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Does pay for performance really motivate employees?

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Introduction

Variable pay for performance may undermine employees' efforts, crowd out intrinsic motivation under identified conditions. A bonus then makes employees lose interest in the immediate goal. Monetary incentives in complex and novel tasks tend to produce substitution, and measurement is often dysfunctional. Therefore, intrinsic motivation is crucial for these tasks. However, for some work conditions monetary incentives are sufficient. We offer a framework for how managers can find the right balance between intrinsic and extrinsic motivation.

Variable pay for performance and motivation

Variable pay for performance has become a fashionable proposal in the last few years, in private companies as well as in the public sector. Firms have given up fixed salaries and have moved to pay their employees in a variable way. Firms try to match payment to objectively evaluated performance. It is reflected in such popular concepts as stock options for executives and various types of bonuses. In the public sector, efforts to increase productivity in the wake of new public management have also led to attempts to adjust variably the compensation of public employees to their performance. This means that firms and public administrations increasingly rely on price incentives – i.e. on extrinsic motivations.

We argue in this chapter that variable pay for performance under the current conditions has severe limitations. In situations of incomplete contracts, where these dominate work relationships – an incentive system based on monetary compensation for work is insufficient to bring forth the performance required. In many situations monetary incentives even undermine performance. Work valued by the employee for its own sake or for

personal or social norms is often indispensable. These values or norms may be undermined, or even destroyed, by offering monetary incentives.

Our basic message is that focusing on money as an incentive scheme with complex tasks causes problems. Complex tasks are a typical feature of knowledge-intensive companies, which today comprise the most rapidly growing segment of the economy. In contrast, variable pay for performance (e.g. via piece rates) is adequate only for simple jobs. For complex tasks, monetary rewards are no substitute for good management: relying solely on money is too simple to motivate people in these circumstances. Successful management consists in choosing wisely from among the many different possibilities to evoke interest in the work – i.e. raising intrinsic motivation. This can be achieved by establishing personal relationships within the firm, strengthening participation and securing procedural justice. All serve to communicate to the employees recognition and appreciation of their work.

We first clarify the underlying concepts of extrinsic and intrinsic motivation. On the basis of theoretical and empirical evidence, the following section demonstrates that intrinsic and extrinsic motivation are not additive. Rather, there is a systematic dynamic relationship between the two, called “crowding effects”. In particular, monetary compensation can crowd out the intrinsic motivation to work for one’s own sake. In the following section we discuss when and why intrinsic motivation is needed. However, as argued in the next section, intrinsic motivation sometimes has disadvantages for the organization. Hence an important task of management is to produce the right mixture of motivations. The chapter concludes that the current fad for variable pay for performance is ill-founded.

Intrinsic and extrinsic motivation

Extrinsic motivation exists when employees are able to satisfy their needs indirectly, most importantly, through monetary compensation. Money as such does not provide direct utility but serves to acquire desired goods and services (de Charms, 1968; Deci, 1975; an extensive survey is given by Heckhausen, 1991, chap. 15). Extrinsically motivated coordination in firms is achieved by linking employees’ monetary motives to the goals of the firm. The ideal incentive system is strict “pay for performance”.

In contrast, motivation is *intrinsic* if an activity is undertaken for one’s immediate need satisfaction. Intrinsic motivation “is valued for its own sake

and appears to be self-sustained" (Calder and Staw, 1975, 599; Deci, Deci and Ryan, 1980). Intrinsic motivation can be directed to the act flow (Csikszentmihalyi, 1975), to a self-defined goal, such as, for example, climbing a mountain (Loewenstein, 1999), or to the obligations of people and social identities (March, 1999, 377). The ideal incentive system rests on the work content itself, which must be satisfactory and fulfilling for employees. It follows that, "if you want people motivated to do a good job, give them a good job to do" (Herzberg, as quoted by Kohn, 1993, 45).

Intrinsic motivation is emphasized by the behavioural view of organization. This approach has a long tradition in motivation-based organizational theory (Argyris, 1964; Likert, 1961; McGregor, 1960). More recent examples are the critics of transaction cost theory (e.g. Ghoshal and Moran, Donaldson, 1995; Pfeffer, 1997), as well as the literature on psychological contracts (e.g. Morrison and Robinson, 1997; Rousseau, 1995). These approaches emphasize intrinsic motivation and identification with the firm's strategic goals, shared purposes and the fulfilment of norms for its own sake.

Intrinsic motivation is dealt with by only a few authors in economic examples are trust (Arrow, 1974), sentiments (Akerlof and Yellen, Frank, 1992), firm loyalty (Baker, Jensen and Murphy, 1988), managerial incentives (Güth, 1995) and implicit contracts or norms (Akerlof, 1992). Some economists admit the existence of intrinsic motivation but leave it aside because it is difficult to analyse and control (e.g. Williamson, 1985). Even if the assumption of opportunism is an "extreme caricature" (Macneil and Roberts, 1992, 42), it is taken to be prudent to consider a worst-case scenario when designing institutional structures (Williamson, 1996; see Brennan and Buchanan, 1985, for the case of the constitution) – i.e. to rely only on extrinsic motivation. Transaction cost theory goes a step further by assuming that individuals are opportunistic and seek self-interest only. Opportunism is a strong form of extrinsic motivation when individuals are not constrained by any rules. The same assumption is made in principal-agent theory, as is made clear in the recent comprehensive survey by Gibbons (1998) and Prendergast (1999).

To analyse intrinsic and extrinsic motivation in isolation is not warranted, and corresponds to a useful division of labour between psychology (focusing on intrinsic motivation) and economics (focusing on extrinsic incentives), so long as they do not depend on each other. However, this dependence has been shown to exist, in a large number of experiments undertaken by Deci and his group (see Deci, 1971, 1975; Deci and Ryan, 1980, 1985, and Deci and Flaste, 1995). This evidence has

been ignored by scholars in organization theory as well as in human resource management (exceptions are Ghoshal and Moran, 1996, and Pfeffer, 1995a, 51, 1995b). The following section considers this relationship.

Motivation crowding out effects

For a long time it has been taken as a matter of course that extrinsic motivation raises performance. It seemed to be a well-established result in both the psychological (see, for example, Eisenberger and Cameron, 1996) and the managerial literature (see, for example, Blinder, 1990, and Lawler, 1990) that positive reinforcement of a particular action increases the future probability of that action. Mechanisms of instrumental and classical conditioning lead to the (*relative*) *price effect*, which is fundamental for economics (see Becker, 1976, Stigler and Becker, 1977, and Frey, 1992). The opportunity cost of unrewarded behaviour is raised.

However, rewards crowd out intrinsic motivation under particular conditions. The most important conditions are, first, that the task is considered to be interesting (i.e. there must be an intrinsic motivation in the first place) and, second, that the reward is perceived to be controlling by the recipient. This effect has been called the "hidden costs of reward" (Lepper and Greene, 1978) or "the corruption effect of extrinsic motivation" (Deci, 1975). Frey (1997) has introduced it into microeconomics as the "crowding-out theory". Extensive surveys are given by Lepper and Greene (1978), Pittman and Heller (1987) and Lane (1991). Kohn (1993) and Deci and Flaste (1995) provide popular applications.

The effect may be illustrated with an experience that many parents have with their children. Consider children who are initially enthusiastic about a task. When they are promised a reward for fulfilling the task they lose part of their interest. Parents who try to motivate their children with rewards to do their homework may be successful in the short run. In the long run, however, the children do their homework *only* if they receive a monetary reward. The crowding out effect has set in. In the worst case, the children are prepared to do *any* housework, such as cutting the lawn, *only* if they are paid.

It is not only for children that such experiences hold; they can be generalized as well. In particular, this principle also applies to variable pay for performance or bonuses. As a consequence, such reward systems usually, but not always, make employees lose interest in the immediate goal (such as serving the customers) and lower their performance. These insights are

corroborated by theoretical arguments as well as by experimental studies.

Theoretical background

The crowding out effect is based on *cognitive evaluation theory* (Deci and Ryan, 1985) and on *psychological contract theory* (Schein and McLean Parks, 1993).

According to cognitive evaluation theory, intrinsic motivation is suppressed by an external intervention that is perceived as a restriction on autonomy. The locus of control shifts from inside to outside the person (Rotter, 1966). The person in question no longer feels responsible but attributes responsibility to the person undertaking the outside intervention. This shift in the locus of control does not always take place. Each intervention – e.g. a reward – has two aspects, a controlling and an informing one. The controlling aspect strengthens perceived external control and the feeling of being stressed from the outside. The informing aspect strengthens one's perceived competence and strengthens the feeling of internal control. Depending on which aspect is more prominent, intrinsic motivation is reduced or raised (see, for instance, the experiments by Enzle and Arnsperger, 1993). An undermining effect on intrinsic motivation, called crowding out, is complemented by a positive effect on intrinsic motivation, called crowding in. If a task is at one and the same time extrinsically and intrinsically motivating, the more devalued the attribution of a self-determined action is to the person, the more strongly the individuals believe themselves to be subject to outside control (Kruglanski, 1975).

The crowding out effect is stronger with material than with symbolic rewards. It is also larger with expected than with unexpected rewards. When the problems at issue are complicated, the negative relationship between reward and performance is stronger than when the problems are simple (Heckhausen, 1991, chap. 15). In all these cases, it is required that the behaviour was initially perceived to be interesting and therefore intrinsically rewarding (see Calder and Staw, 1975).

According to the theory of psychological contracts, each contract has an extrinsically motivated (transactional) aspect as well as a relational aspect directed towards a reciprocal appreciation of intrinsic motivation. If the relational part of the contract is breached, the reciprocal good faith is in question. Empirical evidence shows (Robinson, Kraatz and Rousseau,

that the parties to the contract then perceive the employment arrangement to be transformed into a purely transactional contract. For example, when a superior acknowledges an employee's extraordinary effort with a symbolic gift (such as a bunch of flowers), the intrinsic motivation of the employee tends to be raised because he or she feels that his or her intrinsic motivation is appreciated. However, if the employee feels that the superior's gesture serves only in an instrumental purpose, his/her intrinsic motivation is impaired. The bunch of flowers is perceived to be controlling; the relationship is interpreted as being transactional.

The reciprocal appreciation of motives also explains why commands normally crowd out intrinsic motivation more than the use of prices. Commands do not take into account the motives of the recipients, while the price system leaves the choice open as to whether one cares about receiving the reward or not.

An important part of psychological contracts involves perceptions of fairness. Fairness includes both outcome as well as procedural justice. *Outcome justice* requires, firstly, that employees evaluate their salary not in absolute terms but relative to their co-workers (see the equity theory by Adams, 1963). Secondly, the contract between employer and employee is seen as a gift relationship based on norms of reciprocity. If the perceived reciprocity is violated, employees reduce their voluntarily offered super-normal performance (Akerlof, 1982; for experimental evidence, see Fehr, Gächter and Kirchsteiger, 1997). *Procedural justice* means that people are prepared to accept substantial differences in wages if the process of their determination is perceived to follow transparent and fair rules (Kim and Mauborgne, 1991, 1998; Tyler, 1990).

Empirical evidence

There have been such a large number of laboratory experiments on crowding out that a more comprehensive view is needed. Fortunately, the experimental evidence has been the subject of several meta-analytical studies. Wiersma (1992) looks at twenty studies covering 1971 to 1990, and Tang and Hall (1995) look at fifty studies from 1972 to 1992. These meta-analyses support the crowding out theory. This view was challenged by Eisenberger and Cameron (1996), who, on the basis of their own meta-analysis covering studies published in the period 1971 to 1991, conclude that the undermining effect is largely "a myth". However, Deci, Koestner and Ryan (1999), as a

result of a very extensive study, are able to show that these conclusions are unwarranted. This most recent meta-analysis includes all the studies considered by Eisenberger and Cameron as well as several studies that appeared since then. The sixty-eight experiments reported in fifty articles span the period 1971 to 1997, and refer to no fewer than ninety experimental effects. It turns out that tangible rewards, a subset of what is called pay for performance, undermine intrinsic motivation for interesting tasks (i.e. tasks for which the experimental subjects show an intrinsic interest) in a highly significant and very reliable way. Thus, there can be no doubt that the crowding out effect exists and is a robust phenomenon of significant magnitude under the conditions identified.

In real-life situations we have to look at the net outcome, composed of the relative price effect as well as the crowding out effect. This holds that the effect of intrinsic motivation cannot always be neatly separated from extrinsic incentives. When someone is fond of communication with others for fun, for example, it is always possible to find a corresponding external motive such as selling better. Therefore, it is important to conduct field studies that take into account the net effect of the relative price and crowding out effects. There exist several such studies.

- (1) A real-life case for the crowding out effect is provided by blood donations, as argued by Titmuss (1970). Paying donors for giving undermines the intrinsic motivation to do so. Though it is difficult to isolate the many different influences on blood supply, in countries where most of the blood is supplied gratis, paying for blood is likely to reduce total supply (Upton, 1973).
- (2) A field study refers to the so-called "Nimby" (not in my back yard) syndrome (Frey and Oberholzer-Gee, 1997). In a community located in central Switzerland, in a carefully designed survey, more than a half of the respondents (50.8 per cent) agreed to have a nuclear waste repository built in their commune. When compensation in monetary terms was offered, the level of acceptance dropped to 24.8 per cent.
- (3) An econometric study of 116 managers in medium-sized Dutch companies showed that the number of hours worked in the company decreases when the intensity of personal control effected by the superiors increases (Baron, 1995).
- (4) A large-scale study conducted in 3,860 family businesses found that performance pay is ineffective because it violates a psychological contract directed on higher-order goals such as affiliation and recognition (Buchholtz, Schulze and Dino, 1996).

- (5) Austin (1996) shows, on the basis of interviews with eight experts, that performance measurement is highly counterproductive for complex and ambiguous tasks in computer software development.

To summarize, theoretical considerations as well as empirical evidence from laboratory and field research both strongly suggest that external interventions crowd out intrinsic motivation under the conditions specified. In particular, piece rates, bonuses and other forms of variable pay for performance undermine employees' work ethic, especially in complex jobs in which intrinsic motivation is important and rewards are used in a controlling way. The crowding out effect thus provides a possible explanation for the overwhelming empirical evidence that there is no significant connection between pay and performance, except for simple jobs (Gibbons, 1998; Prendergast, 1999). Even for piece rates applicable to simple jobs, the "literature on incentive plans is full of vivid descriptions of the counterproductive behaviors that piece-rate incentive plans produce" (Lawler III, 1990, 58). The same holds for managerial compensation (for a survey, see Barkema and Gomez-Mejia, 1998), a fact that is admitted even by the proponents of principal-agent theory (e.g. Güth, 1995; Jensen and Murphy, 1990).

In the following section we discuss in a more detailed way when and why intrinsic motivation is needed.

Why intrinsic motivation is needed

Intrinsic motivation is required whenever extrinsic rewards in the form of pay for performance lead to undesired consequences.

Firstly, intrinsic motivation is needed for tasks that require creativity; in contrast, extrinsically motivated persons tend to produce stereotyped repetition of what already works (see Schwartz, 1990, and Amabile, 1996, 1998). In addition, experimental research shows that the speed of learning and conceptual understanding are both reduced when people are monitored. The pressure of sanctions leads to lower levels of learning, and the work is performed in a more superficial way than with intrinsically motivated employees (Deci and Flaste, 1995, 47).

Secondly, intrinsic motivation helps to overcome the so-called multiple task problem (Holmström and Milgrom, 1991; Prendergast, 1999). This applies to cases in which contracts cannot completely specify all the relevant aspects of employee behaviour and its desired outcome. Moreover, it is often not clear to the principals which goals are to be set. Financial goals cannot

always be broken down into operational goals for employees. This has led to the recent success of the balanced scorecard concept (Kaplan and Norton, 1996). As a result, contracts offering incentives to reach goals can give rise to dysfunctional behavioural responses. Agents focus on the rewarded aspects of the job and disregard the unrewarded ones. Do they have sufficient incentives to reflect on the adequacy of the goals they should achieve for the overall success of the firm. Multiple task problems are the subject of incomplete contracts, which are characteristic of employment contracts (e.g. Simon, 1951; Williamson, 1975). Empirical evidence shows that the outcome of incomplete contracts will not normally be evaluated in terms of variable pay for performance but that firms rely considerably on intrinsic motivation (Austin, 1996).

Thirdly, the transfer of tacit knowledge requires intrinsic motivation. Tacit knowledge cannot be expressed in writing or symbols. In contrast, explicit knowledge can be coded, is easily transferable and multipliable and stored in books or diskettes. The distinction entails important consequences with respect to the transfer of knowledge and the kind of motivation required. The transfer of tacit knowledge cannot be measured or rewarded. Hence, when several persons contribute their tacit knowledge, joint or individual contributions are not attributable to a particular person. In the absence of intrinsic motivation, employees would tend to free-ride (Osterloh and Frey, 2000).

Disadvantages of intrinsic motivation

Intrinsic motivation should serve to support a firm's goals. It is not a bad thing in itself, therefore. Sometimes a specific intrinsic motivation is disadvantageous, for example, surfing the internet for private pleasure during work hours. Consequently, managers must compare the benefits and costs related to motivating employees intrinsically and extrinsically. Though intrinsic motivation is indispensable, it nevertheless does have disadvantages sometimes.

First, changing intrinsic motivation is more difficult, and the outcome is more uncertain than relying on extrinsic motivation, or carrots and sticks. This is the reason why economists as well as managers traditionally prefer a reward and command policy (Argyris, 1998).

Second, intrinsic motivation can have an undesirable content. As history shows, some of the most terrible crimes committed have been, at least in part, intrinsically motivated. Envy, vengeance and the desire to dominate are no less intrinsically motivated than altruism, conscientiousness and

They all contribute to immediate satisfaction rather than to achieving externally set goals.

Third, extrinsic motivation enables behaviour to become more flexible. The motivation of volunteers in a not-for-profit organization, for instance, depends strongly on how it differs compared to the organizational goal. A profit-oriented firm, in contrast, does not have to be so much concerned about the personal values of its employees as long as it pays them well and the costs of supervision are low.

The art of producing the right motivation

Motivation is not a goal by itself but should serve to support a firm's goals. Enterprises are not interested in producing *some* kind of intrinsic motivation with their employees, say the joy of stamp collecting. Rather, they must be motivated to perform in a *coordinated* and *goal-oriented* way. To this end, managers must compare the benefits and costs related to motivating employees intrinsically and extrinsically. Further research is needed to spell out more precisely the conditions for the right balance between intrinsic and extrinsic motivation. Nevertheless, several systematic determinants can be identified to help to manage the kinds of motivation required within firms.

Extrinsic motivation is sufficient when the work is routinized and the performance is easy to measure. This condition obtains for simple jobs. In such cases, empirical evidence shows that the price effect increases performance. An example is given by Lazear (1996). He finds that, in a large autoglass company, productivity increases of between 20 per cent and 36 per cent of output were reached when the firm switched from paying hourly wages to piece rates.

This is a striking example, showing that extrinsic motivation may result in considerable efficiency gains in a situation in which the people affected by the external intervention have little or no intrinsic motivation.

Intrinsic motivation is a necessary production factor in the firm when labour contracts are characterized by a high degree of incompleteness as well as ambiguity. In contrast to pure market contracts, labour contracts typically include incompleteness to a high degree (Simon, 1951; Hodgson, 1998). In well-defined situations this incompleteness can be outweighed by commands, and the opportunity costs of unwarranted behaviour can be raised. However, if the description of the tasks to fulfil is incomplete *and* ill-defined,

intrinsic motivation – i.e. interest in the task itself – is the only way shirking.

According to the theories of cognitive evaluation and psychological contracts mentioned above, the following factors favour a higher intrinsic motivation.

- (1) *Personal relationships and communication.* A large number of experiments show that communication strongly raises the intrinsic motivation to cooperate (first Dawes, van de Kragt and Orbell, 198 recently Frey and Bohnet, 1995). Even if no communication takes place but people can identify each other, cooperation is increased (Frey, 1999a, 1999b). Personal relationships are a precondition for psychological contracts (Rousseau, 1995).
- (2) *Participation.* The greater the possibilities to co-determine the work, the more employees engage themselves in mutually set goals, and adopt their own. Participation thus raises self-determination. Mutual goals – in contrast to exogenously imposed goals – strengthen motivation, because the employees are informed about their goals and can agree to perform. As experiments show, this effect takes place on the condition that an agreement about the goals serves primarily as self-control and not as an obligation. In contrast, perceived external control inhibits motivation when people are pursuing goals (see Schwartz, 1990).
- (3) *Interest in the activity.* Employees are more motivated to work when they are aware of the results of their input, when they are responsible for the outcome and when they consider their work to be meaningful (Hackman and Oldham, 1980). Clearly, self-determination is supported.

According to the crowding out theory discussed above, the following factors determine how strongly intrinsic motivation is undermined

- (1) *Contingency of reward on performance.* The closer the dependence of reward on the required performance the more strongly intrinsic motivation is crowded out. This holds provided the perceived controlling effect of rewards is stronger than the perceived informing effect. In that case, employees feel their self-determination to be curtailed. This is an argument in favour of time-based compensation and against strict performance-based pay for performance in situations characterized by high intrinsic motivation.
- (2) *Commands.* A command restricts the perceived self-determination of the people affected more strongly than a corresponding reward would. This distinction between the effect of commands and rewards on motivation has been disregarded in traditional economic theory. Recent research on behavioural anomalies reveals that opportunity costs, in our

receiving a reward, are systematically less valued than direct costs of the same magnitude, in our case the punishment following from not obeying commands (e.g. Dawes, 1988; Thaler, 1992).

- (3) *Violation of justice.* Agents who feel that they have been paid unjustly reduce their intrinsic motivation. A large number of empirical studies show that people judge the fairness of their pay relative to other individuals. "It is more critical how their pay compares to the pay of others than what they make in absolute dollars and cents" (Lawler III, 1990, 24).

This corresponds to the above-mentioned fairness considerations.

These factors influencing the level of intrinsic motivation obtaining in the firm demonstrate that managing motivation cannot be achieved solely by monetary rewards. The use of money alone causes serious problems for motivating employees.

CONCLUDING REMARKS

Concluding remarks

Our main message is: monetary reward is no effective substitute for managing human resources well. Monetary incentives are entangled in an extensive web of psychological contracts, cognitive self-evaluation and fairness considerations. In our contribution we have shown the traps into which management may fall when applying variable pay for performance.

We have systematically disentangled the complicated web of motivations characterizing relationships in firms. In contrast to relationships in markets, contracts in firms are incomplete, with the exception of simple jobs; only in these cases is variable pay for performance applicable and useful. Performance is easy to measure and can be attributed to specific employees. Moreover, such jobs are typically undertaken for monetary reasons only. Today, however, such jobs are increasingly losing importance, as the competitive advantage of firms depends on knowledge and organizational learning. These tasks are, by their very nature, difficult to monitor. Because they are demanding and offer a high degree of self-determination, these activities both enable and necessitate employees to be intrinsically motivated for the firm's goals. In such positions, variable pay for performance as sole motivator crowds out intrinsic motivation.

This does not mean that monetary rewards are unimportant. To avoid the crowding out effect they must take into account various aspects: compensation should be based on an overall evaluation of employees. This may include bonuses or profit-sharing, so long as procedural fairness and perceived justice

relative to co-workers are observed. In any case, to strengthen motivation, monetary rewards must be embedded in detailed feedback discussions. This feedback should not just concentrate on outcome or should also express appreciation for the employee's intrinsic motivation. Feedback supports relational psychological contracts and reciprocity. Employees then feel informed about their competence and their contribution to the firm's goals. Despite the current tendency, the use of variable pay as the only tool for handling performance underestimates the complexity of motivation.

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