

# Incentives, Culture and Development

## A Cross-Country Field Experiment



### In brief

- Evidence suggests that the most profitable firms in developing countries adopt personnel policies that link pay to performance and that firms are less likely to use “good” HR practices in developing countries.
- There could be two explanations for this. Performance rewards could be equally effective in developing countries but informational, institutional or legal constraints prevents them from offering them. Or performance rewards could be ineffective as workers respond differently to incentives due to cultural norms, and thus, firms do not offer them.
- This study seeks to test these explanations through an experiment in Ghana, India and the Philippines. Workers are allocated one of four contracts (hourly wages, rates based on team productivity, rates based on individual productivity, and rates based on individual productivity but set to create identical marginal return to effort as under the team productivity contract).
- Both individual and team-based rewards have the potential to increase productivity. Workers who are paid on the basis of individual productivity are 12% more productive on average than workers on an hourly wage, followed by team productivity rewards (approx. 10%) and the modified individual productivity rewards (approx. 8%)
- Performance rewards increase inequality in the workplace and exacerbate natural ability differences, thus representing a cost that should be weighed against increased productivity.
- The authors recommend: increasing investment in experimentation with incentives in other countries and types of firms, exploring sources of heterogeneity across countries and individuals in response to incentive structures, and strengthening the institutional capacity to collect and disseminate current firm HR practices across industries.

## Policy Motivation

*“Firm productivity is a core engine of growth, yet the drivers of worker productivity in developing countries remain largely unknown”*

Firm productivity is a core engine of growth, yet the drivers of worker productivity in developing countries remain largely unknown. Recent survey evidence shows that the most profitable and productive firms tend to adopt personnel policies that link pay to performance and that firms in less developed countries are less likely to use “good” human resources management practices. This observation is consistent with two alternative explanations with radically different policy implications. First, performance rewards are equally effective in developing countries and firms want to offer them, but informational, institutional, or legal constraints prevent them from doing so. Second, performance rewards are not effective in developing countries, possibly because agents’ responses to incentives are governed by different cultural norms, and hence, firms optimally choose not to offer them.

To distinguish between these two explanations we implement a field experiment designed to measure the effect of individual and team performance pay in three developing countries: Ghana, India and the Philippines. We set up a data-entry firm and hire subjects for short-term data entry positions entering real data subject to contractual terms that vary experimentally. Our findings indicate that performance rewards, both individual and team-based, have the potential to increase productivity: data entry clerks who are offered performance rewards are on average 12% more productive than their colleagues who receive hourly wages.

## Impact

This study should inform decisions concerning human resources and management techniques in small and medium size enterprises in developing countries. The findings suggest that individuals respond to incentives in line with the predictions of economic theory, although the size of the effects is roughly half of that estimated in the US and the UK.

Performance rewards increase productivity in settings where they are not utilised, therefore future research and policy should seek to understand and overcome the constraints that prevent firms from adopting managerial practices that foster productivity.

## Audience

*“Our findings indicate that performance rewards, both individual and team-based, have the potential to increase productivity”*

This brief should be shared with organisations in the public, private, and non-profit sectors that seek optimal compensation schemes. International financial institutions, donors, and other development agencies that support business growth such as DFID, the IFC, the Kauffman Foundation, and national chambers of commerce also have an interest in understanding the determinants of firm productivity and worker welfare.

## Context

*“Compared to their colleagues who are paid hourly wages, the productivity of workers paid high-powered individual piece rates is 12% higher on average”*

We analyse the performance of individuals recruited for short-term data entry jobs in data-entry firms created in Ghana, India and the Philippines for the purpose of the experiment.

Individuals are randomly allocated to one of four contracts, based on existing “real-world” incentive schemes:

1. Hourly wages
2. Team piece rates (based on the average productivity of five workers)
3. High-powered individual piece rates (based on individual worker productivity)
4. Low-powered individual piece rates (based on individual worker productivity but set to create identical marginal financial return to own-effort as under the group piece rate contract)

Productivity comparisons between the four treatments quantify the causal effect of performance rewards.

## Policy Implications

Performance rewards are an effective tool to increase average productivity

Figure 1 shows that compared to their colleagues who are paid hourly wages, the productivity of workers paid high-powered individual piece rates is 12% higher on average. We also find substantial heterogeneity in the response to incentives across individuals and across countries. This suggests that optimal incentives should be tailored to the particular context and worker characteristics.

### The power of incentives matters

Figure 1 also shows that high-powered individual incentives lead to the greatest increase in productivity. This is significantly larger than the 8%-increase generated by low-powered individual incentives.

*“Performance rewards, regardless of their strength or type, increase the dispersion of productivity, particularly at the upper end of the distribution”*

### Team rewards are effective, but less so than individual rewards

Figure 1 shows that compared to their colleagues who are paid hourly wages, the productivity of workers with group-based incentives improves by 10%. This increase is midway between that of the low-powered and high-powered individual incentives, suggesting that on average individuals only partially internalise the effect of their effort on their colleagues.

### Performance rewards increase inequality in the workplace

Figure 2 shows that performance rewards, regardless of their strength or type, increase the dispersion of productivity, particularly at the upper end of the distribution. This may exacerbate natural ability differences and represents a cost that should be weighed against the benefit of increased productivity.

## Implementation

### Recommendation 1

Increase investment in experimentation with incentives in other countries and with other types of firms to determine country and industry-specific human resources best practices.

### Recommendation 2

Further explore the sources of heterogeneity across countries and across individuals in the response to different incentive structures.

*“Recommendation: Strengthen in-country institutional capacity to collect and disseminate current firm human resources practices across industries”*

**Possible constraint to implementation:** Experimenting within several industries across large numbers of countries may be cost-prohibitive.

**Possible solution:** The laboratories established for this project are available for use in future experiments and could be used to experiment in other industries, reducing costs.

**Possible solution:** Work directly with firms to implement performance rewards or, conversely, to maintain current human resources practice where appropriate.

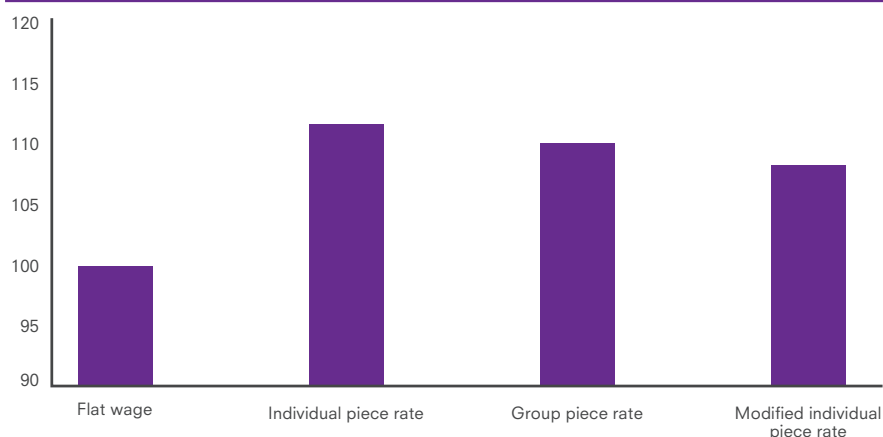
### Recommendation 3

Strengthen in-country institutional capacity to collect and disseminate current firm human resources practices across industries.

**Possible constraint to implementation:** Firms may not have the capacity to collect and maintain detailed personnel data.

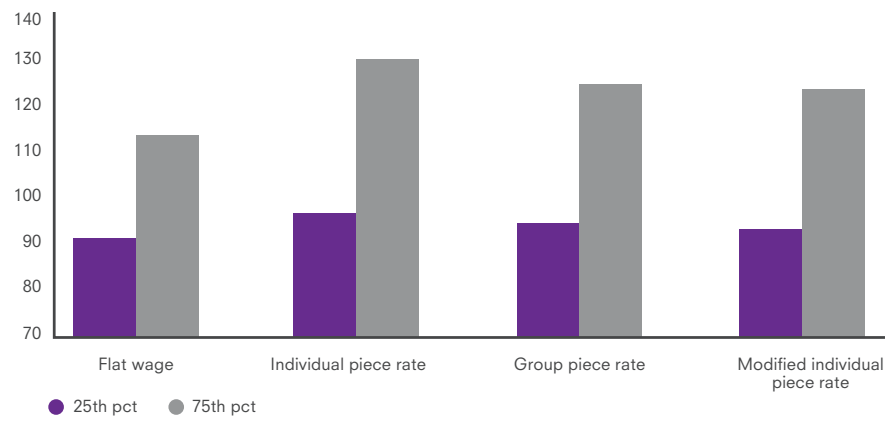
**Possible solution:** Support businesses interested in optimising their operations by providing data collection and analysis training.

Figure 1: Productivity by Contract



Notes: Mean productivity pooled across surveys and countries (Ghana, India, and the Philippines). Productivity conditional on baseline ability, gender, ethnicity (or caste in India) and scaled such that flat wage equals 100.

Figure 2: Productivity Distribution by Contract



Notes: Productivity pooled across surveys and countries (Ghana, India, and the Philippines). Productivity conditional on baseline ability, gender, ethnicity (or caste in India) and scaled such that flat wage equals 100.

## About the authors

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