, and paid time off. The differences between the two treatment arms are not significant, which suggests that improvements in pay conditions are driven by the OHS training and addressing firms' credit constraint has no additional effect on workers' pay conditions. The improvement in pay conditions is driven by firms providing festival pay for workers after the training. We further explore pay conditions for workers by examining pay conditions and hours worked for different groups of workers. On average, workers report receiving higher salaries, with no significant change in hours worked. The effects are driven by the salary of skilled workers and the OHS plus credit arm.

## Effect on firm outcomes

One of the hypothesized channels is OHS training improving the work environment, and this would then improve firm outcomes through channels such as higher worker productivity and worker retention. As another marker of firm growth, we examine the number of workers and find no significant change. However, this may mask the types of workers hired by the firms. Indeed, we find that treated firms hire 0.2 fewer skilled workers and 0.2 more apprentices. At the worker level, we find no significant change in the age of the workers, but we find that workers in treated firms have about 0.4 years fewer experience in the workshop, and 0.1 years additional experience in their occupation. These results are consistent with skilled, and possibly more productive, workers receiving higher salaries, but we find no evidence of the treatment increasing worker retention. If occupation-specific human capital is important in this setting, then the intervention appears to have improved firms' ability to hire more skilled workers. The sub-treatment arm that provides access to financing would also allow firms to address their credit constraint and invest in either capital or labor. We find no significant effect on firms' sales, costs, or profits due to either treatment arms. As a related outcome, we also examine firms' access to formal credit and their asset value. We find no significant change in the probability of obtaining a loan, the amount of the loan, and asset value.

protocol, the NGOs or government could provide equipment for safety standard and additional cash support to improve the work environment. The funding and other constraints did not allow us to do that.

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## Policy Recommendations

We find that the OHS training is effective in improving several aspects of the work environment, while we find no additional impact due to financial linkages, which suggests that information is key to firms' investments in workplace safety. Additionally, we find that the intervention had no significant impact on firm performance, although there is some evidence for improved wages for workers in firms that received financial linkages. Our findings suggest that policies to improve the work environment in the informal sector should center on information on OHS.

## Limitations

The study was implemented in the light engineering sector of Bangladesh, and firms were located outside the main capital cities. The firms needed to spend additional expenses for following the OHS. While some firms were offered loans and financial linkage that did not make much difference in terms of improving work environment. Hence, many firms perhaps need more than information and support in the form of grants to incentivize the work environment might be important. While workers safety are important, in the absence of proper guidance and enforcement of such safety