Subjectivity In Incentive Pay

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I investigate the determinants and effects of subjectivity in incentive pay. New forms of incentive pay are increasingly being introduced by company management – for example, bonuses are now linked to wider business goals, such as quality and customer service, company reputation and employee hiring and retention policies, replacing the traditional focus on output or profit measures. A new conceptual work on subjectivity is used to evaluate these incentive pay practices. The analysis shows that a variety of contextual factors influence the organizations to make greater use of subjectivity in incentive pay. I also discuss the performance effects of subjectivity.

The literature on incentives emphasizes the importance of choosing appropriate performance measures in employee compensation plans. A suitable performance measure aligns the interests of employees with those of the company through its effect on the pay-performance relation. However, research has shown the difficulty often encountered in tying managerial incentives to exact performance metrics. The problem was first highlighted by Steven Kerr in his work published in 1975 in the Academy of Management Journal, entitled 'On the Folly of Rewarding A, While Hoping for B'.

For instance, commonly used objective measures such as output and profit may give a distorted picture of the level of effort put forth by employees. They are typically either too narrow (e.g. department accounting performance measures for managers able to affect a firm's performance beyond their unit) or too broad (e.g. company-wide performance measures influenced by all employees). Bonus schemes were traditionally regarded as a means of improving company performance through a set of profit or productivity targets. However, the practice to date shows that simply adding a bonus component into a total compensation plan does not produce a more motivated employee, but one more likely to make decisions that produce results to ensure their end-of-year payout. Another difficulty is that it is often impracticable to separate out the specific contribution of employees to improvements in company performance.

Subsequent research has therefore been concerned with designing innovative bonus pay plans that can overcome some of these inherent inefficiencies. One such advance is the development of bonus pay plans linked to business goals that are increasingly becoming a common economy-wide practice. The success of these new plans critically depends upon the discretion of management, in contrast to formula-based bonus plans, in deciding the extent to which the intended business goals have been achieved. Subjectivity therefore takes centre stage in ensuring the value component of variable compensation schemes.

Subjectivity plays a particularly important role in incentive schemes, reducing employee risk and increasing the alignment of interests between the employee and the employer. Subjective decisions are common in unpredictable environments as it is difficult to write complete contracts because of unforeseen contingencies. Similarly, complex work environments, where the job design involves multiple tasks require significant subjective judgements. Despite its importance, subjectivity is still largely an unexplored phenomenon, including such issues as when companies make greater use of subjectivity in assigning bonus rewards. The literature on subjectivity as such is sparse, though management theorists have frequently tackled related issues under the rubric of quality management and non-financial performance measures.

In this article I provide a discussion of the causes and effects of subjectivity in employee incentive systems, in particular in discretionary bonus pay plans. I examine many ways in which subjectivity should theoretically play a role. Empirical implications of these concepts are also explored. The research reported here draws upon two disparate sets of literature on performance measurement: it makes extensive

use of accounting and management literature on non-financial performance measures as well as recent economics literature on subjectivity. I organize the article as follows. In the next section I delineate the research questions and explain their significance in relation to performance evaluation practices in a variety of organizational settings. This is followed by a survey of the literature on subjectivity and relevant research propositions. Conclusions and scope for future research are discussed in the final section.

PERFORMANCE EVALUATION SYSTEMS

Traditional incentive pay often took the form of commissions, or profit-related pay, or the payment of a large annual bonus. Empirical research into evaluating the productivity effects of these practices have found that these schemes work better if there is employee participation and if the variable component represents a sizeable share of an employee's compensation (Weitzman and Kruse, 1990; Collins, 1998). However, research has also revealed the limitations of using such incentive schemes for better performance outcomes. The difficulty is with the hypothetical links between rewards and performance. For example, the general hypothesis made about the efficacy of a pay plan rests on its perceived effect on employee performance and satisfaction. This effect is believed to be positive when rewards enter into the equation. The association between the level of performance and the level and/or probability of reward provides the necessary ingredient for incentive pay plans to play a useful role in increasing employee performance.

However, in practice employees are often uncertain about the extent to which these

supposed links actually exist. Both economic and organizational psychology studies suggest that financial measures such as profits and costs provide weak direction to workers and make it difficult to communicate how an employee's actions affect performance goals (Wruck and Jensen, 1994). If such ambiguities persist, employee commitment to performance targets may wear off, resulting in a wide divergence between desirable and actual performance achievement. Such pay-performance non-linearities force companies to find alternative methods that tie rewards more closely to performance.

Similarly, the choice of suitable performance measures poses difficult implementation problems. For example, the success of bonus schemes such as gain sharing plans depends, in great part, on designing the appropriate formula. Profit measures used in profit sharing schemes may incorporate many discretionary decisions about such matters as the valuation of stock, the assessment of depreciation, and the valuation of work in progress (Gaver and Austin, 1995). The motivation for the selection of financial measures is rooted in economic reasoning, for it is understood that the informativeness of performance measures is a key relevant criteria (Ittner and Larcker, 2002; Fama and Jensen, 1983). However, Heneman et al stress the measures' controllability and the tradeoffs between their motivational value and the firm's ability to pay bonuses (Heneman, Ledford and Gresham, 1999).

Behavioral research also indicates that performance measures may, in fact, be selected under the influence of various competing stakeholder groups. An interdisciplinary review of performance measurement literature by Waggoner et al notes that organizations are 'political arenas' in which divergent constituencies attempt to

institutionalize performance criteria that serve their interests (Waggoner and Neely and Kennerley, 1999). For instance, operational efficiency in many organizational settings is a very wide term. It has different connotations for various groups that have an interest in the performance of commercial organizations such as investors, management, customers, staff, government, and the local community in the area of operation, including non-customers. Thus, no single yardstick can serve the purpose of measuring operational efficiency, since this may vary according to the interests of different concerns. The potential conflicts that arise as various constituencies try to promote self-interested performance measures tend to be resolved through the use of power and bargaining.

Because of this interplay between different stakeholder groups, companies may opt for measures such as attracting and retaining key personnel or customer satisfaction, sometimes in collaboration with trade unions and, at times, under external market influences. This is most obvious when companies select multiple performance measures to reflect the varying degrees of managerial emphasis driven by competing interests. Factors such as the creation of, and demand for, employee skill, the relative power of different occupational groups, and the wider market concerns for quality and customer service may all be represented, one way or another, in performance evaluation systems.

Compensation and reward specialists also have come to recognize that conventional accounting-based measures such as levels and rates of profitability, growth in sales, and ratios of cash balances may not be entirely suited to the changed environments. With the advent of new technologies, such as the Internet, and the increasing intensity of

market competition, the concept of efficiency has come to acquire a wider meaning: it is more broad-based, and the measures or indicators chosen now aim to throw light on the varied facets of an organization's performance relevant to the current climate (see Table 1).

Table 1: Employee performance measures.

Traditional Performance Measures	New Performance Measures
Indices of performance include: • rates of profitability • growth in sales (e.g. the amount of credit per employee, the number of computers sold) • output levels (e.g. projector slides)	Indices of performance include: • customer service • leadership • teamwork • quality standards • operational objectives • health & safety

Recent trends in bonus payouts reflect companies' desire to avoid the potentially distorting effects of focusing too much on a single measure such as profit or output. Therefore, a wide range of factors is increasingly being introduced to cover a broader set of business objectives. This is based on the realization that bonuses linked to other components of wages and employee benefits and tied into the culture of the organization are far more effective than those which are not. Although considerations such as financial and output considerations remain important, bonus pay plans are now overwhelmingly oriented toward incorporating measures such as attendance, customer service, quality, safety, team work and various other HR-related measures.

This new emphasis on tying bonuses to multiple business objectives can take different forms. For instance, it is possible to operate several bonus schemes providing appropriate incentives for different employee groups, while also operating corporate-level schemes to reward all staff for the overall performance of the company. One such scheme is the multi-factor, multi-level bonus plan. The growing popularity of this practice is mainly caused by the fact that both personal and corporate level factors are important for providing optimal incentives in new industrial environments. Thus, targets can be set for specific jobs, teams or departments, alongside company-wide elements. At Toshiba Information Systems, output is measured against monthly and quarterly schedules (IDS, 2003). Within these boundaries, employees can exert control over the local targets, while, at the same time, appropriate links are also made to the organization's overall performance.

Further, team-based bonus plans provide a mechanism by which a more visible performance measure can be taken into account at the shop-floor level compared to corporate-wide factors. Such incentives schemes encourage team working, but also allow employees to experiment with and learn new workplace methods and techniques to obtain shared goals and targets. Companies may also use multiple bonus schemes for a specific project or operation. For instance, a company may use a short-term 'hot skills' or 'star pay' bonus for specific categories of employees, a 'milestone bonus' pool, to be disbursed at the discretion of the project director, and a 'completion bonus', to be awarded to project participants at the end of the project. Such multi-pronged project initiatives are just one example of the way companies increasingly use bonuses to achieve various corporate and strategic objectives.

Other examples of business goals-linked bonuses include schemes such as employee retention, personal development, and quality and customer service programs. Retention bonuses that are used to entice employees and contractors to stay through a long-term project may take a number of forms. In the oil industry, for instance, paying people a fixed bonus if they stay beyond a specific deadline is standard practice. Similarly, spot bonuses, rewards for performance, premium skills pay and star pay are a common practice in many other industries. Recognizing the increasing importance of signing and retention bonuses, U.S. Bureau of Labor Statistics (BLS), have recently started collating data about the incidence of these schemes in private industry. Based on the Employment Cost Index data, Moehrle's (2000) analysis of referral, hiring and retention bonus pay plans for the year 2000 provides evidence on the significant role of the employment size of the establishment, as midsize and large establishments provide more coverage and incur higher hourly costs in connection with these plans. In terms of specific sectors, manufacturing, transportation, communications and public utilities, and finance, insurance, and real estate incurred bonuses at higher levels.

Companies may target specific bonus schemes at employees' personal development or to encourage individual employees to upgrade their skills in some specific areas/specializms. They may, for example, pay cash bonuses linked to employee personal development. Under the scheme, employees would be eligible for a cash bonus award that may be determined during their formal review. Bonus awards are based on the ability to meet specific personal performance goals that have been outlined and accessed periodically by both the employee and the employee's manager. Both manufacturing and service concerns now recognize that the more traditional single-factor bonus arrangements may need to make explicit allowance for quality

standards as well. Schemes that are primarily concerned with productivity or output now also include measures of quality to prevent efficiency gains coming at the expense of deterioration in service or product standards.

For example, the two-factor bonus operated by Toshiba Information Systems is based on output and quality – with both weighted equally. It calculates quality as the number of defects found on a daily and monthly basis. Gainsharing plans typically take into account productivity and financial targets (Kaplan and Norton, 1996; Kim, 1996). In many cases, they have expanded to cover a wide variety of performance measures such as the level of faults, site absence rate and customer satisfaction (Collins, 1998).

SUBJECTIVITY IN PERFORMANCE MEASUREMENT

The wide prevalence of discretion in bonus payments – an outcome of linking bonuses to the company's business goals - has inevitably increased the significance of subjectivity in performance evaluation (Ittner and Meyer, 2003). In general, performance measures vary in terms of their effect and ability to provide accurate, informative, and timely indications of the individual's contribution to company goals (Holmstrom, 1979). For instance, although the quantitative performance measures or bi-variate financial ratios mostly used in extant research are simpler to conceptualize and easier to calculate, not all aspects of employee performance can be measured by these methods. Jobs invariably involve some elements of discretion that are difficult to observe and appropriately assign for rewards.

Evaluators therefore use subjective assessments to mitigate problems arising from

unobservability and other challenges in performance measurement - for example, when bonus plans use a multitude of business goals as performance measures. By taking this particular course, evaluators can exploit any additional relevant information that arises during the measurement period.

The effects of subjectivity are evident in a number of ways. First, subjectivity reduces "noise" in good objective measures such as profit or output. For instance, when financial performance is strongly influenced by "uncontrollable" factors (e.g. business cycles), it makes sense to use subjective assessment of individual performance to neutralize the effects of negative externalities. In the case of bonus payouts, for example, subjectivity is used to reduce the risk of bonuses being tied by formulae to quantitative performance measures.

Second, subjectivity reduces "distortions" in poor objective measures. Organizations ideally use "controllable" (that is, high signal-to-noise ratio) performance measures when paying bonuses, as they allow stronger incentives without requiring a high risk premium for the employee. The economic rationale for this observation is rooted in the traditional agency-theory framework, which suggests that the relative use (weight) of particular performance metrics should be a decreasing function of the measure's *noise*, and an increasing function of the measure's sensitivity to employee effort or decision (Holmstrom 1979; Banker, et al., 2000).

However, the fact that distortion in the performance measure may also drive down

incentive strength may limit the use of such measures. For example, some high signal-to-noise performance measures (pieces produced in a machine shop) may feature heavily in an incentive scheme, while others (key-strokes made by a secretary) may receive low weight. It is obvious that in the latter case employees can take actions that increase the performance measure without simultaneously increasing organizational value. Subjectivity will reduce distortions that sometimes naturally arise in objective performance measures, such as those relating to the secretary's job.

Third, subjectivity can make it easier to adapt to changes in the environment as contracts cannot specify or envision every contingency. The use of information that arises during the measurement period can be made more effective with the freedom to re-weight different dimensions of performance, as appropriate, if the environment changes. Easy adaptation to the environment is thus a major feature of subjective performance measures.

Contracts often fail to specify what happens in many contingencies and they are not always crafted to provide each party with the optimal incentives (Grossman and Hart, 1986). For example, important aspects of the agreement may be unobservable to one of the parties (information is asymmetric) or too costly to prove in court (information is 'unverifiable').

Asymmetric information can lead to incomplete contracts in a number of ways: Party A's fear that if she proposes an addition to the contract Party B will deduce that she has private information and either be more reluctant to trade or somehow use that information against her. If a manager asks for a minimum weekly output guarantee in a

long-term contract, the worker may deduce – rightly or wrongly – that the manager does not have alternative sources of labor, and raise the wage demand.

On a simpler level, there is a cost to deciding which contingencies are important and to writing the contract clauses themselves. And even if the parties write a simple contract, if the dispute goes to court, the court will 'fill in the blanks' using default rules designed to work well for the typical contract.

Thus, a number of explanations can be offered for why important variables are left out of contracts – unobservability, unverifiability, second-best incentives, fear of signalling undesirable characteristics, contract-writing costs, and legal default rules. In particular instances of manager-employee contracts, any one or more of these factors may cause an incomplete contracting outcome. There may then be a role for subjectivity to fill the contractual gaps in workplace settings.

Despite all the advantages of subjectivity, observers have noted that there can be major difficulties associated with its use in performance evaluation. Because a supervisor's discretion is involved in making a subjective assessment of an employee's performance, it requires that fair, unbiased judgements be made for it to work in the interest of both the company and the employee. It is therefore argued that both parties (i.e. supervisor and supervisee) will need trust, that the bonus will be paid (Baker, Gibbons and Murphy, 1994), that the supervisor would not shirk (Baker, Jensen and Murphy, 1988), and that the supervisor would not play favorities (Prendergast and Topel, 1996). If the evaluator is unfair and biased, there is a possibility that subjectivity will pose a substantial risk to the employee.

A typical problem encountered in performance measurement is the tendency of evaluators to assign uniform ratings to employees regardless of performance (Zenger, 1992; Medoff and Abraham, 1980). Because careful appraisals take time away from better-rewarded activities, and because evaluators face large nonpecuniary costs from disgruntled employees, evaluators have the incentive to shirk their responsibilities. Such behavioral trends invariably result in ratings compression that reduces the effectiveness of subjectivity in providing fair bonus rewards.

The literature on subjectivity assumes a discretionary role for evaluators to make judgements about employee performance by using an appropriate range of performance metrics. In addition, a related strand of literature has focused on directly analysing alternatives to objective performance measures. Extant management and accounting literature on 'total quality', 'balanced scorecards' and 'benchmarking' indicates the interest in exploring non-financial aspects of performance. The impetus for these alternative performance measures comes from the recognition that objective performance measures are inadequate for situations in which multi-tasking and multi-skilling play a major role in production and organization. Further, the increased intensity of competition has compelled organizations to improve performance in all aspects of their productive operations. This requires a closer attention to qualitative aspects of production and service delivery, as they have a strong bearing on the level of success achieved in the new industrial and commercial environments.

Research in non-financial measures also claims that the conventional emphasis on traditional performance measures, such as revenue, operating profit, or economic value added, or accounting-based ratios such as return on assets or earnings per share, distract

from nonfinancial factors, such as market share, customer satisfaction, product quality, and employee satisfaction (Banker, et al., 2000; Miles and Snow, 1978). A low priority attached to non-financial measures is likely to harm an organization's chance to compete effectively in its particular market. There is also the suggestion that non-financial measures are a better predictor of an organization's long-term performance, and that they help managers to monitor and assess their progress toward strategic goals and objectives (Kaplan and Norton, 1996, 2001).

DETERMINANTS OF SUBJECTIVITY

The study aims to investigate conditions where subjectivity is used effectively in performance evaluation. This is achieved by focusing on the factors that render financial or objective measures incomplete or 'noisy' (e.g. they impose undue risk on the employee as these measures are affected by uncontrollables) or when formula-based incentive plans distort incentives (e.g. because they are prone to manipulation), thus necessitating a supervisor's discretion. Building on recent research in incentives, and on accounting and management literature on non-financial performance measures, the study examines a number of factors relevant to the use of subjectivity.

Economic Constraints. Economics literature on performance measurement hypothesizes that organizations facing a high level of economic uncertainty are likely to use subjectivity to a greater extent than objective performance measures (Lazear, 1998). It is argued that economic constraints impose greater demands on managers to try to insulate their workers from outside volatile environments. There exist specific

circumstances where variations in output are beyond the workers' control, thus increasing their exposure to risk and volatility.

For example, a bank's loan officer may receive a negative return from the bank's investment despite conducting thorough research before agreeing a loan. This might happen because of an economic downturn. It is difficult, if not impossible, for any loan officer to affect the course of macroeconomic events. But the impact on him may occur regardless of his efforts. Given a certain level of effort, a loan officer may do better than expected when economic conditions are good. This may not be the case when conditions are bad. Understandably, employees will be reluctant to have their pay contingent on a change in the external environment, but they might be willing to accept lower pay if it protects them from extreme volatility.

To the extent that management is willing to filter out uncontrollables, thereby reducing the 'noise' element in incentive pay plans, they are likely to have a committed workforce (Brignall, 1997). Industries face a turbulent economic climate from time to time due to significant macroeconomic events. The prevailing practice is to allow supervisors to use their judgment to take such factors into consideration. For example, Bushman et al (1995) suggest that determinators of CEO pay will make more use of subjectivity if accounting measures or stock returns are noisy.

Proposition 1: The level of environmental uncertainty will be positively related to the use of subjectivity in incentive rewards.

Performance Expectations. Investors' expectations of companies can be purely financial or can focus on both financial performance and more qualitative measures (Johnson & Greening, 1999). While traditional performance parameters, such as commercial transactions, output and income, are recognised as valuable indicators, the broader criteria of efficiency has now become a *sine qua non* in achieving competitiveness in various sectors of the economy. From a commercial perspective, it is now imperative not only to outperform competitors on output or income, but also to be competitive on service provision and customer satisfaction. As a result, organizational processes such as cost, quality and the time bases in the new 'hyper-competitive' environment have acquired a new significance in companies' plans to secure and maintain competitive advantage (Cooper, 1995).

This new emphasis on the specific role of organizational parameters means that non-financial indicators such as quality or customer service are assigned higher weights in performance measurement (Kaplan and Norton, 1996; Euske et al., 1993; Hoque and James, 2000). Investors in closer contact with company management recognise the importance of such parameters of company performance. Therefore, company financial performance is measured against any change in non-financial performance, thus requiring a more subjective assessment of changing situations.

Proposition 2: The greater the emphasis on non-financial performance measures, the greater the use of subjectivity in the assignment of rewards.

Strategic Orientation. Consistent with a large literature on work incentive plans (Kaplan and Norton (1996, 2001), an organization's strategic orientation is deemed to be a major factor in the design of incentive plans (Govindarajan and Fisher, 1990). Strategic concerns play a major role when bonuses are directly linked to measures of customer satisfaction, or growth in customer numbers. The traditional issues of corporate strategy are concerned with managing a set of natural stakeholders, involving dealing with suppliers and customers, and facing certain competition. The issue of interest here is how success in managing these relationships is measured and how it is reflected in financial performance.

For example, many market strategies are targeted at building company reputation among prospective employees and customers. This is based on the assumption that the reputation of a company deeply affects its relationship with a critical set of stakeholders, including such considerations as:

(i) the company' stock price;
(ii) the loss or gain of talented employees; and
(iii) financial, customer and supplier relations.

In particular, a firm's ability to hire talent depends, to a significant extent, on the perception of the company, rather than on what actually occurs within the workplace. By following practices such as paying bonuses in a bonus month, many companies strive to follow a market strategy of maintaining a reputation as a generous employer with a sound market position (Nisar, 2003). Bonuses may also be directly linked to the recruitment and retention of key workers. Strategic goals such as these are liable to

introduce a greater amount of discretion in incentive plans. When market strategies such as enhancing company reputation become a priority in bonus payouts, any impact of this on individual performance needs to be fully taken into account in actual bonus practices.

Proposition 3: Higher weight given to the organization's strategy (e.g. retention of employees or growth in customer numbers) will lead toward a greater role for subjectivity in incentive rewards.

Organizational Characteristics. Organizational characteristics, such as the size, nature or type of business, may determine the range of possible changes in organizational systems – for example, in a performance measurement system (Karimi et al., 1996; Thompson, 1967). For instance, studies have found that larger organizations tend to use balanced scorecards to a greater extent than smaller organisations (Hoque and James, 2000). Other studies have looked at the impact of organizational processes on performance measurement systems: the process of service costing may differ from one service process type to another (Miles and Sweeting, 1988), and cost traceability varies systematically in different service processes or types, namely mass, shop, and professional (Brignall et al., 1991). This implies that organizational characteristics may also significantly affect the assignment of rewards.

Proposition 4: Larger organizations are more likely to employ subjectivity in the allocation of rewards from an incentive pay plan.

In empirical tests, the size variable may be important because it might correlate both

with the type and amount of incentive provided, as well as with a variety of other corporate practices, such as the degree of decentralization. It might also be correlated with the manager's human capital, ability and marginal product of effort, since larger organizations may hire more talented managers.

Incompleteness. In organizational settings where jobs involve multi-task and multi-skill performance characteristics, compensation contracts are invariably incomplete. As the multi-task economic models predict, employees will therefore direct their effort only to measured tasks and may ignore other important-but-unmeasured tasks (e.g. they focus on improving short-term profits but not market share) (Baker, Gibbons and Murphy, 1994). Formula-based performance measures take inadequate account of the unmeasured dimensions of jobs, thus resulting in major inefficiencies.

Ideal practice encourages compensation contracts to use all possible information about the outcome of an employee's effort on company value, properly weighted, so that incentives are appropriately balanced across the different dimensions of the job (Holmstrom and Milgrom, 1991). The void arising from distortions due to multi-tasking (or for that matter, the use of 'poor' objective performance measures as discussed above) can be filled by using subjectivity in measuring those aspects of the job that are not easily quantifiable. Similarly, because it is prohibitively costly to specify terms of trade that cover every conceivable state and contingency, subjective evaluations can be made after the state is revealed.

Proposition 5: Greater use of subjectivity in incentive rewards will be observed when

contracts are incomplete.

Investment In Intangibles. Organizations recognize that a big part of their true value depends upon intangible factors such as organizational knowledge, customer satisfaction, product innovation and employee morale, rather than on physical assets such as real estate. As Ulrich and Smallwood (2004) argue, 'such organizational capabilities are key intangible assets. These capabilities – the collective skills, abilities, and expertise of an organization – are the outcome of investments in staffing, training, compensation, communication, and other human resources areas. They represent the ways that people and resources are brought together to accomplish work (p. 119)'.

However, since measuring human capabilities and performance cannot be done in precisely the same language as accounting for assets, liabilities, and equity, incentive schemes have to be designed in such a way that fully recognise the value of such assets. While the trend toward linking bonuses with a company's business goals reflect these developments, it is also possible that these plans result in an increased level of investment in employee skills and capabilities. For example, in many industrial and service sectors, the most significant long-term investment in intangible assets is in providing training in areas such as improved customer service.

Understanding and measuring the role of intangible factors in value creation poses a formidable challenge. Lev and Zarowin (1999) argue that nonrecognition of intangibles has caused a significant decline in the relevance and usefulness of company information systems. There are concerns that 'arcane' accounting rules devised for a bricks-and-mortar economy may be ill-suited to an economy in which many companies

derive their competitive advantage from investments in intangibles. In these situations, it is likely that management will use subjective assessments in incentive pay to encourage the acquisition and utilization of intangible assets by its employees.

Proposition 6: Company demand for intangible assets will make greater use of subjectivity in bonus rewards.

Management literature frequently observes a tendency among managers to focus on the short-term and ignore the long run implications of their actions. This is because the time horizons of managers differ from those of investors. Because the stock price of the company reflects the capitalized value of future profits, an action that increases future profits makes the company more valuable to investors, who can enjoy the higher profits through future dividends or unanticipated capital gains. Investors therefore want managers to take actions that increase the long term value of the company. But a manager may be more concerned about securing short term personal benefits than maximising the long term value of the company. Specifically, when actions cannot be observed easily by owners, managers may have an incentive to take decisions that may have adverse long term consequences.

For example, in the pursuit of short-term financial gains managers may avoid making investments in projects with long-term payoff yields. Therefore, paying managers based on current accounting earnings rather than long-run project value provides no incentives to take decisions today that increase future profits. Economics-based agency models therefore emphasize the informativeness of performance measures used. A related solution is to use subjectivity to mitigate an excessively short term focus.

Murphy and Oyer (2002) and Bushman et al (1995) predict that executive pay will make greater use of subjectivity according to the level of importance accorded to growth opportunities or long product cycles.

Proposition 7: The short term focus of formula-based bonus plans will be positively related to the use of subjectivity in assigning rewards.

Organizational Interdependency. The now widely held view that all relevant categories of employees should be covered by an incentive reward is a direct corollary of recent changes in the organisation of production and service delivery. This is because: (i) the pay differentials among different categories are steadily shrinking, and (ii) everybody contributes to the services rendered by a particular organizational unit. Since accountability in these organizations rests on front-line workers, it makes sense to cover all these workers in an incentive pay plan.

To put this observation into its correct economic context, we need to consider the current climate of employment and wage practices. The last two decades have seen major changes in the demand for skilled workers in industrialized countries. There are three discernible trends: first is the growth of non-manual wages and employment relative to manual workers. This is accompanied by a worsening of the position of the unskilled, relative to the skilled. Bartel and Lichtenberg (1987) use a panel of manufacturing industries from 1960 to 1980 to find that the implementation of new technologies, proxied by the age of the capital stock, increases the share of the highly educated in total labor cost. At the same time, the decline of employment among manual workers has been disproportionately concentrated among unskilled workers.

Finally, there is the evidence of widening wage inequality within skill categories (including the unskilled)(see Mincer, 1989).

Since the number of educated workers in the labor force has increased overall, this should normally have driven down wage differentials. This is obviously not what has happened. It is therefore suggested that education has become more valuable in periods of rapid technological change, and that it takes more education to cope with the constraints imposed by new productive systems. This has led many authors to conclude that technology and human capital are relative complements (Kremer and Maskin, 1996; Acemoglu, 1998).

This implies that workers of different skill-levels are imperfect substitutes, and that output is more sensitive to skill in some tasks than in others. As a result, organizations tend to specialise in one skill level or another, rather than employing workers with all skill types. This subsequently creates an incentive for the segregation of workers into different sets of organizations, as the complementarity between the tasks promotes self- (i.e. assortative) matching; consider, for example, the case of Microsoft. New information technology has, in particular, spurred the move towards the complementarity of tasks (Bresnahan, Brynjolfsson and Hitt, 1998). Recent organizational changes such as flat hierarchies, horizontal networking and team-building reflect these trends. This has important implications for incentive pay plans.

It is likely that those incentive schemes that encourage team work and cooperation will benefit from extant organizational complementarities. For example, paying a

departmental manager strictly on unit profits provides no incentives to cooperate with other departments in exploiting cross-selling opportunities. The optimality condition requires that all related employees are provided with the same set of incentives so as to benefit from interdependencies. Flexible organizations facilitate teamwork relating to an interdependent technology (Milgrom and Roberts, 1990). Such systems aim to put in place a complementary set of human resource management practices, including profit sharing strategies, that encourage employee involvement.

Consequently, bonus plans linked to business goals are designed to cover all relevant categories of employees (e.g. all shop-floor employees). The extent of bonus coverage will however depend upon the scope of organizational interdependency in production or service delivery, measured by the subjective assessments of evaluators.

Proposition 8: The larger the organizational interdependency, the larger the requirements are for subjective assessments in incentive pay plans.

Performance Measure Flexibility. The value associated with maintaining a predictable level of service quality, offering innovative products, updating customer service facilities and keeping trained staff accessible by each customer is often fully recognized by companies in competitive environments. Difficulties arise however when they are less certain about how this mix of facilities - a broad menu of service products, employees, shop-floor operations and delivery options - can be accounted for.

Under each of the above-mentioned broad categories a number of indicators could be listed, ranging from financial to non-financial performance measures. This and other

similar strategies in this direction lead to the conclusion that there is no such thing as a single operational efficiency criterion. The use of a selective performance measure would give only a restricted, incomplete picture of the process and may fail to account for the interactions between different job dimensions, leading to sub-optimal results. Another related problem is the tendency for seemingly informative performance measures to 'degrade' or become dysfunctional when they are used for incentive purposes, as has been noted by many practitioners. For instance, John Darley, a psychologist who has studied dysfunction in control systems, calls this problem 'How Good Numbers Go Bad' (Darley, 1991).

Consider the use of customer satisfaction as a performance measure in an employee bonus plan. Customer satisfaction has become synonymous with good management practice as successful companies are often the ones with a record of higher levels of customer satisfaction. Many incentives schemes have been designed in the past that pay for happy customers. However, this is too dangerous a strategy to motivate employees as there are simply too many ways to increase customer satisfaction without increasing performance. It would not be very difficult for employees to curry favor with customers by indulging them in non-profit-maximising ways, thus driving down the company's profits. On the other hand, even when employee incentives are not tied to customer satisfaction, there is always a possibility of finding a high correlation between customer satisfaction and company performance (hence the motivation for tying both sets of variables in the first place).

To circumvent these problems, supervisors are likely to base their subjective assessments on a broader set of qualitative performance indicators. For instance, it will

be more appropriate to link bonus with group performance and fix norms of group performance to make it more practical. Appropriate weights could then be assigned to non-financial objectives vis-à-vis financial ones so as to minimize the effect of an inverse relationship between these two sets of factors. Weights may be attached to different parameters of performance on the basis of their relative importance and, if possible, an aggregate index may be devised. The movement of this index from year to year would indicate relative improvement or otherwise in the working of the bank.

Proposition 9a: A broader set of qualitative performance measures will increase the scope for subjective assessments in deciding bonus rewards.

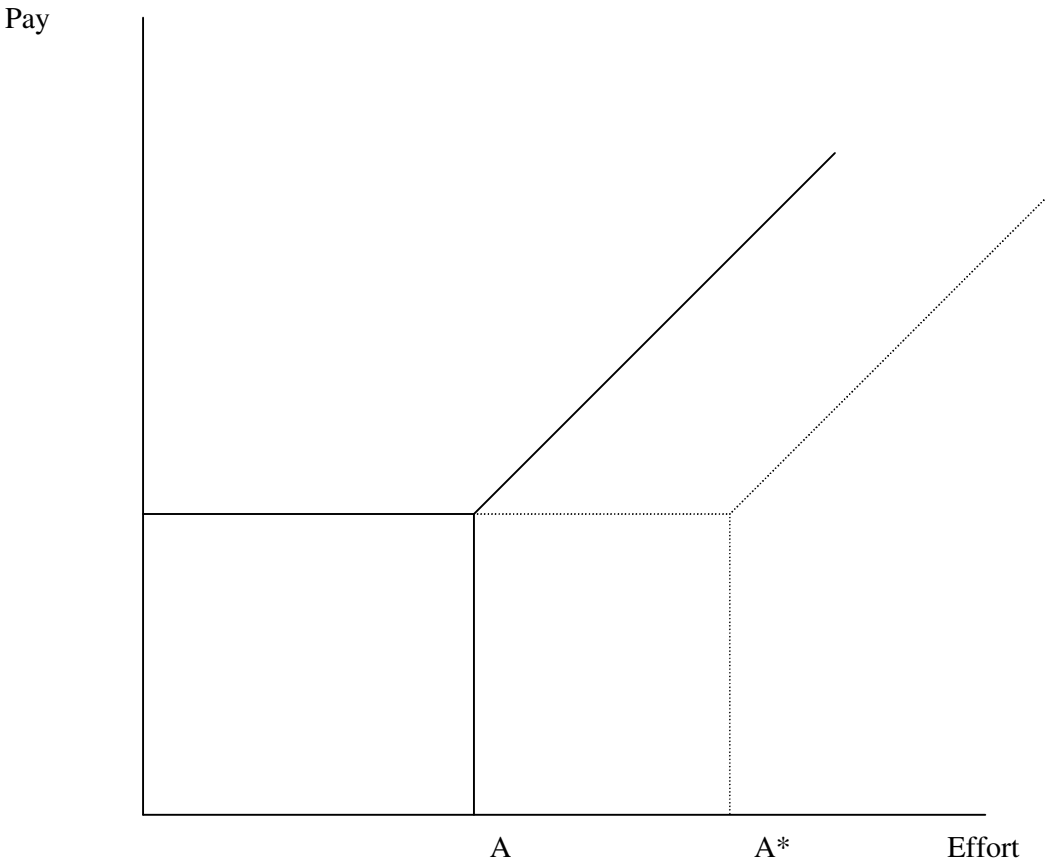
Within such complex work environments, companies will also use performance standards or targets that encompass the interactions between different job dimensions. Murphy (2000) has emphasized the role of performance targets in communicating the expected levels of performance to employees. For instance, bonuses are paid only when certain performance thresholds are achieved. However, the benefit that can be derived from setting performance targets may be restricted by the difficulty experienced in achieving those targets. Job complexity or changes in the environment may render the targets unattainable, thus reducing the incentive effect of the pay plans. Subjective assessments can be used to make adjustments to performance targets in such particular environments.

Proposition 9b: Subjectivity will be used to provide flexibility in measuring employee effort against set performance targets.

However, new trends in the organization of work in some sectors of the economy has made it possible to specify more accurately performance targets - a factor especially responsible for the payment of large bonuses in the financial services industry over the last few years. For example, greater emphasis on controls and process means that credit and risk professionals are now seen as equally important as the front-end specialists. With the recent increase in trading volumes plus the growth of new and more structured and technical products, opportunities in risk management have increased accordingly. As a result, the risk professional has become an important figure in the financial industry and is no longer considered to have merely a supporting role. This is in contrast to the traditional front office responsible for deriving the deals (e.g. a merger deal). A better definition of job activities means that risk professionals feel their bonus should be tied on to the front office, as a reflection of their input into the organization. Similar trends resulting from more structured products and services can be observed for other job categories.

In general, bonus rewards are dependent upon employees hitting a minimum effort threshold (A*) as shown in Fig 1. Bonus pay increases in some proportion to the increase in effort from point A*. This dependence of a bonus reward on meeting threshold targets underlines the importance of accurately measuring effort levels. With more structured jobs though it is possible to better design performance targets that result in performance threshold moving from A* to A.

Figure 1: Pay-performance relationship



PERFORMANCE EFFECTS OF SUBJECTIVITY

There are many ways in which subjectivity reduces distortions in employee compensation plans; however, inefficiencies may also arise from its use. Employees may engage in influence activities, whereby they attempt to curry favor with supervisors to obtain better evaluations; this will make it difficult for the company to weed out bad quality workers. Further, employees may also manipulate effort to make themselves look good in the eyes of their evaluators, again creating inefficiencies.

Moreover, if there is disagreement between the employee and the evaluator over the performance yardsticks used in the evaluation process, this could lead toward employee dissatisfaction and, ultimately, large-scale quits. The problem can be partially resolved by establishing reasonable expectations for performance evaluation goals.

This discussion suggests that there can be two equally likely outcomes from using subjectivity. Subjectivity can improve formal incentive contracts by reducing employee risk and creating an alignment of interest between the employee and the employer. But in the absence of an evaluator giving a sound judgement subjectivity can also create substantial risk for employees. It will therefore be difficult to make an *a priori* assumption about the impact that subjectivity will have on employee performance.

However, a strand of literature emphasizes the role of trust in alleviating implementation problems associated with subjectivity. For example, Lawler (1971) suggests that greater trust increases the effectiveness of incentive plans. Folger and Konovsky (1989) find a positive relationship between the employee's satisfaction with their performance evaluation and trust. It can therefore be argued that the practice of subjectivity can be strengthened by establishing a trusting relationship between the employee and the evaluator. This in turn will result in improved employee performance.

Proposition 10: The greater the level of trust the higher the level of pay satisfaction and productivity resulting from the use of subjectivity in assigning rewards.

CONCLUSION

Research in incentives has tended to focus on non-linearities in the pay-performance relation and the consequences of using dysfunctional performance measures. It seldom discusses the role of subjectivity in creating optimum incentives for better employee performance. This study fills this gap by discussing the causes and effects of subjectivity in incentive pay plans. Further, by emphasizing contextual factors, this study also draws attention to the importance of previously neglected organizational factors, especially organizational strategy, investment in training, target difficulty, and organizational interdependency.

Virtually all incentive contracts require some elements of subjectivity in evaluating employee performance. The use of subjectivity reduces employee risk and increases the alignment of interests between the employee and the company. The analysis reported here suggests that environmental uncertainty encourages managers to use subjectivity to mitigate employee exposure to excessive risk and volatility. Subjectivity thus provides a mechanism by which organizations neutralize the negative effects of uncontrollable external elements.

Our analysis suggests that the more competitive the environment, the greater the drive to improve organizational performance. This in turn accelerates organizational awareness of subjective performance metrics. Services such as quality, promptness, reliability, timeliness, and value for money or economy/affordability are part of a range of measures used to improve non-financial performance. Better outcomes in these areas lead toward improvements in the company' s overall performance. Subjectivity

therefore provides linkages for the development of a comprehensive system of company performance management through its effect on the evaluation of organizational performance metrics.

Subjectivity is also useful in complex work environments where the job design involves multiple tasks and substantial decision-making. For example, many jobs in an organization are connected to more than one type of service, thus making it difficult to allocate precisely the total labor input into the job as between the different services. Subjective assessment of the whole situation ensures an efficient assignment of rewards. From our analysis, it appears that a greater use of subjectivity in environments of organizational interdependency is important. There is also an argument for the use of a broader set of qualitative performance indicators.

Criticisms of traditional bonus schemes rest on the premise that reward practices generally fail to take adequate account of employee performance in all dimensions. In spite of the difficulties inherent in measuring productivity, the desirability of linking bonus to performance has been evidenced by previous research. Our own research suggests that subjectivity is a mechanism by which appropriate linkages can be established between incentives and employee performance.

This is a critical finding, as the evolution of discretionary bonus pay plans reflects the influence of a host of organizational factors that interplay with the bonus decision. Rapid technological and organizational changes, and the wide diffusion of skill-driven productive systems, have played an important role in the creation of these new prospects. Bonus pay plans have emerged as a key strategic device to help create value

from the application of such systems. There is also large anecdotal evidence that suggests that for skill-driven productive systems to be useful in these environments, they need to be carried out in conjunction with a complementary set of measures that augment their effectiveness (Teece, Pisano and Shuen, 1997).

For instance, multi-skill training will be of little use in improving productivity if work tasks are divided and assigned into small segments; on the other hand, training will deliver improvements if connected to broad-based work-related activities; and for both these measures to improve the organization of production, some participation in shop-floor decision-making and a share of financial return will be needed. Thus, one measure is more valuable when other complementary variables are also put in place, and conversely, less than optimal outcomes may result if various elements of an intervention program are not well coordinated.

This suggests the need for a fit between bonus pay plans and an organization's existing set of capabilities and processes. For instance, bonuses for quality output will only produce positive outcomes if the company's operational procedures are geared toward minimizing defective items. Similarly, in the case of a recruitment bonus, the company would be required to determine that, in absence of the bonus, the company would encounter difficulty in filling the position. This may happen because the company has introduced a new technological or organizational system that involves difficult-to-fill positions, resulting from a lack of skilled workers within the company, and/or special qualifications needed in the position. Thus, in this case, the change in the existing system warrants the introduction of a special bonus offer. Such bonus rewards will make effective use of subjectivity as they draw upon existing organizational practices

to help devise and implement appropriate incentive regimes.

Since a well-structured incentive scheme may be highly visible and the outcome may have far reaching consequences for the employees involved, problems such as performance goal setting, the development of achievement measures in specific units, the provision of supportive environments, the laying down of norms acceptable to both the parties, and the scale of payment which will appropriately index achievement with bonus, etc. are bound to arise in the implementation of an incentive pay plan. These problems would vary from industry to industry and from unit to unit and would need to be resolved by taking into account the company's specific organizational and technological capabilities and the extent to which bonuses advance the value of such specific assets.

In sum, basing pay on subjective performance assessments can improve the formal performance evaluation system by reducing dysfunctional incentives associated with "narrow" measures (such as accounting earnings or divisional profits) and by reducing the risk of overly broad performance measures (such as company profits). In addition, state-contingent discretionary bonuses allow incomplete contracts to adapt to changing market or technological environments. A major limitation of the present research pertains to the very concept of subjectivity. As indicated earlier, subjectivity can only usefully be applied if there is trust between supervisor and the employee. There is also scope for conflict over the way subjective measures are used for employee performance. Although substantial progress has been made relating to the determinants and effects of the use of subjectivity, further research could examine the behavioral issues that arise from the use of subjectivity. This may involve case study research of a

varied set of organizational situations.

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