



INCENTIVES AND MOTIVATION

Day 2 of the conference explored the use of incentives in the public sector. Three studies were presented that examined the use of workforce incentives in the UK, Nigeria and Zambia with varying degrees of success.

A vast body of research studies the impact of workplace incentives on performance. From a theoretical perspective, countless permutations of principal-agent models investigate the relationship between incentives and performance across a range of contexts and information structures. A wide array of empirical studies has sought to test the predictions of these models. Overall, there is strong consensus that incentives matter and that the appropriate set of incentives can often lead to improved performance.

Herding cats: incentives in UK universities

John McCormack, Carol Propper and Sarah Smith (University of Bristol) study the variation in management practices in UK universities and the relationship between practice and performance. The paper highlights the unique challenge in the university sector where managing creative, intrinsically motivated employees can often be difficult, especially in an environment in which many incentives are defined by the wider academic community.

The authors employ the management survey developed in Bloom and Van Reenen (2007) to collect data on management practices at 158 universities, both at the central and departmental level. The survey quantifies practices in four key areas: operations, monitoring, targets and incentives. The performance indicators are the ranking in the 2008 Research Assessment Exercise (RAE), the overall student satisfaction score as measured by the National Student Survey and the Complete University Guide (CUG) ranking, which incorporates both research and teaching.

The paper finds that UK universities have greater mean scores than manufacturing firms or UK hospitals. In addition, scores across departments in the same university are weakly correlated, with the central services adopting better practices than individual departments. These differences are driven primarily by variation in the strength of performance incentives. The study unearths a positive correlation between each performance indicator and

the quality of management practice. This finding is robust to inclusion of observable characteristics such as expenditure, size and past performance. The strongest factor in determining performance is the strength of performance incentives, with the carrot playing a greater role than the stick. Half a standard deviation increase in the management score is associated with a one place improvement in the RAE/CUG ranking.

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Nigerian civil service: incentivising middle-tier managers

In their study **Imran Rasul** (UCL) and **Daniel Rogger** (UCL) explore autonomy and incentives for middle-tier bureaucrats in the Nigerian civil service. They adapt the management practice survey in Bloom and Van Reenen (2007) so as to construct measures of the strength of autonomy and incentives across a range of government departments. Autonomy is singled out for study partly due to scarce evidence on its role, and partly to shed light on the relative merits of rules and discretion. Whilst incentives have been studied both in the private sector and among front line public sector staff, no previous study has looked at middle-tier bureaucrats. Rasul and Rogger proceed to study the correlation between autonomy and incentives and the completion and quality of projects undertaken by different departments. In all, there are 11 types of project, ranging from construction to training.

A series of empirical challenges are discussed, including self-selection of bureaucrats into different departments, non-random assignment of projects to departments, reverse causation between project outcomes and management practices and omitted organisational characteristics.

Rasul and Rogger find that whilst autonomy is positively related to project completion and project quality, incentives exhibit a negative association. Results are robust to inclusion of covariates such as project complexity and other observed department characteristics. The latter result is puzzling at first, though the authors argue that it has a root in

Papers

Ashraf, N., Bandiera, O. & Lee, S., *Mission Incentives: Experimental Evidence on Selection, Performance and Retention among Health Workers in Zambia*, Working Paper.

Bloom, N. & Van Reenen, J., (2007), *Measuring and Explaining Management Practices Across Firms and Countries*, *Quarterly Journal of Economics*, 122, 1351-1408.

Holmstrom, B., & Milgrom, P., (1991), *Multitask principal-agent analyses: Incentive contracts, asset ownership, and job design*, *JL Econ. & Org.*, 7, 24-52.

Martimont, D., (1986), *Exclusive Dealing, Common Agency and Multi-principals Incentive Theory*, *Rand Journal of Economics*, 27, 1-31.

McCormack, J., Propper, C. & Smith, S., *Herding Cats? Management and University Performance*, Working Paper.

Rasul, I. & Rogger, D., *Management of Bureaucrats and Public Service Delivery: Evidence from the Nigerian Civil Service*, Working Paper.

multi-tasking and multiple principal theories. The multiple task explanation suggests that when faced with multiple tasks, employees direct too much effort towards incentivised tasks, compromising overall performance. The multiple principal theory suggests that if an agent faces multiple principals with different objectives, the incentives offered to him may clash, leading to inefficiencies. Rasul and Rogger's finding contradicts that of McCormack et al., though clearly the contexts are far from comparable.

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Mission incentives: health workers in Zambia

Nava Ashraf (Harvard), **Oriana Bandiera** (LSE) and **Scott Lee** (Harvard) conduct a field experiment in Zambia looking at mission incentives. The study randomly varies recruitment posters for Community Health Workers to have either a 'private' or 'public' mission. The public mission poster suggests that the role is important to the community whilst the private mission poster emphasises training and career development. The authors study the effects of the different missions on the application process, candidate selection, training and subsequent performance.

Whilst the number of applicants and gender composition was similar for both missions, the number of completed applications was greater for the public mission. However, those who applied for the public mission were less qualified on average. The applicants' motivations were measured through questioning at the interview stage and two tests during training. Those on the public mission were more likely to state that they saw themselves as a Community Health Worker in five years' time and placed more weight on social motivations in both tests.

The interview panels were aware of the missions but not of the experiment. The authors postulate that the panel may select applicants whom they feel more suited to each mission. This is supported by the data; community motivated individuals were more likely to be selected for the public mission.

Moreover, the panel were more likely to appoint females for the public mission, generating gender differences not present at the application stage. Finally, selection of better qualified candidates for the public mission negated the skill gap in the pool of applicants.

The study proceeds to evaluate performance for each mission type. The authors find substantial evidence that community health workers on the private mission outperform their public mission counterparts by a substantial margin, making 25 per cent more home visits on average. This may indicate that the private mission provided stronger performance incentives, though it could also be driven by differences between the two groups.

Conclusion

The three papers each study workplace incentives from different perspectives and in different contexts. McCormack et al. document a strong positive association between workplace incentives and output in the UK university sector, whilst Rasul and Rogger find the opposite in the Nigerian civil service. The discrepancy is likely to be attributable to the different environments studied; however causality is uncertain in both papers. Ashraf et al. show that mission incentives play an important role at each stage of the employment cycle, though the extent to which their results apply to other contexts is uncertain.

INCENTIVE THEORY

The purpose of any incentive scheme is to align the interests of the agent with those of the principal. This is achieved through giving the agent a stake in some observable measure of performance, provided that he is able to influence this measure through his own behaviour, and that the reward is sufficiently large to overcome any associated costs. The appropriate incentive scheme depends on the structure of information and the context. Whilst standard incentive theory predicts that rewarding good performance ought to enhance outcomes, a number of theories exist in which incentives may have the opposite effect. One factor which may cause schemes to fail is that incentives may crowd out intrinsic motivation. Another owes to multi-tasking: if performance depends on the agent's completion of multiple tasks and incentives target specific tasks, the agent may neglect the non-incentive tasks in favour of the incentive tasks, compromising performance (Holmstrom and Milgrom; 1991). Incentives may also fail in a multiple principal environment if the principals do not share a common objective (Martimort; 1986). The net-impact is then context specific, depending on the applicability of these theories and the relative magnitudes of any opposing effects.

