Job Discretion and Compensation Characteristics

An empirical research on job discretion and how it coincides with performance related pay and fixed wages

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PREFACE

In order to graduate for the masters' program in Human Resource studies, I wrote my thesis about compensation schemes and their relationship with job discretion. It was an interesting and valuable learning period in my life. It took me a year to do this research and write about it, and I am happy to finally close the chapter of studying and to start a career in HRM. I found out that I like doing research, particularly in this topic that is still very appealing to me, and I only scratched the surface! Although, I did not suddenly become a big fan of writing papers and I think this is still the hardest part to do.

For the research I had to do and write about, I had some help that I would like to give some special notification here. First, special thanks to my thesis supervisor Nick Zubanov, who did great on offering me new insights and critical reflections to my ideas that helped me to improve my thesis. Second, I would like to thank the HR manager and others within the HR department of 'TelecomCo' who gave me the opportunity to do research based on data and information from their company. Last but not least, I would like to thank my friends and family for their support and interest in the process of my thesis writing. Specially many thanks to my boyfriend who kept me calm and focused in times when I was perhaps a bit "off my game". So I am quite excited to present you this paper and again; Thank you all and enjoy reading!

September 2011,
Susan van Dalen

ABSTRACT

This research focuses on the relationship between job discretion with compensation schemes such as performance related pay and efficiency wages. The general idea is that job discretion refers to a certain range of effort levels that an employee may take concerning to their job. Meanwhile, an agency issue arises because employees are utility maximizers and therefore choose the lowest possible level of effort. In order to encourage employees to exert higher effort, the organization applies different incentive schemes such as performance related pay and efficiency wages. Consequently, the research question central to this study is: *Does the amount of pay depend on job discretion?*

By using a dataset from one large Dutch telecommunications organization, three hypotheses were tested and confirmed. The dataset includes information on 2,123 employees in 369 different jobs for which each job the dimensions on discretion were determined. The results indicate that (H1) jobs with a higher level of discretion attract a higher level of PRP; (H2) jobs with a higher level of discretion attract higher levels of fixed pay; and (H3) after controlling for job scale, the extent of the positive relationship between job discretion with PRP and fixed pay diminishes, but remains statistically significant.

This paper makes a contribution to the existing literature on agency theory and different incentive mechanisms. The most important finding is that in case of the Dutch organization job discretion is affecting the extent of performance related pay and fixed wages, after controlling for job scale. Some aspects regarding future research in this area and practical implications are discussed in conclusion.

Keywords: job discretion; agency theory; performance related pay; efficiency wages

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INTRODUCTION

This research investigates the notion of job discretion and how it may correspond to differences in bonuses and fixed wages that are offered to employees. A dataset obtained from a Dutch company in the telecommunications sector is used to address this. The focus for this industry setting arises due to an increase of organizations in this sector as a result of technical developments in information systems and process reengineering (Batt, 2001). Several studies (Bound & Johnson, 1992; Johnson, 1997; Topel, 1997) indicate an increasing demand for skills because new technologies have driven up wages. Furthermore, about 60 percent of the Dutch organizations is adjusting their share of a variable pay, or is about to do so in the next two years according to a research done by Hay Group (Schuttrups, 2010). The growing popularity of an incentive pay in addition to the fixed wage component results in addressing two incentive mechanisms in this study and their relationship with job discretion. It is argued by Barth (1992) that performance pay and efficiency wages share a common feature on predicting wage differentials. Moreover, it appears both mechanisms are not mutually exclusive and some elements of PRP and efficiency wages are found in the case of the Dutch study company.

In order to find a possible explanation for wage differentials in the variable and fixed pay, this study draws upon the notion of job discretion. Ortega (2009) argues there is a relationship between discretion that is given towards an employee in the organization, and performance pay contracts. This adds to the idea of Finkelstein, Hambrick and Cannella (2009) who illustrate discretion may be a helpful concept in understanding compensation schemes. In the study by Langfred and Moye (2004) for example, it is found that organizations have the intention to provide more discretion (autonomy) towards their employees since it results in higher motivation, satisfaction and performance. However, at higher levels of job discretion, the organization needs to provide stronger incentives because an agency problem will arise.

The underlying problem of agency theory is a conflict of interest between the principal and the agent. This occurs because there is separation of ownership and control once an entrepreneur/employer (principal) hires their first employee (agent) (Jensen & Meckling, 1976). It emerges through the rise of agency costs that come up by goal incongruence because the principal and agent have different goals. The objective of the principal is to maximize firm's profit, and control for agency costs when delegating tasks to the agent. The agent can provide different kind levels of effort that affect firm value, and his objective is to maximize his own utility and complete those tasks at the lowest possible effort. This results in a conflict because effort is costly to the employee, and the employer wishes to maximize the net profit from the employee (Lazear & Gibbs, 2009). Second, an issue arises through information asymmetry; there is less information available about the agent's attributes and behaviors to the principal, than to the agent himself (Gerhart, 2009). Likewise, one can think of an agency relationship in which two individuals have different objectives, and the employee's actions can not be

perfectly observed by the employer (Ortega, 2009). This principal-agent problem is the basic framework in economics for analyzing most incentive problems (Lazear & Gibbs, 2009). With the use of mechanisms like performance related pay and efficiency wages, these incentive problems can be addressed and the agent and principal's objectives may become better aligned.

According to Prendergast (1999) there are several mechanisms found in the employment relationships as a response to align the interests of workers and their employees. This includes: piece rates, (share) options, discretionary bonuses, promotions, profit sharing, efficiency wages, deferred compensation, and etcetera. Hence, performance related pay (PRP) -or bonus- and efficiency wages are mechanisms within agency theory that deal with the incentive problem. To make employees strongly respond to incentives, the mechanism of performance related pay may be introduced (Lazear, 1986). It can be an important source of value creation in order to stay ahead of competitors. The increase of competition caused by recent developments like globalization, has led to a substantial increase of the presence of PRP within The Netherlands (Gielen, Kerkhofs & Van Ours, 2010). Lazear and Gibbs (2009) mention "the most important reason to tie pay to performance is to increase employee effort, and better align it with firm interests" (p. 262). Similarly, they find incentives to be at the heart of effective economies, and effective organizations.

Efficiency wages are another possibility for organizations to use as an incentive mechanism. Efficiency wage theory suggests that higher wages may have positive incentive effects like higher quality, effort and/or performance (Gerhart, 2009). Supervision and efficiency wages can be substitutes for each other, because efficiency wage theory predicts that firms may replace costly monitoring with fixed wage premiums (Arai, 1994). This means if losing a job is the worst punishment for the employee, there is no danger in shirking at a job unless the fixed wage is above alternative outside options (Ellingsen, 1997). Thus, shirking can be controlled either by close monitoring or by having fewer supervisors and higher potential wage loss if being caught (Gerhart, 2009). This illustrates the standard efficiency wage model of Shapiro and Stiglitz (1984) and shows that the fixed wage within an organization is linked with possibilities of monitoring and shirking costs.

In addition, there are other incentive mechanisms found in the literature as well like team incentive designs (Aime, Meyer & Humphrey, 2010; Zhang & Li, 2007), tournament theory (Baron & Kreps, 1999, p. 253), and family firms. The latter form is studied in this area as well, because family firms show a possibility to control for agency costs (Chrisman, Chua, Kellermanns & Chang, 2007; Chua, Chrisman & Bergiel, 2009). In family firms the conflict of interest that exists in agency theory is minimized through family involvement (Chrisman et al., 2007). However, it is limited since there are only those much family members who are able and willing to work in the family firm (Chua et al., 2009). Team rewards refer to generating commitment, creating incentives to motivate and reinforce individual performance, and inducing employees to cooperate at the team-level (Aime et al., 2010). And tournament theory applies to situations when compensation depends on how well an employee does relative to fellow employees. Although there are quite a few interesting mechanisms given by

Prendergast (1999) to include in empirical research, this study concentrates on bonus (performance pay plans) and efficiency wages as means of compensation. The reason for this restriction is due to the finding of elements on both mechanisms in the Dutch study company, and it has not been studied empirically in association with job discretion.

According to Gerhart (2009) a decision about compensation methods in order to control for agency costs must be made. This decision depends on different factors such as monitoring costs, the relative incentive effects of behavior versus outcomes, and the degree of risk aversion among agents. The majority of explanations in the literature center around monitoring costs: An employee who receives performance pay will be less monitored and will have more discretion at the job. The employee in a salary system does not work hard unless he is closely supervised which can be linked to lower levels of discretion (Ortega, 2009). Moreover, supervision creates the possibility of firing the employee if he is caught shirking. This latter detail relates to efficiency wages where autonomous workers are paid a higher wage in order to stimulate effort (Barth, 1992). Consequently, an employee in a less strictly monitored job will receive a higher pay in order to create incentives (Arai, 1994). Thus, employees have the possibility for choosing from a certain range of effort levels, which are given through the extent of job discretion. And the employer must provide monetary incentives because of the agency problem.

To summarize; the incentive mechanisms PRP and efficiency wages share a common goal and can be used in organizations to increase worker effort. These employment relationships are constrained by the nature of the job and the extent of job discretion (Prendergast, 1999). Elaborating on the aspects of job discretion, performance related pay and efficiency wages, the following research question can be stated: *Does the amount of pay depend on job discretion?*

This study includes two components of pay, and therefore two sub questions are stated:

- What is the effect of job discretion on the performance related pay?
- What is the effect of job discretion on the fixed pay?

The main objective of this research is to find an explanation in the variance of a fixed wage and the performance pay component, by using job discretion (autonomy) as the independent variable. Moreover, it examines whether agency theory has any empirical basis in the case of the Dutch organization by applying incentive mechanisms such as PRP and efficiency wages. In the existing empirical literature, there is only the study by Barth (1992) that considers different incentive schemes and thus multiple theories together in respect to discretion. It appears that either agency theory (Holmström & Milgrom, 1994; Ortega, 2009; Prendergast, 2002) or efficiency wage theory (Arai, 1994; Ellingsen, 1997; Osterman, 1994) is at the center of attention in studies within this area. However, there are some additional examples where both theories are found in the literature (Faria & Jellal, 2009; Ritter & Taylor, 1997), but do not address the concept of job discretion. Therefore this study considers both, PRP and efficiency wages, to examine the relationship between job discretion

with fixed wage and performance pay aspects. Furthermore, this study adds empirical evidence to the current literature about agency theory, and to the small amount on discretion (Golden, 2001; Ortega, 2009; Zoghi, Levenson & Gibbs, 2005).

Practical implications are interesting to organizations that are applying performance related pay and efficiency wages as monetary incentives. These organizations can find information and explanations in this study, about the differences in the incentive pay and how these coincide with different levels of job discretion. This research provides awareness about incentive schemes that are addressing the agency issue, in respect to job discretion. Furthermore, it may give some insights for the reason why bonuses exist and more specifically, why these are substantially higher at higher job levels of the organization.

The first part of this paper outlines the theoretical framework and generated hypotheses. The second section shows the methodological approach of this research and how it is conducted. After the most important results are presented with the analyses in the third section, this paper ends with the main conclusion and discussion part. The latter section includes practical implications and some points of interest for future research.

THEORETICAL FRAMEWORK

Job discretion

The notion of discretion occurs when someone has the freedom and authority to take action and is aware of this freedom (Finkelstein et al., 2009, p. 26; Hackman & Oldham, 1975). A definition on discretion in the *English Dictionary for Advanced Learners* (2001, p. 435) is: "if someone in a position of authority uses their discretion or has the discretion to do something in a particular situation, they have the freedom and authority to decide what to do". It may occur in different forms like employee, job or managerial discretion that all are used in the literature. This study takes the main focus on job discretion that is involved with the extent of discretion that belongs to a certain job. Job discretion can be seen as an extension of the concept of managerial discretion. Furthermore, job discretion is closely related to the concept of job autonomy. Both -managerial discretion and job autonomy- are discussed to provide insights on the differences and similarities, resulting in better understanding of job discretion.

Within the existing literature there is a significant amount focusing on the concept of managerial discretion at the firm level (e.g. Finkelstein & Boyd, 1998; Finkelstein et al., 2009; Hambrick & Abrahamson, 1995; Magnan & St-Onge, 1997). In Finkelstein et al. (2009) managerial discretion is dependent on the ownership and awareness on multiple possible courses of action an executive has. As such, the degree of discretion is constrained by contextual forces, but also derived from within the executive and can be perceived as a function of (1) managerial characteristics, (2) environmental

factors and (3) organizational factors (Finkelstein et al., 2009). By introducing the study of Zhang and Li (2007), it appears managerial discretion is also applicable to team level. Consequently, the concept of managerial discretion can be extended to different levels within an organization, for example employee discretion at the individual level in the study by Ortega (2009). This indicates that with every job at all levels of an organization, a certain amount of discretion is present. As such, job discretion can be perceived as a broader concept than managerial discretion, since the latter only refers to discretion at the managerial level. Managerial discretion is related to strategic organizational choices that may affect to some extent the entire organization, job discretion is linked to all positions in the organization that affect the extent of leeway within a job. In conclusion, we learn from Finkelstein et al. (2009) that the characteristics of an organization greatly affect the extent of managerial discretion and therefore decisions about strategy and policy. They make clear that upper-level executives have a predominant influence on what happens to their organizations.

Alternatively, the notion of discretion in the literature relates to the amount of authority one employee has in his own work, rather than being influenced by someone else. This is also known as "job autonomy" and is explained in the organizational behavior literature by Hackman and Oldham (1975, p. 162) as "the degree to which the job provides substantial freedom, independence, and discretion to the employee in scheduling the work and in determining the procedures to be used in carrying it out". Employees are given discretion by their employers to carry out tasks to be completed in a specified amount of time, rather than being told what to do at every moment (Prendergast, 2002). This implies that job autonomy refers to the extent of discretion about how to execute the job. Therefore discretion and autonomy are similar in addressing the extent of freedom in organizational or work related decisions and thus these concepts are tightly linked to each other. However, job discretion also applies to situations that are not directly related to tasks, methods and work scheduling. It includes the ability to take actions on your own and exerting creativity at the job outside the determined tasks by job descriptions or contracts. To illustrate the difference between job autonomy and job discretion, the following example would help. Consider a job of -a call centre employee- which is very low on discretion since this employee has limited possibilities to alter the routine of tasks they must perform. For instance, a failure to take up a call within 10 seconds (after which time the call will be forwarded to another agent) can be easily detected and will be considered shirking. Thus, there is absolutely no room for exercising discretion on whether or when to take up calls. Clearly, there are other jobs where people can choose not to pick up the phone or defer a conversation by asking to call back later and to do instead something deemed more important. On the other end of the discretion spectrum is the job of director of the marketing department for example, which has more job discretion because this job is more complex and the director has more leeway to take actions on his own. Someone in the position of director is entitled to fully determine his or her agenda, given them much more leeway in combining various routines and tasks in their work. The concept of job

discretion therefore in this study is the extent of personal creativity, the possibility to alter tasks, and determining your own agenda.

But what determines the amount of discretion that is related to a job then? According the study of Langfred and Moye (2004) an organization would like to provide more autonomy, or job discretion among employees since it brings higher motivation, satisfaction, and performance. Furthermore, one could say that job discretion is driven by technology and dynamics in which the organization operates (Batt, 2001). It is related to job characteristics that are given by the way jobs are designed because of an organization's task structure (Ortega, 2009). Zoghi et al. (2005) provide some insights about what kind of factors, such as the organization's product, technology and industry are influencing job design. They find strong evidence that job design is also concerned with strategic choice, since organizations choose a particular coherent job design strategy. This leads to the outcome that job discretion is determined through job design by the strategic choice, technology and other given characteristics of the organization. Hence, job discretion is determined exogenously as a function of technology and strategy.

All employees have a certain degree of discretion that is given by the way their job is designed. It is clear that an agency issue may arise within the employment relationship when an organization provides more discretion towards the employees. An employee will try to maximize his own value at the expense of the organization, meanwhile the organization wishes to maximize profit. This conflict of interest illustrates a fundamental agency problem and is quite general, since it exists in all organizations and in all cooperative efforts (Jensen & Meckling, 1976). Higher job discretion provides more leeway to the employee to choose from a certain range of effort levels. In order to sustain effort at higher levels of discretion and induce workers *not* to settle at their lowest possible point in the effort range, an organization must provide a financial motivation. This research focuses on incentives that are used in monetary terms as a form of compensation. According to MacLeod and Parent (1999) compensation policies are chosen strategically upon job characteristics, and therefore any variation that causes changes in the chosen job design will imply variation in the extent of compensation as well. Organizational decisions are affecting job discretion, and consequently the strategic choice about incentives as well. Previous discussion suggests that the strategic choice about job discretion and compensation needs to be taken into consideration as a whole by the organization. In order to address the agency problem that is more likely to occur at higher levels of job discretion, the next section includes payment schemes that are applied in the organization as incentive mechanisms.

Performance related pay (PRP)

PRP is a definition in itself since it applies to compensate on what has been performed, put simply you pay for what targets have been accomplished or exceeded. In current business environments there are different types of performance pay plans such as piece rates or productivity payments, group performance pay, profit sharing, and employee stock ownership (Ortega, 2009). It is argued by Lazear

(2000) that the term 'performance pay' is not very useful since a broad set of compensation schemes can be addressed by this concept. The incidence of PRP is taken into account in the study by Grund and Sliwka (2010), and according to their research two aspects are concerned in respect to the incidence of performance related pay. First, if a superior frequently assesses the employee's job performance. And, secondly, "whether this performance evaluation affects their monthly gross wage, yearly bonus, future salary increases and/or potential promotions" (Grund & Sliwka, 2010, p. 9). Bonuses are a particular implementation of PRP and are paid when specified targets are met or have been exceeded. At the study company they make use of a yearly bonus in order to deal with the agency problem. This study uses the general concept by Grund and Sliwka (2010) as mentioned previously, and focuses on the variance of yearly on target share of bonus.

The development of PRP schemes is generally imposed as a response by employers to the agency problem (McNabb & Whitfield, 2007). Agency theory entails two basic assumptions, with the first accounting for goal incongruence since the principal and agent have different goals and the agent follows different objectives than the principal is aiming for. The second assumption involves information asymmetry because the principal is not able to get a complete insight on actions taken by the agent (Gerhart, 2009). For example, suppose the principal schedules a certain task that has to be executed by the agent within four hours. It is only known to the agent that he is able to finish this task within three hours, which would be more efficient to the organization. As a result, the agent has discretion about the task concerning the amount of time and when to do this. Furthermore, the organization needs to provide incentives to the agent so that he will exert effort and allocate his time in the appropriate way. As such, we see that performance related pay is implemented as a possible solution to the agency problem (Prendergast, 1999).

In order to induce worker effort, an organization needs to provide incentives to the employees. In reality the employee can vary the amount of effort in regarding the job, within a certain range because of job discretion. He provides output (related to effort) to satisfy a standard incentive level given by the employer who observes output (Ortega, 2009). For this part, we need to keep in mind that the strategic choice about compensation method is based on the costs and benefits of the various schemes. It is much more difficult to measure the cost of input, consequently the output of the employee is observed in order to compensate on what is produced (Lazear, 1986). For example the tasks of an employee in a call centre environment as in the study company are easily observed. This gives the opportunity to monitor all actions for instance, the time it takes for a service call to round up, or the amount of time the employee takes to smoke a cigarette, and so forth. In this case the importance to induce effort is close to zero, since the range of effort levels for the worker to choose from is narrow and corresponds to low job discretion. Therefore the utilization of performance related pay is assumed to be almost none, because it is a more expensive alternative than monitoring and the need for inducing effort is relatively low.

Alternatively, with more complicated jobs it is more difficult to measure output or monitor all tasks for example in the case of a director of the marketing department (Ortega, 2009). As a consequence, the director has a larger amount of job discretion and therefore a larger variability in exerting effort. This gives raise to the agency issue and consequently the sense of urgency to apply performance related pay. Similarly, to make a higher-level employee exert the right amount of effort and reduce the agency problem, the extent of performance pay is needed in larger presence. This relates to the idea by Ortega (2009) that: "discretion and performance pay are complementary organizational choices" (p. 591). Higher levels of job discretion thus relate to a higher amount of PRP in order to induce worker effort. In other words, jobs that are involved with more discretion, are expected to be related with higher levels performance pay, or in the case of the Dutch company; a larger share of on target bonus.

Hypothesis 1: jobs with a higher level of discretion attract a higher level of PRP.

Efficiency wages

Although it seems that PRP works ideally as an incentive mechanism, it is bound to some limitations as well. In highly regulated environments bonuses are not that popular and performance pay plans are constrained by collective bargaining agreements that for example are present in The Netherlands. In addition, there are some challenges to overcome when implementing PRP as well. According to Ortega (2009) paying for performance makes the employee only exert effort on tasks that are rewarded. As such, performance pay contracts generate distortion and an organization may decide to pay a straight salary instead. Another problem with PRP involves the difficulty to specify all aspects of a job in a contract, and subjective performance evaluation is therefore applied (Prendergast, 1999). By including subjectivity ratings also uncertainty increases that needs to be compensated, which will lead to a more expensive form of compensation. Therefore, an organization like the study company is in need of another compensation scheme since the power of PRP as an incentive mechanism is limited. This brings us to the opportunity to apply fixed pay as an efficiency wages. Previewing the results of this study it appears both mechanisms -PRP and efficiency wages- may coexist within one organization. The next part gives some insights on how this may work in practice.

Efficiency wage theory attempts to explain the reason why there are differences between pay levels in organizations (Gerhart, 2009). The standard shirking model of Shapiro and Stiglitz (1984) is adequate for describing this. According to their model the worst thing that could happen to a worker who shirks at a job, is to be fired since there is a possibility of being caught. If all workers receive the market wage and unemployment does not exist, the worker can be rehired immediately. In this situation there will be no loss to his account for his misbehavior. In circumstances where there exists imperfect monitoring and full employment, workers will simply choose to shirk because of the agency issue. In order to induce workers not to shirk, an organization may consider paying more than the

"market wage". Consequently, the employee will pay a penalty if he is caught shirking and loses his job. Since the alternative of having a job at the organization that applies efficiency wages, he faces a lower or no income possibility. Shapiro and Stiglitz (1984) also clarify this model as a worker discipline device and it points out how efficiency wages may address the agency problem.

Clearly, as far as the agency problem is concerned, the firm chooses a compensation plan that is able to maximize the net profit from the employee and in turn the employee will try to maximize his utility as well (Jensen & Meckling, 1976). Secondly, when there is a situation where the employee has discretion in a job, he will shirk because of the agency issue. An empirical study addressing the relationship between discretion and compensation schemes is done by Osterman (1994). The results from his research provide strong support on the payment of efficiency wages, which enables managers to provide employees with more discretion. But how does efficiency wage as an incentive mechanism work in particular? One could state that the link between job discretion and efficiency wages is partially overlapped with job discretion and performance related pay, because both mechanisms apply the same logic: if an employee has a job with lower levels of discretion, he/she is less likely to shirk due to a more limited range of effort to choose from. However, in the case of high job discretion the organization should worry about shirking costs and therefore efficiency wages are applied in order to induce effort from the employees (Arai, 1994).

Let us remind the example about discretion of the call center employee and the marketing director of the study company. Given that the employee is closely monitored in his work, he has a substantial probability of being caught shirking and therefore has a limited possibility of doing harm to the organization. On the contrary if the director shirks this could lead to negative effects that may have severe consequences on organizational outcomes (Finkelstein et al., 2009). In order to avoid employees to shirk and by implication do harm to the organization, higher wages are needed. An employee with more discretion may cause more damage and therefore it is necessary to increase the "price" of being caught shirking with higher wages. Suppose the damage or impact on organizational outcomes is equal through shirking, the agency issue also arise due to imperfect monitoring possibilities. Arai (1994) reports that the more difficult it becomes to monitor the employee's actions, you need to pay a higher wage. Likewise, employees may have more discretion in their job, when the amount of effort (or output) monitoring is restricted. Consequently, it becomes much harder to catch shirking in jobs that have more discretion. The probability of being caught is lower in cases of high job discretion, therefore it necessary to increase the "stakes" of a potential loss to the employee's account with higher wages. Both reasons, causing damage through shirking and possibilities of monitoring, are suggesting a positive relationship between job discretion and fixed wages. As such, the second hypothesis indicating a positive relationship between job discretion and fixed wages is as follows:

Hypothesis 2: jobs with a higher level of discretion attract higher levels of fixed pay.

Job scale

Next to the main predictor variable of job discretion this study includes an important control variable which is job scale. Job scales are used in organizations to define the extent of human capital that is needed to execute a job. In the study company for example, job scales are defined in the study company by "technical" features like experience and education that are required for a job, job complexity and freedom to act within a certain job. Suppose that high levels of skill and increased education would reduce the need for supervision, this may enable employers to permit greater discretion over the work to employees (Osterman, 1994). This happens because higher-level jobs are more complex, less codifiable and therefore rely more on independent judgment of the employee. As such, job scale is positively linked with job discretion. Someone who works in a job at a higher job scale, has to possess these specific skills, and the organization needs to pay more money for a larger amount of skills. When employees are required for more skilled labor, they have more responsibilities and are in need of higher rewards. This is an issue that is discussed to be accepted in the labor bargaining agreement as well, in the case of Dutch study company. In other words, the organization has to pay a higher wage in order to compensate for higher demands and requirements.

Additionally, jobs at higher job scales are deemed to have more complexity because tasks are more difficult. Thus, higher level jobs are bound to have more discretion. This positive relationship indicates that job scale largely predicts the extent of performance and fixed pay. In order to find whether the relationship between job discretion and forms of compensation exist due to the agency problem, job scale is needed as a key control variable. The close link between job scale and discretion would mean that the positive relationship with PRP and fixed wage diminishes when it is included in the analyses. The third hypothesis is therefore stated as:

Hypothesis 3: after controlling for job scale, the extent of the positive association between job discretion with PRP and fixed pay will diminish.

METHOD

Research design and procedure

In order to test the hypotheses empirically, a dataset is used that is obtained from one large telecommunications company in The Netherlands. A pseudonym is used in this paper, because this company wishes to stay anonymous. By doing so, the employees of TelecomCo are given privacy concerning personal information such as their wages and bonuses as well. The research design is quantitative and cross-sectional, since the data only contains information gathered from one point in time. The unit of analysis is the individual, i.e. all the employees within the organization. This helps to control for other variables as well like age, gender and job tenure for example, obtained from unique individual-level data.

The data collection consisted of two different parts. The first part of the data was provided by the HR Manager and taken from the personnel data and salary administration within TelecomCo. It included information about fixed wages in 2009, the share of bonus an employee may get if performed on target, job titles, job scales and other demographic variables. This part was used to determine the performance related pay and fixed wage components of each individual. The data was incomplete concerning the job discretion variable. Therefore the second part consisted of constructing the job discretion variable for 369 different job titles that were forthcoming from the data. Every job at TelecomCo is represented within the "job matrix", in which it is classified by the division, complexity, skills, responsibilities and the amount of freedom to act in a certain job. Jobs that have a different bonus structure, like sales employees and members of the board, were excluded from the data, since these would generate outliers in the sample. For each job title, a checklist about job discretion dimensions (Koppes, De Vroome, Mol, Janssen & Van den Bossche, 2008) is filled out by the author who was working at the company at the time. More importantly, instead of asking employees how they perceive or experience their amount of discretion by questionnaires, the data is constructed by the author alone and based on objective information from the job matrix and job descriptions that are constructed by the organization. There is of course an element of subjectivity in our measure of job discretion as well, since relevant specifics in job descriptions had to be related to the job discretion scale. However, whatever bias occurred as a result of mapping the job descriptions into job discretion was common for all observations and thus unlikely to affect our results in a material way

Sample statistics

After checking for outliers and missing values, the data contains information on employee discretion, bonus targets and fixed wages over 2.123 employees. The sample shows an average age of 39.6 within the range between 20 and 63 years. It appears the study company in this case employs less women, 24.8 percent, than men, 75.2 percent. The average tenure of the sample was 6.6 years, within the range

of zero and 36. Most employees in the sample (92.8 percent) have a 5% bonus of their year income as performance related pay, if performed on target. Only 7.2 percent have higher shares of on target bonuses with a maximum of 25%. The mean of wage was 3,421, ranging between values of 1,705 and 9,806. In Table 1, the results from the descriptive analysis are presented, including the means and standard deviations of the continuous variables job discretion, wage, age and years in the organization. Given that gender, on target share of bonus and job scale dummies are discrete; these were included with information on percentages only. Also some examples of jobs were included to illustrate the differences in the job scale variable.

Table 1: variable characteristics with means, standard deviations (SD) and percentages

	Mean	*SD*	*N (%)*
Job discretion	2.59	1.87	
- 0			534 (25.2)
- 1			90 (4.2)
- 2			351 (16.5)
- 3			397 (18.7)
- 4			237 (11.2)
- 5			514 (24.2)
Wage	3,421	1,293	
Age	39.57	9.91	
Years in organization	6.58	5.71	
On target share of bonus			
- 5%			1,970 (92.79)
- 7,5%			76 (3.58)
- 15%			54 (2.54)
- 20%			17 (0.80)
- 25%			6 (0.29)
Gender (in reference to female)			
- Male			1,597 (75.2)
Job scale (in reference to job scale 4 (call centre employee; facility officer phone exchange))			
- Scale5 (call centre agent; facility officer; network administrator)			176 (8.3)
- Scale6 (call centre agent back office; HR assistant; secretary; installation engineer)			292 (13.8)
- Scale7 (engineer technical service; senior call centre agent; employee HR administration)			444 (20.9)
- Scale8 (senior engineer; senior secretary; teamleader servicedesk)			329 (15.5)
- Scale9 (employee development/trainer; system specialist; employee security)			326 (15.4)
- Scale10 (senior telecom engineer; HR advisor; senior project leader; account manager)			166 (7.8)
- Scale11 (manager technical service; business analyst; senior project manager)			138 (6.5)
- Scale12 (manager quality assurance; senior business analyst; technology architect)			68 (3.2)
- Scale13 (manager services; recruitment manager; senior consultant corporate development)			24 (1.1)
- Scale14 (manager direct sales; HRM business partner; senior business consultant)			18 (0.8)
- Scale15 (director sales; director business operations; director technical services)			16 (0.8)
- Scale16 (director network operations; director marketing; director corporate development)			8 (0.4)

Study company - TelecomCo

In order to get a better understanding of the extent of job discretion, some examples are given of jobs within TelecomCo that are in the same job scale, and referring to different levels of job discretion. In the theory section already the example about the call centre employee and the director of the marketing department is briefly discussed, and Table 1 includes several job titles belonging to specific job scales.

Looking at the low job scale (6), we see two jobs on this scale with rather different levels of discretion: A call centre agent and an installation engineer. When the call centre agent is working, he or she is obliged to execute certain task with each service call. For instance; checking the personal information of the person who is calling by asking the bank account and date of birth to confirm the actual customer is calling. If this information is not given, the agent cannot help. Moreover, the name of the customer should be mentioned at least three times within a conversation of the service call. All tasks are actually based on routines and instructions that are available on the intranet of TelecomCo. However, the installation engineer is someone who is able to work independently from outside the company, and is in less need to take specific actions like the call centre agent. However, when problems or certain tasks become more complex, the engineer is required to consult a supervisor and discuss this. Of course it is necessary to follow guidelines in order to get the hardware installed, but the engineer has the possibility to determine on how to proceed when the actual situation gives the opportunity to do so.

At another job scale (11) there is the position of employee development/trainer with medium job discretion and manager technical services that is indicated to be high on job discretion. A manager, who is responsible for the entire technical service department, also has subordinates and needs to delegate tasks that are executed by these subordinates in order to translate strategic goals into operational processes. This brings us across the term of managerial discretion once again. Additionally, according to the job description a manager should positively influence the individuals and the team as an inspiring coach, because he also needs to provide guidance to his subordinates like the team leaders within TelecomCo. However, a trainer does not have any subordinates but needs to provide guidance during workshops for example to a small group of call centre employees. Moreover, the trainer is bound to some basic information and topics that are mandatory for new employees to learn. This leads to a restriction on the extent of job discretion.

Previous examples indicate that although there is a high correlation between job scale and job discretion, there is still some variation in job discretion among jobs in the same job scale. This remaining variance will identify the separate effect of job discretion on the pay components. An overview including all job scales and the level of job discretion is illustrated in a scatter plot (Appendix A).

Next to providing a short outline on jobs with different levels of job discretion within the same job scale, it is important to understand how the compensation characteristics are structured within

TelecomCo as well. The fixed wages are quite straightforward and discussed more in detail in the instrument section in the upcoming part. However, the performance related pay mechanism, or bonus structure that is applied within TelecomCo is in need of some additional background information.

In the collective agreement from 2009 the amount of bonus (PRP) is stated at 2.5% of the yearly gross wage as a bonus, if company-wide targets are met. Even if an employee was not able to perform sufficiently well to obtain a team bonus, the organizational bonus is still offered since this is agreed upon in the collective agreement. In addition to the collective bargaining agreement, the organization has specified the procedure how the PRP structure is arranged with approval of the works council.

Targets are based on the Business Balanced Score Card (BBSC) that is implemented top-down into specified scorecards on department- and team-level for the entire year. As a result, an organizational bonus and team bonus apply for all employees, and for the majority there is the possibility of getting a 5% bonus, divided as 2.5% team-level and 2.5% organizational bonus, if results have met specified targets. Additionally, if the results have exceeded targets, an "overscore" is applied with a maximum bonus in total for 10%. These scores are calculated pro rata, meaning that the actual bonuses are equally distributed within the range between 0% and 10% in the first bonus group, depending on organizational and team-level results. To illustrate this for the entire sample, an overview is included in Table 2. The overview shows the distribution of five different levels of bonus groups that are present within TelecomCo.

Table 2: Bonus groups with (N) employee; on target share of bonus and share of frequencies

Bonus group	*N* (employees)	*On target bonus (%)*	*Share of frequency (%)*	*Cumulative share (%)*
1	1,970	5	92.79	92.79
2	76	7.5	3.58	96.37
3	54	15	2.54	98.91
4	17	20	0.80	99.71
5	6	25	0.29	100

Instruments

Independent variable: job discretion

By using the Dutch Survey on Working Conditions (Koppes et al., 2008) the concept of job discretion is determined using 5 dimensions (Appendix B). These indicators are obtained from Permanent Research LifeSituation (POLS) (CBS, 2005) and the Job Content Questionnaire (JCQ) of Karasek (1985). Taking into account 369 job titles that are present at TelecomCo, the checklist was filled out by using the job matrix and job descriptions. While the job matrix included information about the job complexity; freedom to act and skills/abilities, the job descriptions were taken into consideration to determine the extent of responsibilities, leadership and job content. As such, this part of the data is

generally based on objective information by one rater, instead of subjective perceptions of all employees by running questionnaires. One sample question was “Are you able to determine the order of your own tasks?” [“Bepaalt u zelf de volgorde van uw werkzaamheden?”]. The possible answer category was either yes=1 or no=0. The other four questions were as follows: “Are you able to decide how to perform your tasks?” [“Kunt u zelf beslissen hoe u uw werk uitvoert?”]; “Are you able to determine your working speed?” [“Kunt u zelf uw werktempo regelen?”]; “Is it necessary to come up with new ideas in order to perform certain tasks?” [“Moet u in uw werk zelf oplossingen bedenken om bepaalde dingen te doen?”] and “Are you able to take time off work whenever you like?” [Kunt u verlof opnemen wanneer u dat wilt?”].

The Kaiser-Meyer-Oklin (KMO) value was .69, exceeding the recommended value of .6 and Bartlett’s Test of Sphericity reached statistical significance ($p<.001$), which allowed for PCA to be supported. However, there was only one component with eigenvalues exceeding 1, explaining 61% of the total variance. Therefore the concept of job discretion is retained as one component, and the measure of job discretion is the simple sum of its components. The reliability of the scale in the current study showed a Cronbach’s alpha of .84, which is very good in comparison to the Cronbach’s alpha coefficient of .77 that was good in Koppes et al. (2008).

Dependent variable: performance related pay

To determine the extent of PRP for each individual in this research, this study uses bonus levels of the on target share of bonus, as shown in Table 2. It includes the frequencies for employees being in a certain “bonus group” based on the used data. The general majority of the entire sample is group 1, and the probability of being in a higher group is quite small. These frequencies and cumulative shares are prescribed without any predictor variables and originate only from the unconditional probabilities of being in each category.

The share of employees that are in first bonus group and are getting an on target bonus of 5%, is 92.79%. The second bonus group has a specific share of 3.58%, which will get an on target share of bonus of 7.5%. The third group that is getting an on target bonus of 15%, has a share of 2.54% and so on. These bonus groups are considered to be five different categories of on target share of bonus, and it is possible to rank these groups given their amount of bonus. This is therefore not a continuous variable, but the dependent variable of PRP is categorical including five categories. There is a certain order to these categories; hence it is more suitable to use ordinal logistic regression technique to test the first hypothesis. This type of regression analysis is also known as ordered logit, which is explained more in detail in the regression analyses section below.

Dependent variable: fixed wage

Next to the “bonus groups” about the PRP variable, the base salary of all individual employees is added to the data to determine the variance of the fixed wages. This information is confidential and

therefore not included in the report and are only available on request. In order to determine whether the fixed wages are applied as efficiency wages, it should be compared to the 'market wage' that applies to TelecomCo. In the absence of labor force survey data from which the market wage could easily be calculated, an assumption will be made in our study to estimate the market wage as a function of the employee's age, the number of years in the organization, and gender. That is, once we account for the contributions of these factors to wage by including them in the wage equation, the remaining variation is not due to the market wage, but due to job discretion and a variety of other factors beyond our control (the error term). It is important to note that the assumption is made we can separate the efficiency wage component from the total wage by including the age, tenure and gender as controls for the market wage.

The fixed wage was transformed into a log variable, since a salary never becomes negative and this transformation makes sure the predicted value of fixed wage always ends up as a positive number (Allison, 1999). Secondly, it makes more sense that the increase of a predictor leads to certain percentage change in the fixed wage, instead of an absolute number. The preliminary analysis on the fixed wages showed that this can be used as a continuous dependent variable, which is why the second hypothesis is tested by linear regression method.

Control variables

By conducting research at the individual level, it is possible to control for the following variables that were available from the data: age, gender and job tenure. Next to job scale that is included as the key control variable, these variables are added in order to rule out any other effects that could be of influence regarding the investigated relationships. More importantly, these controls help to indicate the market wage and as such the variance of the fixed wages are efficiency wages. Economists claim that the age-earning profiles change over the work life of the individual worker (Thornton, Rodgers & Brookshire, 1997), and this may affect the fixed wages of employees within an organization. Moreover, the total annual earnings are considered to be affected by age, and therefore age is included as a control variable in this study. Although the gender-wage-gap between men and women has diminished substantially over the 1980s and 1990s, it is found by Winder (2009) that male workers, who have access to flexibility, earn more than their female colleagues. It is argued that women have less autonomy and authority in their jobs, whereas these characteristics may be positively related to flexibility and wages. The third included control variable relates to seniority, or job tenure a worker has, since wage tends to grow with seniority in the firm (Hutchens, 1989). This is measured only by the amount of years an employee works in the TelecomCo, due to lack of information about previous jobs.

Regression analyses

First, the data was screened on error and missing values, followed by an examination of outliers and assessed on normality. This resulted in a fully applicable dataset to proceed with the statistical analyses. All analyses were conducted with the use of the software program SPSS Version 17. The relationship between job discretion and the categorical dependent variable of on target share of bonus was explored with the use of ordinal logistic regression analysis. With ordinal logistic regression some advanced statistics are involved and it is not a commonly used procedure like linear regression, which is why it is explained a bit more in depth to get some basic understandings about this analysis.

Ordinal logistic regression can be seen as an extension of binary logistic regression. While binary logistic regression is applied when there are two possible outcomes, for example with a dichotomous dependent variable with two possibilities of getting a bonus; being either yes or no. Ordinal logistic regression exists to handle the case of dependent variables with more than two classes, and if these multiple classes are ranked (Norusis, 2005, p. 70). The classification for the used sample is shown in Table 2 that defines the event of interest, namely the probabilities of being in a certain bonus group with corresponding on target share of bonus. With ordinal logistic regression, the event of interest has a particular score or less and is defined by the cumulative probability of being in a certain bonus group. In the results section these probabilities are included in Table 5.

In the ordinal logistic regression analysis the standard errors were altered into robust standard errors, in order to deal with heteroscedasticity and resolve the problem of errors that are not independent and identically distributed. If robust standard errors are used, it does not affect the coefficient estimates, but the test statistics will give reasonable accurate significance values (Allison, 1999, p. 127).

To examine the relationship between job discretion and fixed wages, the data was processed with multiple hierarchical regression technique. In order to find the magnitude of this effect some control variables were included as well like age, gender, years in the organization and job scale. The job scale control variable is captured by dummy variables Scale5 until Scale16, which represents dummies ranging from job scale 5 until the 16^{th} job scale in reference to job scale 4.

RESULTS

Correlations

In precedence of the regression analyses, the relationships between the variables were investigated using Pearson product-moment correlation coefficient. The correlation coefficients, means and standard deviations are all included in Table 3. It shows the simple two-part relationships between two variables. To start with the correlation that is in line with the first hypothesis; between job discretion and on target bonus levels (r = .28, n = 2.123, p < .01), implying a weak correlation between higher levels of job discretion are associated with higher levels of the bonus groups.

Also the second hypothesis can be supported to the found correlations between discretion and log wage was strong (r = .82, n = 2.122, p < .01), implying that higher levels of job discretion are associated with higher fixed wages. More interestingly there were found three different positive correlations that make sense concerning the third hypothesis; (1) a strong relationship was found job discretion and job scales (r = .87, n = 2.123, p < .01), with higher job scales associated with more discretion, (2) log wage and the job scale variable show a strong relationship (r = .89, n = 2.122, p < .01), which indicate that fixed wage is highly correlated to job scale, and (3) on target bonus levels and job scales (r = .49, n = 2.123, p < .01), higher job scales are associated with higher share of on target bonus. These correlations are in line with the stated hypotheses. Furthermore, it shows that job scale is important to include as the key control variable, because of the found correlations.

Table 3: Means, standard deviations (SD) and Pearson Correlations

	Mean	*SD*	*1*	*2*	*3*	*4*	*5*	*6*	*7*
1. Job discretion	2.59	1.87							
2. On target bonus	0.05	0.02	.283**						
3. Log wage	3.51	0.15	.824**	.418**					
4. Age	39.6	9.91	.287**	.064**	.492**				
5. Gender	0.75	0.43	.274**	.037	.254**	.142**			
6. Years in organization	6.58	5.71	.261**	-.023	.410**	.536**	.170**		
7. Job scale	7.87	2.27	.874**	.493**	.889**	.247**	.215**	.183**	

** Correlation is significant at the 0.01 level (2-tailed).

Hypothesis 1: ordinal logistic regression

In order to test hypothesis 1, ordinal logistic regression analysis was used and the results are presented in Table 4. The first model only includes the predictor variable of job discretion, in the second step the control variables were entered as well, and job scale dummies were entered in the final model.

Table 4: Ordinal logistic regression predicting on target share of bonus

Model	1		2		3	
	Estimate	*p*-value	*Estimate*	*p*-value	*Estimate*	*p*-value
Job discretion	3.091 ** (.605)	.000	3.138** (.523)	.000	1.675* (.652)	.010
Age			.022* (.008)	.008	.020* (.009)	.033
Gender			-.571 (.302)	.058	-.587 (.354)	.097
Years in organization			-.047 (.034)	.161	-.009 (.025)	.707
Scale9					.843 (.669)	.208
Scale10					2.252* (.759)	.003
Scale11					3.289** (.828)	.000
Scale12					3.041** (.827)	.000
Scale13					2.992** (.838)	.000
Scale14					7.208** (1.047)	.000
Scale15					27.113** (1.288)	.000
Scale16					44.934** (1.656)	.000

NOTE: N = 2,123; *Estimate* = estimate coefficients, with robust standard errors in parentheses.
Gender was coded (male=1; female=0); Job scale dummies were coded (yes=1; no=0) compared to job scale 4.
Link function: Logit
*$p < .05$ **$p < .001$

The dependent variable is the bonus group (5%, 7.5%, 15%, 20% and 25%) and the model contained five independent variables (job discretion, age, gender, years in the organization, and job scale dummies). The *p*-values indicate whether there is a statistically significant association between a predictor variable and the ordinal response variable (Norusis, 2005, p. 80). The full model containing

all predictors is statistically significant, χ^2 (12, N = 2.123) = 1,399.94, $p < .001$, indicating that this model gives a better prediction than the baseline intercept-only model on the five different bonus groups. Hence, the model gives better predictions than simple guessing based on the marginal probabilities for the outcome categories. The complete model explained a significant amount of the variance in the dependent variable; on target share of bonus. As shown in Table 4, job discretion has a positive coefficient (estimate) in all three models. In the last model every unit of increase in discretion indicates an increase of 1.675 in the expected log odds as you move to the next category of on target share of bonus, holding all other variables constant. This means if an employee attains an increase of one unit in job discretion, he or she is 5.34 times; [exp(1.675) = 5.34] more likely to go to a higher level of on target share of bonus, which is in line of hypothesis 1 and therefore confirmed.

The coefficients on ordinal logistic regression could be hard to understand, therefore Table 5 shows the predicted probabilities that are calculated by the odds ratios that are based on the regression estimates (odds ratios) of job discretion. More interestingly, it implies that jobs that are at the lower levels of discretion do not bring substantial changes in the probability of being in a higher bonus group. Furthermore, the first two models show almost the same probabilities of being in a higher bonus group. We see a more interesting result at higher job discretion levels, because in the highest level of job discretion you are 28.9% more likely to receive a higher on target share of bonus of 5%, Model 2. Another interesting finding is that after controlling for job scale in the final model, the probability of being in a higher bonus group is only 8.2%. These results give support to hypothesis 3 concerning the PRP aspect, which is therefore partly confirmed as well.

Table 5: Conditional probabilities of being in a bonus group higher than 1 (5%), for different levels of job discretion

Level of job discretion	*Unconditional probabilities of being in a higher bonus group than 1 (based on model 1 in Table 4)*	*Probabilities of being in a higher bonus group than 1 (based on model 2 in Table 4)*	*Probabilities of being in a higher bonus group than 1 (based on model 3 in Table 4)*
0	.000	.000	.000
1	.000	.000	.001
2	.000	.000	.002
3	.005	.001	.008
4	.004	.018	.026
5	.292	.289	.082

In the ordinal regression analysis, some of the job scale dummies were excluded because these did not make any significant contributions and there was no variance within the bonus groups. This resolves in job scale being a perfect predictor of the on target share of bonus. As such job scales 4 until 8 were excluded from ordinal regression analysis since all jobs within these job scales, belong to the first bonus group level.

Hypothesis 2: hierarchical multiple regression

The second and third hypotheses are both confirmed. Indicating that higher levels of job discretion attract a higher fixed wage and this relationship diminishes after including the job scale variable. This means that jobs with higher levels of discretion are rewarded more by higher fixed pay. This occurs not only because of the amount of skill, requirements and for example educational level that is needed for the job, but also to address the agency issue.

In Table 6, the results for the hierarchical multiple regressions are presented for the relationship between job discretion and log wage as the dependent variable. In the first step the independent variable job discretion was entered. The second model included control variables (age, gender and years in the organization), and in model 3 the job scale dummies were included as well. In the first model job discretion explains (ΔR^2 = .678, p < .001) 67.8% of the variance in log wage. After including control variables at Step 2, the total variance explained by the second model was 75.6%, F (4, 2117) = 1641.38, p < .001. The demographic control variables explained an additional 7.8% of the variance in log wage, after controlling for job discretion, R squared change = .078, F change (3, 2117) = 225.67, p < .001. In the final model, after entering the job scale dummies at Step 3, the total variance explained was 89.3%. The key control variable job scale explained an additional 13.7% of the variance in log wage, R squared change = .137, F change (12, 2105) = 226.78, p < .001. The final model shows that all control measures are statistically significant, and the regression coefficient of job discretion is diminished, while still adding a unique contribution to the variance in log wage (beta = .13, p < .001).

Table 6: Log wage regressed on job discretion (model 1), controlling for demographics (model 2) and job scale (model 3)

Model	1		2		3	
	Beta	*p-value*	*Beta*	*p-value*	*Beta*	*p-value*
Job discretion	.824**	.000	.731**	.000	.132**	.000
	(.001)		(.001)		(.002)	
Age			.231**	.000	.209**	.000
			(.000)		(.000)	
Gender			.006	.619	.022*	.003
			(.004)		(.003)	
Years in organization			.095**	.000	.154**	.000
			(.000)		(.000)	
Scale5					.034**	.000
					(006)	
Scale6					.065**	.000
					(.005)	
Scale7					.111**	.000
					(.006)	
Scale8					.149**	.000
					(.008)	
Scale9					.185**	.000
					(.009)	
Scale10					.257**	.000
					(.010)	
Scale11					.306**	.000
					(.010)	
Scale12					.370**	.000
					(.011)	
Scale13					.423**	.000
					(.014)	
Scale14					.457**	.000
					(.015)	
Scale15					.493**	.000
					(.016)	
Scale16					.567**	.000
					(.020)	
R^2	.678**	.000	.756**	.000	.893**	.000
ÄR^2			.078**	.000	.137**	.000
F	4468.01**	.000	1641.38**	.000	1105.60**	.000

NOTE: N = 2,122; Beta = standardized regression coefficient, with standard errors in parentheses.
Gender was coded (male=1; female=0); Job scale dummies were coded (yes=1; no=0) compared to job scale 4.
*p < .005 **p < .001

CONCLUSION

This study focuses on the relationship between job discretion with compensation schemes such as performance related pay and efficiency wages. By making use of a dataset from one large Dutch telecommunications organization, this research is able to provide empirical evidence for the predicted relationships. The dataset included information on 2,123 employees in 369 different jobs for which each job the dimensions on discretion were determined. These were added to the data on bonus levels and fixed pay, which were obtained from the salary administration at TelecomCo.

The general idea is that job discretion refers to a certain range of effort levels that an employee may take concerning to their job. Meanwhile, an agency issue arises because employees are utility maximizers and therefore choose the lowest possible level of effort. However, the organization would like to discourage this behavior and maximize organizational value. In order to address this agency problem and induce effort from employees, an organization can apply different incentive schemes.

Job discretion is driven by technology and the strategic choice about job design within an organization, which is why the decision on job discretion is related to the organizational choice about how to compensate the employees. Furthermore, the basis for the theoretical background on this study is concerned with the agency problem, since several incentive mechanisms like PRP and efficiency wages are addressing this issue and as such are related to job discretion. Consequently, the research question central to this study is: *Does the amount of pay depend on job discretion?* In order to answer this question, two sub questions and three hypotheses were formed. The results in the previous section demonstrate that all hypotheses are confirmed. It indicates that job discretion is positively related to both performance pay and fixed pay. More importantly, this relationship diminishes after including the job scale variable, but remains positively significant indicating that job discretion *is* accountable for variance in the bonus level and the fixed wage.

Job discretion and performance related pay

The results show that higher levels of job discretion are related to higher levels of PRP. Thus, there is a positive relationship between job discretion and performance pay contracts, which is in line with empirical findings of Ortega (2009). Also the study by Holmström and Milgrom (1994) can be related to this result, since they found that low-powered incentives are enhanced by constraints on the employee's freedom to act. It means that incentives like performance related pay needs to be in balance with the extent of an employee restrictions or possibilities in their job. Partly this result may also be referred to the finding that job characteristics like autonomy are related to the strategic choice concerning payment policies in MacLeod and Parent (1999).

Another finding is about the extent of PRP, since the study by Grund and Sliwka (2010) was used in order to illustrate the performance pay variable. They pose two questions about the employee's job performance: first if a superior frequently assesses it. And, if yes, "whether this performance

evaluation affects their monthly gross wage, yearly bonus, future salary increases and/or potential promotions" (Grund & Sliwka, 2010, p. 9). Within the study company, all employees are at a given level of on target bonus, but this incentive mechanism is for a great deal constrained by the collective bargaining agreement that is relevant to the telecommunications sector in The Netherlands. As a consequence, the possible effects of the incentive mechanism through PRP is limited due to works council legislation and therefore another compensation aspect is applied; efficiency wages.

Job discretion and fixed pay

Based on the results of this study, the second hypothesis can be confirmed as well. This indicates that if the extent of job discretion increases, the fixed wage will increase too. This can be related to Barth's (1992) finding, showing that firms with higher average score of autonomy also pay better. Additionally, current results can be confirmed by the study of Osterman (1994), since it provides strong support that efficiency wages are an alternative to supervision, and it offers more discretion towards the employees. The predictions of the shirking model by Shapiro and Stiglitz (1984) are compatible with these results too. Furthermore, the results match with the study of Arai (1994), since it showed a positive relationship between more autonomous jobs and higher wages. By confirming the first two hypotheses, it is possible to say that two incentive mechanisms are present within the organization. In addition to PRP there are efficiency wages applied in order to address the agency issue. This means that these mechanisms are not mutually exclusive and are implemented as one combined payment scheme. The combination of incentive mechanisms like PRP and efficiency wages has been rarely tested empirically. Only the study by Barth (1992) is found to take multiple theories together in consideration in respect to discretion.

Job scale

The large correlation between job scale and job discretion made it very important to include job scale as a key control variable in both analyses. After controlling for job scale, the relationship of PRP and fixed wages in regard to job discretion diminishes, and thus the third hypothesis is confirmed. Furthermore, after including job scale we can see that job discretion makes a unique contribution in predicting some the variance of PRP and fixed pay. This means that job discretion affects the extent of performance related pay and fixed pay, even for jobs at the same job scale.

Next to the key control variable of job scale, additional control variables were included as well. By adding gender, the number of years in the organization and age, some additional variance in the regression models was also explained.

DISCUSSION

The main objective to this study is to find a possible explanation of the variance in the performance pay component and fixed wages by using job discretion as a predictor variable. This is accomplished through empirical evidence obtained from a large Dutch organization in telecommunications. Additionally, this research makes a contribution to the existing literature on agency theory and different incentive mechanisms. The most important finding is that in case of the Dutch organization job discretion is positively related to performance related pay and fixed wages.

Strengths and limitations

Although this research is able to make some contributions to the literature and practice, it is necessary to discuss the limitations that are involved with this research as well. First of all, a serious limitation of this study is that the data was derived from one organization. This makes the sample a very homogenous group and results in limited possibility to generalize this study to other organizations (Allison, 1999). Moreover, it is a valid question as to how results from a Dutch organizational context can be generalized to other countries, because of the influence of institutional factors like collective bargaining agreements that exists in The Netherlands. It is the organization and the unions that agree on the wages and bonus levels. This bargaining point about pay is influenced by job discretion, since firms would like to settle for a certain wage due to the agency issue.

Additionally, by making use of a quite large sample (N = 2,123), it is possible to find significant results that actually do not matter a great deal in practice. When finding some small regression coefficients that are significant, but interpreted in a practical situation one could argue that the effect is unimportant. A second limitation of this study was the use of a checklist on job discretion dimensions that was filled out with the use of company information. Although it is a fair technique for obtaining objective data, it is sensitive to observer bias and limited by the information that is available from administrative resources such as the job matrix and job descriptions. Furthermore, the use of ordinal logistic regression makes the coefficients more difficult to interpret than with linear regression analysis (Allison, 1999). To conclude, the data of this research is cross-sectional and this evolves in another limitation of this study. This is because cross-sectional data does not allow drawing any conclusions on directions of causality. Although it can be argued that job discretion affects the extent of wage or a bonus by logic reasoning. It is unlikely that a higher wage results in more job discretion, because pay is determined endogenously by age, gender, the number of years in the organization.

Future research

This paper complements earlier work on discretion with performance related pay (MacLeod & Parent, 1999; Ortega, 2009), and efficiency wages (Arai, 1994; Osterman, 1994). However there are some

opportunities to keep in mind for future research within the line of this study. In order to decrease the problem of external validity and limited generalizability, one could think of the possibility to include organizations that belong to the same collective bargaining agreement, or include organizations that apply PRP to the same extent as TelecomCo. However, this may cause some problems in determining job discretion, since a certain job title in one organization not necessarily exists, or has the same amount of discretion, in the other organization.

Another natural extension would be to include data over 2010 in order to establish data concerning the causation sequence between the variables. Longitudinal research in the setting of TelecomCo would also create the possibility to involve the Performance Management Cycle, which in turn gives an indication about the possible increase in the fixed wages of the employees as an extension to the performance pay variable. Next to the probability of becoming in a higher bonus group, the PRP aspect as discussed in Grund and Sliwka (2010) also relates to a difference in future salary increases due to performance evaluation. Furthermore, longitudinal design gives the opportunity to follow employees through time and their possible increase on job discretion if they move up one job scale for example and what the possible outcomes are on the extent of compensation.

The used explanatory variables do not clarify the entire variance in the dependent variables. Therefore some possible additions to the model can be included in following research within this area One specific possibility is to include tournament theory. This may be useful by determine the relative position of an employee to colleagues, supervisors and subordinates. And this would give insight to what extent compensation is affected by tournament compensation. Furthermore, the notion of job discretion is a term that needs to be carefully used in future studies. Previous studies use these concepts simultaneously and this research demonstrates that job autonomy and job discretion are closely linked to each other, which makes it more difficult to construct this concept in the appropriate way.

Practical implications

Organizations could learn from the results of this study when applying incentive mechanisms and how these are associated with job discretion. The results contribute to societal debate on the bonus culture and wage differentials between the "regular" employee, and higher management jobs. In general this research gives insight on why are wages the way they are. It is explained by job discretion levels and the need to compensate employees who will exert effort in return. Furthermore, extension of job discretion requires a director for example, to create new ideas to be successful at the job. And this can be done by providing incentives such as a performance related pay.

The pay structure in the study company is company is fixed due to the collective bargaining agreement. This is affecting the wages and limits the variance in bonuses, which are extremely constrained because unions dislike income inequality. Although this is powerful limitation for organizations to use performance related pay, or bonuses, this study indicates that pay not only

depends on job scales that are determined. But also that the agency issue that may arise is accountable for the differences in pay trough the extent of job discretion. If the agency problem is not being addressed by the organization, it will run out of money since it lacks to maximize profit.

Another practical implication to discuss is the social debate about the bonus culture. It could be that people are starting to resent bonuses due to negative publicity and there is no room for bargaining in the bonus structure. Imagine what it would be like if the bonus structure would be richer and there were more individual bonuses with a higher range of bonus levels. It is possible that the link with job discretion becomes more distinctive.

Although the economic significance is rather small and only applies to small number of employees within an entire organization. If you want to give more job discretion, or autonomy, to the employees in order to benefit from higher satisfaction, motivation and performance, you should be aware of the need to increase on monetary compensation as well. In other words, providing more job discretion through job re-design, a certain price tag should be taken into consideration on the organization's account as well.

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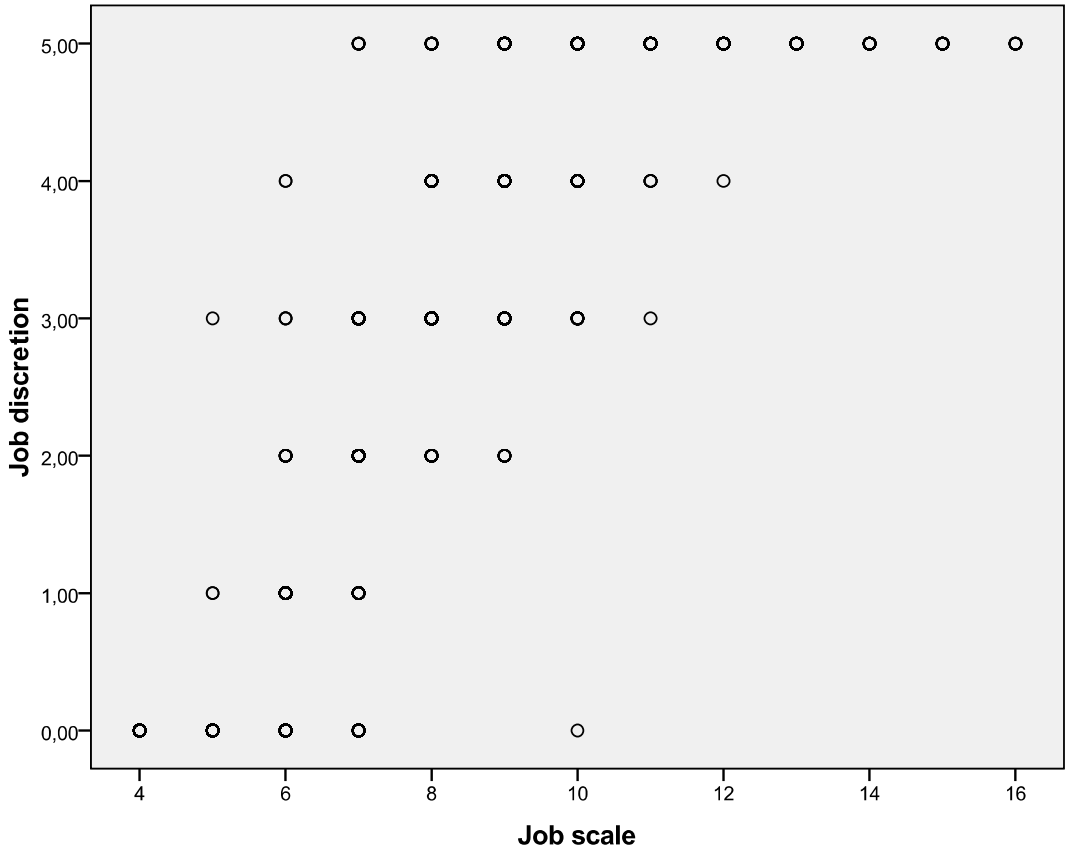
APPPENDICES

Appendix A: Scatter plot Job discretion with Job scale



Appendix B: Checklist Job discretion dimensions

Kunt u zelf beslissen hoe u uw werk uitvoert?	Ja / Nee
Bepaalt u zelf de volgorde van uw werkzaamheden?	Ja / Nee
Kunt u zelf uw werktempo regelen?	Ja / Nee
Moet u in uw werk zelf oplossingen bedenken om bepaalde dingen te doen?	Ja / Nee
Kunt u verlof opnemen wanneer u dat wilt?	Ja / Nee