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THE EFFECTS OF PERFORMANCE MEASUREMENT AND COMPENSATION ON MOTIVATION
An Empirical Study

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Since the data were obtained by signing a confidentiality agreement, the authors are unable to release them. The complete questionnaire is available for other interested researchers.

THE EFFECTS OF PERFORMANCE MEASUREMENT AND COMPENSATION ON MOTIVATION
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ABSTRACT

The design and implementation of a performance measurement and compensation system can strongly affect the motivation of employees. Building on economic and psychological theory this study develops a conceptual model that is used to empirically test this effect. Our survey results demonstrate a positive relationship between the perceived characteristics of the compensation system and extrinsic motivation. Intrinsic motivation is not affected by design monetary compensation, but is affected by promotion opportunities. The compensation system also significantly affects work satisfaction and turnover intent. This paper attempts to take a preliminary step towards showing the relationship between a compensation system and performance.

Keywords: *Performance measurement, Compensation, Promotions, Intrinsic Motivation, Extrinsic Motivation*

JEL Classification Code: J41; J33

1 INTRODUCTION

The strong public interest in incentive compensation has presumably largely been caused by the great increase in CEO salaries in the late 1990s. Their remunerations, being tied to company stock-price performance through stock options, have benefited from the bull market of the 1990s. Executive compensation has also attracted a large amount of academic research, in particular by agency theorists who have focused on the relationship between managerial performance and incentives.

In contrast, little empirical work has been done on (incentive) compensation for *workers*. We will try to partly fill this gap by focusing upon different levels of employees and assessing the effects of compensation systems from an employee and a firm perspective. We will consider not only the absolute level of rewards, but also the performance measurement and evaluation systems, and career concerns. The perception of these processes by employees determines their actions and thus the effectiveness of those systems.

While economists have greatly neglected the psychological effects, organizational psychologists have already analyzed the concept of motivation for many years. They have explored relationships with all sorts of external and internal conditions, both theoretically and empirically. The result is a variety of work motivation theories that have great potential for understanding the impact of a compensation system on effort. A 'crosspollination' of the two streams of research is the logical next step. We contribute to this crosspollination by combining social psychology (e.g. crowding theory) and economics (agency theory) in order to study the motivational effect of a compensation system.

2 THEORETICAL BACKGROUND

Incentives, being the essence of economics (Prendergast 1999), are widely discussed in the agency literature. An agency relationship can be defined as "…a contract under which one or

more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent" (Jensen and Meckling 1976). There are three basic assumptions underlying agency theory, namely agents are self-interested, risk averse and possess private information. These three assumptions introduce the moral hazard type of agency problem. In order to mitigate the agency problem, the principal will invest in monitoring and steering the actions of an agent, especially through incentive compensation, in a direction that is in line with the principal's objective. The so-called *agency costs* that these monitoring and steering activities produce are imposed upon the principal and result in a second best solution.

This classic model has been extended in multiple dimensions in order to remove some of its unrealistic features. Fama (1980) shows the potential effects of career concerns on current behavior. Career concerns occur whenever the labor market uses the current output of a worker to adjust the belief on the worker's ability. The labor market then bases future wages of the worker on the updated beliefs. In this manner, career concerns may serve as a substitute for incentive compensation as these concerns themselves form an incentive for the agent to optimize the labor market's belief of her ability. A second extension to the original agency model is the dimension of goal alignment (e.g. Baker 2002). Agents can behave in a way that is beneficial to the agent, but harmful to the principal, whenever the performance measure used in the incentive contract is not perfectly in line with the principal's objective. Paying for the wrong behavior will have a wasteful or dysfunctional effect on the value of the firm (Baker 2002). Hence, a performance measure should be selected that optimally trades off the desire of controllability with the need of goal alignment (Baker 2002).

The above-discussed extensions of the standard agency model have ensured the continuous growth of insights in industrial relations. To some extend a more psychological side of compensation has been included in economic models as well. Still, industrial-

organizational psychology and organizational behavior have spent greater attention to the confusing concept "motivation" (Locke and Henne 1986). Recently however, serious attempts have been made to insert psychological approaches in economic theory (e.g. Frey 1997; Frey and Jegen 2001; Osterloh and Frey 2000).

Research on motivation has distinguished intrinsic and extrinsic motivation (Calder and Staw 1975). Extrinsic motivation is motivation gained by externally influenced need satisfaction and is thus for example stimulated by monetary incentives (Frey 1997). Agency theorists rely on extrinsic motivation in order to assess the amount of effort an agent is expected to display. Often, the potential effects of the incentive contract on intrinsic motivation are neglected. Intrinsic motivation indicates that under certain conditions employees are prepared to undertake a task for immediate need satisfaction or for its own sake (Calder and Staw 1975; Deci and Ryan 1985) and that some tasks will be performed without monetary payments. This is contradictory to the standard economic assumptions of agents being self-interested and the disutility of labor. Although agency theorists consider intrinsic motivation irrelevant for their purposes (Frey 1997) even founders of agency theory have stressed the importance of the psychological impact of incentive compensation on behavior (Jensen 1994).

Reconciling both research streams, Deci (1975) first described a relationship between external rewards and intrinsic motivation in the cognitive evaluation theory. He stated that external interventions, such as monetary incentives, (may) have a controlling and an informing aspect. These two aspects however have an opposing effect on intrinsic motivation. The controlling aspect on the one hand enhances the feeling of being put under external pressure and thereby establishes a negative effect of a controlling intervention on intrinsic motivation. The informing aspect on the other hand can influence the perceived competence

and strengthens the feeling of being in control (Eisenberger, Rhoades and Cameron 1999): it generates a positive association between the intervention and intrinsic motivation.

This cognitive evaluation theory is closely related to the crowding theory as described by Frey (1997). The crowding theory distinguishes two potential effects of external interventions on the level of intrinsic motivation. Whenever agents perceive an external intervention to be controlling, the intrinsic motivation will decline, which is called crowding-out. If agents perceive an external intervention to be informing or supporting, the level of intrinsic motivation is expected to increase (crowding-in) (Frey and Oberholzer-Gee 1997). The ultimate effect of external intervention on motivation remains undetermined.

Another relationship between external interventions and motivation described in the social psychological literature is based on the impact of psychological contracts (Osterloh and Frey 2000). Various relationships and ties between the agents and principal are expected to influence the level of motivation. For example the perception of *fairness* of a contract is an important element of psychological contracts. Reciprocity theory postulates that agents prefer a condition of fairness in their exchange relationships with the principal. This fairness can be quantified by the size of the surplus seized by the principal (Anderhub, Gächter and Königstein 2000). An agent is expected to at least partly determine the level of motivation on her perception of fairness (Fehr and Gächter 2000). Standard agency theory, based on rationality of the agent, is not able to deal with this type of interaction between the agent and the principal. Therefore, specific models have been developed that fill this shortcoming; e.g. Fehr and Schmidt (1999) formalize fairness by modeling inequity aversion.

3 CONCEPTUAL MODEL

3.1 Compensation System

The output or performance of an agent is a function of effort, ability and an error term, capturing all uncontrollable factors (at least from the agent's perspective). Given the agent's private information *vis a vis* the principal, the latter must depend on performance measures in order to estimate the effort the agent has employed. Performance measures are selected based on two criteria: (a) alignment with the principal's objective and, (b) controllability by the agent (Baker 2002). The performance measure is used to evaluate the performance of the employee, which forms the basis for determining the amount of variable monetary compensation an employee will receive and for making career decisions. Fixed compensation, as opposed to variable compensation, does not induce effort and its role is limited to retention and selection. In practice, completely fixed compensation that is totally unrelated to performance is extremely rare, for instance, the probability of being fired creates an incentive to perform. Two forms of fixed compensation are primary compensation and secondary compensation. Primary compensation consists of monetary payments for employees. Secondary conditions are the non-monetary benefits such as a company car, cell phone and pension benefits. In this paper we will focus on monetary payments only.

Besides incentive compensation, we also consider the incentive functioning of career concerns. Apart from an improvement in fit between employee and job, promotions also have an incentive effect, since increased monetary and non-monetary rewards are usually associated with a promotion. In addition, a higher position in the organizational ranks increases the status of the employee and a new job can also bring about new challenges that can strengthen intrinsic motivation. Lazear and Rosen (1981) have theoretically demonstrated this incentive effect of promotions by modeling an organization as a tournament. Empirically, Ehrenberg and Bognanno (1990) have shown the relationship between price structures and performance by using golf tournaments.

The combination of these elements of the compensation system, i.e. *performance measurement and evaluation, monetary compensation* and *career concerns* link employee performance to motivation, which in turn affects effort and other indicators for the level of motivation. An overview of our conceptual model, partly a derivative of a model by Lawler (1986), is shown in Figure 1.

<< PLEASE INSERT FIGURE 1 ABOUT HERE >>

According to Thierry (1987) the effectiveness of a compensation system depends on three perceived characteristics, namely (1) *transparency,* (2) *fairness* and (3) *controllability*. These concepts are closely related and we will explain them in more detail.

Transparency. The perceived transparency of a compensation system depends on two characteristics: communication and complexity. A transparent system informs risk averse employees not only of the rules of the compensation system, but also of the objectives of the firm. Clear communication of these rules towards the personnel will enhance the understanding of the methodologies, measures and targets used and thereby create a better basis of support for the compensation system. (Perceived) uncertainty decreases the effectiveness of incentive compensation (Gibbons 1998). In sum, the perception of transparency is expected to have a positive relationship with extrinsic motivation. Diminishing the risk of exerting effort without being rewarded accordingly is expected to have a positive effect on the willingness to exert effort.

Fairness. Although economic theory of trust is not well developed, the veracity and honesty of the principal is expected to have great impact on the actions of the agent (Prendergast 1999). Several other theories have focused on the concept of fairness as well, but have used

different perspectives. Reciprocity theory emphasizes the agent's need to receive a fair amount of compensation relative to the principal. The surplus, created by the agency contract, should be fairly divided in order to maximize incentives, according to this theory. If this condition is not met in the perception of the agent, her motivation is expected to decrease (Anderhub, Gächter and Königstein 2000). Moreover, equity theory emphasizes the agent's need to receive a fair amount of compensation relative to the other agents. The agent is expected to compare her ratio of performance over reward to the same ratio of other agents. Any deviation in this ratio causes a state of inequity (Locke and Henne 1986). Recently Janssen (2001) has shown empirically that managers who perceive effort-reward fairness perform better and feel more satisfied than managers who perceive 'underreward unfairness'. Although the need for fairness seems to be clearly understood theoretically, biased, inaccurate and inflated performance evaluations have often been reported in economic studies (Prendergast 1999). Supervisors tend to evaluate their personnel with relatively high scores. Telling employees that their performance is (below) average will make both parties unhappy in the short run, which partially explains the too high portion of positive evaluation scores and the existence of forced rankings. But inaccurate or untrue and undifferentiated evaluations reduce the effectiveness of incentives in organizations (Prendergast 1999). Hence, perceived fairness of the different elements of the compensation system is expected to have a positive relationship with extrinsic motivation.

Controllability. The third characteristic we use to evaluate the compensation system's effectiveness is the perceived relationship between effort and (variable) compensation. Baker (2002) defines *controllability* as the extent to which the agent is able to control or influence the outcome. This strive for 'noise reduction' is one of the two main criteria that determine the choice of the optimal performance measure: the effect of effort on the performance

measure should vary as little as possible in order to have control of one's incentive compensation.

Within the cognitive evaluation theory, the controlling and informing elements of a compensation system are expected to have an effect not only on performance but on motivation as well (Frey 1997). Employees perceive controllability and the controlling element of the compensation system as two opposite sides of the same coin. The need for self-determination is the foundation for this dimension (Deci and Ryan 1985). An agent who is given the possibility to help determine the performance measures that are used in an incentive program, will perceive the performance measurement itself as less controlling. This is in line with the cognitive evaluation theory were the informing and controlling elements are proxies for the possibilities of self-determination of the employees.

Although the underlying theoretical concepts are different for the cognitive evaluation theory and the agency theory, the expected relationship between control (self-determination) and motivation is similar: perceived controllability over the different elements of the compensation system is expected to have a positive relationship with extrinsic motivation.

3.2 Differentiation within motivation

In the psychological and economical literature (e.g. Lawler 1986) motivation is viewed as a proxy for the amount of effort that will be exerted. Effort, ability and external circumstances determine actual performance, which in turn determines compensation. In the introduction two types of motivation were distinguished, namely intrinsic and extrinsic motivation. Both types of motivation will determine the total motivation. Therefore, both types of motivation must be taken into account while analyzing the optimal amount of effort that can be reached.

Our previous discussion focuses on the concept of extrinsic motivation. The potential effect of a compensation system on intrinsic motivation has been disputed heavily in the

literature (Kunz and Pfaff 2002; Eisenberger and Cameron 1996). Kunz and Pfaff (2002) state that especially economists seem reluctant to accept the construct of intrinsic motivation. Intrinsic motivation may be the response to fuzzy extrinsic motivators, such as fear of discharge and the relationship with other employees (Kreps 1997). Also the workers may take such pride in the work that the cost of effort at some point may be negative (which can be interpreted as intrinsic motivation). Intrinsic motivation is the manifestation of the internal drives of individuals: intrinsic motivation will by definition only be influenced by the 'work itself' and not by the associated monetary incentives. 'Work itself' can be characterized by concepts such as the enjoyment of performing the basic tasks belonging to the current job, colleagues, atmosphere, organizational culture, etc.

In summation, we expect to find no relationships between the perceptions of transparency, controllability and fairness of the *monetary part* of the compensation system and intrinsic motivation. In contrast, we expect a positive effect of the same perceptions of the *promotion opportunities* on intrinsic motivation.

3.3 Indicators for the level of motivation

Besides the expected relationships discussed above, the perceived quality of a compensation system is also likely to be related to other indicators of motivation that are more tangible than intrinsic and extrinsic motivation. We use three such indicators for the individual level of motivation: (1) Work satisfaction, which should be positively related to the perceived quality of the compensation system, (2) Turnover intent, a proxy of undesired employee turnover, which we expect to be negatively correlated to the perceived quality of the compensation system and finally (3) Absenteeism caused by sick leave, which is assumed to be negatively correlated to the perceived quality of the compensation system. The empirical validity of these indirect effects will be tested as well.

4 DATA AND METHODOLOGY

4.1 Research Site

The research site central in this study is a division of a Dutch company, listed at the Amsterdam Stock Exchange, the Dutch section of Euronext. The division is a publishing company and consists of different clusters, each serving its own market segment. The division employed 1798 workers, of which 1496 were included in the study. Employees that were not included did not have a permanent contract, such as freelance reporters and interns. The data were collected in May 2001.

Data collecting at a single research site circumvents the problem of having to control for company specific factors, such as country specific differences (this division only operates in The Netherlands), differences in organizational culture, differences in organizational forms etc. Especially the heterogeneity in corporate cultures of various companies might have a strong impact on the analyses since corporate culture and the associated various implicit contracts can strongly affect intrinsic motivation.

In order to test the hypotheses we have collected personnel data and conducted a survey amongst all individual employees. Before setting up and sending out the survey we conducted ten interviews with senior management in order to understand the organization, the activities performed and the incentive systems in place. The personnel data consist of information on compensation systems and all actual payments to individual employees. We also extracted job descriptions and socio-demographic data for all 1496 employees. The questionnaires were sent to all 1496 employees by snail mail and were returned anonymously through internal post by 31% of the employees. The questionnaire renders information about employee perceptions of the various elements of the compensation system, as well as individual assessments of their levels of motivation (both intrinsic and extrinsic). It also generates data for other indicators for the level of motivation. In the sequel, we first discuss

some general descriptive results at the firm level based on the personnel files and then discuss the questionnaire and the individual level results.

4.2 Firm level descriptives

Sample. Table 1 compares characteristics of the respondents with those of the population of the entire division. The sample proves to be fairly representative. Comparing the population and sample averages, none of the variables is significantly different.

Table 1 further shows that the percentage of female employees in the firm is fairly large, 69%. Over 40% of the employees population is younger than 35, a quarter is older than 45. More than 30% has been working already for over ten years with this publishing company. Over 40% works in the editorial staff. Five percent is part of the sales force, nine percent works in a marketing department, whereas the remaining 45% is working in various other staff departments. Thirteen percent of the total work force receives explicit incentive compensation. Moreover, editorial, sales and marketing employees are clustered according to the magazines for which they work. This is not shown in the table.

<< PLEASE INSERT TABLE 1 ABOUT HERE >>

Compensation system. The first element of the compensation system we discuss is performance evaluation. Formal processes for evaluating the entire staff have been absent, though plans for the introduction of an overall performance evaluation procedure for the whole staff were in a final stage at the time the survey was sent out. Formal evaluation of employees with incentive compensation did already exist. The evaluation meetings are being held in the first quartile of each year. During these (approx. one hour) sessions the performance of the previous year is discussed and the targets for the next period are

communicated. However, the period for which the targets are set stretches from January to December. Thus, communication of targets is being done fairly untimely since they are communicated to employees two or three months after the start of the target period.

The second element of the compensation system we study is fixed compensation. The compensation system of the company is based on two different collective labor agreements. The first labor agreement has been formulated for journalists and the editorial staff. The second labor agreement applies to the remaining employees. Both agreements have different pay level scales. Each job has been rated in a standard function evaluation system, based on different aspects of the job, and classified into different categories. The total number of job categories within the organization is 49. This large number of categories is caused by the fact that historically ascribed categories are still in use. Each category consists of eleven, sometimes fourteen salary steps. Normally, an employee is put into a higher step each year until the maximum of the category has been reached.

Incentive compensation, the next element we consider, applies to 13.1 % of the total workforce. Two groups can be distinguished that have incentive compensation. The first group consists of employees within the sales department. Their incentive compensation is based on their performance on three main objectives. On average, 5.6 % of their total fixed annual monetary compensation consists of incentive compensation. The second group of employees with incentive compensation is the middle and top management. Depending on the category and the department middle and top management are awarded incentive compensation based on their performance on different measures. For every management position certain measures are mandatory. The supervisor determines additional measures, the target and the pay-performance schema. This results in a variable compensation that in 2000 was equal to 21.9 % of total management remuneration.

The last element of the compensation system we consider is promotion. A combination of two specific circumstances causes a promotion to be an especially important incentive device at this company. The first circumstance is the lack of alternative possibilities for salary increases within this division. There are three generic possibilities for salary increases. The first is a promotion to a position in a higher category. The second is incentive compensation, which only applies to only 13% of the employees. These two methods are performance based. The third method is an automatic (and modest) salary increase by means of a yearly salary step within every job-category. This last method is not based on the performance of the employees. Moreover, a large proportion of employees in this firm have reached the highest step within their job category. Figure 2 sketches the situation for the editorial staff, all without incentive compensation: 45% have reached the highest compensation given their job category. Hence, given the lack of alternative salary increases, a promotion is all the more important as an incentive device.

The second reason why promotions are such an important incentive is the above industry average salary increase at a promotion: The total amount of compensation for lower level employees within this division is below the median amount of compensation for the same type of employees in peer companies whereas at higher levels within the organization the total amount of compensation catches up with peer companies and even surpasses the median amount of compensation. This implies that a promotion within this division will have stronger impact on compensation than an inter-company promotion within the industry.

<< PLEASE INSERT FIGURE 2 ABOUT HERE >>

4.3 Questionnaires

Table 2 shows the core questions of the questionnaire, along with the sample mean scores and standard deviations. The questions concerning the employees' perception of the compensation system, as well as those related to motivation and individual performance were all formulated as statements. Employees were asked to react to the statements by providing answers ranging from 1 (1 = Completely disagree) to 5 (5 = Completely agree). Multiple questions have been asked to assess single constructs. The internal consistency of the constructed items (transparency, fairness, controllability, intrinsic and extrinsic motivation) is tested by means of Cronbach's alpha. Factor analysis has been done to provide insights into the relationship between the various answers.

<< PLEASE INSERT TABLE 2 ABOUT HERE >>

Transparency. The perceived transparency for each element of the compensation system was assessed by asking questions concerning the complexity and the clarity of communication of each element. In total three statements were formulated that tried to capture transparency. They all contained the word "clear", either referring to the dimension of communication or the dimension of complexity. Besides, respondents were asked to evaluate the transparency of the overall compensation system. The transparency of the element monetary compensation was measured by only one statement. Two statements measured the transparency of promotion opportunities. For this item the coefficient alpha was equal to .83.

Fairness. The perceived fairness of the monetary compensation system was measured by using four statements. The statements tried to capture different dimensions of the concept of fairness. The internal fairness is measured by asking whether the employees feel that the compensation system treats them fairly. The second statement measures if the match between pay and performance is perceived to be fair. The third statement focuses on the external

fairness (the current level of monetary compensation compared to competitive firms). The coefficient alpha for this item equals .82. A single statement measured the perceived fairness of internal promotions.

Controllability. Statements concerning potential employee influence on the compensation system capture controllability. To this end, we focused on the terms *"influence"* and *"being in control"*. Single statements measured the perceived controllability of the two elements of the compensation system: pay and promotion

Motivation. In order to grasp the level of job motivation of the individual employees, the respondents were asked to react to thirteen statements. Seven statements were intended to estimate the level of extrinsic motivation. The intrinsic motivation of the employees was estimated with a second series of questions. The statements refer to motivation coming from the job itself, the level of current compensation and future compensation by means of promotion opportunities. Factor analysis was used to identify the underlying dimensions of the responses to the fourteen motivational statements. A scree plot of the factor results suggests a two-factor solution. The rotated component matrix of the two factors option supports our principal assumption: one factor is loaded with the extrinsic motivation questions, while the intrinsic motivation questions load the second factor.

The internal consistency of the two components of motivation was again estimated with Cronbach's alpha. The scale reliability of the summative scale for extrinsic motivation was .77. In order to generate a proper construct for intrinsic motivation the negatively stated variables 4 and 6 were inversely recoded. The Cronbach's alpha of this scale has a value of .84.

Indicators for the level of motivation. Also three other indicators of individual motivation are analyzed in this paper. These indicators, overall work satisfaction, turnover intent and sick leave, were all measured by the results on a single statement. Overall work satisfaction

was expressed by the employees on a ten point scale. The second individual indicator of the level of motivation, turnover intent, was assessed by means of the statement: "I've often seriously considered to quit and work elsewhere". Sick leave is a relatively objective indicator and was assessed by the question "How many days have you approximately been absent in 2000 due to health reasons?". The categorized answers were considered only for employees that were employed by the company throughout the entire year 2000.

Control Variables. Individual differences in demographic factors can have an impact on the relationship between the variables (e.g. Janssen 2001). Therefore, demographic control variables were used in each of the analyses. The respondents were divided into three groups: younger than 35, between 35 and 45 and older than 45. Respondents with high levels of education (a university or college degree) are distinguished from the rest (dummy variable). The dummy for gender is one for male respondents, and zero for females. Respondents are part of one of four organizational groups: editorial staff (group 1), sales (group 2), marketing (group 3) and support staff (group 4). A dummy distinguishes participants in an incentive program from the rest. Furthermore a dummy for managers was used as well as a dummy for having explicit targets. Three categories of tenure were used (less than 5 years, between 5 and 10 years and more than 10 years). A similar division was based on the amount of years the respondents were working in the same function/ task (less than 1 year, between 1 and 4 years and more than 4 years).

4.4 Descriptive statistics

In order to get an overview of the sample data, tables 3 and 4 present descriptive statistics for the dependent and independent variables obtained by the questionnaire. Table 3 compares the means of the different dependent variables while using the control variables to divide the sample into sub-groups. It shows that tenure and task tenure are negatively related to work

satisfaction. Employees that have worked less than five years with the organization have a mean score for work satisfaction that is higher than the same score for employees that have been with the organization for over ten years (7.17, $p < 0.05$). This difference is even clearer once the focus shifts to task tenure. Performing the same tasks for less than one year provides the employee with a median work satisfaction of 7.29, while staying without a promotion for more than four years diminishes the level of satisfaction to 6.80 ($p < 0.01$).

<< PLEASE INSERT TABLE 3 ABOUT HERE >>

The table also indicates differentiations for the level of intrinsic and extrinsic motivation. The group 4 (Staff) without incentive compensation has a lower level of intrinsic motivation than the other groups. On average management functions have a higher level of intrinsic motivation (4.31 versus 4.16, $p < 0.05$). Table 4 provides the descriptive statistics for the variables used to analyze the effect of the entire compensation system on motivation and other indicators of individual motivation.

<< PLEASE INSERT TABLE 4 ABOUT HERE >>

4.5 Regression techniques

To test the hypothesized relationships between the perceptions of the compensation system and the two types of motivation, we will use two different methods to determine the dependent variable. Both the average of the 6 or 7 statements will be used as well as the factor scores. The appropriate technique is an OLS regression but when we use the averages of the statements also an ordered probit technique will be used since the dependent variable is a derivative of an ordinal variable. The combination of using two regression techniques and

two ways to calculate the dependent variable will test for robustness. For regressions with work satisfaction, turnover intent and sick leave as dependent variables we will use an ordered probit model, since these ordinal dependent variable are the result from the usage of a single construct.

5 RESULTS

The effects of monetary compensation and promotions on motivation

Table 5 displays the regression results concerning the overall motivational effects of monetary compensation and promotions with extrinsic and intrinsic motivation as the dependent variables. The independent variables are the perceptions of the monetary part of the compensation system and the promotion part. A large number of control variables is used to restrain the impact of demographic factors on the two types of motivation. Four out of six characteristics have a significant relationship with extrinsic motivation, namely the perceived fairness of the compensation system and the transparency, fairness and controllability of promotions. The results are similar for the OLS and the ordered probit technique. The perceived fairness of the monetary compensation has the strongest effect on extrinsic motivation. The transparency and the controllability of the compensation system were found to have no effect on the level of extrinsic motivation. The level of intrinsic motivation is not influenced by any of the characteristics of the monetary compensation system. However, two perceived characteristics of promotion opportunities have a significant positive effect on intrinsic motivation. Also for intrinsic motivation the OLS and ordered probit results are identical.

<< PLEASE INSERT TABLE 5 ABOUT HERE >>

The control variables that are significantly correlated with extrinsic motivation are the individual employee characteristics gender and task tenure. The significant control variables in the regression explaining variations in intrinsic motivation are age and the organizational department where the employees are working. In order to test for multicollinearity, the VIF scores were also measured. The highest score (2.999) was below common excepted tolerance levels and indicates that multicollinearity does not significantly affect our results.

Table 5b shows the results while using the factor scores as dependent variables. For extrinsic motivation the results are similar as in the two previous regression models: fairness of the monetary part of the compensation system and the three perceptions of the promotion opportunities all significantly affect extrinsic motivation. For intrinsic motivation the transparency of promotions is found to be significant, but the controllability is not.

Table 5c continues the analyses by replacing the average scores of the perceptions of the compensation system with the factor scores. This results in comparable outcomes as in tables 5a and 5b. The main difference is the effect of the controllability of monetary compensation on extrinsic motivation, which is significant at the 0.01 level. The perceived controllability of promotions significantly affects intrinsic motivation at the 0.01 level as well.

The empirical results give an indication of the validity of our conceptual model. Regarding extrinsic motivation, support has been found for five of the six expected relationships. Transparency of monetary compensation has not been proven to have a significant effect on extrinsic motivation. On the other hand transparency of promotion opportunities did show the expected relationship. Fairness and controllability were found to be important influencers of extrinsic motivation.

Furthermore, no significant relationship has been exposed between the perceptions of the characteristics of the monetary part of the compensation system and intrinsic motivation.

However, intrinsic motivation is significantly influenced by the perception of transparency and controllability of the promotion opportunities. This result does not hold for the other characteristic of the promotion opportunities.

The effects of monetary compensation and promotions on indicators of motivation

While investigating the relationship between the compensation and promotion system and motivation, it is informative to look at the more direct consequences of motivation. Table 6 presents the results of these tests, namely the relationship between the compensation system and work satisfaction, turnover intent and sick leave.

<< PLEASE INSERT TABLE 6 ABOUT HERE >>

Work satisfaction is significantly positively affected by the fairness of the monetary compensation and the transparency and controllability of promotion opportunities. Turnover intent has a significant negative relationship with the perception of the fairness of monetary compensation. Sick leave was not significantly related to any of the six characteristics of the compensation and promotion system

6 CONCLUSION

Various schools of thought in both the psychological and economic literature have made incentive compensation the central subject of study, without coming to a univocal answer. This paper tests a conceptual model that is original in its compilation and tries to combine existing elements of psychological and economic theory. The empirical tests of the conceptual model enable us to evaluate the model.

The first theory is the crowding theory. This theory has been developed in an attempt to stretch the boundaries of economic theory. Our regression results do not find support for the crowding theory. We have not located evidence of a significant relationship between monetary compensation and intrinsic motivation. We do find that intrinsic motivation is influenced by job related issues such as job enrichment. Promotion opportunities are proven to have a significant contribution to the degree of intrinsic motivation. Transparent and controllable promotional opportunities can increase the prospect of enjoyable future tasks and thereby intrinsic motivation.

The results have also partly tested both the reciprocity and equity theory by investigating the relationship between the perception of fairness and motivation. As hypothesized, the perceived fairness of the monetary and promotional parts of the compensation system has a significant relationship with extrinsic motivation. This result is predicted by both the reciprocity theory and the equity theory. The feeling of being treated correctly by a company will induce fair behavior in return. Employees will not undertake tasks, while considering the possibility of shirking and the potential danger of this behavior on future levels of compensation, but they will undertake tasks because they feel obliged to return the fair treatments they receive. The support for the importance of perceived fairness is clearly a recurring empirical result in this study.

The confirmation of the reciprocity and equity theory emphasizes the academic relevance of this paper, but the conceptual model and the empirical results also have a managerial relevance. They supply managers with a tool to distinguish between different elements that build a compensation system. The potential impact of the tool would be that both extrinsic as well as intrinsic motivation are improved. An increase of extrinsic motivation can be reached by improving elements of both the monetary compensation system and promotional opportunities. As we have shown, an increase in the perception of fairness

and controllability will increase the level of extrinsic motivation. The characteristics of promotions have been shown to have a positive relationship with both types of motivation. Therefore, it can be seen as an important managerial tool, for an increase in the level of motivation is not limited to an increase in effort. We have shown that a well perceived compensation system also has a beneficial effect for companies on other indicators of motivation: work satisfaction and turnover intent. We can conclude that a compensation system can be of great importance for managers in order to increase both motivation and individual performance.

Limitations and suggestions for further research

Our study has three main limitations. The first one is the difficulty to investigate the causality of the relationships. Consistent with the expectancy theory, motivation is based on the expected value of the rewards (monetary compensation and promotions). Motivation in turn is linked to performance. Performance in turn is an input parameter into the performance measurement and evaluation system. The perception of the compensation system will therefore consist of updated believes of how motivation results in rewards. Although the causality remains an issue worth investigating, the relationships we have formulated are based on existing psychological and economic literature.

The research site causes the second limitation. The research site was a single Dutch company. This leads to the limitation that we are unable to identify the practical boundaries of this study and the possibility of generalizing the results.

The third limitation is related to the research methodology. In our methodology we were not able to combine the questionnaire with hard data that illustrate the actual level of effort displayed by the employees. Some might argue that we implicitly assumed that motivation is a beneficial parameter that should be maximized. In reality, maximizing the

principal's utility will not necessarily lead to a maximization of employee motivation. The costs of improving the compensation system should be weighed with the benefits of motivated personnel.

Much work remains to be done. An important possible contribution is to increase the understanding of the mutual relations between extrinsic, intrinsic motivation and total motivation. This paper has shown the existence of a positive relationship between the characteristics of a compensation system and both types of motivation, but has not dealt with the interaction of the two types of motivation with respect to total motivation. The impact of a compensation system on the performance of employees depends for a large part on the importance of extrinsic motivation for total motivation. Further research might also lead to an improved understanding of the optimal balance between improving the monetary compensation system and promotion opportunities.

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FIGURE 1
Conceptual Model

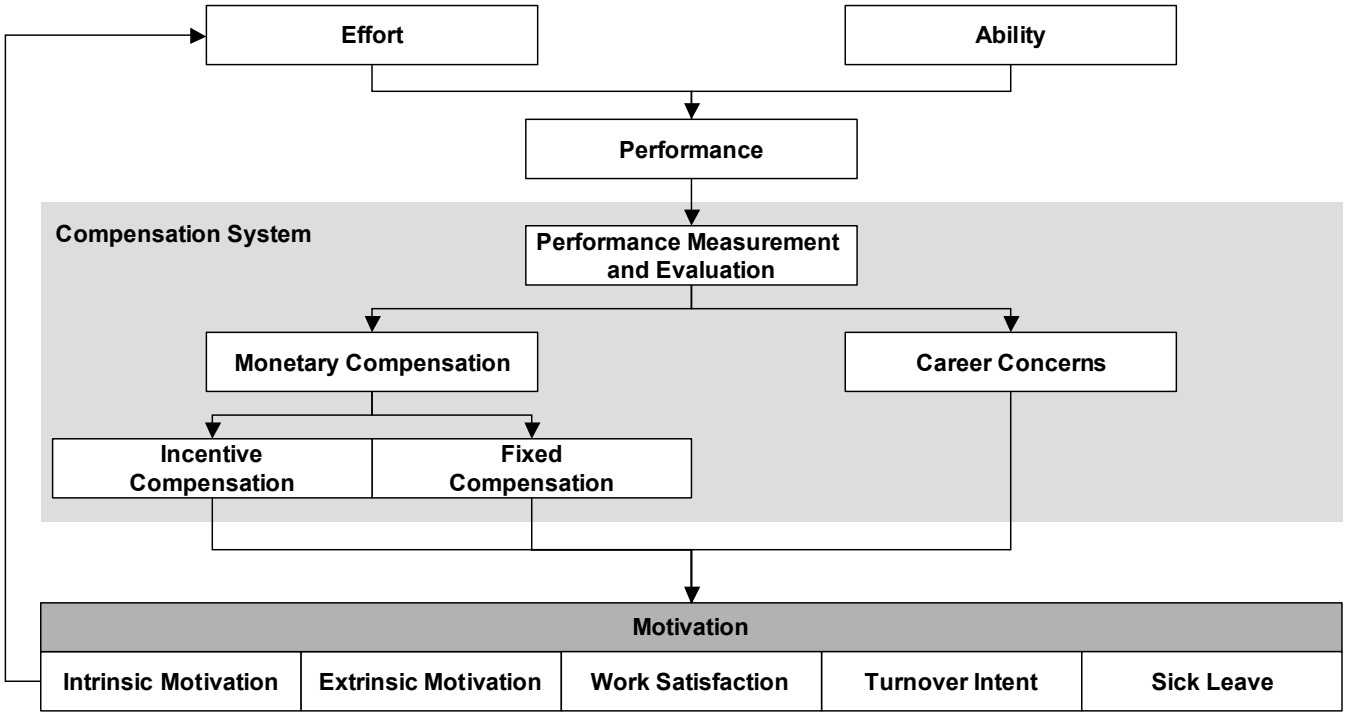

FIGURE 2
Frequency Distribution of Salary Steps for the Editorial Staff

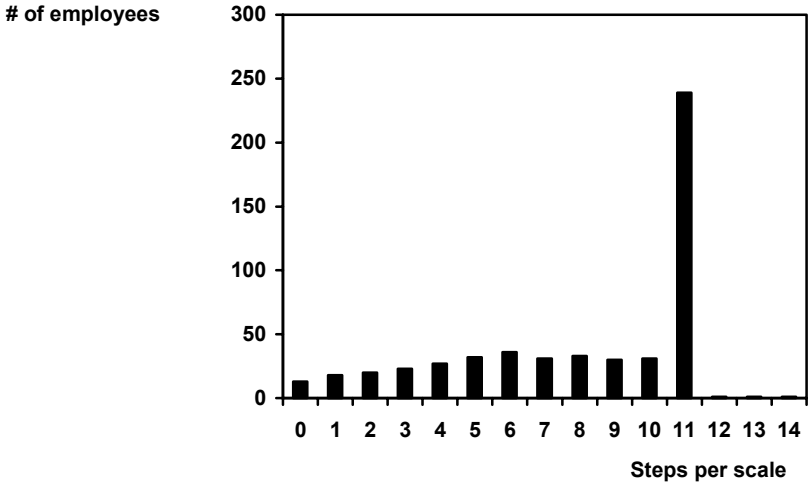

TABLE 1
Sample Descriptives

		Total population		Sample	
		Absolute	**Percentage**	**Absolute**	**Percentage**
Gender	Female	1024	69%	319	70%
	Male	450	31%	137	30%
	Unknown	22		4	
Age (years)	< 25	46	3%	12	3%
	25 – 34	571	38%	185	40%
	35 – 44	438	29%	150	33%
	45 – 54	302	20%	81	18%
	> 55	139	9%	30	7%
	Unknown	0		2	
Tenure (years)	< 1	85	6%	46	10%
	1 – 5	756	51%	188	41%
	6 – 10	183	12%	67	15%
	11 – 15	128	9%	37	8%
	> 16	344	23%	116	26%
	Unknown	0		6	
Discipline	Editorial	599	40%	189	42%
	Sales	77	5%	42	9%
	Marketing	141	9%	80	18%
	Staff and other	679	45%	137	31%
	Unknown	0		12	
Incentive compensation	No	1305	87%	370	81%
	Yes	191	13%	90	20%
	Unknown	0		0	
	TOTAL	1496		460	

TABLE 2
Summary of Questionnaire[a]

Perception		Question	Mean	Std. Dev.
Transparency	Mon. Comp.	The way in which my salary is determined is fully clear to me.	3.49	1.23
	Car. Conc.	It's clear to me what my promotion possibilities are.	3.04	1.27
	Car. Conc.	It's clear to me what the criteria are for me to get promoted to the next level.	2.68	1.25
Fairness	Mon. Comp.	I feel fully appreciated by the total compensation I receive for the work I do.	2.99	1.15
	Mon. Comp.	My compensation fits my performance.	2.90	1.20
	Mon. Comp.	My salary is good when compared to what I could earn in another company doing the same job.	2.89	1.12
	Mon. Comp.	I find the compensation system to be fair.	2.50	0.94
	Car. Conc.	People who I've seen receive promotions at *the company* deserve them.	2.89	0.87
Controllability	Mon. Comp.	I can influence my total compensation by working harder.	1.71	1.04
	Car. Conc.	I have full control over my ability to get promoted.	3.08	1.20
Extrinsic motivation	1	The manner in which I am compensated ensures that I am motivated to give the fullest effort possible.	3.02	1.12
	2	There are enough promotion possibilities to stimulate me to work hard.	2.59	1.04
	3	I'm satisfied with the way in which my compensation is determined.	2.80	0.97
	4	I'm satisfied with the promotion possibilities existing in *the company*.	2.81	1.03
	5	I get the feeling that *the company* finds it important to have a solid and clear compensation system.	2.77	1.02
	6	I'm enthusiastic about my salary level.	2.97	1.05
	7	I find the compensation system to be motivating.	2.70	1.09
Intrinsic motivation	1	I get much satisfaction from the work I do.	4.00	0.88
	2	My job is worth the effort.	4.23	0.76
	3	I'm very satisfied with my job.	3.85	0.88
	4	I often have to force myself to got to work	1.54	0.88
	5	Usually I'm enthusiastic about my job.	4.14	0.86
	6	While at work I often feel like the day will never end.	1.53	0.84
Work Satisfaction		Considering all the aspects of my present job, my overall satisfaction can be expressed with the following grade: (on a scale of 1 to 10):	7.04	1.21
Turnover Intent		I've often seriously considered quitting and finding a job elsewhere.	2.61	1.18

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[a] Mon. Comp. refers to questions regarding monetary compensation; Car. Conc. refers to questions regarding career concerns.

TABLE 3

Descriptive Statistics of Control Variables

		Extrinsic Motivation		Intrinsic Motivation		Satisfaction		Turnover Intent		Sick Leave	
Age	<35	2.85		4.10	***	7.08		2.62		1.27	*
	35-45	2.76		4.23		6.99		2.62		1.48	**
	>45	2.80		4.31	**	7.05		2.59		1.35	
Education	Low	2.87		4.16		7.08		2.29	***	1.39	
	High	2.78		4.21		7.02		2.79	***	1.35	
Gender	Female	2.77		4.16		7.02		2.60		1.38	
	Male	2.89		4.25		7.08		2.66		1.31	
Tenure	<5	2.89	***	4.12	**	7.17	**	2.47	***	1.26	**
	5 till 10	2.68	*	4.27		6.95		3.09	***	1.44	
	>10	2.76		4.25		6.90	*	2.63		1.46	*
Task tenure	<1	3.06	***	4.27		7.29	*	2.36	*	1.35	
	1 till 4	2.83		4.16		7.11		2.60		1.29	**
	>4	2.66	***	4.21		6.8	***	2.76	*	1.49	**
Management	No	2.79		4.16	**	6.96	***	2.57	*	1.41	***
	Yes	2.90		4.31	**	7.38	***	2.81	*	1.14	***
Parttime	No	2.80		4.2		7.02		2.74	***	1.33	
	Yes	2.86		4.15		7.15		2.15	***	1.47	
Targets	No	2.81		4.16	*	6.97	**	2.57		1.39	
	Yes	2.82		4.29	*	7.26	**	2.73		1.29	
Discipline	Gr 1 with inc comp	2.78		4.43		7.28		3.22	**	1.35	
	Gr 1 without inc comp	2.74	*	4.35	***	7.04		2.68		1.37	
	Gr 2 with inc comp	2.93		4.32		7.56	**	2.29		1.54	
	Gr 2 without inc comp	2.92		3.98		6.86		2.64		1.18	
	Gr 3 with inc comp	2.80		4.28		7.28		2.67		1.18	
	Gr 3 without inc comp	2.78		4.10		7.06		2.58		1.51	
	Gr 4 with inc comp	2.90		4.33		7.54		2.77		1.10	
	Gr 4 without inc comp	2.88		3.98	***	6.84	**	2.49		1.29	

* *p < .10, two –tailed tests*
** *p < .05, two –tailed tests*
*** *p < .01, two-tailed tests*

TABLE 4
Descriptive Statistics and Correlations

Variables	Mean	s.d.	1	2	3	4	5	6	7	8	10	11
Compensation												
1 Transparency	3.47	1.25										
2 Fairness	2.80	0.90	0.12									
3 Controllability	1.67	0.99	0.09	0.22								
Promotions												
4 Transparency	2.84	1.18	0.09	0.20	-0.05							
5 Fairness	2.85	0.89	0.11	0.34	0.16	0.07						
6 Controllability	3.09	1.18	-0.10	0.33	0.18	0.32	0.22					
Motivation												
7 Extrinsic	2.79	0.69	0.06	0.72	0.2	0.34	0.34	0.45				
8 Intrinsic	4.20	0.61	0.06	0.13	0.01	0.22	0.04	0.10	0.25			
Indicators of mot.												
9 Work satisfaction	7.00	1.25	0.01	0.40	0.13	0.24	0.19	0.27	0.42	0.47		
10 Turnover intent	2.66	1.18	-0.03	-0.31	-0.09	-0.19	-0.13	-0.21	-0.43	-0.34	-0.36	
11 Sick leave	1.36	0.80	0.01	0.03	0.00	0.03	-0.02	0.00	-0.01	-0.18	-0.14	0.01

[a] *N = 385*

TABLE 5A

Regression Results Extrinsic & Intrinsic Motivation[b]

	Dependent Variable							
	Extrinsic Motivation				Intrinsic Motivation			
	OLS		Ordered Probit		OLS		Ordered Probit	
Independent Variable	***b***	***t***	***b***	***z***	***b***	***t***	***b***	***z***
Characteristics of monetary compensation								
Transparency	-0.02	-0.85	-0.03	-0.71	0.00	0.17	0.02	0.41
Fairness	0.46***	16.97	1.14***	15.12	0.06	1.51	0.08	1.24
Controllability	0.02	0.97	0.06	1.09	-0.02	-0.50	-0.03	-0.45
Characteristics of promotion								
Transparency	0.08***	3.82	0.20***	4.01	0.06***	2.21	0.12***	2.44
Fairness	0.07***	2.70	0.16***	2.63	0.03	0.73	0.01	0.20
Controllability	0.11***	5.14	0.25***	5.07	0.05*	1.85	0.09*	1.72
Control variables								
Age < 35	0.03	0.53	0.07	0.51	-0.19***	-2.36	-0.35***	-2.44
Age > 45	0.07	1.05	0.16	1.05	0.13	1.50	0.23	1.49
Education	-0.10***	-1.97	-0.27***	-2.23	-0.03	-0.47	-0.08	-0.67
Gender	0.12***	2.18	0.28***	2.24	0.08	1.09	0.15	1.15
Gr 1 with inc comp	0.09	0.63	0.24	0.72	0.33*	1.70	0.61*	1.81
Gr 1 without inc comp	0.08	1.32	0.24*	1.68	0.42***	5.11	0.75***	5.14
Gr 2 with inc comp	0.10	0.89	0.31	1.12	0.43***	2.70	0.80***	2.86
Gr 2 without inc comp	0.08	0.58	0.23	0.74	0.02	0.09	-0.10	-0.32
Gr 3 with inc comp	0.09	0.70	0.21	0.70	0.30*	1.68	0.52*	1.68
Gr 3 without inc comp	0.01	0.13	0.01	0.05	0.19*	1.79	0.24	1.30
Gr 4 with inc comp	0.18	1.21	0.46	1.28	0.21	1.03	0.36	0.99
Management dummy	-0.06	-0.74	-0.15	-0.75	0.11	1.02	0.19	0.96
Parttime	-0.04	-0.73	-0.14	-0.98	-0.07	-0.87	-0.12	-0.90
Target dummy	-0.03	-0.38	-0.10	-0.52	-0.02	-0.15	-0.15	-0.78
Task tenure < 1	0.12*	1.89	0.31***	2.12	0.09	1.06	0.19	1.26
Task tenure > 4	-0.13***	-2.24	-0.32***	-2.38	-0.05	-0.66	-0.13	-0.99
Tenure < 5	0.10	1.49	0.22	1.47	-0.02	-0.18	-0.02	-0.12
Tenure > 10	0.06	0.80	0.15	0.85	-0.09	-0.91	-0.13	-0.73
(Constant)	0.70***	5.15			3.50***	18.88		
R^2	0.63		0.17		0.16		0.04	
adjusted R^2	0.61				0.11			
N	429		429		429		429	

**p < .10, two-tailed tests*
***p < .05, two –tailed tests*
****p < .01, two-tailed tests*

[b] Gr1 refers to editorial staff, Gr2 refers to the sales department, Gr3 refers to the marketing department and Gr4 refers to support staff. All these departments were divided into a group receiving incentive compensation and a group without incentive compensation.

TABLE 5B

Regression Results on Factor Scores Extrinsic & Intrinsic Motivation (OLS)[c]

	Dependent Variable - Factor Scores			
	Extrinsic Motivation		Intrinsic Motivation	
Independent Variable	***b***	***t***	***b***	***t***
Characteristics of monetary compensation				
Transparency	0.00	-0.17	0.00	-0.12
Fairness	0.75***	20.59	-0.02	-0.33
Controllability	0.03	1.02	-0.03	-0.61
Characteristics of promotion				
Transparency	0.09***	3.08	0.14***	3.07
Fairness	0.11***	3.03	0.05	0.86
Controllability	0.13***	4.56	0.07	1.51
Control variables				
Age < 35	0.08	0.99	-0.33***	-2.56
Age > 45	0.15*	1.73	0.28***	1.98
Education	-0.10	-1.51	-0.02	-0.21
Gender	0.07	1.04	0.05	0.39
Gr 1 with inc comp	-0.12	-0.61	0.56*	1.77
Gr 1 without inc comp	0.04	0.55	0.74***	5.51
Gr 2 with inc comp	0.08	0.52	0.88***	3.30
Gr 2 without inc comp	0.07	0.39	0.10	0.34
Gr 3 with inc comp	-0.02	-0.11	0.46	1.58
Gr 3 without inc comp	-0.03	-0.29	0.35***	2.09
Gr 4 with inc comp	0.11	0.54	0.38	1.13
Management dummy	-0.04	-0.33	0.24	1.32
Parttime	-0.09	-1.14	-0.16	-1.21
Target dummy	0.01	0.13	-0.05	-0.30
Task tenure < 1	0.18***	2.11	0.10	0.70
Task tenure > 4	-0.17***	-2.20	-0.06	-0.51
Tenure < 5	0.16*	1.88	-0.06	-0.40
Tenure > 10	0.18*	1.74	-0.22	-1.32
(Constant)	-3.24***	-17.8	-0.86***	-2.87
R^2	0.70		0.18	
adjusted R^2	0.68		0.13	
N	415		415	

**p < .10, two-tailed tests*
***p < .05, two –tailed tests*
****p < .01, two-tailed tests*

[c] Gr1 refers to editorial staff, Gr2 refers to the sales department, Gr3 refers to the marketing department and Gr4 refers to support staff. All these departments were divided into a group receiving incentive compensation and a group without incentive compensation.

TABLE 5C

Regression Results Extrinsic & Intrinsic Motivation (OLS)[d]

	Dependent Variable							
	Extrinsic Motivation				Intrinsic Motivation			
	Averages		Factor Scores		Averages		Factor Scores	
Independent Variable	***b***	***t***	***b***	***t***	***b***	***t***	***b***	***t***
Characteristics of monetary compensation								
- Factor Scores								
Transparency	0.01	0.39	0.04	1.3	0.00	0.14	-0.01	-0.3
Fairness	0.40***	16.96	0.66***	20.8	0.04	1.26	-0.04	-0.68
Controllability	0.11***	4.47	0.17***	5.11	-0.01	-0.27	-0.04	-0.65
Characteristics of promotion								
- Factor Scores								
Transparency	0.12***	5.11	0.13***	4.16	0.10***	3.12	0.19***	3.69
Fairness	0.08***	3.35	0.11***	3.53	0.04	1.25	0.06	1.28
Controllability	0.13***	5.64	0.16***	5.02	0.07***	2.21	0.12***	2.3
Control variables								
Age < 35	0.03	0.48	0.07	0.93	-0.19***	-2.43	-0.35***	-2.64
Age > 45	0.08	1.34	0.17***	1.98	0.14	1.63	0.27*	1.91
Education	-0.11***	-2.17	-0.12*	-1.8	-0.01	-0.17	-0.01	-0.08
Gender	0.09*	1.71	0.04	0.59	0.08	1.08	0.07	0.55
Gr 1 with inc comp	0.06	0.43	-0.16	-0.85	0.33*	1.68	0.57*	1.76
Gr 1 without inc comp	0.08	1.34	0.04	0.55	0.42***	5.20	0.74***	5.5
Gr 2 with inc comp	0.11	0.92	0.08	0.51	0.45***	2.83	0.9***	3.33
Gr 2 without inc comp	0.06	0.45	0.04	0.25	0.02	0.12	0.12	0.42
Gr 3 with inc comp	0.09	0.68	-0.03	-0.18	0.32*	1.79	0.47	1.61
Gr 3 without inc comp	0.01	0.13	-0.03	-0.33	0.19*	1.84	0.38***	2.21
Gr 4 with inc comp	0.19	1.25	0.12	0.57	0.23	1.1	0.39	1.15
Management dummy	-0.06	-0.74	-0.04	-0.32	0.11	1.00	0.25	1.34
Parttime	-0.06	-0.97	-0.11	-1.37	-0.07	-0.86	-0.14	-1.1
Target dummy	-0.07	-0.82	-0.03	-0.3	-0.03	-0.28	-0.06	-0.31
Task tenure < 1	0.11*	1.82	0.17***	2.08	0.08	0.97	0.09	0.66
Task tenure > 4	-0.11***	-1.98	-0.15***	-2.03	-0.04	-0.55	-0.07	-0.52
Tenure < 5	0.10	1.63	0.17***	2.01	-0.01	-0.15	-0.06	-0.44
Tenure > 10	0.07	0.92	0.19*	1.88	-0.09	-0.90	-0.23	-1.36
(Constant)	2.75***	32.8	-0.11	-0.99	4.03***	35.56	-0.25	-1.31
R^2	0.63		0.70		0.17		0.19	
adjusted R^2	0.61		0.68		0.12		0.14	
N	421		408		421		408	

**p < .10, two-tailed tests*
***p < .05, two –tailed tests*
****p < .01, two-tailed tests*

[d] Gr1 refers to editorial staff, Gr2 refers to the sales department, Gr3 refers to the marketing department and Gr4 refers to support staff. All these departments were divided into a group receiving incentive compensation and a group without incentive compensation.

TABLE 6
Regression Results Indicators of Motivation (Ordered Probit)[e]

	Dependent Variable					
	Work Satisfaction		Turnover Intent		Sick Leave	
Independent Variable	***b***	***z***	***b***	***z***	***b***	***z***
Characteristics of monetary compensation						
Transparency	-0.07	-1.58	-0.04	-0.90	0.03	0.44
Fairness	0.43***	6.10	-0.34***	-4.96	0.00	0.01
Controllability	-0.03	-0.56	-0.05	-0.88	0.05	0.61
Characteristics of promotion						
Transparency	0.14***	2.61	-0.08	-1.54	0.08	1.13
Fairness	0.06	0.97	-0.04	-0.68	0.04	0.40
Controllability	0.11***	2.04	-0.08	-1.50	0.04	0.54
Control variables						
Age < 35	-0.16	-1.07	0.07	0.50	-0.14	-0.64
Age > 45	0.24	1.49	-0.13	-0.82	-0.32	-1.49
Education	-0.20	-1.57	0.49***	3.80	0.16	0.93
Gender	0.11	0.81	-0.01	-0.05	0.04	0.23
Gr 1 with inc comp	0.58	1.63	0.11	0.32	0.89	1.64
Gr 1 without inc comp	0.49***	3.20	0.03	0.22	-0.30	-1.41
Gr 2 with inc comp	0.98***	3.27	-0.44	-1.50	0.60	1.42
Gr 2 without inc comp	0.17	0.52	0.23	0.70	-0.71	-1.14
Gr 3 with inc comp	0.59*	1.80	-0.49	-1.52	0.86	1.63
Gr 3 without inc comp	0.37*	1.90	0.03	0.13	0.24	0.91
Gr 4 with inc comp	0.72*	1.88	-0.23	-0.61	0.38	0.53
Management dummy	0.26	1.27	0.28	1.40	-1.08***	-3.06
Parttime	0.01	0.07	-0.36***	-2.44	0.32*	1.65
Target dummy	-0.14	-0.70	0.20	0.99	-0.25	-0.81
Task tenure < 1	0.08	0.49	-0.27*	-1.70	0.00	0.00
Task tenure > 4	-0.22	-1.54	0.13	0.94	0.40***	2.06
Tenure < 5	0.24	1.47	-0.52***	-3.20	-0.43***	-1.96
Tenure > 10	-0.17	-0.91	-0.25	-1.31	-0.20	-0.81
R^2	0.10		0.09		0.06	
N	427		421		385	

**p < .10, two-tailed tests*
***p < .05, two –tailed tests*
****p < .01, two-tailed tests*

[e] Gr1 refers to editorial staff, Gr2 refers to the sales department, Gr3 refers to the marketing department and Gr4 refers to support staff. All these departments were divided into a group receiving incentive compensation and a group without incentive compensation.