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PERFORMANCE BUDGETING, MOTIVATION AND INCENTIVES

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SECTION I: INTRODUCTION

As noted in Chapter 1.2, many contemporary forms of performance budgeting are part of the broader “Managing for Results” (MFR) approach to public sector reform. Like MFR in general, **the primary focus of these forms of performance budgeting is upon *motivating agencies to perform better***, and in this sense they differ from, for example, classic forms of performance budgeting the primary focus of which is upon better central expenditure prioritization. This is true of contemporary performance budgeting models which contain one or more of the following elements:

- Agency-level performance targets which are intended to be linked to the level of resourcing provided,
- Funding formulas which implicitly set, through the funding formula, targets for the results expected to be achieved,
- Agency-level financial incentives, under which good performance by the agency results in higher levels of funding and perhaps also poor performance leads to financial sanctions.

Motivating agencies to perform better is also important if the full benefits of input control relaxation are to be realized.

These contemporary approaches to performance budgeting all subscribe to the MFR view that the most fundamental tools for improving agency performance are the explicit specification of objectives, the measurement of performance against those objectives, and the setting of performance targets. This points, however, to a crucial question. Exactly how is it that the specification of objectives, measures and targets impacts—to the extent it actually does—on agency performance? In asking this question, we need of course to bear in mind that agencies are comprised of individuals, and it is those individuals who need to perform better if the agency as a whole is to perform better. Therefore, to ask about the motivational impact on agencies is really to ask about the motivational impact *upon individuals* of objectives, measures and targets specified for the agency as a whole.

There is a widespread contemporary view that the key to more effectively motivating individual public sector employees to perform is *individual performance incentives*¹, and that, conversely, the biggest motivational problem in the “traditional” employment

¹ By which term is meant, in what follows, all material rewards and sanctions applied to individuals including salary, remuneration in kind, promotional (career) rewards and the threat of dismissal.

arrangements has been the weakness of such performance incentives. From this perspective, the “transmission mechanism” by which MFR in general and performance budgeting in particular can succeed in inducing better agency performance might be seen as requiring two critical elements. The first is the **development of individual and work-group performance measures and targets which are clearly linked to organizational objectives**—in order to create what the US GAO (2005, p. 21; 2002, p. 11) refers to as “a line of sight that shows how individual performance can contribute to organizational goals” by “cascading organizational goals and objectives down to the individual performance level”. The second element is the **systematic linkage of these performance measures to individual incentives**—both to traditional incentives (for example, promotion) and also increasingly to “higher-powered” incentives such as performance pay (also known as “merit” pay). Individual “contracts” are increasingly used for this purpose.

Consistent with this approach, there has been considerable expansion in recent years in the use of performance incentives in the public sector. Both the incidence of performance pay schemes for civil servants and the levels of incentives paid under those schemes have been increasing in a number of countries. In the United States, for example, between 1998 and 2000 alone there was an increase from 14.3 to 64 percent in state governments using performance bonuses linked to measures of individual performance (Government Performance Project, 2003, p. 111)². The OECD (2005, p. 175) recently reported that countries with “extended, formalized performance-related pay policy for civil servants” include Denmark, Finland, Korea, New Zealand, Switzerland and the United Kingdom.

Performance pay is also increasingly being used in areas of front-line service delivery such as health service (e.g. nursing) and teaching. A prime example is teacher performance pay—what the recent US *Teaching Commission* report (2004, p. 22) calls “paying teachers more for high performance, as measured by fair evaluations and clear evidence of improved student learning”. Many such schemes have been introduced into school jurisdictions in the US over the past decade, and a similar trend has been underway in some other countries. A national teacher performance pay scheme was, for example, introduced in the United Kingdom in 1999, taking effect in 2001. Other countries where such scheme have been tried include Kenya and Israel. Similar arrangements have been introduced for nursing pay in a number of countries including the United Kingdom.

Performance budgeting systems which incorporate **agency-level funding “incentives”** would seem to fit naturally with this approach to motivating individual performance—at least if there is a link between agency level funding rewards and individual incentives. Perhaps the most striking example of such a link is the Canadian province of Ontario, which recently experimented with a system in which the overall performance of all ministries was rated and the performance pay pool (i.e. the amount of money made available to fund individual

² And also an increase from 2.0 to 38 percent in states using bonuses linked to measures of group performance.

performance pay) made available to each ministry was linked to that rating (GAO 2002: 20). An example of something similar at the sectoral level is a system announced in late 2005 in Texas (Perry, 2005) under which:

- schools that serve a large population of economically disadvantaged students that show marked improvement in student performance will be eligible for a grant of at least \$100,000;
- local school officials will have discretion to distribute the grant to the teachers they determine are having the greatest impact, with a requirement that a minimum of 75 percent of the grant must go directly to the “hardworking teachers who are improving the learning environment”.

In most cases, the linkage between agency financial incentives and individual incentives has been less clear than in these instances. Moreover, as noted earlier, many versions of performance budgeting do not attempt to provide agencies with financial incentives for performance, but instead focus on strengthening the link between funding and expected future performance. In these systems, performance budgeting is more about strengthening the credibility of target-setting, rather than about linking individual performance incentives to the overall level of agency funding. It is not necessary to support *agency*-level financial “incentives” in order to endorse the proposition that **the key to better public sector performance is stronger individual performance incentives linked to measured performance and performance targets**.

Influential though this proposition may be in contemporary thought and practice, it is also **controversial**. There are many who oppose stronger individual performance incentives, arguing that will actually lead to a deterioration in public sector performance. Critics emphasize the perverse effects which can arise from linking high-powered incentives to inherently imperfect targets and measures. Many also suggest that the emphasis on incentives is based on a misunderstanding of the true nature of workplace motivation, and that high-powered incentives are more likely to demotivate than to motivate.

There has been vigorous public debate on these issues in recent years in a number of countries. In Britain, for example, critics have attacked the Public Service Agreements target-setting regime on the grounds that targets “are arbitrary ... focus people on the wrong things ... (and) demotivate” (Seddon, 2002). The British government has been criticized for its teacher performance pay initiative by those who see such schemes as “unfair and divisive, with a negative effect on team-working and co-operation” (Richardson, quoted in BBC, 1999). Similarly, in California, a November 2005 constitutional referendum proposition put forward by Governor Schwarzenegger to permit merit pay for teachers was attacked by the California Federation of Teachers³ on the grounds that

³ “Responding to the Governor’s Attacks: Oppose Merit Pay Schemes”, <http://www.cft.org/resources/leg/news/talkptsmerit.html> [accessed 7 November 2005].

- It would “poison ... the school atmosphere with unnecessary and unproductive competitive pressures”, and
- Previous experience with merit pay scheme indicated that “to maximize pay, some teachers ignored their best and worst students, concentrating on the middle group, because they assumed the best would score well anyway, and the worst demanded too much time.”

Critics often suggest that a regime of individual incentives based on measures and targets is *particularly* unsuitable in the public sector and, more generally, that the public sector has specific characteristics which mean that caution needs to be applied when importing management practices—whether in this or other areas—from the private sector. However, this debate is in no sense confined to the public sector. There are many management thinkers and practitioners who believe that high-powered individual performance incentives are damaging to organizational performance in a private sector context—who reckon that, although “we are often encouraged to believe that rewarding people for what they do will cause them to work harder and better”, in fact “research and our long-term experiences ...suggest exactly the opposite” (Kohn,1998). The critics of performance incentives draw a sharp distinction between the level of pay and incentive pay. As Kohn eloquently puts it: “Pay people well. Pay people fairly. And then do everything in your power to take people’s minds off of money.”

It is relevant to this debate that although the current level of use of individual performance incentives in the public sector is certainly much higher than ever before, the use of these incentives are in no sense new. There was, in fact, a previous wave of enthusiasm in the 1970s and 1980s associated, for example, with the introduction of performance pay as part of the new “senior executive service” in the United States, the influence of which they spread to many other countries. Critics suggest that the body of empirical research⁴ on these earlier civil service schemes indicates that they were ineffective. Indeed, the OECD’s recent interpretation of this evidence was similar:

The impact of performance pay on motivation is ambivalent: while it appears to motivate a minority of staff, it seems that a large majority often do not see performance-related pay as an incentive... Job content and career development have been found to be the strongest incentives for public employees. Performance-related pay is unlikely to motivate a substantial majority of staff, irrespective of the design.
(OECD, 2005, p. 176-77)

Similar claims about the weight of empirical evidence have been made in other public and private sector contexts. Thus the respected management academic Jeffrey Pfeffer recently claimed that “the last 100 years’ worth of research shows that incentive pay does not produce

⁴ See, for an outline of this research, Ingraham (1993) and Kellough and Lu (1993).

better results in education, even though this is a lesson that seems to be continually relearned” (Pfeffer, 2005). He also argues that broader research in both public and private sector contexts suggests that they increased pay dispersion associated with performance pay schemes “can often reduce job satisfaction, disrupt social relationships in the workplace, decrease performance ... decrease quality ... and [staff] increase turnover” (Ferraro and Pfeffer, 2005, p. 20).

Objectives of this chapter

Against this background, the objective of this chapter is to consider the motivational “transmission mechanism” of performance budgeting. More precisely, it is to review, drawing upon the existing literature, what is known or what might be reasonably hypothesized about the efficacy of strategies for motivating public sector employees, and the implications of this for performance budgeting and for the managing-for-results mechanisms of which certain performance budgeting models are part.

The first and most fundamental question examined is therefore that of **how far the correct approach to motivating better agency performance in the public sector is through stronger performance-based individual incentives**, including not only performance pay but the more systematic linking of other incentives to measured performance. This question raises a number of more specific issues, including:

- How severe are the problems which arise for individual incentive schemes from imperfections in individual performance measurement?
- To what extent should one be concerned about stronger incentives undermining what is sometimes referred to as “intrinsic” or “public service” motivation?
- To the extent that motivations other than material self-interest are important, what should be the respective role of incentives and other strategies for motivating people?

To consider these questions, we start in Section II with a review of the literature of what might be called classic institutional economics, the most well-known element of which is agency theory. This is a literature which models workplace behavior on the assumption that individuals’ motivation is essentially self-interested and materialistic. This literature explores formally the implications of this assumption for the role and design of performance incentives in the presence of both imperfect performance measurement and uncertainty (risk).

In Section III, we turn to a body of literature which emphasizes the importance of non-materialistic motivations—social motivation, intrinsic motivation and moral motivation. Most of this literature comes from the fields of psychology and management, although in recent years economists have also done important work based on richer motivational models.

We also provide some additional views which do not necessarily emerge clearly from the literature.

In Section IV, we consider—albeit in a rather speculative manner, given the limitations of the literature—the implications of these findings about the nature of individual motivation for the motivational transmission mechanism of performance budgeting.

In Section V, we consider briefly the implications of this analysis for the issues of motivating performance in the special circumstances which often characterize developing countries. We finally draw the main conclusions as for motivating individuals in the context of performance management.

SECTION II: OVERVIEW OF THE MAINSTREAM ECONOMIC LITERATURE

Introduction

The mainstream economic literature on incentives uses various currents of the new institutional economics, including transaction costs economics, organization and property rights theories, and predominantly the principal-agent theory. It is a literature which assumes that individuals act rationally to pursue their self-interest. Crucially, self-interested motivation is not construed in the broad sense—to refer to the pursuit of anything from which individuals derive utility—but in the much narrower sense of the pursuit of material (monetary equivalent) well-being.⁵ As Le Grand (2003, p. 25) puts it, the assumption is that rational *homo economicus* is “a genus of individuals whose self-interest is defined solely in terms of their own consumption: that is, such individuals are motivated entirely by the desire to acquire material wealth that they consume themselves for their own benefit”. In short, this literature assumes that individuals are, at least as an approximation, exclusively motivated by *materialistic self-interest*.

This literature assumes that people have a preference for leisure, so that work is wholly unpleasant. From this it follows that, to the extent they can succeed in doing so without being caught, or are not adequately motivated by incentives, agents will shirk in order to avoid the disutility of working. Because agents are assumed to be motivated solely by materialistic

⁵ “Material” self-interest will be understood in what follows to also include things such as personal safety and quality of the physical environment, which are not part of social motivation as defined in Section III. Thus, for example, the hedonic theory of wages—which argues that workers are interested in maximizing their *net* utility and therefore are willing to “exchange” that which produces utility to get reductions in something which yields disutility (e.g. reducing the risks of injury associated to their job)—is firmly part of the mainstream “rational choice” tradition.

self-interest, “incentives” in this context refer exclusively to monetary incentives, on the one hand, and sanctions (including the threat of dismissal), assessed in terms of their monetary equivalent effect, on the other hand. The term “incentives” will, accordingly, be used in this manner throughout this paper.

The assumption that individuals are motivated solely by materialistic self-interest distinguishes the mainstream economic literature from the psychological, management and economic literatures discussed in Section III, which focus upon a range of “non-self interested” and “altruistic” motivations.⁶ It is perhaps useful, however, to make clear at this point that we are not satisfied with this classification of motivation. We readily accept the existence of genuinely selfless motivation. However, as discussed in Section III, we regard the pursuit of *some* (not all) so-called “non-self interested” objectives—such as the non-material psychological benefits associated with status and power—as fundamentally self-interested. Therefore, instead of adhering to the classification of self-interested vs. non self-interested motivations, **we rather distinguish between “materialistic” self-interested motivation and “non-materialistic” motivations.**

Although the materialistic self-interest postulate of the mainstream economic literature is quite reductionist, this literature has nevertheless yielded important results.⁷ In particular, the conclusion of the bulk of this literature is that “high-powered” (performance-related) incentives are problematic in most employment relationships.

In this Section, we overview key themes of this literature which are relevant for the question of individual motivation in a context of performance management. We start with the general literature, which generally assumes a private sector context, and after that consider the specifics of the public sector context.

Measurement, uncertainty and the employment relationship

The mainstream economic literature treats the employment relationship as a principal-agent relationship in which a “principal” (e.g. employer) delegates work to one or several “agents” (e.g. workers). The agent’s *effort* (activity) yields results for the principal. These results can be thought of, at least as starting point, as the worker’s “output”.⁸ The objective of the

⁶ Although the mainstream economic approach does not reject so-called “intrinsic” motivation, but regards it as irrelevant on the grounds that it allegedly only shifts the labour curve rightwards, without any impact on the marginal decisions with respect to work performance (Frey, 1997).

⁷ For a survey on that literature, see Prendergast (1999).

⁸ Which in the language of Chapter 2.2, can mean either final or intermediate outputs.

principal is to manage and motivate the agent to deliver the best results possible. Agent remuneration may, in principle, be based on effort, on output, or on some mix of the two. The principal needs, amongst other things, to decide the appropriate remuneration mix—in other words, how “high-powered” remuneration should be. Remuneration is more “high-powered” the more strongly and more directly it is linked to worker output—or more generally, worker results—and is more “low-powered” the weaker and more indirect that link. Piecework pay is, for example, extremely high-powered, while time-based pay is extremely low-powered.

To the extent that the principal can readily observe and measure the quantity and quality of the agent’s effort, remuneration can be unproblematically based on effort with little or no consideration of worker output. However, in many employment relationships, the agent’s effort is not perfectly or costlessly observable by the principal. If this is the case, the proxy measures of effort upon which remuneration is based—most obviously, hours worked—are flawed, and basing remuneration upon them allows considerable scope for shirking. The obvious response to this is the monitoring of agent effort by the principal (i.e. work supervision). This is, however, not a fully satisfactory solution because for many types of jobs monitoring is imprecise and has a high cost. This is particularly true for managerial and other “knowledge worker” jobs where the precise activities which the agent should carry out in the interests of the principal cannot be fully specified in advance.

Where effort is not easy to measure, and supervision is costly and/or imprecise, it might be thought that the obvious alternative is to link pay more to output (e.g. via piece rates or commissions), so that workers have a strong incentive to exert more effort and thereby to increase production.⁹ The use of high-powered incentives has the added advantage of screening workers on basis of their ability (Lazear, 1986, 2000). In other words, because the most able workers have the prospect of earning more under such incentive schemes, these workers would be attracted to working for firms offering strong performance incentives.

The mainstream economic literature points, however, to **major informational and uncertainty/risk problems which limit the scope for paying workers on the basis of their output**. It explains by reference to these factors the limited use of high-powered incentives within firms—that is, in the context of the employment relationships—relative to their use in market transactions between firms.

In the first place, the measurement of worker “outputs” may be affected by a range of output measurement problems—for example, if the output concerned is a service rather than a

⁹ There is, indeed, clear evidence that workers respond to pay-for-performance by increased effort (Lazear, 1996, 2000; Prendergast, 1999). However, two remarks have to be done: first, there is little empirical endorsement of the principal-agent theory, in the sense that contracts are rarely designed as predicted by theoretical models (Prendergast, 1999). Second, empirical evidence on pay-for-performance is nearly exclusively directed either at jobs with routine tasks (see e.g. Lazear, 2000) or at corporate managers’ compensation (see e.g. Kole, 1997).

physical good, quality may be particularly hard to measure. The self-interest postulate implies that, faced with high-powered incentives linked to imperfect output measures, agents will ruthlessly focus all effort on what is measured, neglecting what is not measured and which does not therefore enter into their compensation scheme. This will be a problem in any “multi-tasking” context—i.e. when the work to be performed encompasses several dimensions (for example quantity and quality, production and maintenance of the productive asset, etc.)—some of which are less measurable than others. The result will be *dysfunctional (perverse) behavior*—that is, behavior which is to the detriment of the principal’s interests (Holmström and Milgrom, 1991). The other consequence will be that agents may “game” the system, i.e. manipulate information so as to be sure to get their output-based payments. Some degree of output measurement difficulty affects, moreover, the bulk of jobs.

A further problem arises when, as is so often the case, outputs are produced by teams of workers and it may not be possible readily to distinguish the contribution of one worker from other workers in the team (Alchian and Demsetz, 1972). Under such circumstance, a measure of team output may be used as a proxy for individual output. However, group incentives entail the risk of the so-called free-rider problem, meaning that a member of the group could be tempted to reduce his own effort, while hoping to get the performance premium if the group as a whole meets the target.¹⁰ But if most members act non-cooperatively and do not exert sufficient effort, performance will be low and the group will not receive any premium.

The further problem is that some agents—managers in particular—do not produce specific final or intermediate outputs, but are rather engaged in “overhead” tasks such as strategy-formulation and the organization of production processes. In these circumstances, the ideal high-powered incentive would not be payment by output, but payment based on the agent’s contribution to the principal’s ultimate objective (which can be taken to be the maximization of the firm’s total value). In reality, however, this generally is impossible to measure. Great difficulties arise in seeking to distinguish good performance from impact of uncontrollable external factors. Disentangling one individual’s contribution to the results achieved from that of others it exceedingly difficult, particularly given the substantial and variable time lag between managerial actions and their consequences (Feltham and Xie, 1994). Under these circumstances, if a high-powered incentive scheme based upon objective performance measures is to be used, there tends to be little choice but to use overall measures of firm performance (e.g. accounting profit or changes in the firm’s share price, or performance

¹⁰ The literature suggests several different ways to overcome the free-rider problem. In small groups, cheating may be easily detected, so that it is easy to enforce cooperation through the threat of group punishments (peer pressure). Teamwork associated with a group incentive may even allow the costs of supervision to be reduced, if individual effort is more difficult to observe for outsiders than for team members (FitzRoy and Kraft, 1985, 1987). In large groups however, such a mutual monitoring is not possible. The way out of the free rider problem must then come from other sources, such as organizational loyalty (Ehrenberg and Smith, 1997). To sum up, depending on the severity of the free-rider problem, team bonuses may or may not increase team productivity (McConnell and Brue, 1989).

relative to competitors or to the market as a whole) which do not seek to distinguish the contribution of specific individuals and which, in general, do a poor job of netting out the impact of uncontrollable external factors. The inevitable imperfection of such performance measures leads to perverse effects (Baker, 1992; Gibbons, 1998). For example, they may lead to actions which boost short-term profitability (and, thereby, the short-term share price in an imperfectly informed equity market) at the expense of longer-term value maximization.

This points to a further related problem to which high powered incentives are subject—the impact of uncertainty. To the extent that high-powered incentives for workers are based upon measures of outcomes or outputs which are subject to uncertainty due to uncontrollable external factors, the use of such incentives makes worker income uncertain, and transfers risks from the firm to its workers. The implication of this is that, if workers are more risk averse than the firm’s principals, the appropriate role of high-powered incentives will be correspondingly lessened (Stiglitz, 1974).¹¹

In summary, the conclusion of this literature is that *the less measurable are worker results (output or outcomes), and the greater the uncertainty about the relationship between worker effort and the results measures available, the less use should be made of high-powered incentives based upon objective performance measures*. The principal should, in general, *trade-off the increase in incentives and the problems associated with them, i.e. risk and distortions* (Baker, 2002). Insofar as high-powered incentives are used, the performance measures should be selected taking into account their degree of controllability by the agent and their alignment with the principal’s objective (Feltham and Xie, 1994).

The role of medium-powered incentives

The mainstream economic literature also considers the merits of a number of other remuneration strategies which fall somewhere between the high-powered and low-powered ends of the spectrum.

One of these is the **use of subjective performance “measures”** as a way to mitigate incentive distortions arising from imperfect *objective* performance measures.¹² Subjective “measures” are performance ratings by supervisors which are intended to capture aspects of

¹¹ However, despite it has much occupied theorists, the so-called risk insurance – efficiency trade-off has received little evidence in practice (Prendergast, 1999; Foss and Laursen, 2005). And anyway, as Gibbons (1998) puts it, the trade-off has some explanatory power, but is far from all that matters.

¹² Technically, the literature often models the use of objective performance measures through static models, while subjective measures necessitate some repeated interaction for contracts to be enforceable.

the workers' contribution to the firm which are hard to measure. However, subjective measures come with their own set of problems. As they cannot be costlessly verified by outsiders, subjective performance measures may possibly be manipulated or distorted (compression of ratings or rent-seeking activities) and entail the risk of opportunistic behavior by the principal (Prendergast, 1999). In particular, the risk of influence activities on the part of employees involves costs to the organization, both in degrading the quality of decision-making and in diverting attention and effort (Milgrom and Roberts, 1988). Subjective performance measures make sense only in ongoing relationships where credibility of both players is important.

In practice, objective and subjective performance measures are often used in combination. Baker et al. (1994) show that in some circumstances, objective and subjective measures are complements, leading to better results than either explicit or implicit contracts alone. At the bottom line, the mix of objective and subjective measures should thus be based on a trade-off between the perverse effects and the distortions arising from the two kinds of measures.

Promotional incentives (referred to in some of the literature as "career concerns") have the advantage that they break the immediacy of the connection between assessed performance and the reward (Dewatripont et al. 1999a). This helps reduce the incidence of perverse effects and gaming with only a misleading short-term impact on measured performance. However, promotional incentives also raise another more general risk. This is that any incentives which are awarded on the basis of *relative performance*¹³ (i.e. the performance of one worker assessed in comparison with other workers' performance) entail the risk that agents will take actions that reduce the chances that other players "win the prize"—that is, employees may sabotage each other's work or output. This risk is however, considerably greater for higher-powered incentive such as, at the extreme, the process which has been adopted by some companies wherein all employees are rated relative to one another and those at the top rewarded richly while those at the bottom are fired, and the literature warns strongly on the risk of using such "tournament" processes in contexts where co-operation and team work are critical to firm performance (Borjas, 2000, pp. 444-445; Lazear, 1989, Holmström and Milgrom, 1994).

The literature also suggests a number of other mechanisms which may be used to create more balanced incentives for materially self-interested workers in the presence of performance measurement difficulties, namely:

- *Deferred compensation* such as seniority pay (underpayment followed by overpayment) and pensions provide incentives to exert effort, and they reduce turnover.

¹³ Mechanisms based on relative performance ratings are referred to in the economic literature as "tournaments". Tournaments theoretically enable to elicit the "right" level of effort from workers when it is difficult to measure a worker's actual productivity, but it is easier to contrast the productivity of one worker with that of another.

- *Better working conditions*: which the hedonic theory of wages suggests can reduce the opportunity cost of worker effort.
- *“Efficiency” wages*: the idea here is that paying above-market wage rates will, by raising the opportunity cost of being fired, increase the desire of workers to perform in order to keep their jobs.¹⁴

Further theoretical results

Although this literature points to strong reasons for caution about high-powered incentives in many employment contexts, it clearly implies that the extent to which such incentives may be used varies enormously between different contexts. The literature points to a set of factors which determine the nature of the optimal employment and remuneration regime for particular types of work. These include the ease and cost of monitoring effort, the availability and quality of measures of works output or contribution to the firm’s results, the importance of workgroup cooperation, and the length of the employment relationship. In some contexts, it may be optimal from the principal’s point of view to rely largely or wholly upon high-powered incentives—for example, if workers are responsible as individuals for producing an easily-measurable product (permitting, for example, piecework for outsourced clothing workers). However, the circumstances of most employment relationships are far removed from this, and more limited use of high-powered incentives is appropriate as a result.

With few early exceptions (e.g. Alchian and Demsetz, 1972), the mainstream economic literature hardly mentions the **cost of performance information (i.e. of information about outputs and outcomes achieved)** as a factor in determining the appropriate role of high-powered incentives. In the main, it is only in respect to the monitoring of worker effort that information costs are taken into accounts as a determining factor for the choice between low-powered and high-powered incentives (e.g. Garen, 1998). However, clearly the higher the

¹⁴ This theory is based on the premise of a wage-productivity dependency. Its principle lies in providing incentives through paying workers a wage above the market-clearing level: an efficiency wage is such that the marginal cost of increasing the wage exactly equals the marginal gain in productivity. The presumed link between wages and productivity is explained by different reasons: a high wage is supposed to increase the cost of shirking, to influence the “sociology” of the organization, to reduce turnover costs, and to attract a “select” pool of workers (if their reservation utility depends on their ability). The theory thus assumes that wage rents and supervisors are substitutes. However, the efficiency wages theory suffers both from theoretical criticisms (bonding theory) and a lack of solid empirical foundations (nevertheless, Goldsmith et al. (2000) find that receiving an efficiency wage enhances effort). Moreover, it is less adapted to the public service where the fear of being fired is quasi-inexistent for many civil servants.

costs of performance information, the smaller the appropriate role for high-powered incentives, other things being equal.

Generally speaking, in multi-task settings, it is often helpful to use multiple instruments to provide a balanced package of incentives (Gibbons, 1998).¹⁵ In other words, optimal employment arrangements will often tend to be based upon a mix of low-powered and medium or high-powered remuneration instruments of varying types, including use of objective and subjective measures. Amongst low-powered remuneration, time-based payment will often be important, supported by significant monitoring activity. In addition, rules constraining employees behavior can play an important role in many contexts (Holmström and Milgrom, 1994).

Empirical results

The general empirical evidence with respect to the motivating power of money, which is notably surveyed in Gupta and Shaw (1998), Jenkins et al. (1998) and Prendergast (1999), is relatively consistent, and shows that financial incentives are associated with higher performance—or, more precisely, that it is associated with higher quantity of worker output.¹⁶ However, the literature indicates little about impacts where measurement is difficult. Thus, for example, the available literature on impacts on performance *quality* is inconclusive (Gupta and Shaw, 1998). In a managerial context, empirical evidence suggests that there is indeed a statistically significant relationship between managerial pay and firm performance, but only a weak one (Barkema et al., 1997).

This literature on dysfunctional responses—perverse effects and gaming—to compensation schemes in a private sector context is reviewed in Prendergast (1999, pp. 25-29), and provides some evidence that these effects are real. Baker et al. (1994) also offer a series of examples illustrating the dysfunctional behaviors due to pay-for-performance system based on “distortionary” performance measures. However, this empirical evidence is quite limited (it is inherently difficult to test, because of measurement difficulties), being based on only a handful of case studies.

¹⁵ Feltham and Xie (1994) show that adding an additional measure to the performance assessment process will improve that process if (and only if) the additional measure adds additional information. However, this analysis does not consider the cost of information.

¹⁶ In one representative case study, Lazear (2000) shows that the switch to piece-rate pay in a glass corporation had a significant effect on average levels of output per worker. The increase in productivity can be split into two components, about half of which resulting from the average worker producing more because of incentive effects, the rest resulting from an ability to hire the most productive workers, and possibly from a reduction in departures.

Yet, the real empirical question is not so much whether perverse effects exist, but rather what is their magnitude, and whether their costs outweigh (in conjunction with other problems) the benefits of incentives. A related question is how they can be mitigated, be it through additional constraints (supervision) to secure quality (Holmström and Milgrom, 1991) and/or other types of motivation (see next Section).

Application of these results to the public sector

Most of the mainstream economic literature assumes a private sector context. However, a number of economists, and some political scientists, have applied this framework to the public sector. Their general conclusion is that the special characteristics of the public sector mean that the problems affecting the use of high-powered incentives tend to be particularly severe, and that **financial performance incentives may therefore *optimally* be absent or very low-powered in the public sector** (Burgess and Ratto, 2003; Tirole, 1994; Dixit, 2002, Dewatripont et al., 1999b).¹⁷

A key reason for this is that output measurement difficulties tend on average to be more severe in the public sector, because (as discussed in Chapter 2.2) the general government sector has a heavy concentration of services as opposed to physical goods, and many of these services are heterogeneous or contingent capacity in nature. Moreover, performance data is often only available at a more aggregate level than that at which production takes place, hence the need to focus on team performance (Burgess and Ratto, 2003). At the level of outcomes, there is usually no measure of overall agency results equivalent to profit or market capitalization in the public sector. All of the other difficulties of measuring individual manager's contributions to results—the impact of external factors, uncertain and variable time lags, and the team nature of outcomes—also apply. Moreover, by contrast to private firms which, at least approximately speaking, have a single clear ultimate objective (value maximization), government agencies pursue multiple social welfare objectives which frequently conflict (for example efficiency vs. equity) and which must therefore be traded off against one another. Moreover, as noted again in Chapter 2.2, there is often a measure of ex-ante ambiguity about objectives, one reason for which is unresolved competing views at the political level or within agencies. Relevant to this is the widespread presence of what the literature refers to as “multiple principals” in the public sector. In other words, rather than only having one boss to please, public organizations often face competing pressures from, for example, politicians and the public, or from political leaders in executive government versus

¹⁷ Note that this raises questions about the role of the public sector in general, because of the finding that low-powered incentives are sometimes ineffective. Two arguments may be opposed to this statement: (i) some justifications explain the existence of the public sector because it is more efficient than the private sector in some areas characterized by market failures (e.g. Francois, 2000); (ii) it is possible to design policies that offer robust incentives to public service professionals, and ensure both performance and equity (e.g. Le Grand, 2003).

those within the legislature. For all these reasons, it is often the case that results are harder to measure than actions (effort) (Dixit, 2002).

Moreover, the multiplicity of missions and measurement difficulties means that the “multi-tasking” problem tends to be particularly severe in the public sector, the implication of which is that high powered incentives entail even **more unforeseen and dysfunctional side-effects** than in firms with clear goals. It has also been suggested that the importance of **worker cooperation** in some sectors is so great that excessive wage differential between workers of the same level would be very damaging to team cooperation (Lazear, 1989).

For example, Prendergast (2002) argues that overseeing public officials’ behavior is often carried out by investigating the details of the cases they handle, not on a random basis, but instead upon information received from consumers – precisely, based on complaints. This system creates agency problems because those consumers who are given rents by mistake do not complain, while those who feel mistreated do complain. Bureaucrats thus have an incentive to give consumers what they want.

A further difficulty for high-powered incentives in the public sector is the absence of a link between the level of performance of an agency and its funding—by contrast to the position of firms which, if they are performing well, will tend to enjoy strong profits which can be used to provide performance incentives to employees.

This is a formidable list of difficulties, and the literature suggests that it is in significant measure as a consequence of these specificities that **incentives are generally weaker in the public sector** and public agencies rather resort preponderantly on **other types of lower-powered incentives such as promotion** (see e.g. Dewatripont et al., 1999; Rose-Ackerman, 1986). Conversely, greater attention to the monitoring of effort is warranted, and task assignment and work organization are particularly crucial in promoting better performance (Burgess and Ratto, 2003). Holmström and Milgrom’s (1994) argument that the **effectiveness of low-powered incentives may be enhanced by simultaneously placing constraints on the employee’s freedom to act** has also been used to explain the widespread use of **bureaucratic rules** regulating the behavior of public employees (Prendergast, 1999).

It must, however, be borne in mind that there is considerable variation within the public sector, and also in the private sector, in the type of work being performed and therefore in relation to such factors as the costs of performance information and effort monitoring. What is more important to determine the power of incentives is not whether the tasks are performed in the public or private sector per se, but the nature of the tasks. For instance, a survey of the evidence on incentives in organizations led by Burgess and Metcalfe (1999a) shows that there is no difference in the likelihood of an agency operating a performance pay scheme for manual workers; however, public service agencies are much less likely to operate a performance pay scheme for non-manual workers. Besides, they find that merit pay (based on subjective assessments), as predicted, is more likely than objective performance pay for non-manual workers (whose output is harder to measure), and that the reverse is true for manual workers. Generally speaking, incentive schemes for “operational” staff ought to

adapt to the characteristics of the tasks, such as ease of monitoring, availability of good performance measure, and degree of cooperation needed between workers – just like in the private sector.

SECTION III: NON-MATERIALISTIC MOTIVATION

Introduction

The key deficiency of the mainstream economic literature is its adherence to the materialistic self-interest postulate. There is, however, considerable evidence indicating that people often act contrary to their material self-interest (Frey and Jegen, 2001; Fehr et al., 2002; Gintis et al., 2003; Fehr and Rockenbach, 2003). Moreover, the assumption that workers will shirk in the absence of sufficient incentives is one for which there is little empirical evidence (Minkler, 2004). The evidence points to the existence of informal norms and socio-psychological forces that may often motivate workers more powerfully than financial incentives do (Baron 1988). Such non-monetary motivations have been studied for decades by social scientists (e.g. Herzberg, 1968) and in particular social psychologists (e.g. Deci, 1971; Deci and Ryan, 1985; Lepper and Greene, 1978).

With some honorable early exceptions (e.g. Akerlof, 1982), economists for a long time ignored this literature. However, in recent years more and more economists have been using the findings of social sciences on the nature of work motivation, taking their analysis to a more sophisticated level than that offered by the strict material self-interest postulate (e.g. Frey, 1993, 1997; Kreps, 1997; Murdock, 2002; Bénabou and Tirole, 2003; Minkler, 2004). The importance of this is captured well by Gibbons (1998: 130), who observed that “one simple possibility is that economic models that ignore social psychology may be incomplete (but perhaps still useful) descriptions of incentives in organizations. A more troubling possibility is that management practices based on economic models may dampen (or even destroy) non-economic realities such as intrinsic motivation and social relations.”

No unified theory of non-materialistic motivation has emerged yet, and a range of different concepts of such motivation can be found in the literature. The lack of consensus in the literature makes it necessary to suggest a working classification of such motivation as a framework for the analysis in this chapter. **To this end, we propose to distinguish between social motivation and internal motivation, and within the latter category between intrinsic motivation and moral motivation.** In doing so, it is however important to stress the close interactions between these various sources of motivation. Moreover, the distinction between motivation and motivators is, as discussed below, an important one.

It is worth emphasizing that the recognition of these additional sources of motivation allows us to adapt – rather than completely reject – the rational choice approach preferred by economists. Indeed, adjusted to take into account non-pecuniary motivation, economic

models may account for much of the pro-social or altruistic behavior now broadly evidenced in the literature (Baron, 1988; DiIulio, 1994; Bénabou and Tirole, 2003). Technically, of course, one can incorporate non-materialistic factors into the worker's utility maximization problem and still use (a modified version of) the rational choice approach (Minkler, 2004).

Social motivation

We define social motivation as referring to the pursuit by individuals of certain types of social relationships in the workplace—such as the acceptance and approval of others, adherence to norms, and search for status and power—for reasons which are separate from, or additional to, any material advantages which may arise from those social relationships.

The sources of social motivation identified by sociologists and psychologists include the human tendency to **identify with groups**, which translates into group loyalty and group utility (Gupta et al., 1997); the adherence to **norms** (general rules of voluntary behavior); and more generally, the desire to **reciprocate**, to **avoid social disapproval** and to get “**social rewards**”. The importance of these sources of motivation has been clearly demonstrated in the psycho-sociological literature, even if their *raison d'être* is not as yet perfectly explained by social cognitive science (see e.g. Falk and Fehr, 2002; Fehr et al., 2002; Gintis et al., 2003; Fehr and Fischbacher, 2004; Janssen and Mendys-Kamphorst, 2004).

The sense of **fairness** is one crucial element of social motivation. Fairness is about how people feel they are treated (materially and also symbolically) relative to others in their reference group. Fairness often centers on reciprocity, and numerous experimental studies indicate that people tend to voluntarily cooperate, if treated fairly, and to punish unfair behavior (see e.g. Fehr et al., 1997; Fehr et al., 2002; Fehr and Schmidt, 2004). Fairness is very important to consider in the workplace, because workers who believe they are being fairly treated are more likely to put forth effort and commitment, even if it runs counter to their material self-interest; while workers who feel unfairly treated may quit, reduce their effort level, steal from the employer, or even sabotage output (Ehrenberg and Smith, 1997).. Fairness and more generally, social comparison, would appear to be very important to human beings in general, but is probably especially important in some societies (e.g. Japan—see Levine, 1993).

One of the few economists who recognized early the importance of social motivation is Akerlof (1982), whose partial gift exchange model involves the concepts of *norms*, *reciprocity* and *fair treatment* (the latter being, for the most part, based in comparison of one's own situation with that of an appropriate *reference group*).

Internal motivations

We define internal motivations as those deriving from a desire of the individual to behave in a certain manner for reasons that are independent of any immediate external pressure or inducement. This contrasts with social motivations, which are activated by reference to the actual or anticipated reactions of others to one's own behavior.

Moral motivation is the first type of internal motivation we consider—and the most altruistic one. We define moral motivation as the desire to behave in accordance with one's moral beliefs and values, for reasons separate from any personal advantages (material or social) which may accrue from such behavior. Moral motivations encompass the desire to act altruistically in pursuit of a cause one believes to be just, or in the interests of external beneficiaries who one believes one has a responsibility to assist (Minkler, 2004). It also encompasses the work ethic, in the sense of an internalized commitment to work.

In a workplace context, belief in the “mission”—the social purpose—of the organization can be an important element in “moral” motivation. This is particularly true in public service and not-for-profit organizations. In a public sector context, the terms “public service motivation” is, as discussed later, often used to describe this type of motivation.

Intrinsic motivation will be used in what follows to refer to motivation which derives from the enjoyment of work—that is, from the pleasure of undertaking activities one likes (input-orientation) or from internal satisfaction derived from work achievements (and independent of any social or material rewards which those achievements might generate). Intrinsic motivation thus refers to working “for its own sake” (Deci and Ryan, 1985).

In the literature, the term “intrinsic” motivation is sometimes used in this narrow sense. But it is frequently used more broadly. For some authors, it encompass some or all forms of what we call internal motivations.¹⁸ For others, it includes even elements of social motivation.

The degree of intrinsic motivation clearly varies enormously both between individuals and between types of jobs. Little intrinsic motivation may exist in some narrowly repetitive manual jobs, whereas the intrinsic motivation for, say, a musician may be extremely high.

The interrelationship between different kinds of motivation

Although the divergent use of terminology in the literature makes the presentation of the above taxonomy of sources of motivation necessary for purpose of clarity, it must be immediately acknowledged that social, intrinsic and moral motivations are closely interconnected. For example, whereas an individual may initially be driven by social motivation to act in accordance with values held by others in his/her social milieu, over time such values

¹⁸ Thus Frey (1997) regards all moral motivations as forms of “intrinsic” motivation. Deci and Ryan (1985) regard the work ethic as a form of intrinsic motivation.

are often internalized by the individual, thus becoming part of moral motivation. Intrinsic motivation and moral motivation arising from the work ethic can also be closely linked in practice.¹⁹

As noted earlier, the taxonomy here does not rely on the distinction between self-interested and non-self interested motivation. In our typology, social motivations and intrinsic motivation are to an important degree self-interested in nature, although not in a material sense. This is obviously the case in respect to the desire for recognition or power, or the desire to avoid being socially “punished” by peers for unfair or non-cooperative behavior. It is for this reason that we reject the use of the term “self-interest” to refer to monetary and material objectives alone, and instead describe this as “materialistic” self-interest.

Some economists and game theorists argue that supposedly non-self-interested motivations are, or are at least in part, “rational”. The most trite (but still erroneous²⁰) form of this proposition uses the term “rational” not in the narrow sense of the search for material self-interest, but in the broader standard economic sense of the pursuit of utility (satisfaction). The proposition is then that individuals only do what gives them utility (satisfaction), and that therefore even supposedly altruistic acts must be selfish in the sense that they yield utility to the individual. A more credible proposition is that, as Kreps (1997) points out, it can be hard to distinguish between internal motivation and the worker’s response to fuzzy extrinsic motivators, such as fear of discharge, censure by fellow employees, or even the desire of co-workers’ esteem. Altruistic and co-operative behavior may also be in the self-interest, including the material self-interest, of individuals.²¹ These points may readily be accepted insofar as they are not inconsistent with the basis propositions that (i) people are capable of behavior which is not only not self-interested, but which runs contrary to their self-interest, and (ii) individuals self-interest pertains to social as well as material objectives.

¹⁹ Although clearly if one does something one does not enjoy out of a sense of work ethic, one is being driven not by intrinsic but by moral motivation. François (2000) provides a criteria for differentiating between “intrinsic” and “public service” motivation: he argues that if agents get utility from some aspects of the task itself (intrinsic motivation), in terms of principal-agent theory, this effects on both the participation and the incentive constraints; while if all that matters is the result from working (public service motivation), the nature of the actions performed is irrelevant, and the only constraint altered is the incentive compatibility one.

²⁰ In that moral motivation sometime leads people to make great sacrifices which can hardly be said—without abusing the language unacceptably—to yield them satisfaction.

²¹ Thus Rotemberg (1994) suggest that feelings of altruism can be individually rational in certain settings in which the variables controlled by the workers are strategically linked (“equilibrium altruism”); and Che and Koo (2001) explain co-operation as a self-enforcing behavior, in a context where team members interact repeatedly.

In our view, the essence of non-materialistic motivations is that, by contrast to the economic approach, it focuses on sources of motivation the mobilization of which requires different types of external motivators than financial ones, and/or which can operate without any external motivator.

Motivators and the mobilization of non-materialistic motivation

An important distinction which is not often made in the literature is that between motivation and motivators. Motivators are external actions or conditions which can impact upon the degree of motivation. Incentives—monetary and material rewards and sanctions—are thus a motivator which acts upon materialistic motivation. Crucially, however, they are not the only motivator, and the mobilization of non-materialistic motivations requires different types of motivators.

Social pressure—expressions of approbation, disapprobation, respect, etc., from others—is a particularly important motivator which acts directly on social motivation. The literature focuses mainly on *peer pressure*, which may constrain free riding under group incentive schemes.²² The importance of mutual monitoring and group norms in teams has been shown empirically (see e.g. Hamilton et al., 2003; Knez and Simester, 2001). Social pressure from respected superiors and/or subordinates may, however, also impact upon social motivation.

The example of social pressure indicates the important point that specific motivators can impact upon more than one source of motivation. For example, individuals may act to avoid the disapproval of others not only because they find this unpleasant, but also because they know that a bad reputation even amongst peers (and certainly on the part of superiors) may well damage their future material interests. The key point, however, is that the existence of social motivation means that social pressure can have a much more powerful impact than it would if people were motivated only by materialistic self-interest. The same point applies to some “incentives”. The most obvious example is promotional incentives, which work not only because of monetary motivation, but also because of the way they mobilize certain forms of social motivation (desire for status). Perceptions of how fairly one is being treated similarly play on both monetary motivation and status concerns.

Social pressure may be, up to a point, be mobilized by the principal in the employment relationship. For instance, Akerlof (1982) argues that firms can succeed in raising group work norms, which in turn raise average effort and performance, by paying workers a gift of

²² As a reference, Kandel and Lazear (1992) explore how peer pressure operates and how factors such as profit sharing, shame, guilt, norms, mutual monitoring, and empathy interact to create incentives in the firm.

wages in excess of the minimum required (efficiency wage). As already mentioned, social motivation may also be enhanced by actions targeted at fairness and reciprocity.

Although moral motivation is not subject to immediate external influences, the extent of such motivation and its nature can under some circumstances be changed over time by a different type of motivator—what might be called management or **leadership**—as well as by social pressure. Managers may “sell” desired behaviors by linking them to values which workers already hold. They may also act to persuade worker to modify their values to some extent, so as to increase their commitment to the objectives of the firm. Such leadership complements the “screening” of employees by commitment to the mission in mission-oriented organizations (Leete, 2000; Besley and Ghatak, 2003a).

Other motivators identified in the literature include task enrichment, empowerment and participation possibilities in the firm (e.g. Herzberg, 1968; Frey, 1997). Motivators may also be positive and/or negative. In other words, some external actions and conditions—such as perceived unfair treatment and bad working conditions—may actually reduce worker motivation.²³ Leete (2000), for example, finds that wage equity is related to worker motivation. The concept of “strong reciprocity” developed by cognitive psychologists is highly relevant here. This refers to the propensity of people to voluntarily cooperate, if treated fairly, and to punish non-cooperators (Fehr et al., 2002). Strong reciprocity is shown to be a powerful device for the enforcement of social norms, in particular for explaining altruistic behavior (Gintis et al., 2003).

Advantages and disadvantages of non-materialistic motivations

Non-materialistic motivations have a number of potential advantages. They can provide powerful motivations for behaviors which are very difficult to measure, such as creative tasks and the transfer of tacit knowledge (Osterloh and Frey, 2000). Most importantly, because these motivations generate a desire to perform *per se*, they are not prone to induce the types of behavioral distortions—perverse effects and gaming—associated with imperfect performance measurement under monetary incentive schemes. In technical terms, internal motivation can help in reducing the multi-tasking problems arising from purely materially self-interested behavior when the contract cannot completely specify all relevant aspects of employee behavior and its desired outcomes. For instance, the erosion of output quality which might be expected to occur in a system with incentives linked to output quantity,

²³ Herzberg (1968) notices the puzzling fact that the factors involved in producing job satisfaction (and motivation) appear to be separate and distinct from the factors that lead to job dissatisfaction. The author argues that motivator factors are *intrinsic* to the job (e.g. achievement, recognition, the work itself, and responsibility), while dissatisfaction-avoidance (or hygiene) factors are *extrinsic* to the job (e.g. supervision, interpersonal relationships, working conditions, and salary).

might be in some measure mediated by the presence of a moral commitment on the part of workers to the maintenance of service quality. Moreover, the more widespread is the moral commitment at the workplace to certain objectives, the greater the social pressure is likely to be on those who are less internally committed to those goals. Peer pressure has the added advantage of mobilizing information on effort and results which is more readily available to peers than to management. Thus Hamilton et al. (2003) confirm the presence of mutual learning and group norms in teams.

The crucial implication of this is that, in workplace contexts where internal and social motivations are substantial, the conventional economic literature may somewhat over-estimate the extent of the perverse effects and gaming which is likely to arise from the use of performance incentives in the context of imperfect performance measurement.

A further potential advantage of non-materialistic motivation, from the principal's point of view, is that the stronger such motivation, the less emphasis needs to be placed upon incentives to elicit any given level of effort (Minkler, 2004). Potentially, therefore, leadership efforts by the principal to strengthen the sense of mission may be worthwhile. One should, however, be cautious on this point, because the marginal cost of increasing the sense of mission may in many work contexts be quite high. Expressed differently, one should safeguard against an exaggerated sense of the malleability of the workforce.

Internal motivations are not, however, without their risks and limitations. Intrinsic motivation, for example, can perhaps best be mobilized for creative tasks which need quality, but not for repetitive tasks. Internal motivation in general is fragile and difficult to manage (Frey, 1993). Moral motivations may be somewhat inconsistent with the objectives of the organization, so that it does not always work to the benefit of the employer (Osterloh and Frey, 2000). For instance, in the context of the JTPA training program, training centers were shown to manifest preferences for serving the most disadvantaged. This had the benefit of acting as a counterweight to potential dysfunctional behavior induced by the funding formula, in the form of "cream-skimming". However, from the perspective of policy-makers, the extent of the case-worker bias towards the most disadvantaged is a problem, because it leads to too large a portion of resources going to clients who are, on average, least likely to succeed in re-entering the labor market even with substantial training assistance (Heckman et al., 1997). This example illustrates that sometimes, internal motivations may be myopic— e.g. placing too much weight on equity issues, and too little weight on cost-effectiveness ones. We return to this important point below in the specific context of the public sector.

Impact of incentives on non-materialistic motivation

An important lesson from incentive theory is that, as new instruments are added, the key is to evaluate them not in isolation, but as part of a coherent incentive system (Holmström and Milgrom, 1994, p. 990). This is even truer when non-materialistic motivations intervene. It is indeed presumable that behavior driven by either social or internal motivation is seen by people as "voluntary", and is preferred to action forced through either economic incentives or

the threat of external sanctions. The latter, to complement internal incentives, should thus be designed in a way that emphasizes the voluntary nature of the desired behavior (Kreps, 1997).

In particular, a crucial and controversial question is the impact of performance incentives—material rewards and sanctions for performance—upon the level of non-materialistic motivation. One possibility—the more attractive one, is that the mobilization of materialistic motivation by stronger incentives might not effect the degree of non-materialistic motivation. If this were the case, materialistic and non-materialist motivation would be substitutes, so that more non-materialistic motivation can lessen the need of financial incentives (Minkler, 2004). Another appealing possibility is that materialistic and non-materialistic motivations are complements, so that for instance financial incentives together with moral motivation can counterbalance the flaws of each other.

The other possibility, however, is that the increased activation of materialistic motivation by incentives might fight the degree of an individual's non-materialistic motivation. Such interaction between materialistic and non-materialistic motivation is the subject of “crowding” theory. First studied by social psychologists (in particular Deci, 1971; Deci and Ryan, 1985; Lepper and Greene, 1978), the possibility that the degree of non-materialistic motivation might be affected by material incentives has more recently been taken into consideration by some economists (e.g. Frey, 1993 1997; Kreps, 1997; Murdock, 2002; Bénabou and Tirole, 2003; Minkler, 2004). Crowding effects have mostly been studied with respect to what we call internal motivation, but also to impacts on social motivation.²⁴ The crowding theory helps explain some empirical observations contradicting principal-agent theory (Frey, 1997).

The greatest concern raised by this literature is that incentives may reduce (“crowd out”) non-materialistic motivation. The extreme possibility is that the crowding out effect reduces non-materialistic motivation by a greater amount than the increase in self-interested motivation which those incentives are aimed to induce, with the result that the total effect on motivation, and thus on workers' performance, may be negative (Frey, 1997). However, it has also been argued that—at least at low levels—incentives can “crowd in” (increase) the level of non-material motivation. The explanation for crowding out is to be found on socio psychological grounds, as explained in the next Box.

²⁴ Including impacts on social rewards (e.g. Janssen and Mendys-Kamphorst, 2004), reciprocity-driven voluntary cooperation (e.g. Fehr and Gächter, 2001), and compliance with rules (e.g. Falk and Fehr, 2002).

Box 1: The explanations for the crowding theory

Cognitive evaluation theorists argue that an understanding of the effects of rewards and controls requires a consideration of the *interpretation* that the recipients are likely to give to them, in relation to their feelings of self-determination and competence. It indeed appears that the *perception* of external interventions affects individual motivations. People may indeed perceive external interventions, such as monetary incentives, in two ways: either as *controlling* of their behavior, or as *informational* (e.g. indicator of worker's competence) (Deci and Ryan, 1980, 1985). The first aspect tends to move away the perceived locus of control and to forestall self-regulation, and has a negative effect on intrinsic motivation; while the latter has a positive effect over it. If the controlling aspect dominates, the external intervention undermines intrinsic motivation (Deci, 1971; Deci et al., 1999). Thus, the "control costs" that workers associate with various systems of rewards and monitoring labor play a major role in affecting how workers respond to a given employment system.

Alternative explanations have been proposed, such as the hidden cost of reward due to the over-justification hypothesis (Lepper et al., 1973; Lepper and Greene, 1978). The latter lies in that, in the presence of external controls, people attribute their behavior to an external agent. If they are faced with too many reasons (justifications) for performing the activity, the role of intrinsic motivation will be discounted, resulting in a decline in intrinsic motivation. When the external control is removed, future motivation and performance will then decrease.

The results obtained by Gneezy and Rustichini (2000) also suggest that behavior is influenced by agents' perception of the contract that is offered to them. They argue that when the contract offers money, the environment is perceived as monetary, and agents respond in a qualitatively different way in monetary and non-monetary environments.

From these socio-psychological explanations and related evidence, some economists have developed models aiming at offering explanations to the crowding effect which bridge the gap with the rational choice approach. Frey (1997) uses the idea that external interventions have both a disciplining effect (on the cost of working) and a crowding out effect (on its benefits). The total effect on work performance depends on the relative size of marginal effects. For their part, Bénabou and Tirole (2003) base their explanation on the informational impact of reward, arguing that when the agent has imperfect knowledge of his ability, he can derive information from the incentive scheme through an inference process. If the agent reviews his perception of the task or of his own abilities, incentives may then have only a weak positive effect in the short run, and a negative one in the long run.

It should however, be noted that **there is forceful debate about the empirical evidence on the detrimental effects of rewards**. On the one hand, a meta-analysis of the literature leads Deci et al. (1999) to conclude that "the evidence indicates clearly that strategies that focus

primarily on the use of extrinsic rewards do, indeed, run a serious risk of diminishing rather than promoting intrinsic motivation”. By contrast, meta-analyses by Cameron and Pierce (1994) and Eisenberger and Cameron (1996) conclude that, apart from very circumvented situations, rewards do not negatively affect intrinsic motivation. Moreover, the literature concerned with the effects of reward on intrinsic motivation draws quasi exclusively from experimental investigations – and little from work settings. But there is also experimental and econometric work by economists suggesting that, in some cases, the provision of extrinsic incentives, and in particular monetary rewards, may adversely affect agents’ internal motivation (e.g. Frey, 1994; Frey and Oberholzer-Gee, 1997; Frey and Jegen, 2001).

What seems unquestioned is that **a trade-off between extrinsic incentives and internal motivation does not appear systematically – but actually occurs under some particular conditions**. Some conditions have been identified as entailing the risk of crowding out internal motivation. First and foremost, the crowding out effect can occur only if there is high levels of intrinsic motivation in the first place (Kreps, 1997; Frey, 1997; Osterloh and Frey, 2000).²⁵ Different complementary conditions are advanced in the literature. In particular, the crowding-out effects may take place when an external intervention is perceived to be controlling; in contrast, when the intervention is perceived as informative, intrinsic motivation is unaffected or may even rise. Contingent, tangible and expected rewards entail the risk of reducing intrinsic motivation, while verbal rewards do not (Cameron and Pierce, 1994; Deci et al., 1999).²⁶

So, it appears that, according to the way they are designed and thus perceived, explicit contracts can either reinforce implicit contracts, or crowd them out. Our view on that issue is that the **possible de-motivating effect of non-materialistic motivations deserves some attention**. More precisely, the long-term effects of incentives on motivation are to be considered with care (Deci et al., 1999; Bénabou and Tirole, 2003). However, it is possible that **the crowding out effect may be largely escaped** by avoiding the conditions which are recognized to prompt it (see e.g. Frey, 1997; Eisenberger and Cameron, 1996). So that, at the

²⁵ For instance, Lazear (2000) finds that the hypothesis that monetary incentives may actually reduce output is unambiguously refuted by his data on blue-collar work.

²⁶ Bénabou and Tirole (2003) develop an interesting alternative explanation for crowding-out, based on an informational inference process. They argue that when the agent has imperfect knowledge of his ability, he can derive information from the incentive scheme. In that view, the “crowding out” case requires that the agent be less knowledgeable in some dimensions than the principal, and that a sorting condition holds (the principal is more inclined to offer rewards when the agent has limited ability or the task is unattractive). By offering low-powered incentives, the principal signals that she trusts the agent. Conversely, rewards have a limited impact on current performance, and reduce the agent’s motivation to undertake similar tasks in the future.

bottom line, using financial incentives in complement to non-materialistic motivations and motivators, as part of a coherent system, may be fruitful.

The public sector

It has been suggested by many analysts that non-materialistic motivation, especially moral motivation, is particularly strong in the public sector, or at least parts thereof (Perry and Wise, 1990; Le Grand, 2003). Indeed a specific term, “public service motivation” (PSM), has been widely used in this context. PSM may be defined as an altruistic motivation to serve the interests of the community, which leads public sector workers to employees to commit effort because of the value they attach to a social service or other public goal (François, 2000). Expressed differently, the idea is that “mission-oriented” organizations—that is, organizations staffed by motivated agents who subscribe to the its mission—are more common in the public than in the private sector (Besley and Ghatak, 2003b). There is considerable evidence that PSM exists within the public sector (e.g. Perry 1996, 1997; Brewer et al., 2000; Wright, 2001), and that public service organizations tend to attract such people (Houston, 2000) . There is also empirical evidence that the same type of moral motivation exists, to varying degrees, in the non-profit sector and even, in certain cases, the private sector (Wittmer, 1991).

It has been argued that PSM plays a crucial role precisely because the use of higher-powered performance incentives is more risky—more likely to induce perverse effects and gaming—in the public sector, because of factor such as particularly severe performance measurement problems and goal ambiguity (Baker, 1992, p. 599). The organizational goals of nonprofit organizations are therefore often best achieved by intrinsically motivated employees and by employees who identify very closely with the goals of the organization (Leete, 2000). In this context, the lesser use of performance incentives, and lower remuneration in general, has been viewed as playing an important screening role. That is, by discouraging people with stronger materialistic motivation, it helps to match employee mission preferences to those of the agency in a way which increases organizational efficiency and economizes on the need for high-powered incentives (Besley and Ghatak, 2003a). Public organizations attracting members with high levels of public service motivation are thus likely to be less dependent on utilitarian incentives to manage individual performance effectively (Perry and Wise, 1990).

The picture of public employees which such literature paints is one which differs greatly from the narrow homo economicus of the mainstream economic literature. Thus DiIulio (1994) speaks of “principled agents” as workers who do not shirk, subvert, or steal on the job even when the pecuniary and other tangible incentives to refrain from these behaviors are weak or nonexistent.

In this context, action to boost and shape non-materialistic motivation is viewed as generally even more important than it is in the private sector. The role of leaders is, for example, seen

as crucial to shaping moral commitments (DiIulio, 1994)²⁷. Socialization and organizational culture are viewed as especially important. Thus Wilson (1989) underlines the necessity to develop a “sense of mission” in bureaucracies, as well as the role of “professionals” and “narrow specialists” in creating such a sense of mission. The manner in which the organization is managed may also be important—thus Moynihan and Pandey find that red tape and length of organizational membership are negatively related to public service motivation, while hierarchical authority and reform efforts are positively related to it. This suggests that it is important to create an environment that allows employees to feel that they are contributing to the public good.

Some analysts suggest that the prevalence of public spirit greatly entails the danger that high-powered incentives will induce crowding-out (Frey and Oberholzer-Gee, 1997). Perry and Wise (1990) warn that the great risk in treating the public service like private enterprise is that it fails to acknowledge unique motives underlying public sector employment.²⁸

The implications of this literature are, firstly, that performance incentives should work less well in the public sector than in the private sector and, in the extreme, might not work at all or actually be counterproductive. Recent empirical evidence on this seems to show, in the main, that performance related pay systems in the public sector can result in increased performance, but that the effects are not strong (Propper and Wilson, 2003). The literature surveyed in Burgess et al. (2001) suggests that the effect of performance-related pay in education in the US had only limited effects, while Atkinson et al. (2004) show that the scheme for teachers in England did improve test scores and value added, – but the results were quite heterogeneous and sometimes nil. In the health sector, some anecdotal evidence finds that fee-for-service resulted in a higher quantity of primary care services provided compared with capitation (Gosden et al., 2001). However, Arrowsmith et al. (2001) conclude that performance-related pay in the British public health sector has had, at most, only a very modest beneficial impact. Overall, little reliable evidence is available on the impact and effect of incentive and reward strategies in health care (Buchan et al., 2000). However, by contrast, a study by Kahn et al. (2001) finds that the introduction of performance pay in the Brazilian tax collection authority had a dramatic effect. Empirical evidence questioning the efficacy of “first generation” pay for performance systems in the civil service was mentioned earlier.

²⁷ Generally speaking, “management matters”. For instance, a study of the largest US federal agencies finds that frontline supervisors play an important role in organizational performance and effectiveness, and supervisory management is an important determinant of high performance (Brewer, 2005).

²⁸ More generally, critics argue that increasing “managerialism” in the public sector entails the risk that impartiality, equal treatment and general interest, i.e. the ethic component of common goods, disappear (Rawls, 1987).

The other implication of the public service motivation thesis is that the extent of perverse effects and gaming should be less than would be the case if actors were entirely materially self-interested. Counterfactual propositions of this type are not easy to test. There is some systematic (non-anecdotal) evidence—although not a great deal—on perverse effects and gaming in general in the public sector (Propper and Wilson, 2003). However, a key problem with this evidence is that in nearly all cases it examines the impact of organizational performance measures and targets without making it clear to what extent individual employees within those organizations received incentives linked to those organization-wide measures and targets.

Perhaps the most systematically studied area is the output-based hospital funding system pioneered in the US under the “prospective payments” label and subsequently adopted in many public hospital systems around the world. The empirical literature on this (surveyed in Robinson and Brumby, 2005) overwhelmingly suggests that, despite quite strong financial incentives for hospital linked to imperfect performance measures (in particular, output measures without a quality dimension), much-feared perverse effects largely failed to eventuate. On the other hand, researchers have reached mixed conclusions about the widely-studied training program managed under the US Job Training Partnership Act (JTPA). Heckman et al. (2002) finds that the degree of “cream-skimming” (selection of lower cost clients and exclusion of higher cost ones) is small, which suggests that training centers do not respond blindly to the dysfunctional doors opened by the system, and instead have some consideration for the disadvantaged. By contrast, Courty and Marschke (2004) find that training agencies game the incentive system, which is consistent with the hypothesis that performance incentives in organizations lead to costly distortions in agent behavior. Prendergast (2002) shows how the new supervision system introduced in a police department led to dysfunctional behavior on the part of police officers, who changed their behavior to avoid the risk of being subject of complaints from customers – which led to increased crime rates in the area.

At the bottom line, jury is still out on the implications of this for the appropriate role of incentives in the public sector. This raises the question of the possible ways, other than through linkage to individual incentives, in which measures and targets may impact upon public sector employee motivation. We return to this in Section IV.

Additional views on motivation under performance management

The above analysis makes it clear that when considering how best to motivate employees to perform, it is important not merely to think about the role of incentives, but to think about *motivators* more generally. “Motivators”, as indicated above, refer to all external factors which impact upon worker motivation, and include, as well as materialistic incentives, factors such as the quality of leadership, the social recognition given for performance, peer review processes, the “fairness” with which people are treated, and other aspects of the quality of the working environment. The term “motivational system” can be used to refer to the set of such motivators in place at any given time. The use of the term “system”

recognizes the interactions between various types of motivators, and the manner in which certain motivators can act upon multiple sources of motivation. As Holmström and Milgrom (1994) emphasize, it is crucial to assess proposed new motivational instruments not in isolation, but in relation to other incentives—and, in our language, in the context of the rest of the motivational system.

To decide what is the best way of improving performance, then, the starting point should be an **assessment of the initial (baseline) situation**. What are the deficiencies, if any, in the existing set of motivators? Depending upon the answer to this question, quite different responses may be required. For example, if the biggest motivational problem is that the employees of an agency feel themselves to be inequitably treated in base pay relative to similar workers elsewhere, and as a consequence their level of non-materialistic motivation is much lower than might be expected, adding performance pay may be entirely the wrong response. In making baseline assessments, it is important to recognize that the degree of sensitivity of workers with respect to the different types of motivations can be culture-specific (for instance, Japanese workers may be more sensitive to social comparison than their American counterparts (Levine, 1993)).

It is also important to identify explicitly the areas in which agency performance is most in need of improvement, with respect to the ultimate objective of the motivational system to be put in place. For example, is the main performance improvement imperative to increase efficiency (i.e. to reduce the unit costs of production)? Or is improving the quality of service to customers the more pressing concern? The appropriate type of change in the motivational scheme will depend critically on the answers to these questions. Thus if increasing efficiency is the priority, stronger incentives may be the answer. If, however, the priority is quality improvement, efforts to build upon the sense of mission (through better leadership, peer review and other similar strategies) may be more appropriate.

The interaction of various motivators is, as discussed above, an important theme of the literature, particularly in respect to “crowding out” or “crowding in” impacts of performance incentives on the degree of internal motivation of public sector employees. Setting aside such interactions, it is also worth bearing in mind that the effectiveness of each type of motivator is almost certainly subject to diminishing returns²⁹. Thus, if the level of public service motivation is already high, it may not be cost-effective to put much effort into raising it even higher. But conversely, if it is low, there may be great gains to be realized from efforts to build morale. If that is true, assessing the baseline situation in terms of existing motivation and motivators is crucial, because it can allow **identifying which motivations may already be quasi-saturated, thus which motivators have the highest potential to be profitable**.

²⁹ The point we want to make here is about the efficacy of increasing the level of incentives, other motivators being constant – and notwithstanding the cross-effects of one type of motivator on other motivations than its “target” one. For instance, it falls under common sense that increasing monetary incentives might increase productivity up to a point, but raising pay to the infinite will not raise effort correspondingly.

Acknowledging all the above mentioned considerations, the choice of a motivation scheme should be based, as far as it is possible, on a **cost-effectiveness analysis**. It should, in other words, be based upon a comparison of the incremental benefits of options for changes to the motivational system, relative to the total additional cost of such changes. Of course, it will generally be impossible to quantify these costs and benefits, but bearing in mind the basic cost-benefits principle is nevertheless useful because one can often form of rough view of the likely orders of magnitude of such costs and benefits.

Finally, it is important always to bear in mind the **real-world constraints** on public sector motivational schemes. Thus the overall public sector budget constraint imposes important limits on the scope for performance incentives. Similarly, mechanisms designed to protect the integrity and independence from nepotism and political corruption of the civil service may impose other constraints.

SECTION IV. IMPLICATIONS FOR MANAGING FOR RESULTS AND PERFORMANCE BUDGETING

The analysis of individual motivation above makes it clear that it is a mistake to think of incentives as the only, or even principle, means of motivating individuals to perform well. Similarly, it is a mistake to think of performance budgeting—or “Managing for Results” more generally—as capable of improving agency performance only through a linkages with individual performance incentives. There are, rather, a number of channels through which they may impact also upon public service motivation and non-materialistic motivation more generally.

Consider firstly the role of performance measures. Principal-agent literature encourages one to think of performance measures mainly as a means by which principals can inform themselves on the extent to which agents are doing what is expected of them. This is clearly an important function. However, measures may also under some circumstance play the role of informing agents themselves on the degree of success which they are having in achieving missions to which they have an internalized commitment—and may in this way assist in mobilizing public service motivation more effectively. It is possible that comparative indicators—for example, measures indicating how the comparative performance of regional or local service-delivery units in achieving important national objective—are particularly useful for this purpose.³⁰ The important proviso about this role for performance measures is

³⁰ Another example of comparative performance measures playing a valuable informational role for service deliverers is to be found in the development of measures of the comparative success rates of alternative procedures for treating given medical conditions, which is part of the broader movement over recent years to more “evidence based” medical practice. In the absence of such information, it was quite possible for doctors to continue using procedures

(continued)

that it is *completely* dependent upon service providers regarding the measures concerned as valid—even if partial and imperfect—measures of internalized goals. This is a powerful argument to reinforce the importance of the consultative development—rather than mere imposition from on high—of performance measures.

The setting of *targets* in respect to goals in relation to which there is an existing internalized workforce commitment, as a means of harnessing public service motivation, raises the additional issues of credibility and realism. It is counterproductive for the centre, or agency management, to set arbitrary targets to which the workforce feel no commitment and which it regards as unrealistic. As the Royal Statistical Society (2003, p. 11) puts it, “motivational targets which are not rational may demoralize”. This makes collaborative development, rather than imposition, even more important for targets than it is for performance measures.³¹ Insofar as performance budgeting succeeds in “calibrating” agency performance targets better to the level of funding provided, it should improve the credibility of targets and therefore their motivational force. Once again, however, this raises question-marks about targeting-setting for high-level outcomes in respect to which there is limited controllability or, expressed differently, there is great uncertainty about time frames and the relation between resources and possible outcomes. Further experience with some of the major target-focused managing-for-results régimes around the world will hopefully help to clarify the scope for useful performance target setting.

MFR processes should also be viewed as potentially playing a valuable role in **boosting, and in some measure reshaping, the sense of mission held by agency employees**. Advocates of corporate planning processes view this, implicitly or explicitly, as a primary function of the process of articulating agency missions and objectives. Some skepticism about these processes is understandable, because there is a widespread sense that they deteriorate all too often into paper exercises which have negligible impact on the internalized values and motivation of staff. Notwithstanding this, the process of clarifying organizational goals can, if properly handled, potentially be a valuable one with a real impact on the level and direction of public service motivation.

which had become outmoded and which were less effective than current best practice, in the sincere belief that they were giving their patients the most appropriate treatment. Such an approach becomes much more difficult when good information is developed and the use of such information is reinforced by peer review processes.

³¹ This is a lesson which has, for example, been learned in Britain where, particularly following the 2003 report of the House of Commons Public Administration Select Committee On Target: Government by Measurement, the government has proclaimed its intention of improving consultation in the setting of national Public Service Agreement targets and permitting greater local autonomy in the translation of those targets to the “coal-face” level.

It is important in this context to start with an explicit understanding of the way in which agency employees conceive their mission—and, more particularly, of any differences which exist between the employee sense of mission and the objectives held by the government. MFR processes may then be thought of as a potential tool for bridging any gaps which exist in the way principals and agents view agency goals. It was suggested earlier, for example, that it may not be uncommon for service delivery staff to be so focused on delivering good service to individual clients that they give insufficient weight to overall cost-effectiveness considerations, and that this may be in part the result of myopia—service deliverers can see what they are doing for individual clients, but have perhaps less sense of the opportunity cost of this in terms of services which could have been provided to others. Under such circumstances, it may be a key part of the leadership function to help employees understand that by paying more attention to cost-effectiveness, the overall mission of the organization may be able to be carried out more effectively.

What about the role of performance budgeting more specifically? As noted above, insofar as the credibility of targets can be improved by linking them better to the level of resourcing, this can assist in boosting performance. The other possible role of performance budgeting is through agency-level financial incentives. As emphasized throughout this volume, only some contemporary forms of performance budgeting aim to create a relationship between past performance and future funding in order to create “incentives” at the agency level. Such a linkage raises numerous difficulties, and can arguably work only in certain circumstances. The relevant point here, however, is that such **agency-level incentives might impact upon individual motivation in ways other than, and in addition to, their impact on individual material self-interest.**

It may be instructive in this context to consider the experience of the diagnostic related group (DRG) payment system for hospital services—an output-based funding system outlined in Chapter 1.2. DRG systems were not generally characterized by any individual staff performance incentives linked to the overall financial success of the hospital under the DRG system. However, because under DRG funding hospitals are, approximately speaking, paid a fixed amount per service irrespective of their costs, the financial consequences of inefficiency are serious—leading to the need for major cut-backs or even, at the limit, of closure. American research on initial experience with DRG payment in that country provided strong evidence for a “pressure matters” thesis, to the effect that hospital performance was quite sensitive to the risk of losses, but not to the incentive to make profits.³² It appears that the very considerable success of the DRG system—not only in the US, but elsewhere around the world (Robinson and Brumby, 2005)—arises from the fact that the financial pressure for efficiency placed on hospitals provided a powerful tool with which to convince physicians

³² See the evidence surveyed in Coulam and Gaumer (1991, p. 51). It should be noted that most of the US hospitals concerned were private rather than public. However, at that stage, they were generally non-profit, and therefore possessed very similar characteristics to public hospitals.

and other treating practitioners of the importance of efficiency, and to persuade them to take efficiency considerations systematically into account in clinical decision-making so as, in particular, to cut down on over-servicing. As Averill et al. (1996, p. 18) observe, “the DRG-based prospective payment rates created a natural language for communicating to the medical community the financial implications of clinical decisions.” Analyzing the difference between hospitals which were winners under the DRG payment system and those which were losers, Bray et al. (1994, p. 50) find winners were hospitals where management “successfully engaged physicians in efforts to control costs (e.g. physician-led task forces, routine financial information sharing with physicians, and appointments of senior physicians to management team positions)” whereas, by contrast, loser hospitals tended to be characterized by adversarial management/physician relationships (in the extreme, resulting in physician actions to push up costs as a means of undermining management). It seems plausible to hypothesize that what was at play here may have been more than just the self-interested motivation of physicians in seeing the hospitals which they work survive, and that it is a distinct possibility that much of the impact of the DRG system came from, and was dependent upon success in, mobilizing the “public service motivation” and professional commitment of physicians, as well as their sense of organizational loyalty.

Unfortunately, there is little empirical literature broader clarifying the way in which agency-level financial incentives impact within the public sector, and one can do more than speculate on the issue. It seems clear, however, that it is inappropriate to think of non-profit public sector agencies as being impacted upon by financial incentives in the same manner as for-profit corporations. Beyond this, it seems plausible to hypothesize that, in agencies characterized by strong public service motivation, agency-level financial incentives which are not linked to individual performance incentives may have an asymmetric effect: that is, the fear of losses which may put the existence of the agency at risk and thereby jeopardize its mission may have considerably more force in motivating improved performance than the prospect of agency-levels financial rewards for good performance.

On a final point, MFR and performance budgeting have, as noted earlier, the twin theme of greater *pressure* to perform and greater *freedom* to perform. Greater freedom usually refers to the decontrol of input choices, but in some cases also refers to greater managerial freedom in output choices (that is, in the choice of the means of meeting certain objectives). It is often suggested that **greater freedom to perform can only work in the presence of stronger incentives to perform**. However, it seems reasonable to suggest that the greater is the degree of public service motivation in a given sector of public service delivery, the greater the impact which increased freedom to perform may have irrespective of whether stronger performance incentives are offered. That is, the reduction of central controls may also be viewed as a means for providing scope for service providers to more effectively achieve public service goals to which they have a strong internalized commitment.

SECTION V: SPECIAL FEATURES OF DEVELOPING COUNTRIES

Introduction

The previous Sections demonstrate that the motivation of public employees for performance should rely on different types of motivators, acting on different sources of motivation. The possible introduction and/or combination of motivators should however be carefully assessed according to the institutional context, notably the existing incentives, organizational features and history. For instance, Perry (2000) insists on the role of the socio-historical context for forming public service motivation. Moreover, individuals from different cultural backgrounds are probably likely to be more sensitive to some kinds of motivations and motivators – especially with respect to non-materialistic motivations. For example, Levine (1993) shows that Japanese workers are more prone to social comparison than their American counterparts.

The cultural norms in many developing countries are undoubtedly very different from those of industrial countries, upon which the quasi-totality of the economic literature on incentives has been written. It is therefore probable that workers in developing countries will tend to react somewhat differently to external interventions, compared to what Western ones would do. In addition to different social norms, developing countries also have a series of characteristics and constraints which may impede the use of some kinds of incentives, which would otherwise be recommended in industrial countries.

In the present Section, we do not claim to be able to present a comprehensive analysis and recommendations as for the issue of incentives in developing countries. We rather propose some reflections which build on the literature and the authors' experience (mostly in Sub-Saharan Africa) and relate them to the lessons drawn in this chapter on motivation. Some features drawn below might of course not apply to all the developing world, but reflect the situation in at least some regions – parts of Africa but also of the Pacific, Latin American and Asia. We hereafter present a brief overview of some specific incentive problems encountered in developing countries, a series of potential causes, and finally some implications for the motivation of civil servants in these countries.

Overview of problems

Public service in developing countries is often plagued with many deficiencies like ineffectiveness, inefficiency and poor quality of services; endemic corruption; service provider absenteeism; and the high turnover of high-level staff which precludes the transfer of knowledge and the building of strong institutional cultures. These take place in a context of “informality”, i.e. where informal rules often dominate the formal rules of official institutions. In particular in Sub-Saharan Africa, it appears that formal institutions are at odds

with societal behavior, expectations and incentive systems, and therefore face a crisis of legitimacy and enforcement (Dia, 1996). This of course hardens the design of incentive schemes. The following box illustrates some of these problems, draws some explanations as well as possible paths out of the trap.

Box 2: Excerpts from the World Development Report (WDR) 2004
“Making Services Work for Poor People”

The World Bank’s *World Development Report (WDR) 2004* builds an analytical and practical framework centered on stakeholders’ incentives to provide basic services, such as health and education, to poor people. It focuses on strengthening relationships of accountability between policymakers, providers and citizens. Some of the motivational problems faced by service providers in developing countries are highlighted in the following excerpts (highlights are ours).

“They [teachers, doctors, nurses] are often mired in a **system where the incentives for effective service delivery are weak, wages may not be paid, corruption is rife**, and political patronage is a way of life. Highly trained doctors seldom wish to serve in rural areas. Since those who do serve there are **rarely monitored, the penalties for not being at work are low**. A survey of primary health care facilities in Bangladesh found the absentee rate among doctors to be 74 percent. [...] When present, some service providers treat poor people badly. “They treat us like animals,” says a patient in West Africa. [...] By no means all frontline service providers behave this way. Many, often the majority, are **driven by an intrinsic motivation to serve**. Be it **through professional pride or a genuine commitment to help poor people** (or both), many teachers and health workers deliver timely, efficient, and courteous services, **often in difficult circumstances**—collapsing buildings, overflowing latrines—and with few resources—clinics without drugs, classes without textbooks. [...] **The challenge is to reinforce this experience – to replicate the professional ethics, intrinsic motivation, and other incentives** of these providers in the rest of the service work force”. (p. 4)

“**Since the contract cannot be fully specified**, policymakers look to others means of eliciting pro-poor services from providers. One way is to **choose providers who have an intrinsic motivation** to serve the poor. A study of faith-based health care providers in Uganda estimates that they work for 28 percent less than government and private for-profit staff, and yet provide a significantly higher quality of care than the public sector. [...] Another way is **to increase incentives to serve** the poor or work in underserved areas. But one study of Indonesia shows that **it would require multiples of current pay levels** to get doctors to live in West Papua, for instance (where the vacancy rate is 60 percent). [...] A third way is to solicit bids for services and use the competition in the bidding process to **monitor and discipline providers**.” (pp. 8-9)

Special constraints of the incentive systems

The incentive systems in many developing countries face a number of additional constraints relating to the various motivations and motivators we have presented in this chapter.

First, a number of characteristics worsen the agency problems. Many developing countries lack good information systems, so that the cost of information is probably higher than in industrial countries. It even sometimes happens that no reliable information is available at all – neither on inputs, nor on outputs (as for fiscal data, see e.g. Lienert, 2003; Moussa, 2004). This results in acute measurement problems. Yet monitoring is not easy either, as these countries lack well-trained (and honest) supervisors; moreover, due to the scarcity of resources, the opportunity cost of control is increased. Because of a generalized lack of transparency, some civil servant networks may easily manipulate the information obtained by the rest of the organization – and this is a favorable ground for collusion to arise (Tirole, 1986).

Second, the predisposition of workers for various sources of non-materialistic motivations is probably different in developing countries than in Western societies. Some characteristics may worsen the incentive problem, while others may offer opportunities. One problem lies in the low level of civil-service pay – which has, for example, been shown to have a statistically and economically significant relationship with corruption (Van Rijckeghem and Weder, 2001). This relates to the issue of fairness: many civil servants in developing countries do not consider themselves as fairly treated, which decreases their loyalty to the organization and justifies “sabotage” behaviors. For example, health staff unions in Senegal regularly call for the retention of information on the part of health care providers (Paul, 2005). Together with low levels of *institutionalized* public service motivation, an implicit social acceptance of behaviors like absenteeism and corruption, civil servants may have quite low levels of social and moral motivation to perform.³³ As for the level of intrinsic motivation, it may be hampered by demotivating factors and external constraints (negative “hygiene factors”, in the terminology of Herzberg, 1968) such as a poor working environment. However, as the WDR 2004 highlights it, some service providers do possess a genuine dedication to serve, which should be carefully considered when thinking of designing an appropriate incentive scheme.

Finally, a series of constraints hamper the use of traditional incentives in developing countries. The latter very often face a tight budget constraint, which might prevent setting the otherwise economically optimal incentive scheme (be it paying performance premiums, for instance). The poor (or even inexistent) judicial system make it harder to enforce contracts

³³ Gatti et al. (2003) show that the social environment plays an important role in determining individual attitudes toward corruption. The presence of social effects implies that at the individual level, incentives to fight corruption can be low.

and to punish deviant behavior.³⁴ This reduces and possibly annihilates the value of ex post controls (Leruth and Paul, 2005). The use of peer pressure to increase work dedication is also hampered by the inexistence of a long tradition of public service.

Implications for motivation

In the face of these additional problems pervading in developing economies, the question of how to motivate agents for performance is even trickier than elsewhere. This issue has been a (baffling) puzzle for consultants and technical assistants for decades, and it is impossible to provide here some magic bullets to solve this question. However, we present a few ideas which build on the analysis developed in this chapter, and may contribute to the reflection.

First, we believe the issue of **fairness** deserves great attention. As long as civil servants believe they are unfairly treated, one should expect to witness deviant behaviors on their part, such as absenteeism and corruption. In terms of principal-agent theory, paying higher basic wages could help satisfy the agents' "individual rationality constraint" and guarantee their participation to the contract.³⁵ In such a situation, trying to introduce pay-for-performance has little chance to be understood like that; for instance, the pilot introduction of performance premiums for health workers in a Senegalese region ended up as being considered as a (legitimate) increase in salary, with absolutely no connection to any consideration for performance. It even spread over in other regions as a claim for a general increase in salaries (Paul, 2005).

Notwithstanding the above issue, introducing **pay for performance** in developing countries has the potential of increasing workers' effort, but should be considered with accrued caution for various reasons. Practically speaking, the measurement problem may be such that it may be impossible (in the short run and at reasonable cost) to get the adequate information to sustain a system of performance measurement and control. Together with the cost of supervisors (considering the risk of collusion) and that of performance premiums (cf. the example of Indonesia above), using financial incentives may be prohibitively costly considering the government's cash constraint.³⁶ Moreover, the possible crowding out effect

³⁴ For examples of enforcement failures for regulatory contracts in Africa, see Laffont (2003). As for the lack of penalties in budgeting and financial management, see e.g. Ramakrishnan (1998), Sekwat (1997).

³⁵ Van Rijckeghem and Weder (2001) suggest that higher relative salaries for public officials are associated with lower corruption. Dabla-Norris (2002) and Dabla-Norris and Paul (2005) argue that, as formal contracts fall short of their reservation utility, public agents in developing countries are offered "implicit contracts" which tolerate a certain degree of rent capture.

³⁶ Van Rijckeghem and Weder (2001) also show that a rather large increase in wages is required to eradicate corruption solely by raising wages.

of internal motivation (if initially present) might have greater effects than in industrial countries. Finally, incentive schemes are generally ineffective in non-stabilized situations (Pallez, 2003), which is often the case in developing countries.

It appears clearly from the problems overviewed in this section that the civil service in many developing countries crucially lack an adequate system of **sanctions**. The “culture of non-punishment” which is prevalent in some countries is due to different factors like the absence of a performing and independent legal system, the low work norms in place, the close-knit nature of society which precludes harming other members of one’s social network, together with the risk of reciprocal punishment in case the worker you punish today becomes your boss the day after. The result is that the threats which exist in theory become meaningless in practice. Hence, it seems unavoidable to accompany any motivator scheme with a real (and fair) system of sanctions.

Besides, mobilizing **non-materialistic motivations** may be appropriate in developing countries, all the more in the short run. Increasing work norms, professional ethics and public service motivation through human resource management initiatives appear unavoidable. For instance, Rauch and Evans (2000) show that meritocratic recruitment is a statistically significant determinant of bureaucratic performance in less developed countries. Moynihan and Pandey (forthcoming) identify a number of organizational settings which have an effect on employees’ public service motivation (e.g. reducing red tape, undertaking reform that clarifies goals and empowers employees, creating an environment that allows employees to feel that they are contributing to the public good). As for intrinsic motivation, it could be raised by enriching tasks and acting on the “hygiene” factors which, in the initial situation, rather tend to destroy workers’ satisfaction (e.g. bad working conditions).

Nevertheless, reliance on non-materialistic motivation rather than on explicit incentive contracts should not preclude the use of (existing) performance data for other purposes than linking pay to it. For example, it may be fruitful to use performance indicators (e.g. health center process indicators) to clarify goals, manage staff and increase their awareness and ability.

Finally, at the level of agencies as well, the basic problem to be solved may be of a different nature. While performance-based funding systems in industrial countries often aim at reducing costs, the first problem to handle in developing countries is perhaps to increase output (and its quality). This probably calls for designing alternative incentive systems rather than importing those developed in industrial countries. As for tackling the prominent problem of corruption in developing countries’ public service, some institutional frameworks have been shown to reduce the incentives for corruption at agency level (see e.g. Easterly, 2001; Recanatini et al., 2005).

SECTION VI: CONCLUSIONS

A major theme of contemporary performance budgeting is the building of tighter links between results and funding as a means of encouraging and pressuring agencies to improve their performance. This can only work insofar as individual public employees are motivated to perform better. This is particularly relevant when introducing new MFR systems, because reforms call for an extra amount of effort and cooperation, and a reform has little chance of being successfully sustained if those who manage it do not have appropriate incentives at crucial stages of implementation (Drazen, 2000).

This paper has considered the manner in which performance budgeting—and managing-for-results more generally—can be linked to actions to boost individual performance motivation. The literature survey in this chapter indicates that no definitive unified theory exists on the motivation of public personnel for performance. However, certain key points do emerge from the analysis in this paper.

It is a mistake to focus exclusively or primarily upon material incentives as the means of strengthening individual motivation to perform. While materialistic self-interest is an important element of individual motivation, so also in many areas of government are “public service motivation” and other forms of non-materialistic motivation (social, moral and intrinsic). MFR processes of defining objectives more clearly, and of measuring performance and setting targets have the potential, within limits and if managed appropriately, to boost individual performance through acting on these other sources of motivation as well as through links with individual incentives. Leadership and other mechanisms for strengthening and shaping the sense of mission in public sector agencies are enormously important. Agency-level financial performance “incentives”, where appropriate, may also act in part through the mobilization of employee commitment to the mission of the agency as well as through the impact on individual material self-interest. Moreover, a first step before considering how to motivate workers to perform better, may be removing the factors which de-motivate them – such as unfair pay or adverse “hygiene” factors (in the terminology of Herzberg, 1968).

In determining the best means of boosting individual motivation to perform, account needs to be taken of many factors including the nature of the work and the existing areas of motivational deficit. If, for example, public service motivation (and moral motivation generally) are low in an area of service delivery where they could be expected to be high, action to boost such motivation may be considerably more important than, say, the introduction of performance pay mechanisms.

The jury is out on the extent to which the great use of incentives such as performance pay can boost performance in the public sector. It is not true, as is sometimes claimed, that the empirical literature demonstrates that the contrary is the case—there are, in fact, a significant number of studies which suggest beneficial effects, although these are generally small in

magnitude. As for the danger of behavioral distortions arising from the use of unavoidably imperfect performance measures and targets, the empirical (as opposed to anecdotal) evidence is quite limited. It is, in general, desirable that further experiments in the use of such incentives take place and that the results continue to be dispassionately assessed. There are, however, sufficiently strong theoretical grounds to suggest that caution should be exercised in such experiments, especially in those many areas of the public sector where performance measurement difficulties are greatest.

In the same vein, it also appears that the question of the possible de-motivating effect of non-materialistic motivations deserves some attention, in particular in order to avoid situations which are recognized to de-motivate people (see e.g. Frey, 1997).

Nevertheless, there are reasons to believe the distorting effect of performance measures and targets can be expected to be less than sometimes warned against in the public sector, to the extent that either or both (1) non-materialistic motivations are strong and (2) the connection between measures and targets and individual incentives is muted in various ways (such as their combination with subjective assessments, and the use of longer-term promotional incentives). Therefore, contrary to the crowding out hypothesis, using financial incentives in complement to non-materialistic motivations and motivators, as part of a coherent system, may be fruitful.

At the bottom line, one should keep in mind that the choice of an appropriate motivational system should be done using the logic of a cost-effectiveness analysis, i.e. by comparing the *incremental* benefit prompted by the proposed instruments (increase in output and/or reduction in production unit costs) with all their costs. In particular, the extent to which contingent material rewards to individuals are cost-effective depends upon (i) the extent to which perverse effects arise as a result of the imperfection of individual performance assessment; (ii) the risk (noise) in the performance measure; (iii) the extent to which financial incentives may have de-motivating or “crowding out” effects; (iv) the risks associated with the negative effect of individual incentives on cooperation; and (v) (if our assumption of diminishing marginal returns is valid), on the initial degree to which material motivation is mobilized.

Moreover, agency-level performance measures and targets may potentially have significant motivational effects even when they are not linked strongly to individual incentives. They may, at least under certain circumstances, be important sources of information to public employees about the extent to which they are successful in achieving objectives to which they have strong internalized commitment. Experience with target-based systems such as the US GPRA model and the UK PSA model will hopefully help to shed further light on the extent of such effects.

It is, finally, important to bear in mind that the bulk of the literature on incentives has been conceived in the context of industrial countries (especially the US), and that developing countries are characterized by special features and constraints and therefore deserve a special attention. “Magic” solutions adapted to industrial countries cannot be blindly exported in

these settings. Two crucial issues which appear to hamper the incentive systems in some of these countries, and which should be tackled in priority, are the un-fairness resented by civil servants (due to low wages, nepotism, lack of recognition) and the absence of a real sanction system. Moreover, the construction of a public service ethos, the enhancement of work norms and the mobilization of intrinsic motivations are also important in the short run.

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ANNEX – A STYLIZED MODEL AND A ROADMAP FOR ASSESSING INCENTIVE SCHEMES

The literature generally studies the benefits of incentives, possibly some of their hidden costs (dysfunctional behaviour, crowding out effect), but hardly considers the full costs of incentive schemes. Yet, we argue that the choice of an incentive scheme should – as far as possible – be grounded on a cost-effectiveness analysis. In this appendix, we design a simple model aimed at **guiding the choice between alternative incentive schemes**, depending on the characteristics of the initial context. We do not aim to solve for the theoretical optimal solution, but rather to outline the factors which should be taken into account when considering the introduction of new incentives in a given situation.

Consider a simple production function, where the output X is a concave function of the effort e exerted by the worker, i.e. $X(e)$ with $X' > 0$ and $X'' < 0$. Consider also that the worker's utility is a function of his different sources of motivation, of the following form:

$$U_i = u_i(w(X(e))) - \theta_i C(e, c) + \delta_i S(e, s) + \lambda_i I(e, i) + \gamma_i M(X(e), m)$$

Where:

- u_i measures worker i 's preference for material gains, with $u' > 0$ and $u'' < 0$; w is the total wage received by the worker, which (at least partly) depends on his performance;
- θ_i measures worker i 's laziness (effort aversion); C is a cost of effort function; c represents what Herzberg (1968) calls “hygiene” factors (like working conditions) i.e. external factors which impact on the cost function; with $C_e > 0$, $C_{ee} > 0$, $C_c \leq 0$ and $C_{cc} \geq 0$;
- δ_i measures worker i 's sensitivity to social pressure; S is a function capturing social pressure; s represents the social motivators in place (work norms, peer pressure, etc.); with $S_e \geq 0$, $S_{ee} \leq 0$, $S_s \geq 0$ and $S_{ss} \leq 0$;
- λ_i measures worker i 's interest in the tasks performed; I is a function capturing intrinsic motivation; i represents the intrinsic motivators in place (empowerment, participation, etc.); with $I_e \geq 0$, $I_{ee} \leq 0$, $I_i \geq 0$ and $I_{ii} \leq 0$;
- γ_i measures worker i 's moral (including public service) dedication; M is a function capturing moral (including public service) motivation (it depends on the output value); m represents the moral / public service motivators in place (e.g. public service culture, acknowledgement of the service to the population); with $M_{X(e)} \geq 0$, $M_{XX} \leq 0$, $M_m \geq 0$ and $M_{mm} \leq 0$.

The worker will set his effort level by optimizing his utility level:

$$\partial U_i / \partial e = (\partial u_i / \partial w)(\partial w / \partial X) X'(e) - \theta_i C_e(e, c) + \delta_i S_e(e, s) + \lambda_i I_e(e, i) + \gamma_i (\partial M(X(e), m) / \partial X) X'(e) = 0$$

$$C_e(e, c) = (1 / \theta_i) \{ (\partial u_i / \partial w)(\partial w / \partial X) X'(e) + \delta_i S_e(e, s) + \lambda_i I_e(e, i) + \gamma_i (\partial M(X(e), m) / \partial X) X'(e) \}$$

This equation informs on the different ways that can be used to increase worker's effort:

- Directly, through financial incentives (w) and/or the non-materialistic motivators (c , s , i and/or m);
- In a more indirect way, through selecting workers with high degrees of sensitivity to the different non-materialistic motivations (δ , λ , γ) and/or little effort aversion (θ).

This simple model captures the fact that **acting on each source of motivation has diminishing returns to scale**. However, because of its additive form, it implicitly assumes that the different sources of motivation are substitutes. It thus **hides the potential cross-effects between the various sources of motivation and motivators**, for instance whether two types of motivations entail positive (crowd-in) or negative (crowd-out) externalities on each other. To take account of these considerations into the model, we need to introduce assumptions about motivators' cross-elasticity.

For example, if the crowding out theory holds, increasing wage is supposed to have a positive direct effect on effort: $(\partial e / \partial w)|_{Dir.} \geq 0$; but might have a negative indirect effect on e.g. intrinsic motivation: $(\partial I / \partial w)|_{Ind.} \leq 0$. If the latter effect dominates, it could happen that the total effect on effort is negative $(\partial e / \partial w)|_{Total} \leq 0$. As another example, measures aimed at increasing moral motivation (e.g. acknowledging the service to disadvantaged people) could also indirectly increase the social motivation (desire of co-workers' esteem): $(\partial S / \partial m)|_{Ind.} \geq 0$; so that the total effect on effort is superior to the direct effect on moral motivation: $(\partial e / \partial m)|_{Total} \geq (\partial e / \partial m)|_{Dir.}$

The value of new incentive tools could be assessed, using the analytical tool presented above, according to the following **“roadmap”**. (Note that the precise data will probably not be available; however, reasonable appraisals may be hypothesized.)

1. Assess the baseline

The additional effectiveness of new incentives will depend on the initial situation, which should be carefully assessed in order to identify possible motivational gaps. One should evaluate, as much as possible:

- 1.1 What is the “innate” sensitivity of workers to the different motivation sources, as well as degree of effort aversion (according to personal characteristics and cultural norms, for instance)?
- 1.2 At what degree do the existing incentives mobilize each source of motivation? In particular:

- Is workers' individual rationality constraint met by the initial pay level?
 - What are the "hygiene" factors which raise or decrease job hardness?
 - How strong are the work norms, and how does peer (and social) pressure play in the workplace
 - How are internal motivations currently mobilized?
- 1.3 What are the actual motivations which are (quasi-)saturated, and what are those which could be incrementally raised?

2. Consider the interaction of the new incentives on the existing system

As emphasized by Holmström and Milgrom (1994, p. 990), one should evaluate new instruments not in isolation, but as part of a coherent incentive system. Both direct and indirect effects of motivators should thus be taken into consideration.

2.1 What is the potential *incremental* direct effect of the considered instrument on its "target" motivation? (that is, e.g. $(\partial e / \partial w)|_{Dir.}$, $(\partial e / \partial s)|_{Dir.}$, etc.)

2.2 What is the potential *externality* effect of the considered instrument on the efficacy of existing incentives, and on other motivation sources? (that is, e.g. $(\partial S / \partial m)|_{Ind.}$.)

- In particular, the crowding out of internal motivation by financial rewards is shown to take place only (i) if the level of internal motivation is high at the outset; (ii) if certain conditions hold (e.g. the external intervention is perceived as controlling and not informing, rewards are highly contingent on performance). Depending on the initial situation, one could assess whether $(\partial I / \partial w)|_{Ind.} \leq 0$, $(\partial M / \partial w)|_{Ind.} \leq 0$, and at the bottom line whether $(\partial e / \partial w)|_{Total} \leq 0$.

3. Do a cost-benefit analysis

The introduction of a new (system of) instrument(s) should not be done unless its benefits outweigh its total costs. One should therefore assess:

3.1 What is the *total incremental cost* of the considered new instrument? Including:

- Its monetary cost (rewards and/or motivational scheme and/or supervision, etc.);
- The monetary cost of the additional information required;
- The potential bias, risk and dysfunctional behavior due to imperfect indicators;
- The potential crowding-out effect;
- The possible ratchet effect (and thus impossibility to get the true information, for other (strategic) purposes).

3.2 Compare this cost with the *incremental* benefit in terms of increased effort and thus production (including its quality).

4. Consider alternatives

The “cost-effectiveness ratio” of the considered new instrument should be compared with that of possible alternative systems. For instance, financial schemes could be supplemented by e.g.:

- Mobilizing the intrinsic, moral or social motivations;
- Using performance information to build a public sector ethos, decrease goal ambiguity, and increase civil servants’ pride, rather than linking pay to it;
- Meeting the individual rationality constraint of workers and thus increasing their fairness perception, so as to win their loyalty to the organization;
- Offering efficiency wages.