

Psychological perspectives on performance-based compensation

Implications for work-related and health-related outcomes

Alexander Nordgren Selar



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Abstract

In the past decades, the contributions of individuals have come into greater focus on all levels of employment in many types of organizations. For example, this is manifested through an increased use of individual performance-based pay setting, where individual evaluations of employees' contributions lead to diversified pay raises among peers. The reasons for using such a pay system include that it is expected to motivate better performance and inspire those who perform well to remain with the organization. Criticism of this type of pay system, however, has come from a motivation theory perspective, for example, along with assertions that it is too resource intensive. The general aim of this dissertation was to contribute to the present research regarding how pay-related perceptions relating to these pay systems may encourage work and employees' well-being. **Study I** aimed at investigating how various aspects of individual performance-based pay setting (instrumentality of the pay system, performance-based pay-raise amount, and procedural pay-setting justice) and various work design factors addressing employees' psychological needs (feedback, job autonomy, and social support from colleagues) relate to employee task and contextual performance. Results of hierarchical multiple regression analyses supplemented by relative weight analysis showed that the work design factors – especially job autonomy – evidenced stronger positive relations with employee performance. **Study II** aimed at identifying groups of employees with similar pay-related characteristics and perceptions of pay setting (regarding pay-levels, perceived horizontal pay dispersion, transactional leadership and procedural pay-setting justice) in the Swedish private sector, and then examining the differences between these groups in regard to work-related (task performance and turnover intention) and health-related outcomes (self-rated health and work-related exhaustion). Latent profile analysis identified six distinct groups. A key finding was that groups characterized by perceptions of low horizontal pay dispersion who also experienced a high pay-setting quality (referring to high levels of transactional leadership and procedural pay-setting justice) – and by high procedural fairness in particular – had the most favorable levels of task performance, turnover intention, and work-related exhaustion. In combination with high pay and high procedural quality, however, high horizontal pay dispersion was associated with fairly decent outcomes, especially in regard to health. **Study III** aimed at compiling research, especially from a self-determination theory perspective, that concerned how work-related reward systems might encourage work and well-being in organizations by influencing employees' psychological need satisfaction and motivation types (e.g., autonomous work motivation). It was argued that organizations should lower the saliency of monetary rewards. Instead, they need to design the work, within the limits of the context in which they operate, such that autonomous work motivation is encouraged, thus bringing about maximum well-being and high-performance outcomes. In general, the dissertation maintains that successful individual performance-based pay-setting systems require accurate administration. If not, they may run the risks of discouraging performance, decreasing retention, and lowering employees' well-being.

Keywords: *compensation, financial incentives, health, income, job performance, need satisfaction, pay dispersion, performance-based pay, self-determination theory, turnover intention, well-being, work motivation.*

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PSYCHOLOGICAL PERSPECTIVES ON PERFORMANCE-BASED
COMPENSATION

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To all people with a big
heart and enriching
laughter –

You are my endless
inspiration.

Summary

To be well, or at least sufficiently, compensated for the work one does is an expectation that most people would likely agree with. What roles financial rewards (e.g., performance-based pay raises), pay differences, and pay setting have in motivating employees to perform well, to want to remain with the organization, and to maintain good health are, however, disputed in the research.

Over the last couple decades greater emphasis has been put on individual performance for individuals at nearly every employment level within many types of companies and public organizations. This has been manifested, for example, in the increased use of individual performance-based pay setting, where pay-raise amounts are diversified among groups of employees with similar job tasks (e.g., among those working in the same department) as a result of performance appraisal. This development has been especially prominent in Sweden, where such pay systems are regulated through collective agreements for a number of professions, replacing traditional standards of determining employee pay, such as employment tenure.

Some of the reasons for utilizing performance-based pay are that its focus on individual performance is expected to motivate better performance, to indicate the significance of not performing according to expectations, and to encourage those who perform well to stay with the organization. Such pay systems, however, have received criticism from a motivation theory standpoint, and also for demanding too many resources. It is also unclear which features of such pay systems may lead to positive or negative effects.

The main objective of this dissertation was to contribute to current research on pay levels, pay-raise levels, pay dispersion, perceptions of pay setting, and the factors that impact work-related (e.g., work performance) and health-related outcomes (e.g., work-related exhaustion). The center of focus is the various components of individual performance-based pay systems. Other

types of pay systems (e.g., traditional pay system) and monetary reward systems (e.g., bonuses) are also discussed to a certain degree in the dissertation.

Study I aimed at investigating the relative importance of different aspects of individual performance-based pay setting (such as perceptions of performance-based pay systems, performance-based pay-raise amounts, and procedural pay-setting justice) and of the different work design factors that may contribute to satisfying employees' psychological needs (such as job autonomy, social support from colleagues, and feedback) for work performance (task and contextual performance). The results of hierarchical multiple regression analysis, complemented with results from relative weight analysis, showed that work design factors – especially job autonomy – were more strongly positively associated with job performance.

Study II aimed at identifying groups of employees with similar pay-related outcomes and perceptions (regarding pay level, perceived horizontal pay dispersion, transactional leadership, and procedural pay-setting justice) among Swedish private-sector employees, and then investigating the differences among these groups in regard to their work-related outcomes (task performance and intention to remain with the organization) and health-related outcomes (self-rated health and work-related exhaustion). Latent profile analysis identified six distinct groups. A key result was that groups characterized by both a low level of perceived horizontal pay dispersion and by a high level of perceived pay-setting quality, with respect to high levels of transactional leadership and especially procedural pay-setting justice, had the most favorable levels of task performance, intention to remain, and work-related exhaustion. The combination of high pay and high procedural quality with high perceived horizontal pay dispersion was found to be associated with rather favorable results, especially in regard to health-related results.

Study III aimed at compiling research on the self-determination theory (SDT) to update its current perspectives regarding employee pay, particularly as it relates to the context of work-related compensation systems (e.g., individual performance-based pay setting and bonus systems). The main focus was on how the effects of performance-based compensation regarding satisfying employees' psychological needs (for autonomy, relatedness, and competence) and motivation types (autonomous and extrinsically controlled

work motivation) may impact work performance and employee well-being. Based on previous SDT-related research, a main conclusion was that organizations should take measures to limit the influence that monetary compensation systems have on employees' motivation. Organizations should instead, to the extent their situation allows, create working situations in which work performance is autonomously motivated and where satisfying psychological needs are supported, in order to improve well-being and work performance as much as possible.

Generally, the dissertation shows that individual performance-based pay-setting systems require careful administration. Otherwise, there is a risk that it could lead to more drawbacks than benefits regarding employees' desire to perform well and stay with the organization, and potentially even lead to more work exhaustion.

Sammanfattning

Att man vill bli rikligt, eller åtminstone tillräckligt, belönad för sina arbetsinsatser är nog de flesta som har ett jobb eniga om. Vilken roll ekonomiska belöningar (t.ex. prestationsbaserade löneökningar), löneskillnader och lönesättning spelar för att motivera anställda att utföra ett gott arbete, vilja stanna kvar och må väl är emellertid omtvistat i forskningen. Sedan ett par decennier läggs allt större vikt vid individuella prestationer på nästan alla anställningsnivåer inom många typer av företag och offentliga organisationer.

Detta manifesteras, till exempel, genom ökad användning av individuell prestationsbaserad lönesättning, där lönehöjningar diversifieras bland grupper av anställda med likvärdiga arbeten (t.ex. på samma avdelning) efter en prestationsutvärdering. Det är en utveckling som inte minst syns i Sverige där sådana lönesystem har kollektivavtalsreglerats för en lång rad yrkeskategorier och därigenom ersatt mer traditionella metoder för att belöna arbete såsom baserat på anställningstid.

Argumenten för individuella prestationsbaserade lönesystem är bland annat att fokus på individens prestationer förväntas motivera bättre prestationer, inskräpa allvaret av att inte prestera enligt förväntningarna och inspirera de som presterar bra att stanna kvar i sin organisation. Men dessa lönesystem har också kritiserats utifrån till exempel motivationsteori, och för att vara för resurskrävande. Det råder också osäkerhet kring vilka inslag i sådana lönesystem som kan tänkas ge positiva respektive negativa effekter.

Det övergripande syftet med avhandlingen var att bidra till den aktuella forskningen om hur, exempelvis, lönenivåer, löneökningarnivåer, lönespridning och upplevelser av lönesättning driver arbetsrelaterade (t.ex. arbetsprestation) och hälsorelaterade utfall (t.ex. arbetsrelaterad utmattning). Strålkastarljuset riktas främst gentemot olika komponenter av individuella prestationsbaserade lönesystem. Även andra lönesystem (t.ex. traditionella

lönesystem) och andra monetära belöningssystem (t.ex. bonusar) speglas emellertid i viss mån i avhandlingen.

Studie I syftade till att undersöka den relativa betydelsen av olika aspekter av individuell prestationsbaserad lönesättning (hur pass prestationsbaserat lönesystemet upplevs, prestationsbaserade lönehöjningsbelopp och procedurmässig lönesättningsrättvisa) och olika arbetsdesignfaktorer som kan bidra till de anställdas psykologiska behovstillfredsställelse (feedback, arbetets autonomi och socialt stöd från kollegor) för arbetsprestation (uppgiftsprestation och kontextuell prestation). Resultat av hierarkiska multipla regressionsanalyser kompletterade med relativ viktanalys visade att arbetsdesignfaktorerna – i synnerhet arbetets autonomi – visade på starkare positiva relationer med arbetsprestation.

Studie II syftade till att identifiera grupper av anställda med liknande lönerelaterade utfall och erfarenheter (beträffande lönenivåer, upplevd horisontell lönespridning, transaktionellt ledarskap och procedurmässig lönesättningsrättvisa) i den svenska privata sektorn, och att undersöka skillnader mellan dessa grupper i arbetsrelaterade utfall (uppgiftsprestation och uppsägningsintention) och hälsorelaterade utfall (självskattad hälsa och arbetsrelaterad utmattning). Latent profilanalys (LPA) identifierade sex distinkta grupper. Ett nyckelresultat var att grupper som kännetecknades av uppfattningar om låg horisontell lönespridning som också upplevde en hög lönesättningskvalitet (beträffande höga nivåer av transaktionellt ledarskap och procedurmässig lönesättningsrättvisa) – och i synnerhet hög procedurmässig lönesättningsrättvisa – hade mest gynnsamma nivåer avseende uppgiftsprestation, uppsägningsintention och arbetsrelaterad utmattning. I kombination med hög lön och hög procedurkvalitet var dock hög horisontell löneskillnad förknippad med ganska förmånliga arbetsutfall och mycket förmånliga hälsorelaterade utfall.

Studie III syftade till att sammanställa en uppdaterad version av självbestämmandeteorin om motivations (SDT) teoretiska syn på arbetsrelaterade belöningssystem (t.ex. individuell prestationsbaserad lönesättning och bonussystem). Huvudsakligen beträffande hur prestationsbaserad kompensering kan tänkas påverka arbetsprestation och anställdas välbefinnande genom hur de påverkar anställdas psykologiska behovstillfredsställelse (för autonomi, samhörighet och kompetens) och

motivationstyper (autonom- och yttre kontrollerad arbetsmotivation). Baserat på tidigare SDT-driven forskning var en huvudslutsats att organisationer bör vidta åtgärder för att begränsa monetära belöningssystem's inflytande på anställdas motivation. Snarare bör organisationer utforma arbetet, inom rimliga gränser för det sammanhang i vilket de verkar, så att arbetet uppmuntrar autonom arbetsmotivation och understödjer psykologisk behovstillfredsställelse för maximalt välbefinnande och bättre prestationer.

Generellt visar avhandlingen att individuella prestationsbaserade lönesättningssystem kräver noggrann administration. Om inte, kan de riskera att leda till mer skada än nytta beträffande anställdas vilja att prestera väl, stanna kvar i organisationen och möjligen kan de även leda till ökade utmattningstendenser.

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Most of all I want to thank all of you who have enriched my life and made me who I am. You are too many to name – and I wouldn’t want to leave anybody out (word limits, you know...). But it should be said that it is my family and relatives, and my friends and others I have encountered – across the entire world – who have made this dissertation what it is.

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List of studies

- I. Nordgren Selar, A., Falkenberg, H. Hellgren, J., Gagné, M., & Sverke, M. (2020). "It's [not] all 'bout the money": How do performance-based pay and support of psychological needs variables relate to job performance? *Scandinavian Journal of Work and Organizational Psychology*, 5(1), 1-14.
- II. Nordgren Selar, A., Gagné, M., Hellgren, J., Falkenberg, H., & Sverke, M. *Compensation profiles among private sector employees in Sweden: Differences in work-related and health-related outcomes*. Manuscript submitted for publication.
- III. Gagné, M., Nordgren Selar, A., & Sverke, M. (in press). How important is money to motivate people to work? In R. M. Ryan (Ed.), *Oxford Handbook of Self-Determination Theory*. New York: Oxford University Press.
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Chapter 1. Introduction

Compensation systems where pay is based on employment-related factors such as degree of responsibility, experience, and employment tenure (i.e., traditional pay-setting systems) were the dominant form of compensating employees for their work during the first decades of the post-war period, in Sweden as well as in many other industrialized countries. A backlash against such systems emerged in the 1980s, and since then the ways in which employees were to be compensated for their work took off in another direction: towards increased individualization (Hellgren et al., 2017; Pfeffer, 1997, 1998). Including in the Nordic countries (Dahl & Pierce, 2020; Swedish National Mediation Office, 2007, 2017), compensation systems of many types or organizations put a higher priority on individual performance achievements. This development included, among other things, basing salary increases on performance evaluation scores, and an increased use of other monetary rewards at the employee level, such as bonuses, commissions, and shareholding opportunities (Pfeffer, 1997, 1998). However, whether performance-based monetary rewards are used at all, how they are used, and what they are based on in particular vary across contexts, such as between different industries, occupations, and countries.

Individualized performance-based monetary rewards such as those mentioned above fall under the umbrella term ‘performance-based compensation,’ which includes any distribution of monetary rewards in organizations that are fully or partly based on performance evaluations (Ganster et al., 2013). In Sweden the use of performance-based salary increases (a common form of performance-based compensation) have been enshrined in many collective agreements since the 1980s, including a wide range of occupations, although there are many exceptions where traditional pay-setting systems are still used (Hellgren et al., 2017). It has been implemented in more or less the entire public sector, but in recent decades it

has also become increasingly common among white-collar workers and academics in other professions as well as among some blue-collar workers (e.g., assistant nurses) operating in the private sector (Falkenberg et al., 2018; Swedish National Mediation Office, 2007, 2017). In practice, this means that, rather than being based on employment-related factors (e.g., seniority), salary increases are based on an individual evaluation of each employee's performance on a yearly basis, which is most often performed by an employee's closest manager (Lundh, 2010). This type of pay setting, which is a central topic in the dissertation, is called 'individualized performance-based pay setting' in Sweden (Hellgren et al., 2017). Globally, this is probably the most common form of performance-based compensation (internationally known as 'merit pay') as it can occur on all levels of employment. Other forms such as bonus programs and shareholding opportunities are generally more common at the top management level, although it varies between different contexts (Maaniemi, 2013).

Internationally and in Sweden, the trend towards individualized performance-based pay setting at the employee level has been motivated by the assumption that compensation based on performance can increase employees' willingness to perform and may act both as a carrot for employees' willingness to remain in the organization and as an instrument facilitating the recruitment of new, competent staff members (Gerhart & Fang, 2014; Shaw & Gupta, 2015). In addition, individualized performance-based pay setting has also been assumed, unlike when pay is based on seniority, to lead to employees becoming more clearly rewarded by their own contributions based on measurable and objective parameters (Malmrud et al., 2020), which, together with greater opportunity to influence one's salary development by doing a good job (Eisenberger et al., 1999), is assumed to potentially result in increased experiences of fairness (Stråberg, 2010).

There are several main assumptions about how these suggested advantageous effects may occur. One such assumption is that performance-based monetary rewards encourage the continuation of positive work behaviors. A second is that these rewards may create expectations that increase motivation. A third central assumption is that monetary rewards contribute to creating a little more competition among employees, which

assumingly encourages employees to put in more effort in their work (Lazear, 2018; Shaw & Gupta, 2015).

Other assumptions regarding individualized performance-based pay setting highlight that it has the potential to ensure a sense of having been rewarded fairly (Malmrud et al., 2020) and also that it has an enticement effect, in that it might attract job applicants and stimulate employees to remain in their job (Downes & Choi, 2014; Gerhart & Fang, 2014). Yet another aspect is that individualized performance-based pay setting might potentially clarify performance expectations by increasing employees' knowledge of the points stipulated in the pay criteria of what the company expects from employees. This could be facilitated by pay-setting managers if they properly explain and emphasize the importance of working in line with the pay criteria to their employees; this is known as transactional leadership: a direct leadership style that emphasizes the availability and importance of monetary rewards and follows up on employee work behaviors based on, for example, performance criteria (Han et al., 2015; Rowold & Schlotz, 2009; Yukl, 1999). Transactional leadership has been suggested to potentially lower stress associated with experiencing job uncertainty (e.g., when experiencing difficulties in handling various work-related challenges) (cf. Rowold & Schlotz, 2009). Above all, however, these pay systems are expected to motivate employees to engage in their work and its associated work tasks. If successful, this would be expected to contribute to making the whole organization more productive and efficient in the long run (Nyberg et al., 2016; Shaw & Gupta, 2015).

However, criticism has been leveled at individualized performance-based pay setting and bonus programs whose assumed effects have been viewed both positively and negatively in previous research. For instance, critique against these pay systems has emerged from the perspective of the self-determination theory of motivation (SDT; Deci & Ryan, 1985). The root of this is that SDT challenges other motivational theories by posing that motivation is a multidimensional phenomenon composed of various types of motivation which may vary in degree, rather than motivation being a one-dimensional phenomenon that is rather synonymous with effort (Gagné & Deci, 2005).

From this perspective, work motivations that are autonomous in nature (e.g., engaging in one's work and its related work tasks because it is meaningful and/or of personal importance), are assumed to, among other

things, underlie employees' willingness to do a good job and perform their work with high quality as well as encourage retention and increase the meaningfulness of the job (Gagné & Deci, 2005; Gagné & Forest, 2020). Based on SDT's view of motivation, it has been argued (Ryan & Deci, 2017) that basing pay raises and bonuses on performance in organizations risks attenuating autonomous work motivation (e.g., doing things in one's work because they are meaningful and of personal importance), while it is likely to encourage less autonomous work motivation, such as extrinsically controlled work motivation (e.g., doing things in one's work to gain monetary rewards, to please one's environment or ego, or to avoid sanctions) (Deci et al., 1999; Gagné & Deci, 2005). The stimulation of these types of motivation is line with the theory about the satisfaction of psychological needs (Gagné & Deci, 2005, Gagné & Forest, 2008).

SDT postulates that these motivational effects are most likely to occur when performance requirements are linked to something vital, such as monetary rewards, as this may lead people to overtly focus on earning the monetary rewards. As a result, following the pay criteria may, to some extent, begin to have a governing effect on employees' work situation by increasing the pressure to fulfill them, known as a "controlling effect" (Kuvaas et al., 2020). In turn, this may result in employees gaining more extrinsically controlled work motivation, which SDT links with impaired work behaviors (e.g., focusing less on producing good quality output) and lower well-being (Gagné & Forest, 2020).

Relatedly, a meta-analysis has also shown that pay systems that promote extrinsically controlled work motivation have a lower capacity to drive job performance quality compared to pay systems that successfully promote autonomous work motivation (Cerasoli et al., 2014). Furthermore, some of the previous research has found individualized performance-based pay setting to be associated with higher intention to remain with the organization (e.g., Lee & Jimenez, 2011). However, other studies based on SDT have shown that individualized performance-based pay setting may constitute a positive correlate of extrinsically controlled work motivation among employees, which, in turn, resulted in increased turnover intention; this was found, for example, in a study of a Norwegian insurance company, where turnover

increased over a three-year time period after this type of pay setting was first introduced in the company (Kuvaas et al., 2016).

Previous studies have also found other unfavorable outcomes related to individualized performance-based pay setting. For instance, the introduction of this type of pay system, to some extent, was found to have contributed to increased workplace stress in a Danish study, particularly among low performing employees and older employees (Dahl & Pierce, 2020). As compared to just maintaining a traditional pay system, it has also been argued that investing the resources needed for establishing performance appraisal procedures (including developing pay criteria, informing about the criteria, holding salary negotiations, maintaining the importance of the criteria during the year, performance evaluation, and making decisions) might produce little in return as it drains organizational resources and has little effect on improving job performance (Murphy, 2020).

Among other things, the fact that there are different views on performance-based compensation (particularly in regard to individualized performance-based pay setting and bonus programs) has given rise to an extensive debate about their use. This debate also concerns whether individual performance-based pay setting would be of a relative strategical importance in relation to the work organizations do to encourage performance by more traditional factors that are connected with the design of the work (e.g., the level of autonomy provided) (Gagné & Forest, 2020; Lazear, 2018; Locke et al., 1980). Furthermore, because individual performance-based pay setting may be seen as controversial and has been called into question by some as an organizational method (Gagné & Forest, 2020; cf. Lievens et al., 2020; Murphy, 2020), much research effort has been dedicated to examining the impact of these pay systems more closely. What more generally characterizes positive characteristics and perceptions of pay systems across the labor market as a whole, and regardless of pay-system type, on the other hand, have received limited attention in previous research (Gagné & Forest, 2008; Thibault-Landry et al., 2017). In this regard, there is some ambiguity in previous research regarding how different types of holistic perceptions, such as regarding how certain pay levels and salary differences may interact with how the pay setting has been carried out by pay-setting managers (and thus form communalities among employees), and what impact they may have on

work-related outcomes (such as performance and turnover intention) and health-related outcomes (such as health and stress) in organizations (Gagné & Forest, 2008, 2020).

Furthermore, individualized performance-based pay setting and other forms of performance-based compensation, such as bonus programs, have often been taken as practical examples that can highlight how extrinsic sources in organizations may motivate or demotivate working and influence the well-being of employees (Ryan & Deci, 2017). In this way, whether or not to base employee compensation and monetary rewarding on performance appraisals is part of a larger debate in organizational theory, namely, that about whether extrinsic sources (e.g., monetary rewards and performance appraisals) or autonomous sources (e.g., opportunities for meaning and personal engagement) may constitute the most significant drivers of working and well-being (see Gagné & Forest, 2020).

In short, the lack of agreement is mainly over whether individualized performance-based pay setting and other forms of performance-based compensation (e.g., bonus programs) can support employees in a way that makes them more motivated to perform and remain with the organization (e.g., Lazear, 2018) or whether it constitutes an external regulation that might rather prevent employees from becoming their own best (autonomous) selves by inducing sources of control, and in turn lessening their willingness to perform and remain with the organization (e.g., Gagné & Forest, 2020). From the employees' perspective, the question could also be raised over whether these systems are more of a help to employees, by bringing clarity to work-related and reward-related criteria and expectations, or whether they are more of a source of pressure, compelling employees to perform faster and more, and thus possibly lowering well-being by inducing stress (Dahl & Pierce, 2020).

This dissertation goes through a number of theoretical assumptions about individual performance-based pay setting, which is the form of pay setting that the dissertation mainly focuses on, and empirically investigates whether various aspects of these pay systems may encourage working and well-being in organizations. It also focuses on pay setting more generally, including, to some extent, other types of pay systems (e.g., traditional pay systems). It also slightly focuses on performance-based compensation more broadly, including

other types of monetary reward systems, such as bonus programs. Three empirical studies formed the empirical foundation of this dissertation:

Study I focuses on the relative importance of individual performance-based pay setting for job performance. Job performance was self-reported and captured by task performance, which refers to how well employees have performed the tasks that are part of their overall work description (Campbell, 1990), and contextual performance, which refers to employees' ability to perform at a level that goes beyond their general work description, such as coming up with creative ideas and taking on extra responsibility (Campbell, 1990; MacKenzie et al., 1991; Organ & Ryan, 1995).

Study II focuses on employees' holistic perceptions of compensation and pay setting in an attempt to identify different subgroups of individuals with different experiences of pay setting. It also focuses on how such groups associate not only with work-related outcomes with regard to task performance (Campbell, 1990) and intention to leave one's current employment (Mobley et al., 1979), but also with health-related outcomes with regard to self-rated health (Odéen et al., 2013) and work-related exhaustion (Moore, 2000). A secondary focus was on also describing different subgroups' potential demographic representation among Swedish private sector employees and to characterize them in regard to their psychosocial work environment (based on the 'job control-demand-support model'; Karasek, 1979; Karasek & Theorell, 1990).

Study III focuses on how SDT's assumptions about performance-based compensation (where individual performance-based pay setting is one aspect) have been updated and refined since they were first clearly put forth (i.e., in the 1980s) and how other research has contributed to further advancing our knowledge about pay- and work-related reward systems potential impact on employee performance, retention and their well-being. The study surveys SDT's basic assumptions in this context. Particular focus is placed on how these systems may, through how they affect autonomous work motivation and extrinsically controlled work motivation, affect employees' performance, turnover intention, health, and the fulfillment of psychological needs at work.

Structure of the dissertation

Chapter 2 presents a more detailed description of individual performance-based pay setting, including how it operates in the Swedish context. This is followed by Chapter 3, which describes the general debate over whether working and employee well-being may be primarily motivated by extrinsic sources, such as monetary rewards, or by autonomous sources, such as finding meaning and personal interest, in terms of a couple of perspectives from the history of psychological ideas. Chapter 4 follows with a description of the contemporary differences of opinion on this matter, and explains how performance-based compensation (i.e., where individual performance-based pay setting is one aspect) has ended up in the middle of this discussion. Chapter 5 then describes influential psychological theories, relied on in both research and practical contexts, whose assumptions about performance-based compensation stand in contrast to each other. Chapters 6 and 7 follow by describing previous research that punctuates the need for more research on individualized performance-based pay setting and its various components (e.g., pay levels and pay procedures). Chapter 8 provides an explanation of the general aim of the dissertation and of its associated empirical studies. A summary of the methods follows in Chapter 9, and Chapter 10 summarizes the contributions of Study I, Study II, and Study III. Chapter 11 provides a discussion on the findings as a whole; Chapter 12 presents the methodological limitations; and Chapter 13 gives the general conclusions.

Chapter 2. Individual performance-based pay setting

While many different types of pay plans and other monetary reward systems (e.g., bonus programs) are used in workplaces, this chapter focuses solely on describing individualized performance-based pay setting, which is the form of salary setting that is most in focus for the dissertation. It also describes what forms these pay systems typically take in Sweden, the context focused on in two of the studies of this dissertation.

General definition of individual performance-based pay setting

Central to this dissertation is individual performance-based pay setting, which is a type of pay that is flexible in the granting of pay raises. In such pay systems, pay raises are usually distributed once a year based on pay-setting managers evaluations of employee performance (Hellgren et al., 2017). Furthermore, performance evaluations are most often based on a set of criteria regarding job performance; the same set of criteria may apply to all employees, or different sets of criteria may be used for specific groups of employees with similar work tasks (Maaniemi, 2013; Stråberg, 2010). The evaluation itself is usually conducted by the employees' closest managers such that they (as pay-setting managers) evaluate employee job performance subjectively on an overall level (e.g., based on goal fulfillment), by performance scoring based on the points stipulated in the criteria, or through a combination of these (De Nisi & Murphy, 2017).

Individual performance-based pay setting is often characterized by rigorous pay procedures to ensure that the assessment is made on an accurate basis (Hellgren et al., 2017). Furthermore, its use of annual performance-based increases to base pay (i.e., individualized pay raises based on performance)

are expected to contribute to greater pay differences over time among groups of peers doing similar jobs, known as horizontal pay dispersion (Shaw, 2014). These elements of individual performance-based pay setting are further described below.

Pay setting

An important aspect of individual performance-based pay setting is its characteristic procedures. Specific for such pay systems is that a key purpose of the pay setting is to bring clarity to how employees are expected to perform their work and work tasks; this is achieved by ensuring that employees have a clear understanding of what they need to do in order to earn the available monetary rewards (i.e., to receive a high pay raise) (Hellgren et al., 2017). For example, this can be achieved by pay-setting managers clearly explaining the criteria to their employees and communicating how they impact pay (e.g., by transactional leadership style; Rowold & Schlotz, 2009; Yukl, 1999).

Another characteristic of individual performance-based pay setting is its focus on equity as defined by Adams (1965). In the context of pay systems, equity depends on the level of fairness experienced regarding the congruence between how much one has contributed to the organization and how much one is rewarded. In this regard, it has been suggested that pay-setting managers play a significant role in clarifying the relationship between input (e.g., performance) and output (e.g., pay) for the employees (Malmrud et al., 2020). In addition, making an effort to ensure equity may be particularly important when the annual pay raises are unevenly distributed between colleagues doing similar jobs, as they are when they are distributed based on individual performance achievements, unless everyone performs equally well. In this regard, the task of pay-setting managers is to legitimize the relationship between performance and monetary reward for the employees, based on the points stipulated in the performance criteria (Stråberg, 2010).

Furthermore, in more recent years, advocates of individual performance-based pay setting have started arguing that organizations need to complement these strategies by also focusing on eliciting strong perceptions of procedural fairness; if this type of pay system is to produce the desired effects (e.g., motivate job performance), employees need to trust the methods and their pay-

setting managers, as well as feel included and seen (Shaw, 2014). In this regard, previous theoretical research has put forth the principles of organizational procedural justice (e.g., Leventhal, 1980).

In terms of the pay-setting context, and individual performance-based pay setting in particular, Leventhal's principles could be adopted by an organization as a set of guidelines, namely: be consistent with the principles prescribed by the monetary reward system; keep employees apprised of the current reward criteria; do not deviate from the established criteria when determining pay raises; give employees the opportunity to be involved in the process; and be sure that any decisions about pay are based on morally and ethically acceptable standards. In line with this, previous research has shown that when employees experience high procedural fairness, there might be an increased chance for this type of pay setting to successfully motivate employees to perform well (Sung et al., 2017).

Horizontal pay dispersion

When an organization utilizes performance-based pay raises this means that, over time, pay differences between colleagues (i.e., horizontal pay dispersion) increase overall based on individual performance (Shaw, 2014). According to neoclassic economics, high pay dispersion is assumed to inspire a desire for advancement and, due to social comparisons, to increase employees' will to make more of an effort in order to receive a greater paycheck (i.e., that is closer to that of their highest paid colleague) (see Bloom, 1999). Although there are differences in pay in most pay systems, except for those that base pay raises solely on the work role (i.e., egalitarian pay systems; Bloom, 1999). Individual performance-based pay setting differs from other pay systems (e.g., traditional pay systems) in that they more clearly aim at increasing horizontal pay dispersion over time (Shaw et al., 2002), unless everyone is performing very similarly (and thus receiving similar pay raises), they increasingly reward those who perform best (Shaw, 2014).

In reality, however, employees may not always know about the pay differences emerging from the use of an individual performance-based pay-setting system, as the pay raises may not be disclosed. In such a case, it has been shown in previous research (Card et al., 2012) that pay differences that

are not disclosed may not influence working (as reflected by job satisfaction and turnover intention) to any appreciable extent. However, there appear to be more negative consequences (decreased job satisfaction and higher turnover intention) among those who are aware of being disadvantaged by pay dispersion, while the positive effects seem rather small for those who are aware of being advantaged by the pay dispersion. Other research has shown that actual high horizontal pay dispersion may constitute a negative correlate of both employee performance and remain intention in competitive organizations (e.g., Bloom, 1999, Bloom & Michel, 2002).

These relations may be explained by the assumption that actual high horizontal pay dispersion gives rise to perceptions of injustice through increased pay comparisons and fierce and unhealthy competition among peers doing similar jobs (Bloom, 1999, Bloom & Michel, 2002). Research has also indicated that actual high horizontal pay dispersion, when the pay differences lead to perceptions of equity (i.e., performance-based fairness), constitutes a positive correlate of job performance. Actual high horizontal pay dispersion based on other factors such as seniority, on the other hand, constitutes a negative correlate of job performance (Shaw, 2014, 2015). Individual performance-based pay setting places more emphasis on creating wage differences between peers than other wage systems typically do (e.g., traditional or egalitarian), although the effects of horizontal pay dispersion remain disputed.

Individual performance-based pay setting in the Swedish context

As concerns individual performance-based pay setting, Sweden provides an interesting context. In Sweden, unions organizing white-collar workers (affiliated with the Swedish Confederation of Professional Employees, TCO) and academics (affiliated with the Swedish Confederation of Professional Associations, Saco) as well as a number of unions organizing blue-collar workers (affiliated with the Swedish Trade Union Confederation, LO) have arranged centrally stipulated agreements based on individual performance-based pay setting for most public sector contracts (with the exception being

LO, where most side unions adhere to traditional agreements), while these are somewhat more unusual in the private sector although growing in numbers. Furthermore, in Sweden, the yearly pay-raise pots (i.e., total funds allocated for pay raises) for organizations, or for specific occupational groups of employees within organizations, are usually first negotiated between unions and an employer organization (i.e., in collective pay agreements) (Falkenberg et al., 2018; Stråberg, 2010; Swedish National Mediation Office, 2017). When individual performance-based pay setting is the agreed on type of pay setting in a collective pay agreement in Sweden, the employers and unions determine the yearly pay-raise pot, and then the pay negotiations are handled on the local level in organizations by pay-setting managers (Hellgren et al., 2017).

When it comes to individual performance-based pay setting, in many agreements, there is a guaranteed salary increase for everyone, which means that the remaining funds to distribute based on individual performance is relatively small. In other agreements, the pay-setting managers have the entire pay-raise pot at their disposal, which means that they can give a very low salary increase (or even choose not to provide a salary increase). To what extent the pay increases are allowed to vary upwards can also differ depending on the collective agreement (Falkenberg et al., 2018; Hellgren et al., 2017). Furthermore, pay decreases are not permitted unless the central parties have reason to make an exception (e.g., to mitigate the impact on the economy during a major financial crisis). Traditionally, however, pay, and especially pay raises, have been determined based on skills, knowledge, seniority, and/or the level of responsibility demanded by the job position. As noted in previous studies, pay was seldom determined on the individual level (Stråberg, 2010) and did not generally aim at having a wage spread between colleagues doing similar jobs (Bloom, 1999).

One practical argument for transitioning to individual performance-based pay setting in Sweden has been that these systems could increase equity-based fairness perceptions, or performance-pay equity (i.e., a sense that one's contributions are congruent with how one is rewarded; Malmrud et al., 2020) among workers, based on individuality and work performance (Hellgren et al., 2017). Another is that pay discussions directly between managers and employees could contribute to the individual development of employees; by discussing with their manager how performance and monetary rewards are

connected, and receiving feedback on their fulfillment of the criteria, these meetings would encourage employees to perform better in the upcoming year.

It has also been argued that managers by having yearly pay-related conversations with their employees may increase transparency and thereby create more understanding of why they have received a certain salary increase (Hellgren et al., 2017). It has also been assumed that individual performance-based pay setting increases an organization's attractiveness as an employer, thereby making it easier to recruit competent staff, and that employees will be more motivated to remain in their job if they are given increased opportunities to influence their salary within the framework of their ongoing employment (Falkenberg et al., 2018). Alongside this, however, practical counter-arguments have also been put forward, maintaining that individualized pay negotiations could reduce the role that unions have in defending collective interests (Lapidus, 2015). It is reasoned, for instance, that it diverts the attention of unions members away from their shared pay-related interests (e.g., in solidarity with their peers) and directs it towards their own interests. Too much leverage is then put into the hands of the employers and pay-setting managers; since employees' pay development is dependent on their relation with their pay-setting managers, employees' scope for raising relevant criticisms against their organization and managers is effectively reduced (it is an important goal for many unions in Sweden that employees should be able to voice such criticism without risking reprisals) as it could put their pay development at risk (Lapidus, 2015).

Furthermore, there have been a few organizational reports (e.g., Falkenberg et al., 2018; Wallenberg, 2000, 2002, 2012) presented in Sweden about employees' opinions about the introduction of individual performance-based pay setting. One of the latest (Falkenberg et al., 2018) shows, for example, that a large majority of private sector employees in Sweden believe that their pay would likely be positively influenced by having their pay set through individual performance-based pay setting. However, while many employees held positive beliefs about their possibilities to do well in such a system, many also thought that such a system would likely impair company operations, thus indicating quite mixed views on these systems. This report also showed that the importance of individualized performance-based pay setting (as measured particularly in terms of factors that have to do with pay setting, such as the

pay negotiations) to impact work outcomes on the employee level, such as by increasing job satisfaction and commitment to the organization, in comparison with factors that are more linked with the conditions of the work environment (e.g., in terms of how much autonomy the employees are given in their work) evidenced clearly weaker positive associations (Falkenberg et al., 2018).

It has also been shown that, on average, woman employees, and employees in blue-collar occupations, express more concerns about the effects of pay raises being based on performance evaluations than do other groups, such as males in white-collar occupations (Falkenberg et al., 2018; Stråberg, 2010). There are also a whole host of other, more or less, scientifically substantiated conclusions drawn from studies of individual performance-based pay setting in various organizations in Sweden (for a larger review in English, see Stråberg, 2010). However, there has been very little published academic research about *if* and *how* various phenomena related to the use of individual performance-based pay setting in a Swedish context might relate to work-related and health-related outcomes on the employee level.

All in all, this dissertation focuses primarily on individual performance-based pay setting from a theory-driven practical perspective and examines how such systems relate to employee performance, retention, health, and well-being. However, it should be said that questions about how employees are best motivated in their job and seeks well-being are also part of a general discussion in organizational theory that is partly about work compensation but which is also about how organizations should be managed and structured in the best possible way. This is addressed in the next chapter.

Chapter 3. Historical ideas through the lens of organizational psychology

While having explained individualized performance-based pay setting in the previous chapter, this chapter provides a few historical perspectives relevant to the debate about whether motivating work and the desire to improve well-being is best achieved through extrinsic sources of motivation (e.g., monetary rewards) or by autonomous sources (e.g., meaning and personal interest). The historical perspectives discussed have a bearing on today's modern organizational views, having inspired the formation of a wide range of current theories that are commonly used in scientific investigations of individual performance-based pay setting and of other forms of performance-based compensation (e.g., bonus programs). Reasons for keeping pay systems more egalitarian can also be found among these perspectives.

Early perspectives

Some of the earliest important distinct ideas about the motivating power of monetary rewards have their origins in the philosophical characterization of the good life into hedonic and eudaimonic well-being and in early descriptions of human nature by hedonistic and eudaimonistic philosophers.

Original definitions of hedonic well-being (e.g., Aristippus, 435–356 BC; Epicurus, 341–270 BC) included the lack of pain and the indulgence of pleasure, but also abstinence from non-meaningful/sinful pleasure (Annas, 1987; O'Keefe, 2017). Popularly, hedonic well-being has been described as when pleasure outweighs pain (Disabato et al., 2016). In terms of human nature, hedonistic perspectives assume that humans are malleable, and that her nature is changed and affected by experiencing external stimuli and adapting to her surrounding environment (e.g., by social norms) (Tooby & Cosmides, 1992). Largely, the hedonistic view assumes that humans are born as a tabula

rasa (“blank slate”; Locke, 1817), and thus attaches great importance to the influence of social environmental factors for shaping people (Deci & Ryan, 2008).

Even though many hedonistic philosophers (e.g., Epicurus) did not have a particularly bright view of monetary rewarding as a motivator for achieving the good life (Bergsma et al., 2008), hedonistic well-being is today viewed as rather affect influenced, and, in turn, possibly influenced by monetary rewards and by other factors that might yield positive or negative states of affect (e.g., social rewards and social punishments) (Neuringer & Englert, 2017). In addition, the assumption that people are malleable has often been interpreted as meaning that human behaviors can be both affected and changed through external stimuli such as by monetary rewards, but also from a whole host of other rewarding factors (Marks, 2011).

Another early perspective on human motivation and well-being concerns eudaimonic well-being, which, as defined by Aristotle¹ (384–322 BC), is the state of living a life of dedication to a strong moral standard and being self-actualized (Deci & Ryan, 2008; Kraut, 1979). Popularly, eudaimonic well-being results when one leads a life in which one can be their most capable self while pursuing their own goals (Deci & Ryan, 2008; Ryan & Deci, 2001; Ryan et al., 2008). In terms of human nature, eudaimonistic philosophy assumes that humans have different inherent qualities that need nurturing. Complete well-being (i.e., the state of eudaimonia) can only occur when people are able to detect, live in congruence with, and thrive on their inherent qualities (Ryan & Deci, 2001). However, if one’s inherent capacities are not allowed to be fulfilled, for example, because one’s motivations are controlled by some factor (e.g., by potential negative judgments from others), it could lead to poorer opportunities to develop and to lower well-being (Deci & Ryan, 2008).

Based on this, it has been argued that autonomous stimuli that encourage freedom, purpose, and self-acceptance, along with having opportunities for personal growth and meaningful relationships, contribute to a state of eudaimonia (Ryff, 1989). Thus, according to this perspective, the fulfillment of needs may, rather, constitute the main motivation sources for working and seeking improved well-being (Deci & Ryan, 2008). According to Aristotle

¹ For modern translations of Aristotle’s philosophy, see Irwin’s (2019) “*Nichomachean Ethics*.”

himself, money is only a means, and the pursuit of it is not something that should govern a person's life if dedication to personal and societal causes and self-actualization is the goal.

In their original definitions, eudaimonism and hedonism have common roots, even though they differ in their characterizations of the good life, and in that they provide slightly different views about human nature (Ryan et al., 2008). Nevertheless, the hedonistic and eudaimonistic philosophies have inspired the development of contrasting psychological viewpoints that underlie many modern perspectives, such as in regard to paid labor, about the influence of autonomous and extrinsic sources of motivation on well-being. This is partly due to the fact that psychological and organizational scholars have interpreted these philosophies differently, developing many different assumptions based on their interpretations. This has resulted in a debate over whether to utilize the amount of monetary rewards as a means of strengthening positive work behaviors or to treat work performance and employee well-being as outcomes based on the extent to which employees' inherent innate qualities are allowed to flourish in their work (Kohn, 1998).

Perspectives from diverging branches of psychology

Inspired by their own interpretation of hedonistic views, behaviorist psychologists developed the theory of operant conditioning, based in part on strict laboratory animal and child experiments and observations (Hull, 1943; Pavlov, 1927; Skinner, 1953, 1965; Watson & Morgan, 1917). Operant conditioning is a behavior modification technique in which it is believed that all forms of human and animal behaviors can be modified by repeated external stimuli, such as in the form of repeated rewards (e.g., monetary) for certain tasks (Skinner, 1953, 1965). In order to achieve behavior modifications, the external stimuli must be salient, and be given in direct response to the behavior that is being modified. Thus, the behaviorist view rests on the expectation that the behavior can be influenced, modified, and changed through persistent methods that open up for the reinforcement of positive human behaviors – an approach that was assumed by BF Skinner (1904–1990) to have the capacity to improve human society in the long run (Skinner, 1953, 1965). However,

unlike the earlier behaviorists, Skinner argued that punishment is not a particularly effective behavior modification technique (it leads to apathy rather than positive action). Instead, Skinner suggested that not rewarding unwanted behaviors is more effectual as it diminishes the reasons people have for engaging in such behaviors without risking creating feelings of apathy, fear or hopelessness that may arise from repeated punishments (Skinner, 1973).

Contrary to behaviorism, and inspired by eudaimonistic views of humanistic psychologists such as Carl Rogers (1902–1987), the humanistic approach assumes that it is the intrinsic drive for self-actualization and to maximize one's inner (inherent) capacity and skills that motivates people to live well, develop, and achieve. Humanistic psychology assumes that people are their own best 'masters,' and that individual progress stems from having certain environmental conditions met, making it possible for individuals to realize their full potential (Rogers, 1961). Other humanistic psychologists, such as Abraham Maslow (1908–1970), argued that the satisfying of lower needs (e.g., food, shelter, money, health, and safety) and higher needs (e.g., freedom, mastery, self-acceptance, and relatedness) is what determines the extent to which humans are able to make the most of their inner potential. In addition, Maslow argued that it is unlikely that humans would be able to begin to address their higher needs unless the lower (basic) needs are first satisfied (Maslow, 1943).

Taken together, the humanistic view puts great emphasize on the uniqueness of humans and acknowledges that humans have different inherent abilities, arguing that abilities are best supported by providing the conditions (i.e., secured needs) in which each individual's unique abilities can grow and flourish. Clearly, humanistic psychology does not put much focus on extrinsic sources, such as different forms of monetary rewards, as drivers of humans' ability to achieve and develop or on the experiencing of well-being; rather, they hold that need fulfillment is the main determinant of humans' psychological development (Rogers, 1961).

Some tenets of these theories have influenced many of the current organizational and psychological theories, which represent many contrasting ideas about how individual performance-based pay setting might relate to job performance, retention, and the well-being of employees in today's

organizations. As we will see in the next section, these different ideas, with their origins in hedonistic and eudemonistic philosophies, have not only had a role in shaping perspectives about human psychology, they have also been a cornerstone in organizational philosophy.

Diverging ideas in organizational philosophy

There are a number of differing views in organizational philosophy that correspond to the classic disagreements in psychology mentioned in the previous section. For example, early and well-known sociologists like Max Weber (1864–1920) posited that values (e.g., ideological or religious) play a large part in driving people to engage in social action, a notion that was taken up in organizational philosophy (see Sverke, 1995). Later, these views were developed into normative management theory, which refers to managing in ways that create organizational purpose, culture, and values (see, e.g., Etzioni, 1961). According to Etzioni, normative management enables the creation of strong moral bonds between employees and their organization. Furthermore, Weber (1968) argued that value-driven people are apt to engage in causes because they believe them to be important, rather than because of any interest in the specific outcomes of making the effort (e.g., for personal gain) (Sverke, 1995; Weber, 1968).

However, working is not a voluntary act according to Etzioni (1961, 1988), who argued that normative management must take place within the framework of work being a partially forced, paid, and professional activity where employees are expected to complete certain tasks. This implies that organizations need to engage in a kind of balancing act where they need to ensure that employees actually do what they are employed to do (e.g., by following up on employee behaviors), while also encouraging value-based motivations, which is assumed to presuppose autonomy and can be counteracted by too strict control, as the overall norm of the organization (i.e., by normative management).

These perspectives stand in contrast to other styles of managing organizations. For example, according to many management scholars another important basis for people engaging in their work is self-interest (see Miller

& Ratner, 1998). According to Weber (1968), self-interest efficiently motivates humans to take actions towards predetermined goals, especially when they can expect to get something in return (e.g., monetary rewards) (Sverke, 1995; Sverke & Kuruvilla, 1995). In addition, Etzioni (1961) argued that motivation based on self-interest could facilitate employees' commitment to their organization as long as these self-interests are satisfied (e.g., through monetary rewards). However, motivations based on self-interest are unlikely to drive people to engage in social action for its own sake (Sverke, 1995). In addition, the disadvantage with motivations based on self-interest, could be that they are unlikely to lead people to take on things beyond a certain scope (i.e., beyond tasks that can be expected to satisfy these motivations). Another potential disadvantage is that motivations based on self-interest could be less effective than value-driven motivations for maintaining employee engagement, unless organizations continuously monetarily reward employees in ways that satisfy their self-interest motivations (Etzioni, 1988).

Furthermore, these perspectives are integrated in McGregor's (1960) theory of managerial styles. McGregor distinguished between Theory X, which is built on the notion that extrinsic sources are the main sources of employee motivation, and Theory Y, which is built on the notion that autonomous sources are the main sources of employee motivation. Managing an organization according to Theory X means focusing on extrinsic sources of motivation such as monetary reward systems (e.g., performance-based financial incentives) and on control by managers or by monitoring systems. Managing according to Theory Y, on the other hand, means managing by focusing on autonomous sources such as work environment factors (e.g., job autonomy), and by the creation of common purposes in organizations (McGregor, 1960).

Taken together, these perspectives (and certainly a number of additional perspectives) have given rise to a modern debate that is directly related to the extent to which it seems appropriate to use extrinsic or autonomous sources to stimulate work and well-being in organizations. This debate is also directly related to whether compensation should be assessed based on performance or on other factors (e.g., employment tenure). The perspectives presented in this chapter have been discussed a bit dichotomously (hedonic vs. eudaimonic and

Theory X vs. Theory Y); notably, however, the work context is characterized by diversity in regard to many of the perspectives described in this chapter (Hellgren et al., 2017). As we will see in the next chapter: whether to put the most effort into extrinsic or autonomous sources is, however, strongly debated.

Chapter 4. Modern contradictory perspectives

This chapter describes a modern debate corresponding to the use of extrinsic (e.g., monetary rewards) and autonomous sources (e.g., meaning and personal interest) to motivate work in organizations. The perspectives behind this debate concern aspects of individual performance-based pay setting, other forms of performance-based compensation (e.g., bonus programs), and other types of pay systems (e.g., traditional and egalitarian pay systems), especially in regard to how they may encourage (or discourage) work and facilitate well-being in organizations. This modern organizational debate is characterized by two fundamentally different theoretical perspectives, which also appear as complementary elements in many organizations' general motivational strategies.

The 'pro' side of the coin

In the debate mentioned above, some perspectives emphasize that money has a direct and positive influence on the ways in which people take action – especially with regard to utilizing opportunities for receiving monetary rewards (Shaw & Gupta, 2015), making employees apt to engage in certain desirable work behaviors (cf. Gerhart et al., 2009). Some even go further than this by claiming that economic “[i]ncentives are a necessary part of inducing the work that makes an economy go” (Lazear, 2018, p. 195). Relatedly, some perspectives also emphasize the importance of creating indirect tournaments over pay, for instance, where the monetary rewards are set on the individual level based on performance, including among those doing similar jobs, to motivate employees to put more effort into their work (Lazear, 2018). Another reason for basing monetary rewards on performance in organizations is to ensure that employees take action to fulfill their work goals. Reaching a high

level of goal fulfillment should then result in being monetarily rewarded (e.g., with a relatively high pay raise) (Gerhart et al., 2003).

Furthermore, some perspectives assume that monetary rewards given through performance appraisals (e.g., performance-based pay raises) can facilitate identifying and motivating the low performers (Lazear, 1989, 2018). For instance, it has been argued that a dispersed pay structure might send a signal to low performers that it is, in my own words, “about time” for them to increase their performance if they want to earn future monetary rewards (cf. Shaw, 2014; Lazear, 2018). If this does not lead the low performers to increase their performance, organizations can prompt low performers to resign by rewarding them less than others (Shaw, 2014). Thus, while offering incentives to particular employees, and rewarding them when they take advantage of them, benefits some employees, not offering incentives to certain peers of theirs can constitute a form of implicit sanctioning (cf. Lazear, 2018).

Proponents of these perspectives also argue that having compensation based on individual performance results can facilitate attracting and retaining talented employees, since it would give them an opportunity to increase their earnings (see Shaw, 2014). In addition, by having compensation based on performance, employees should recognize a clearer connection between their input (i.e., their performance contributions) and the output (i.e., what they earn) (Malmrud et al., 2020) – making it possible for employees to control their earnings by deciding on how much they want to contribute (cf. Eisenberger et al., 1999). It has also been suggested that performance-based compensation might lower employee stress, due to the reward criteria and performance feedback acting to provide guidance to employees about what to prioritize in their work; that is, having a clearer picture of what the organization expects from them reduces uncertainty and may thus lower stress (cf. Rowold & Schlotz, 2009).

All of these perspectives are usually argued to be able to apply to individual performance-based pay setting, provided that procedures are consistently applied and carried out with the desired precision by the pay-setting managers (Han et al., 2015; Shaw, 2014). In addition, a clear link between performance and pay raises (or other monetary rewards such as bonuses) must be established for the arguments to be valid – because it is primarily this link that

these perspectives argue could induce employees to increase their motivation (Locke et al., 1980).

The not so ‘pro’ side of the coin

Another perspective in this debate (e.g., represented by advocates of self-determination theory of motivation; SDT; Deci & Ryan, 1985) asserts that drawing regular and overt attention to pay could make people less likely to engage in their work because, under some circumstances, monetary rewards might negatively influence work motivation (Gagné & Deci, 2005). It has been argued that by basing monetary rewards on performance criteria, organizations could shift employee motivation from being driven by autonomous sources (e.g., by meaning or the importance of a personal cause) to being driven by extrinsic sources (e.g., by monetary rewards, ego-booster or to avoid sanctions) (Gagné & Deci, 2005). This is held to potentially lead to employees’ motivation becoming less self-determinant and less driven by meaning, and thereby less effective and less likely to enhance performance, retention, and well-being (Gagné & Forest, 2008).

Those emphasizing these consequences of offering monetary rewards argue that organizations should take action to lessen the general focus on, and especially employees’ attention on, monetary rewards by reducing the saliency of compensation (Deci et al., 1999; Gagné & Deci, 2005). For example, this can be done through the use of securely contracted pay where pay raises are set on a more egalitarian basis (e.g., based on the work role): other means can then be used to boost employees’ (autonomous) motivation and competencies (Gagné & Forest, 2008, 2020). Further arguments include that organizations should make sure that employees at least are rather satisfied with their levels of pay (high pay supports this; see Kuvaas et al., 2016; Thibault Landry et al., 2017), and that employees across the organization are fairly paid in accordance with their responsibilities and the level of skills required for their work – an approach that may also apply to individual performance-based pay-setting systems (Gagné & Forest, 2020).

After de-emphasizing the importance of monetary rewards, an organization can turn their attention to creating a work situation and working routines that

would help make work more meaningful and engaging; common work norms and values could be established that are relevant to and valuable for employees who want to contribute and perform (Gagné & Forest, 2020). For instance, this could be done by highlighting positive causes and aspects that are at the heart of the organization and of interest to the employees, regarding, for example, how the organization or the organization's products contribute to society or to the fulfillment of the organization's overall goal. In addition, instead of giving feedback as part of the performance evaluations, as occurs in individual performance-based pay setting, organizations could instead, through managers and colleagues, provide feedback less formally through more casual and regular conversations with employees (Deci et al., 1999; Gagné & Deci, 2005). According to SDT, good feedback is that which contributes to the development of employees' unique personal abilities and which leads to improved teamwork and shared success, with the goal of reaching common goals within the organization (Deci et al., 1999).

It has been theorized that establishing a work situation that fosters autonomous work motivation and provides feedback through a constructive positive approach (Deci et al., 1999; cf. Kluger & DeNisi, 1998) might positively affect employees' psychological need satisfaction and, in turn, increase their drive to seek autonomous sources of motivation in their work (Gagné & Deci, 2005). In the long run, designing work situations that take into account employees' psychological needs will not only be expected to positively influence employee performance but also contribute to employees' well-being and willingness to remain with the organization; it avoids certain stress-inducing pitfalls potentially resulting from extrinsic pressures to perform faster and more (Dahl & Pierce, 2020), leaving room for the work to be more meaningful, engaging, and value driven (Kuvaas et al., 2016).

Furthermore, SDT agrees with proponents of performance-based compensation who maintain that having a clear connection between performance and monetary rewards in organizations can serve to encourage motivation. However, SDT predicts that this will mainly encourage extrinsically controlled work motivation, which they link with impaired work behaviors (e.g., concentrating less on producing good quality output) and with lower well-being (Gagné & Deci, 2005; Gagné & Forest, 2020). Based on this, SDT argues that organizations may need to look for sources of motivation

(i.e., autonomous sources) other than monetary reward programs in order to avoid encouraging extrinsically controlled work motivation and to, instead, stimulate better performance and increase well-being among their employees. Indeed, a better approach for organizations would be to concentrate on designing a workplace in such a way that it increases the chances that their employees will experience their work as meaningful and stimulating. It must also offer opportunities for the employees to work in line with their personal values and ambitions, and stimulate cohesion (Gagné & Forest, 2020).

Furthermore, according to previous SDT research (cf. Cerasoli et al., 2016), if employees are able to meet their psychological needs in a given work context, it is conceivable that the importance they place on relative salary standings might lessen, thereby mitigating the potential risk of encouraging extrinsically controlled work motivation – a scenario which also applies to organizations where performance and monetary rewards are directly connected. Thus, the risk of encouraging extrinsically controlled work motivation may not necessarily be the outcome of an individual performance-based pay-setting system or a bonus program so long as the psychological need fulfillment of employees is generally achieved within the organization.

Even though these perspectives have been described as contradictory (corresponding to how they are described in much of the previous research), they are sometimes considered complementary. In addition, from a practical point of view: how private companies and public organizations apply aspects of these differing theories can vary greatly. The next chapter describes a set of psychological and behavioral economic theories which relate to these two overall perspectives and comprise precise assumptions regarding individual performance-based pay setting.

Chapter 5. Theoretical background

The debate described in the previous chapter, concerning the importance of extrinsic and autonomous sources of motivation, involves a number of specific organizational psychological and behavioral economic theories. These theories present directly differing, or contrasting, assumptions about how extrinsic sources (e.g., financial incentives) and autonomous sources (e.g., meaning and personal importance) may influence employees' work and well-being. Some theories also make assumptions about specific aspects of pay systems such as horizontal pay dispersion (i.e., pay differences between peers doing similar jobs) and about the fairness associated with the pay setting. All of the theories that are presented in this chapter have inspired much of the previous research regarding how performance-based compensation (where individual performance-based pay setting is one aspect) may relate to employee motivation, performance, retention, and health outcomes. There are other major theories that involve similar aspects to those in the theories described below, such as some of the satisfaction-influencing attributes in the vitamin model (Warr, 1994), and, especially, the aspects of reward and motivation in the effort-reward model (Sigreist, 1996), but the following theories are particularly relevant for studies on pay, pay setting, and compensation in relation to employee motivation.

Theories resting on the motivating power of extrinsic sources

This section describes a set of theories concerning the impact of extrinsic sources on behavior and, more specifically, how performance-based compensation such as individual performance-based pay setting is a means for motivating work.

Expectancy theory

Expectancy theory was first introduced by Victor Vroom in the 1960s and essentially views a person's motivation for something as depending on how much it is wanted and what the likelihood of getting it is (Moorhead & Griffin, 1998). Expectancy theory (originally labelled expectancy–instrumentality–valence theory; Vroom, 1964) assumes that human motivation can be viewed as the calculated sum of the outcome that people can expect from engaging in certain activities (i.e., expectancy), the extent to which individuals believe the expected outcome of their effort to be probable (instrumentality), and the importance of receiving the outcome on a personal level (valence) (Vroom, 1964). The text below is a depiction of how motivation occurs according to expectancy theory.

$$\text{Expectancy} \quad \times \quad \text{Instrumentality} \quad \times \quad \text{Valence} \quad = \quad \text{Motivation}$$

In the context of compensation, the basic assumption derived from expectancy theory is that when there is a strong expectation that a monetary reward will result from engaging in a certain behavior to meet a performance criterion, it will motivate the level of performance and work effort needed to meet the criterion and thus obtain the monetary reward (e.g., Shaw, 2014). Instrumentality with respect to compensation would then refer to how certain an employee is that certain behaviors (effort and/or performance) will lead to certain monetary rewards (Kuvaas et al., 2016). Instrumentality could be fostered in organizations by clearly connecting performance and monetary rewards, for example, through the use of performance criteria (Shaw, 2014). In regard to a compensation system, valence might be strengthened by the creation and integration of organizational norms in the organizational culture that emphasize the importance of individual contributions, the value of receiving potential outputs such as monetary rewards, and the value of fulfilling performance goals in general (Vroom, 1964).

Tournament theory

Augmenting expectancy theory (Vroom, 1964) is tournament theory (Lazear, 1989, 1995, 2000, 2018; Lazear & Rosen, 1981), which is based on a method

“that focuses on providing incentives to workers on the basis of their relative performance” (Lazear, 2018, p. 201). According to this theory, ‘tournaments’ over pay and monetary rewards might be formal (i.e., overtly orchestrated by management) or informal (i.e., taken up by employees on their own due to pay comparisons), or emerge as a combination of the two. Tournament theory further posits that tournaments over pay will increase the motivation of all employees. Lazear argues that “[t]here is an optimal spread between the prize for the winner and the runner-up [in competitions over monetary rewards in organizations], and optimality is defined so as to elicit the efficient level of effort, not the maximum effort possible” (2018, p. 201). Thus, it is relative reward sizes that characterizes a wage competition. According to Lazear (2018), monetary rewards should be just large enough to induce employees to want to make an effort to get the prize. Accordingly, tournaments over compensation can lead to inspiring all employees to do better and to compete (i.e., because they will want to win the ‘prize’) and, in the end, clearly indicate to the best performers that they have ‘won’ by monetarily advantaging them. Over time, this leads to increased wage spread (and wage competition) that provides instrumental reasons for employees to increase their motivation (Lazear, 2018). However, Lazear (2018) adds that this must be done within reasonable limits and by taking into account the characteristics of the organization.

The use of tournament-like pay structures can also be part of an implicit strategy to sanction those employees who have not performed up to the level the organization expects them to (Lazear, 2018). According to tournament theory, disadvantaging low performers will leave these employees with two options. According to my own interpretation of the theory, employees will then either increase their contributions in ways that are in line with what the organization expects, or they will realize that they could do better elsewhere and start searching for a job at another organization. According to tournament theory, losing the lower performing employees who exercise the latter option would lead the organization towards better outcomes (i.e., a sorting effect; Shaw, 2014). Another aspect to this is that tournaments could also lead to talented employees becoming more apt to remain with the organization, which would further increase organizational success (cf. Shaw, 2014).

In general, both expectancy theory and tournament theory rely on the assumption that extrinsic sources (e.g., monetary rewards) are the main drivers of employee motivation (Lazear, 2000; cf. Locke et al., 1980). However, both these theories assume that for monetary rewards to drive employee motivation, they need to evoke expectancies, and be instrumental as well as clearly emphasized by the organization through managers and through the organizational culture (valence) (Vroom, 1964). Expectancy theory and tournament theory, however, do not assume that the degree to which we want something necessarily stems from striving for monetary rewards; it could also stem from one's own will or inherent goals. However, both theories assume that aiming for an outcome (e.g., a prize) could further increase humans' willingness to want to achieve (Lazear, 2018; Vroom, 1964).

Equity theory

According to equity theory (Adams, 1965), it is human nature for people to want to be judged based on their individual contributions and rewarded accordingly. Furthermore, equity theory assumes that people care about the output of comparable others and will thus compare their output to that of others (e.g., peers), which, in turn, could create negative or positive emotional responses, depending on the outcome of those comparisons. Finding one's own input to be incongruent with one's output will, according to equity theory, result in perceptions of inequity (regarding personal performance) (Adams, 1965). The text below is a depiction of the equity formula.

Input equals output = equity

In the context of compensation, equity theory (Adams, 1965) can be applied to fairness relating to employee pay: if employees receive the output they deserve based on their input, it will result in perceptions of fairness (i.e., equity) regarding their pay (Stråberg, 2010). Thus, it supplements expectancy theory and tournament theory by suggesting that, besides instrumentality and 'prizes,' it is also important that the input (e.g., effort) and the output (e.g., pay raise) are congruent (Shaw, 2014). In this regard, a performance-based system, based on clear criteria, would enable employees to tailor their efforts

into following and fulfilling the criteria that lead to monetary rewards, thus potentially legitimizing the level of output received (Hellgren et al., 2017). If equity theory is applied to employee pay, it could be presumed that employees will compare their pay with their peers. Equity theory also emphasizes the importance of grounding output decisions in criteria that are thoroughly evaluated – making it clear to employees why they have received more or less output for the input they have put in into their work (Stråberg, 2010).

Theory on the motivating power of autonomous sources and on the de-motivating power of extrinsic sources

While the theories outlined above rest on assumptions about how extrinsic sources, and individual performance-based pay setting and bonus programs, constitute important drivers of work, other theories stress that there are risks attached to strategies based on these theories, and advocate utilizing autonomous sources as an alternative strategy for motivating work. This position is perhaps most clearly formulated by the self-determination theory of motivation (SDT; Deci & Ryan, 1985).

The self-determination theory of motivation (SDT)

For many years, SDT has made profound contributions to research on individual performance-based pay setting and bonus programs. SDT is both a humanistic psychology theory and a dynamic psychological theory: the former in the sense that it is based on the notion that people have unique inherent abilities that need nurturing, and the latter in the sense that it assumes people are affected by the dynamics between people and society and between people and their environment (Ryan & Deci, 2017). Although SDT has various sub-theories, there are two main parts that underlie the theory as a whole. These are psychological need satisfaction and self-determined motivation (Gagné & Deci, 2005; Ryan & Deci, 2017). The former is presented first because psychological needs are believed to underlie the development of motivation, rather than the other way around. Also, the general assumptions from SDT regarding the roles of psychological needs and motivation, respectively, in regard to individual performance-based pay setting and other forms of

performance-based compensation (e.g., bonus programs), are described after the general background provided for each of these theories.

Theory of psychological need satisfaction

Inspired by earlier works on general human needs, such as the hierarchy of needs theory (Maslow, 1943), SDT's need theory concentrates on psychological needs (Chen et al., 2015). This does not mean, however, that lower-order needs (e.g., food, shelter, and security) are overlooked in SDT. In fact, SDT assumes that satisfying lower-order needs is crucial for human development and health, and that being able to do so is more important for a secure life and for basic health than fulfilling psychological needs (Ryan & Deci, 2017). Also, SDT holds that securing lower-order needs increases the chances of being able to devote more time and energy to fulfilling psychological needs (Howell et al., 2013; Ryan & Deci, 2017). SDT builds on earlier need theories by maintaining that psychological needs are not necessarily higher-order needs, but are also a type of basic human need, regardless of whether they directly relate to survival on a day-to-day basis. The three psychological needs defined by SDT are autonomy, relatedness, and competence (Ryan & Deci, 2017).

The need for *autonomy* relates to having freedom and power over one's life, including over one's work situation (Van den Broeck et al., 2010). Satisfying the need for autonomy means giving people freedom and influence, of which factors such as trust and openness to ideas are important ingredients (Cerasoli et al., 2016). *Relatedness* refers to an aspect of the social nature of human beings; that of wanting to belong (Chen et al., 2015). In more work-oriented terms, this can be reflected in, for example, how supportive employees are of one another in the organization (Van den Broeck et al., 2016). By spending time in loving, understanding, caring, supportive, and friendly environments, the need for relatedness is met (Ryan & Deci, 2017). *Competence* refers to the human need to exercise their inherent abilities, and to being able to make use of and develop their skills. Competence can help establish a sense of control in challenging environments (e.g., at work) (Van den Broeck et al., 2016). There are many ways of addressing employees' need for competence. One important way is to offer and encourage learning

opportunities. Another is to give constructive feedback that can contribute to developing employees’ skills and abilities (Cerasoli et al., 2016).

According to SDT, satisfying autonomy, relatedness, and competence needs enables people to live good, happy lives (hedonic well-being), to exercise their inherent abilities (i.e., optimal functioning), to experience high quality social bonds (belongingness), and to realize their inherent potential (i.e., self-actualization), and could make it possible for people to put effort into fulfilling their deepest aspirations in ways that are congruent with their personal values, ideals, and beliefs (eudaimonic well-being) (Ryan & Deci, 2017). Figure 1 summarizes the aspects of psychological need satisfaction, and its postulated influence on human life according to SDT.

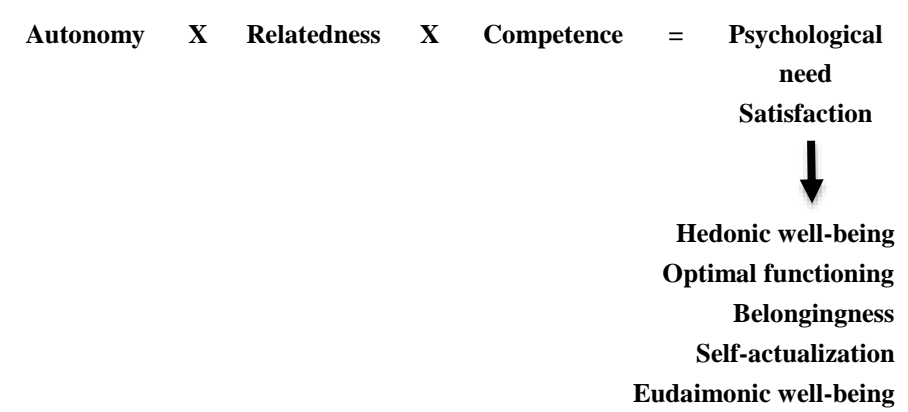


Figure 1. The occurrence system of psychological need satisfaction, and the postulated life of people who experience complete psychological need satisfaction according to SDT.

Based on its theory of psychological needs, SDT reasons that basing job rewards on performance could contribute to fulfilling the need for competence if the pay-setting procedure ensures that managers provide constructive performance feedback, and if the rewards serve as a signal for recognizing one’s competence (cf. Deci et al., 1999). However, it could also be that the monetary reward decision procedure carries with it a form of negative feedback about employees’ competence, where not receiving monetary rewards, or receiving a very small monetary reward, could signal a depreciated

view of one's competence (Vansteenkiste & Deci, 2003). SDT holds that negative feedback could lower people's feelings of being competent by the discouragement it could signal (Deci et al., 1999). Thus, the potential contribution to the fulfillment of the need for competence that performance-based compensation (e.g., individual performance-based pay setting) is expected to bring about would likely be limited to influencing those with more favorable compensation determinations, while it might frustrate meeting the need for competence for those less-favorably assessed (Vansteenkiste & Deci, 2003).

Furthermore, SDT argues that basing monetary rewards (e.g., pay raises or bonuses) on performance criteria could be utilized as a control mechanism that could frustrate meeting the need for autonomy (Deci et al., 1999). When the organization has control over setting the monetary reward criteria, employees typically have no decision-making power in the matter and must meet the criteria or forfeit the potential monetary rewards (Gagné & Deci, 2005). This could also occur because monetary rewards based on performance contribute to changing employees' cognitive attention from autonomous sources to extrinsic sources (i.e., on receiving the monetary reward), thereby reducing autonomy through finding less meaningfulness (Deci & Ryan, 2017).

Performance-based compensation systems might also frustrate meeting the need for relatedness. By stimulating a high level of within-workplace competition to fulfill the criteria and gain the most individualized monetary rewards possible, relationships among employees could become more characterized by personal ambition rather than teamwork. Indeed, SDT reasons that individual performance-based pay setting and bonus programs might lead individuals to increase their focus on their own contributions, instead of focusing on cooperation, and on supporting one another (Gagné & Forest, 2008, 2020).

Recognizing these potential negative consequences to employees' psychological need fulfillment, SDT advises that a pay system, and especially its reward-distribution procedures, should be designed in such a way as to minimize such a risk and, ideally, even facilitate employees meeting their psychological needs (Gagné & Forest, 2008, 2020).

Theory of self-determined motivation

The second major part of SDT concerns the reasons (i.e., the motivation) why people engage in certain activities or tasks, and differentiates among different types of human motivations (Gagné & Deci, 2005). In principle, all types of motivation defined by SDT can be accommodated within the same individual to varying degrees, and vary over time. The type of motivation that is elicited may also differ depending on behavioral regulations (e.g., whether it is a forced or voluntary act) and on the behavior a certain situation brings out. The more autonomously regulated the motivation is, over time, or in a particular situation, the more individuals can attain self-determination (i.e., self-power) in certain situations such as in relation to work or, more generally, in relation to life choices (Gagné & Deci, 2005). According to SDT, living a life, or being in environments where one's psychological needs demand attention, generally pulls people towards establishing or relying on more self-determined motivations (Van den Broeck et al., 2021).

SDT originally divided motivation into three types: amotivation (i.e., complete lack of motivation), extrinsic motivation (i.e., doing things to gain monetary rewards or avoid sanctions), and intrinsic motivation (i.e., doing things because of interest or joy) (Ryan & Deci, 1985). However, SDT has been updated numerous times and is continually under development (see Gagné et al., 2015; Van den Broeck et al., 2021). Of particular importance, Gagné and Deci (2005) argued for dividing extrinsic motivation into four different subtypes, and suggested that these types can be placed on a continuum between amotivation and intrinsic motivation. In part, this was done on the basis that not all activities that humans engage in are intrinsically motivated to begin with; this is the case with paid labor that most people have to do, regardless of whether or not they would want to do it (Gagné & Forest, 2020). However, in cases where something is extrinsically motivated to begin with, this initial motivation can, to varying degrees, and depending on what type of regulation is guiding the behaviors, develop in a more or less intrinsic direction (Gagné & Deci, 2005).

Furthermore, Gagné and Deci (2005) distinguished four subtypes of extrinsic work motivation that also ranged from controlling to more autonomous in nature. These extrinsic types of motivation, as well as how autonomous or controlling they are held to be are presented in detail in Figure

2. In addition, the figure shows Gagné and Deci's (2005) descriptions of the types of specific regulations that are related to the different types of motivations according to SDT. In order to be able to do empirical research, however, simpler categorizations of the spectrum of extrinsic motivation are sometimes used, such as autonomous work motivation (e.g., doing things because of meaning or personal importance) and extrinsically controlled work motivation (e.g., doing things to gain rewards, to boost ones' ego or to avoid negative criticism) (Kuvaas et al., 2016).

As regards performance-based monetary rewards to stimulate working, SDT recognizes that they can be used as a technique for behavioral control and behavior modification (Deci et al., 1999; Gagné & Deci, 2005). However, SDT reasons that individual performance-based pay setting and bonus programs are likely to lead to an increase in extrinsically controlled work motivation, and may attenuate autonomous work motivation due to the increased control. The problem with such a development, according to SDT, is that extrinsically controlling types of motivation are poor drivers of many types of employee outcomes, including job performance quality, well-being, and retention (Cerasoli et al., 2014; Gagne et al., 2015; Van den Broeck et al., 2021). Based on its view that employees characterized by autonomous motivation are better equipped to carry on with their work in accordance with the organization's goals and ambitions, SDT holds that organizations should focus on making work more meaningful and engaging, and avoid actions that may rather contribute to extrinsically controlled work motivation to improve the performance and well-being of employees.

Justice theory

Justice roughly means fairness, that is, the perception or the objective reality of being treated and judged correctly. Furthermore, most justice theories assume that humans are able to accept certain injustices if the differences between people are perceived to be fair because of some factor legitimizing the injustice (e.g., skill differences) (Malmrud et al., 2020).

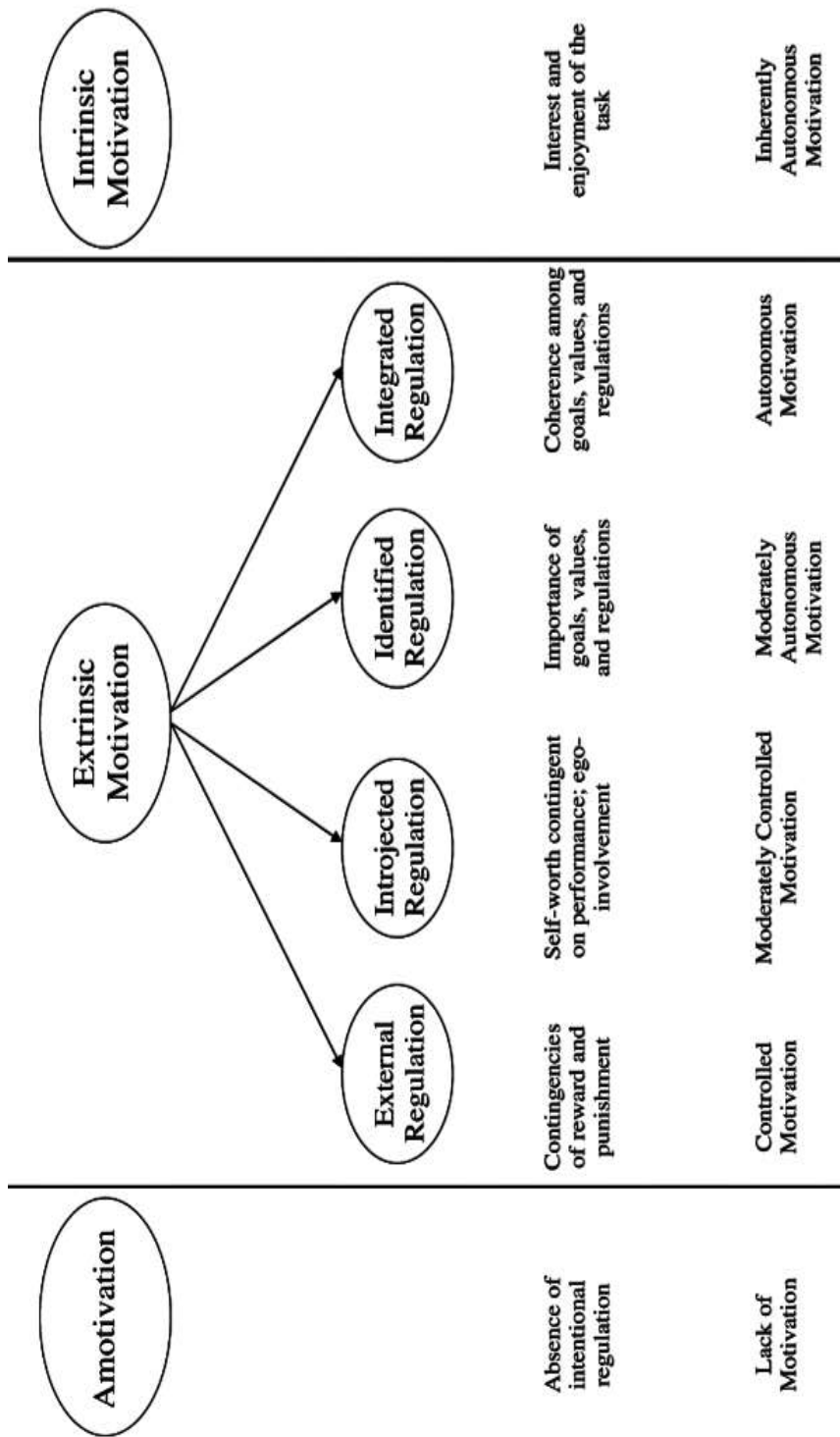


Figure 2. The motivation continuum (Gagné & Deci, 2005, p. 336). From “Self-determination theory and work motivation,” by M. Gagné and E. L. Deci, 2005, *Journal of Organizational Behavior*, 26, p. 336. Copyright [2005] by John Wiley and Sons. Reprinted with permission.

It has been suggested that there are four general dimensions of justice (see Colquitt 2001, Colquitt et al., 2005; Rawls, 1971). The first dimension, which has some similarities with that in equity theory (Adams, 1965), is distributive justice, which refers to fairness associated with the allocation of resources, of which one's relative level of compensation within an organization is one example (Colquitt, 2001). Procedural justice is about the fairness associated with the administration of certain systems and other regulations, and the degree to which procedures lead to everyone being treated equally, objectively, and based on the same measures. In addition, according to some justice theories, the right to participate and have an influence over procedures is also considered to be included in the concept of procedural justice (Leventhal, 1980). Another dimension is informational justice, which refers to fairness associated with being provided with enough information and with proper explanations about why things work as they do. Finally, interpersonal justice refers to fairness associated with how one is treated by others, and especially to being treated with respect and honesty and in non-discriminatory ways (Colquitt, 2001).

While all these dimensions of justice are relevant to studying the outcomes of individual performance-based pay setting, procedural fairness has received considerable attention in previous research (e.g., Shaw, 2014). There is agreement in otherwise contradicting theories (e.g., expectancy theory and SDT) that performance-based compensation systems are much more likely to encourage employee motivation, and in turn, motivate retention and performance, if the pay-setting procedures are characterized by procedural fairness (Gagné & Forest, 2008, Shaw, 2014). However, SDT holds that eliciting procedural fairness also drives positive outcomes in other types of pay systems, including those that are characterized by more egalitarian pay structures and those that are based on employment-related factors such as seniority (i.e., traditional pay systems) (cf. Gagné & Forest, 2020). However, there are fewer assumptions about the role that such experiences of justice may play in terms of health-related outcomes.

Theories regarding pay comparisons and pay inequality

This section presents another theory that sheds light on what shapes the effects of performance-based compensation, namely the social comparison theory (Festinger, 1954). In addition, two theories from behavioral economics are described that help explain the circumstances surrounding who might be most likely to be affected by the relative distribution of income and other monetary rewards.

Social comparison theory

While there are many components to social comparison theory (Festinger, 1954), an important assumption made in this theory is that people's relative standing in any social group is likely to affect how they behave and influence people's feelings about themselves and about others in the group. In addition, important determinants of the effects of social comparisons are the intrapersonal levels on which the comparison is being made. According to this theory, from the viewpoint of the individual employee in organizations, a social comparison is made by comparing oneself with other employees that one holds to be in a socially better or worse position, the former being labelled an upwards comparison and the latter a downwards comparison (Festinger, 1954).

Regarding employee pay, vertical comparisons that regard a person's level within the organizational structure and horizontal comparisons that regard flat comparisons on the same level in the organization (e.g., between peers doing similar jobs) will further influence the emotional reactions of individuals that are comparing themselves upwards and downwards. On the one hand, horizontal pay comparisons are assumed to provide a crucial point of comparison, whose outcome, if it is based on performance, people may be able to internalize as something they may be able to influence in the future (i.e., by performing better), thereby legitimizing the perceived pay difference. On the other hand, vertical comparisons may be easier to legitimize for organizations, as they are based on larger differences regarding, for instance, the difficulty of certain work roles (Shaw, 2014). As wages increase, at least in a Swedish context, are usually relatively little differentiated (at least on a yearly basis),

individual performance-based pay setting is likely to result in rather horizontal pay comparisons.

Furthermore, the social comparison theory also makes the prediction that the effects of social comparisons will depend on whether or not one is better or worse according to the result of the comparison, with the theory expecting mostly negative effects of being disadvantaged, and mostly positive effects of being advantaged (Festinger, 1954). However, if those finding themselves disadvantaged by a social comparison succeed in calibrating the fact that they are disadvantaged and turn this into a critical insight about how they could do better in the future, they might not suffer the consequences of being disadvantaged, and this might even provide reasons for them to improve their performance to bridge the social gap with their better paid peers (cf. Lazear, 2018).

Applied to the aims of individual performance-based pay setting, these assumptions could be interpreted in different ways. For example, they could be interpreted as suggesting that it would be particularly suitable to have pay differences between peers, rather than between employees at different hierarchic levels (e.g., between blue-collar workers and the top management), as it could allow more opportunity for social comparisons that may provide reasons for employees to improve their performance. In a best-case scenario, such comparisons would yield recognition to those who perform well, and encourage low performers to increase their effort as a result of having greater awareness of what needs to be improved in order to be on par with their colleagues (see Lazear, 2018; Shaw, 2014; Card et al., 2012). However, social comparison theory could also be interpreted as suggesting that organizations should avoid having large and salient pay differences, as it could worsen the reactions of those finding themselves worse off (Card et al., 2012).

Loss aversion and inequality aversion

Behavioral economics theories have contributed with a few assumptions that I have interpreted as providing a potentially critical perspective about individual performance-based pay setting and bonus programs, thus supplementing perspectives in SDT. One such example is the theory of loss aversion, which assumes that people are more aware of potential losses than

potential gains (Kahneman, Knetsch & Thaler, 1991; Kahneman & Tversky, 1979). This suggests that losses carry with them more disutility than gains carry with them utility, which in the context of compensation could concern, for instance, employees' motivation. Another is the theory of inequality aversion, which maintains that people are more aware of whether they are low on a social ladder than whether they are high on one (Fehr & Schmidt, 1999). Thus, assumingly, a monetary disadvantage based on inequality brings more disutility (e.g., an experience of injustice that may lead employees to lower their work motivation) than an advantage would bring utility (e.g., improved motivation). It is thus conceivable, based on the assumptions of these theories, that for employees whose pay is based on individual performance-based pay setting and bonus programs, the low performers would experience more of a loss, or discouragement, than the high performers would experience a positive encouragement.

This could potentially result in a negative overall impact on organizations in that overall motivation may decrease as long as the low performers choose to remain with the organization. This obviously depends on the proportions of employees who perceive themselves to be disadvantaged by the reward determinations versus those who perceive themselves to be in a favorable position.

These theories, and a wide range of other theories, have inspired much of the research that has been done on performance-based compensation (where individual performance-based pay setting is one component); such research is addressed in the next chapter.

Chapter 6. Empirical background

This chapter describes a selection of previous research findings on the potential relations of performance-based compensation (where individualized performance-based pay setting is one aspect) to job performance, retention-related outcomes, and health-related outcomes. Notably, individualized performance-based pay setting is included as part of this research, but it has often been merged with other forms of performance-based compensation (e.g., bonus programs) in the analyses.

How is performance-based compensation related to outcomes?

Job performance

Job performance is a relatively abstract concept that can be defined in a variety of ways. One definition is that it is about quantity and quality, in terms of how much and how well employees succeed in working in line with their organizations' goals (Viswesvaran & Ones, 2000). As described earlier, one of the main aims of performance-based compensation is that pay systems based on it should encourage better performance (Shaw & Gupta, 2015).

Correspondingly, when it comes to the relationships between performance-based compensation and job performance quantity and quality, many findings have been made over the years (e.g., Cerasoli et al., 2014, 2016; Jenkins et al., 1998). Most of these studies assume that motivation underlies performance (e.g., Cerasoli et al., 2014). Thus, the aspect of motivation is also relevant to consider in order to more fully understand the effects that performance-based compensation systems, such as individualized performance-based pay setting, may have on job performance. Notably, and with some exceptions, the previous research presented about job performance in this dissertation, as well

as the research on the possible underlying influence of work motivation on job performance, mainly revolves around the results summarized in meta-analyses (e.g., Jenkins et al., 1998) and other substantial research, such as cross-cultural studies (e.g., Gagné et al., 2015). In addition, many of the meta-analyses (e.g., Cerasoli et al., 2014, 2016) that are presented below about performance-based compensation have based their conclusions on a mix of data sources, including both experimental observations and survey reports. Because of the length of time between pay raise opportunities (often annually) in organizations, quite little research has focused on the effects of individual performance-based pay setting over time (Kuvaas et al., 2016).

To begin with, early comparative studies showed that financial rewards may constitute a more efficient means of motivating employees to perform quantitative work tasks as compared to many other types of organizational strategies (e.g., job enrichment) due to their suggested ability to increase work engagement for these types of work tasks (Guzzo et al., 1985; Locke et al., 1980). This notion inspired organizations to transition to a more frequent use of individualized performance-based pay setting (cf. Pfeffer, 1997). In line with this, several meta-analytic studies have indicated that performance-based reward programs (such as individualized performance-based pay setting) positively correlate with organizational productivity figures, due to their ability to encourage employees to want to produce more and work harder (i.e., performance quantity) (e.g., Cerasoli et al., 2014, 2016; Jenkins et al., 1998).

These results have been interpreted to mean that individual performance-based pay setting has a role in motivating the performance of routine tasks, especially those that are of great importance for organizations but which are not motivated by intrinsic meaning (e.g., because they are by their nature uninteresting) (Lazear, 2018). However, whether, and to what extent, employees are faced with uninteresting tasks in their work can of course vary greatly depending on the type of job as well as individual preferences.

On another note, there are also individual studies that have shown that individual performance-based pay setting constitutes a positive correlate of employee contextual performance, a performance dimension which is quite closely associated with job performance quality (e.g., it includes coming up with creative ideas) (e.g., Detnakin & Rurkkhum, 2019; Gilbreath & Harris, 2002). It is thus conceivable that individual performance-based pay setting

may also encourage employee contextual performance. There is less research, on the other hand, regarding how individual performance-based pay setting might relate to task performance from a performance quality perspective (i.e., in regard to how well the employees have performed their most basic tasks), although performance-based rewards have evidenced positive correlations with task performance as measured in quantities (e.g., Guzzo et al., 1985; Shaw, 2015).

However, the picture of how well individualized performance-based pay setting contributes to motivating employee performance is contrasted by research based on SDT (Deci & Ryan, 1985). An early meta-analysis using an SDT perspective showed that salient performance–reward connections decreased people’s intrinsic motivation to undertake tasks (Deci et al., 1999). It may thus be the case that when performance and rewards are directly intertwined (i.e., when they are instrumental), they may decrease intrinsic or autonomous motivation (Deci et al., 1999) and, as has been shown in recent meta-analyses, may increase extrinsically controlled work motivation as well (Cerasoli et al., 2014). These results, although the former is not limited to contexts involving paid labor, are important to consider given that it is relatively well established, through other meta-analytic research, that autonomous work motivations are positively related to job performance quality, and to a range of other performance outcomes as well (e.g., proactivity) in organizations, whereas extrinsically controlled work motivation is not (Cerasoli et al., 2014; Van den Broeck et al., 2021).

In line with this, research across nine countries (including Norway, Germany, and Indonesia) indicated that autonomous work motivation is a stronger positive correlate of employee creativity and proactive performance, and of employees being able to handle increasing demands for flexibility and for adapting to new technologies than is extrinsically controlled work motivation (Gagné et al., 2015). Given that many types of work are becoming much more challenging in these regards (see Gagné et al., 2021; Griffin et al., 2007), it has been argued that organizational actions that run the risk of attenuating autonomous work motivation might lead to workers becoming less equipped to cope with their jobs in modern working life because it is characterized by increased demands for flexibility, proactivity, and adapting to change (Gagné & Forest, 2020).

Building on the work of Deci et al. (1999), a recent meta-analysis encompasses the area of performance-based monetary rewards in the context of paid labor. This meta-analysis found monetary reward systems characterized by indirect performance–reward contingencies (i.e., a sense that performance matters for one’s compensation but without it being possible to identify exactly how) to be positively linked with employees’ autonomous work motivation. Direct performance–reward contingencies (i.e., a sense that performance and rewards are directly intertwined), on the other hand, were found to be positively linked with employees’ extrinsically controlled work motivation. Due to these motivational effects, pay systems characterized by indirect performance–reward contingencies evidenced stronger positive correlations with job performance quality than those characterized by direct performance–reward contingencies (Cerasoli et al., 2014). These tendencies have also been found to apply to employees’ satisfaction of psychological needs for autonomy, competence, and relatedness at work in that pay systems characterized by indirect performance–reward contingencies were more positively associated with psychological needs and, in turn, with performance quality, as compared to direct performance–reward contingencies (Cerasoli et al., 2016). However, the extent to which individual performance-based pay setting increases the saliency of performance–reward contingencies has not been specifically mapped in previous research. Thus, there is uncertainty as to whether such systems elicit these motivational effects.

In addition, another meta-analysis found that performance-based reward programs (e.g., containing performance-based pay raises or bonuses) appear to be weakly related to job performance quality, while they appear to be positively related to job performance quantity (Jenkins et al., 1998). It has also been shown in another meta-analysis examining previous experimental research that performance-based rewards are a positive correlate of extrinsically motivated work tasks (e.g., repetitive tasks), while they negatively correlate with intrinsically motivated work tasks (e.g., tasks that require initiative) (Weibel et al., 2010).

Another issue concerns whether individual performance-based pay setting contributes something additional, compared to what is contributed by more regular work environment design factors, which may be used to encourage performance and retention in organizations (see, e.g., Gagné & Forest, 2020;

Lazear, 2018; Pfeffer, 1998). While it has been described above that some early studies (conducted in the 1980s) showed that performance-based financial incentives (e.g., Guzzo et al., 1985) were strongly significantly associated with encouraging job performance, these findings were limited to strictly quantitative aspects of job performance (e.g., tree planting figures).

Furthermore, as regards performance-based compensation, very little research conducted in the latest two decades or so has focused on the relative significance of performance-based rewards in relation to more general work design factors (e.g., job autonomy). In addition, previous research has not investigated the relative importance of various aspects of individualized performance-based pay setting specifically. There is thus reason to investigate the issue and to do so in relation to more qualitative aspects of job performance.

Retention

Another important outcome of individual performance-based pay setting is retention, such as with regard to recruitment and turnover intention. Previous research on this aspect has been less extensive than on job performance. Nevertheless, also in this case, some of the research results have been contrasting. On the positive side, several literature reviews have come to the conclusion, based on their summaries of previous research, that the use of individual performance-based pay setting and bonus programs in organizations may serve as an inducement when recruiting new staff members (e.g., Downes & Choi, 2014; Gerhart et al., 2003; Gerhart & Fang, 2014).

Furthermore, based on its summary of previous research, another literature review (Shaw, 2014) came to the conclusion that individualized performance-based pay setting may create ‘sorting effects’ through increasingly generating larger pay differences between peers working on the same level (i.e., horizontal pay dispersion). Accordingly, the top performers would be more motivated to stay due to receiving relatively higher monetary rewards for their hard work in comparison to coworkers who performed less well. The low performers, on the other hand, may become less motivated due to the lower, or lack of, monetary rewards. Shaw (2014) reasoned that over time such sorting might render a generally stronger workforce within organizations due

to the retention of top performers increasing and the intention to stay among low performers decreasing. Relatedly, Shaw (2015) found that performance-based pay differences were positively related to production gains in organizations, surmising that the pay differences seemed to encourage the motivation of top performers while rendering the low performers more likely to leave their current work position (hence the total production profit increased over time) (Shaw, 2015).

Notably, however, few of the studies on sorting effects have included a measurement regarding the instrumentality of individualized performance-based pay setting, or considered the motivations that may result from these programs. The one study that actually did take autonomous and extrinsically controlled work motivation into account found instrumental pay increases (i.e., resulting from individual performance-based pay setting) to be associated with generally higher turnover intentions among employees, through pay instrumentality's positive association with extrinsically controlled work motivation (Kuvaas et al., 2016). It has also been shown in previous research that even high performers may become more likely to quit because of stress effects relating to performance-based monetary rewards (see Ganster, et al., 2011; Harrison et al., 1996).

Furthermore, while it has been commonly argued that individualized compensation could be used as a strategical method for attracting new staff (e.g., Downes & Choi, 2014), an objection that relates to this concerns the stress put on the monetary reward program during the recruitment process. It has been shown in SDT research that an emphasis on the availability of monetary reward programs might attract applicants who find extrinsic motivations for doing work appealing, which, in turn, might lead to organizations employing individuals who may perform at lower levels as compared to recruiting those who find autonomous motivations appealing (Derfler-Rozin & Pitesa, 2020).

All in all, there are different perspectives on how individual performance-based pay setting (and bonus programs) should be examined in relation to how it might attract and retain employees in organizations. Notably, this dissertation follows the more humanistic perspectives and examines issues from a perspective that presumes most organizations would want to motivate

their employees to want to stay (although of course there may be individual employees they may do better without).

Health-related outcomes

Another important outcome regarding individual performance-based pay setting concerns employees' health. For many organizations, caring for the health of their employees is a priority for several reasons. Among them is that successfully promoting employees' health has been linked with productivity gains and with lower sickness absence (Loeppke et al., 2009). Employees' health status can be captured, for instance, through biological health indicators (e.g., stress hormones) or, psychologically, through self-rated health indicators that may be used to capture a person's perceived general psychological health status or just specific aspects of one's health, such as perceived stress (Dahl & Pierce, 2020).

Research on the relationship between individualized performance-based pay setting and health-related outcomes is relatively scarce. Thus far, health-effects have mostly been studied from a critical (negative) perspective. For example, previous research has indicated that individualized performance-based pay setting may constitute a source of pressure that may increase workplace stress (see Dahl & Pierce, 2020). In line with this ominous finding, a few experimental studies have shown that performance-based rewards may increase stress, according to both perceived and biological stress indicators, in regard to the execution of tasks (Allan et al., 2017; Cadsby et al., 2016). Other research has shown that salient links between performance and monetary rewards may be more likely to bring about these potential stress effects as compared to when performance and monetary rewards are more loosely connected in organizations (Parker et al., 2019).

It has also been shown, through meta-analytic research, that autonomous work motivation is positively related to employee well-being, whereas extrinsically controlled work motivation is negatively related (Van den Broeck et al., 2021). Relatedly, SDT-driven research has shown that it might be more likely that individual performance-based pay setting positively relates to extrinsically controlled motivation than to autonomous work motivation (Kuvaas et al., 2016, 2020). Notably, and as pointed out earlier, there is,

however, uncertainty regarding the extent to which individual performance-based pay setting can be assumed to increase the saliency of performance and reward contingencies.

One explanation for the potential negative effects of performance-based compensation on employees' health suggested above might be that they are in part due to this type of compensation increasing performance pressure (Dahl & Pierce, 2020). For example, in line with social comparison theory (Festinger, 1954), employees may begin to socially compare themselves with each other in terms of their pay raises. This could make not slipping behind the others more important to them, and thus lead them to feel that they should perform faster and more. If so, this could, perhaps, in line with SDT, steer employees' attention towards extrinsic reasons (e.g., gaining rewards) for motivating their work, and, through this, potentially reduce the attention on autonomous reasons (e.g., interest and importance), which have been found to be more closely related to well-being (see Gagné & Forest, 2020). Previous research has also shown that intrapersonal conflicts could arise through pay tournaments, which may further evoke performance pressure and stress, and attenuate cohesion, thereby further reducing employee well-being (Gläser & Van Quaquebeke, 2019).

A potential upside of individual performance-based pay-setting systems with regard to health is that, insofar as the employees are well informed of the job requirements and expectations, they should be able to clearly identify how to perform their work – thus lessening the potential stress brought on by in-role uncertainty. Above all, it has been suggested that this can happen if the leadership clarifies how performance and rewards are connected (cf. Rowold & Schlotz, 2009). While there is little research on the potential upsides of individual performance-based pay setting in regard to health, equity-based fairness, the type of equity that potentially results from pay systems, has been shown to be associated with lower work-related exhaustion (Malmrud et al., 2020).

Given the research findings described above, it is theoretically important to consider both the monetary rewards (e.g., performance-based pay raises) as well as the instrumentality of the pay setting (i.e., how clearly connected performance and monetary rewards are in the pay system and how much they

are emphasized through the pay-setting processes, such as by pay-setting managers) (e.g., Gagné & Forest, 2008). In so doing, it should lead to a more comprehensive understanding of how individualized performance-based pay setting not only might encourage or discourage employee performance and retention, but also of how it relates to employee health, especially in relation to instrumentality. Beyond this, there are also a number of other pay-related factors that may further contribute to our knowledge of pay systems and pay setting in particular. Different aspects of instrumentality relating to pay as well as other factors relating to pay distribution and pay setting, along with the reasons for researching these aspects in a Swedish context, are addressed in the next chapter.

Chapter 7. Pay-related factors

This chapter describes a number of pay-related factors, including two different ways of capturing pay-related instrumentality. As will be discussed in this chapter, the factors are all considered to be able to increase (or in some cases decrease, depending on which theoretical perspective one takes on the factors' effects) the contributions of pay systems as a means of encouraging work and well-being in organizations. Why these factors are important to investigate in a Swedish context is also discussed.

Instrumentality-related factors

The level of instrumentality of a pay system may be captured in different ways. The most common way involves establishing how contingent performance and rewards are in the pay system (Cerasoli et al., 2014, 2016; Deci et al., 1999). Another indicator, however, of the instrumentality of a pay system may be found in the use of transactional leadership. In research-oriented terms, transactional leadership style is often captured by aspects relating to a focus on monetary rewarding in organizations, such as that the leader emphasizes the performance criteria and clarifies that employees must work in line with the criteria to receive the available monetary rewards. It also includes following up on how well the employees are able to actually work in line with the expectations (Rowold & Schlotz, 2009; Yukl, 1999).

Transactional leadership

As argued above, one potential way to reflect the instrumentality of the leadership of pay-setting managers is transactional leadership. However, unlike the instrumentality of a pay system (that arises from performance–reward connections), perceptions of transactional leadership are not limited to performance-based pay systems. Potentially, they may also arise from the use

of goal setting in organizations, where the leadership focuses on following up on individual- or team-based goal fulfillment, and thus it may play a role in other pay-system types, such as those that are more egalitarian. Thus, transactional leadership goes a little broader than instrumentality connected with monetary rewards specifically. It may also reflect an active leadership style, and although it seems to be related to a relatively lower capacity to drive better performance and support retention and well-being in organizations than other forms of active leadership styles (e.g., transformative leadership style), its relations with these types of outcomes on the employee level appear positive (Han et al., 2015; Rowold & Schlotz, 2009).

There are a few factors in addition to transactional leadership that may also occur as part, or a result, of other types of both individual performance-based pay setting and other pay systems (e.g., traditional and egalitarian). These are pay level, horizontal pay dispersion, and procedural pay-setting justice.

Pay level

To begin with, having a high, or at least a rather satisfactory, level of base pay has been suggested to potentially mitigate the controlling effects that SDT in particular warns monetary rewards might bring about (i.e., if they are instrumentality based) (Thibault-Landry et al., 2017). In this regard, it has been shown in previous research that the amount of work pay one receives may constitute a negative correlate of employee extrinsically controlled work motivation, and a positive correlate of employee autonomous work motivation (e.g., Kuvaas et al., 2016), with the later motivation having been shown to be more positively related to many desirable work behaviors (e.g., job performance) and employee well-being (e.g., Gagné et al., 2015). One potential explanation for such outcomes is that a high or relatively high pay level could contribute to satisfying basic needs (e.g., the bills can be paid without further ado), and thereby pave the way for people to focus on finding meaning and cohesion and fulfilling their personal ambitions; this, in turn, stimulates their psychological needs for autonomy, relatedness, and competence. When psychological needs are met, most people seem to become more self-determined, thereby creating a certain barrier to the influence of extrinsic control factors (cf. Sharma et al., 2014), and potentially decreasing

the risk of gaining more controlled motivation (Ryan & Deci, 2017). But it can also be about things like a high or relatively high pay being linked to more stimulating and fun work roles, as compared to typical low-salary work roles.

Furthermore, work positions with high levels of pay are generally high-status jobs, and such jobs have been shown to be related to better health (Marmot, 1991). In addition, the pay level per se may not be very instrumental (Thibault-Landry et al., 2017). Rather, it may reflect a normative subconscious picture of what type of expectations the organization has of an employee without directly interfering in how the employee more specifically chooses to carry out the work. A high or relatively high amount of pay may also reflect a greater scope for maneuvering, which has been associated with having a high or reputable work position. Such work positions may also carry with them better general working conditions (e.g., more job support) than would less reputable work positions. Thus, a high or relatively high pay may be accompanied by greater job autonomy and job support than those with lesser pay would enjoy (Kuvaas, 2006; Sieweke et al., 2017; Thibault-Landry et al., 2017). However, a high or relatively high pay can also entail a greater workload, which perhaps could make the potential positive role of the pay amount somewhat less significant (Sieweke et al., 2017).

Taken together, receiving a high or relatively high pay is a factor connected with pay systems that may encourage working and well-being. However, it is not clear whether other factors connected to pay systems (e.g., the pay setting) may strengthen or weaken the potential positive effects of having a high or relatively high pay; to put it another way – could there be other factors that mitigate the potential negative perceptions arising from pay system experiences?

Horizontal pay dispersion

A second factor pertaining to many types of pay systems is the level of horizontal pay dispersion (i.e., pay differences between peers). In the context of individualized performance-based pay setting, it builds up over time on the peer level based on performance differences (Shaw, 2014). In traditional pay systems, horizontal pay dispersion results from employment-related factors

such as seniority. It is not likely to reach a salient level, however, in egalitarian pay systems where pay raises are solely based on employees' work roles (Bloom, 1999). Some previous research has found high levels of horizontal pay dispersion to be related to impaired job performance, in terms of both the quantity and quality of employee performance (e.g., Bloom, 1999, Bloom & Michel, 2002; Bucciol et al., 2014; Pfeffer & Langton, 1993; Yanadori & Cui, 2013), and to higher turnover intention (He et al., 2016; Bloom & Michel, 2002; Messersmith et al., 2011).

However, a field experiment, inspired by a range of inequality-related theories (e.g., social comparison theory and inequality aversion theory) has provided some clarity regarding for whom these effects may be considered valid. It was found that, on the one hand, employees who found themselves being disadvantaged by horizontal pay differences (in this case it resulted mainly from performance-based pay raises) tended to start searching for a new job to a greater degree than others, and their job satisfaction decreased as well (Card et al., 2012). Those who identified themselves as favored by the horizontal pay dispersion, on the other hand, did not seem to become more motivated, as reflected by the findings that their job search intentions did not decrease, while their job satisfaction did not increase (Card et al., 2012). Corresponding to this, previous research has also shown that employees who were relatively disadvantaged by the monetary (performance-based) reward distribution were shown to be more likely to lower their autonomous work motivation than the favored were likely to increase theirs (Vansteenkiste & Deci, 2003).

Furthermore, on a societal level, income inequality has been shown to constitute a negative correlate of people's well-being (particularly for those negatively affected by it) (e.g., Pickett & Wilkinson, 2015), and there are some indications that income inequality may also hamper work-related well-being (cf. Dahl & Pierce, 2020; cf. Marmot et al., 1991). However, little is known about whether or not this may also apply to the inequality associated with having large horizontal pay differences in organizations.

Other research has shown that horizontal pay dispersion might be positively related to job performance, at least in terms of performance quantity, and shown that it may be positively related to intention to remain with the organization among top performers (for a review, see Shaw, 2014). It has also

been argued that the potential negative impact of having large horizontal pay dispersion in organizations (e.g., for job performance) may not occur if the pay-setting managers succeed in making it clear to the employees why they received a certain pay amount; doing so would successfully increase employees' equity-based fairness perceptions. It has also been emphasized that pay differences must be predicated on fair, correct, and objective procedures in order to avoid evoking negative reactions from employees (Shaw, 2014).

On the one hand, it is thus conceivable that the motivational force of horizontal pay dispersion may depend on how it interacts with a number of other factors related to pay systems, such as regarding how much the pay-setting managers emphasizes the performance-reward connections and the fairness of the pay setting. On the other hand, the key question may be whether or not other pay-related factors (i.e., the pay setting) may mitigate the assumed negative outcomes of horizontal pay dispersion. Furthermore, if employees' attention on receiving monetary rewards decreases due to having a high or relatively high pay, as has been assumed by some (e.g., Kuvaas, 2006), it may be conceivable that a high or relatively high pay also reduces the potential negative outcomes of having large horizontal pay dispersion through lowering the meaning of such pay differences. Thus, it could be asked: do perceptions of high horizontal pay dispersion have the same sort of impact (perhaps most likely negative) regardless of what one earns, or might the effects differ also depending on one's level of income?

Procedural pay-setting justice

A third factor is procedural pay-setting justice (for a thorough explanation, see Chapter 2), which reflects how well (i.e., in terms of fairness) the pay-setting managers have been able to handle the distribution of pay raises according to their organization's pay-setting guidelines. In studies inspired by equity theory (Adams, 1965) and fairness theories (e.g., Colquitt, 2001), strong perceptions of procedural pay-setting justice have been found to mitigate some of the negative responses associated with perceptions of large horizontal pay dispersion among peers (see Shaw, 2014). It has also been shown that procedural pay-setting justice is a positive correlate of autonomous work

motivation (Olafsen et al., 2015). It has also been assumed that strong procedural pay-setting justice could, to some extent, mitigate potential controlling effects (e.g., resulting from the instrumentality emphasized by managers through transactional leadership) by making it clearer to employees that the rewards they receive are based on correct and objective parameters (Gagné & Forest, 2008). However, whether the wage level has a role in the significance of the procedural justification is more unclear.

A Scandinavian context

All in all, the interplay among employees' salary levels and their perceptions of horizontal pay dispersion, transactional leadership, and procedural pay-setting justice needs to be investigated in relation to work and health-related outcomes. Potentially, such an investigation could increase our understanding of what characterizes pay systems that render positive results for such outcomes. However, even though there has been substantial research on individualized performance-based pay setting and other forms of performance-based rewards (e.g., bonus programs), relatively little research has examined the relations between pay-system predictors and both work-related and health-related outcomes in the Scandinavian context.

Overall, the current literature on individual performance-based pay setting presented above emphasizes the US context (for a description of the US context, see, e.g., Bryson & Freeman, 2013) and other contexts that are increasingly characterized by competitiveness, relatively weak labor rights, and deregulation (e.g., the Chinese context). For example, several meta-analyses have been published in academic journals in the USA and, although they have included research across countries, a large proportion of it has been based on samples containing North American employees (e.g., Jenkins et al., 1998; Cerasoli et al., 2014, 2016). Quite often, employers in the USA have considerably greater opportunities to individualize wage increases, and other rewards such as bonuses on the employee level, compared to the Scandinavian countries.

In the Scandinavian countries, employee unions have a much higher, more balanced, degree of negotiating leverage in relation to the employer

organizations, especially with regard to determining guidelines for employee compensation and general working conditions (Nihlwing, 2019). These differences distinguish the Scandinavian context as different to that which is focused on in much of the previous research on individual performance-based pay setting. The question then emerges: how do previous conclusions about individualized performance-based pay setting hold up when related to a Scandinavian context such as the Swedish?

Chapter 8. General aim

The general aim of this dissertation is to increase our understanding of how different aspects of pay setting, especially individualized performance-based pay setting, relate to employees' work performance, willingness to remain in the organization, health, and well-being. The dissertation examines this both in the context of private sector employees in Sweden and in a more international context. This was done through three specific studies.

The aim of *Study I* is to investigate the relative importance of various aspects of individual performance-based pay setting (instrumentality of the pay system, performance-based pay-raise amount, and procedural pay-setting justice) and various aspects of the work design that may address employees' psychological needs for competence, autonomy and relatedness at work (feedback, job autonomy, and social support from colleagues) for employee performance.

The overall aim of *Study II* is to identify groups of individuals with similar combinations of characteristics and perceptions of pay setting. Specifically, this was done by exploring how measurements of employee pay levels, perceived horizontal pay dispersion levels, and perceptions regarding pay setting (transactional leadership and procedural pay-setting justice levels) may combine to form subgroups (i.e., different profiles) of employees with similar levels of compensation characteristics. A second aim was to investigate potential differences between these latent profiles in terms of work-related (job performance and turnover intention) and health-related outcomes (self-rated health and work-related exhaustion). To provide a more in-depth understanding of the similarities and differences between the groups, a third aim was to explore what differentiated the profiles in terms of demographic characteristics (age, education, sex, managerial status, and occupational status) and psychosocial work environment factors (job demands, job control, and social support). Taking account of these differences among the latent

profiles enabled more nuanced comparisons, especially in terms of the representativeness of the groups.

The aim of *Study III* is to update self-determination theory's (SDT) views on employee' pay and in particular performance-based compensation (e.g., individual performance-based pay setting and bonus programs) by compiling research relating to it and focusing especially on workplace compensation as a driver of work and as an impacting factor on employee well-being and psychological need satisfaction at work. SDT's assumptions are also put in relation to research on other theories (e.g., justice theories) that may further contribute to updating SDT. SDT is also evaluated in light of theories that make assumptions that are contradictory to those of SDT (e.g., expectancy theory; Vroom, 1964 and tournament theory; e.g., Lazear, 1995). The conclusions are intended to provide up-to-date advice on how SDT can be used in future research and by practitioners.

Chapter 9. Method

Data collection and samples

Study I and Study II

The data collected for Study I and Study II was obtained as part of a larger data collection about individual performance-based pay setting in Sweden within the research project “Legitimacy in pay-setting: Psychological perspectives on individualized pay” (project leader: Professor Magnus Sverke). The data in Study I was collected through survey questions and from organizational registers, whereas the data in Study II was collected through survey questions and from national registers. Before receiving a survey, all participants were informed through e-mail (Study I) and post (Study II) about the research project. This information, along with further information attached to the actual surveys, described how the responses as well as participation in general would be kept confidential. Participants were also informed about the fact that it was voluntary to answer the questionnaire and that they were allowed to opt out from it. The data collection was approved of by the Regional Ethical Review Board in Stockholm (ref. no. 2015/1733-31/5).

Study I: The organizational sample

The organizational sample for study I was chosen on the basis that the company used individual performance-based pay setting with the goal of encouraging employees to perform well. In this organization, all of the employees’ pay raises were based on an overall evaluation of their performance, using a single set of criteria for all job positions. Thus, this organization provided a context where hypotheses relating to the potential effects of individual performance-based pay setting on job performance could be investigated. The company, which is a large international corporation, had

a significant proportion of its employees situated in different departments located in Sweden. The company operates in the energy/environment sector.

Data was collected from a survey distributed to all employees in Sweden not holding a management position and from the company's register in 2016, shortly following the company's determinations of performance-based pay raises for that year. A total of $N = 1,738$ employees were invited to participate. Among these, the response rate was 43.5 percent, yielding $n = 756$ returned questionnaires.

However, due to the company's register lacking data on certain participants' pay level and pay raises, and also due to extensive data missing for the variables under examination in the study, the final sample was reduced to $n = 582$ participants. The mean age was 46 years ($SD = 10$), 40 percent were women, the average employment tenure in the company was 8 years ($SD = 6$), and 66 percent had a university degree. The average pay level was 459,862 Swedish kronor (SEK) per year ($SD = 114,617$ SEK) and the mean of the (annual) amount of performance-based pay raise received was 9,649 SEK per year ($SD = 4,438$ SEK/year).

As the drop out was relatively high, non-response analysis was used to compare those employees who were included in the final sample and everyone else who had been invited to participate, with regard to how they differed on a set of variables that were obtained from the company's register. It was found that those who were included in the final sample were slightly older ($M = 46$ years) than the others ($M = 44$ years). No significant differences were found regarding gender, average pay level, or the proportion of pay raise between these groups.

Study II: The national sample

A national sample was used in Study II. This sample was in the form of a representative sample of private sector employees employed in Sweden. Using a survey that had been put together by the research project, Statistics Sweden collected the survey data. Data was also gathered from national registers. To ensure representativeness among the private sector employees in Sweden, the participants who were invited had been randomly selected based on demographic strata from a national register by Statistics Sweden. In 2016, a representative proportion of 5,000 private sector employees, between 20 and

65 years old, received the questionnaire. In total, $n = 1,252$ individuals sent their questionnaires back to Statistics Sweden. Thus, the response rate was 25 percent. However, due to incomplete questionnaires, resulting in extensive missing data on the variables, 76 individuals were excluded from the study. In addition, another 30 individuals were excluded because they were multivariate outliers. The final sample thus included $n = 1,146$ participants. The mean age of the final sample was 47 years ($SD = 11$) and the proportion of women was 29 percent. The average pay was 33,300 SEK ($SD = 9,900$ SEK) (1,000 SEK was approx. \$117 or €106 in 2016).

The drop out was analyzed by Statistics Sweden. It was revealed that the drop out was highest among young individuals (20–26 years), those with primary or secondary level as their highest education level, those from rural areas, and those with below average salaries, suggesting that the sample may not have been very representative of these groups. In terms of other demographic groups (e.g., those with average or high income levels), the sample was found to be generally quite representative of those employed in the private sector in Sweden.

Study III

The data in Study III was comprised of previous theoretical and empirical research, gathered from electronic academic text databases; the texts selected related to self-determination theory, incentives, rewards, compensation, performance, turnover intention, need satisfaction, and well-being, primarily in relation to employment. This included theoretical frameworks and previous research findings, mainly in regard to the research field of workplace compensation (e.g., including research about various aspects of individual performance-based pay setting and bonus programs). The content mainly relates to the potential effects of compensation for work motivation and employee well-being. The focus was on identifying previous research that had made a particularly large theoretical (e.g., theoretical frameworks and literature reviews) or empirical (e.g., meta-analyses) contribution, and on examining previous research about individual performance-based pay setting and bonus programs through the lens of self-determination theory's

assumptions on psychological need satisfaction and motivation (SDT; Deci & Ryan, 1985).

Measures

This dissertation covers a broad range of measures. With some exceptions, the measures were based on established measures that have been used in previous research. As regards the measures containing more than one item (i.e., the index variables), the internal consistency of these measures was found to be at least acceptable in all cases, with the Cronbach's alpha values for all measures (Cronbach, 1951) exceeding the lower limit of .70 (Nunnally & Bernstein, 1978). For a full description of the self-rated measures, including the references, scale ranges, and item wordings, see Appendix 1.

As Study III was in the form of a literature review, specific measures were not used as such (and thus not given a subsection below).

Study I

Independent variables

In Study I one block of independent variables were labelled *performance-based pay variables*. A three-item scale captured employees' perceptions of the instrumentality of the pay system (see Appendix 1:1). Among the items, one had been developed for Study I, one was based on Colquitt (2001) but slightly changed in order to suit a pay-setting context, and one was based on an item from Yukl (1999). The obtained internal reliability estimate (Cronbach's alpha) was .79. The performance-based pay-raise amounts were obtained from an organizational register. Procedural pay-setting justice was assessed through a seven-item scale based on Colquitt (2001); see Appendix 1:2. The original items had been modified from capturing organizational procedural justice to capturing the procedural fairness of pay setting (i.e., procedural pay-setting justice). Cronbach's alpha was .87.

Another block of independent variables was labelled *support of psychological needs variables*. A three-item scale assessed the participants' perceptions of job autonomy (see Appendix 1:3). This measurement was

developed based on a number of different measures of job autonomy (Hackman & Oldham, 1975; Sverke & Sjöberg, 1994; Walsh et al., 1980). Cronbach's alpha was .71. The variable of *feedback* was measured using participants' responses to a four-item scale based on Hackman and Oldham (1975); see Appendix 1:4. Cronbach's alpha was .92. Finally, a three-item scale, based on Näswall et al. (2006), was used to measure *social support from colleagues* (see Appendix 1:5). Cronbach's alpha was .84.

Control variables

Measures of age (years), sex (1 = woman, 0 = man), and pay-level amount (SEK), which had been obtained from the organization's register, were included as control variables.

Outcome variables

The outcome variables measured two aspects of job performance and were based on Koopmans et al. (2014). A five-item scale captured employees' perceptions of task performance (see Appendix 1:6). Cronbach's alpha was .80. Participants assessed contextual performance through an eight-item scale (see Appendix 1:7). Cronbach's alpha was .84.

Study II

Independent variables

The independent variables in this study were labelled *compensation characteristics* and were used to identify subgroups (i.e., profiles) of individuals with similar levels for these variables. The first two variables, monthly pay-level amount and perceived horizontal pay dispersion, were assessed through single items (see Appendix 1:8 and 1:9). The third, transactional leadership, was assessed through a four-item scale based on Yukl (1999); see Appendix 1: 10. Cronbach's alpha was .78. The fourth variable, procedural pay-setting justice, was assessed through a four-item scale based on Colquitt (2001); see Appendix 1:2: items 4–7. The items that were not used from Colquitt's scale were all related to the participation and inclusion aspects of procedural justice (see Appendix 1:2: items 1–3), while the three items that

related to quality aspects and one item related to the ethical and moral aspects of procedural pay-setting justice were used². Cronbach's alpha was .86.

Outcome variables

A number of measures were included to capture work-related outcomes and health-related outcomes. Among the work-related outcomes, task performance was assessed by the participants through a five-item scale based on Koopmans et al. (2014); see Appendix 1: 11. Cronbach's alpha was .79. The second was turnover intention, which participants assessed through a single question based on Sverke and Sjöberg (2000); see Appendix 1: 12. Regarding health-related outcomes, self-rated health was assessed through a single item developed by Odéen et al. (2013); see Appendix 1: 13. Another was work-related exhaustion, which participants assessed through a single item based on Maslach (1996); see Appendix 1: 14.

Demographic background variables

Several measures were included to determine what distinguishes the profiles in terms of demographic background characteristics. These included age (years) and sex (woman = 1, man = 0), which were obtained through a national register, and the measures of education level (1 = university, 0 = lower) and managerial status (yes/no), which were self-assessed by the participants. The study also included variables reflecting occupational status (1 = white-collar employees and academics, 0 = blue-collar employees), which were coded mainly based on occupational codes (from the national register), managerial status (self-reported) and trade union membership (self-reported).

Psychosocial work environment factors

Three measures reflecting employees' psychosocial work environment were included to determine what distinguishes the profiles in terms of the members' general working conditions. The first was job demands, which was based on a three-item questionnaire based on Beehr et al. (1976); see Appendix 1: 15.

² Confirmatory factor analysis (CFA) including the multi-item measures (i.e., transactional leadership and procedural pay-setting justice) showed that the two-factor model provided a better fit than the one-factor model. The one-factor model showed a poor fit ($\chi^2 = 281.32$, $df = 20$; $p < .001$; CFI = .83; TLI = .76; RMSEA = .15; SRMR = .08) and the two-factor model provided an acceptable fit ($\chi^2 = 88.45$, $df = 19$; $p < .001$; CFI = 0.95; TLI = 0.93; RMSEA = 0.08; SRMR = 0.04), with a factor correlation at .70.

Cronbach's alpha was .74. The second was job control, which included three items that had been modified and taken from a number of different measures of job autonomy (Hackman & Oldham, 1975; Sverke & Sjöberg, 1994; Walsh et al., 1980); see Appendix 1: 16. Cronbach's alpha was .79. The third was social support, which was measured by six questions that were based on measures of collegial and managerial social support (Näswall et al., 2006); see Appendix 1: 17. Cronbach's alpha was .83.

Analytic strategies

Study I

In terms of the analysis, Study I tested hypotheses concerning the relative importance of various components of individual performance-based pay setting and support of psychological need variables. These hypotheses concerned the relative importance of performance-based pay variables and support of psychological needs variables for task and contextual performance. The relationships between blocks of variables and job performance were investigated statistically through hierarchical multiple regression analysis and supplementary relative weight analysis (RWA; Johnson, 2000). The regression analyses were performed using SPSS version 26 and the RWA was performed on the RWA free WEB (Tonidandel & LeBreton, 2015).

The regression analyses were performed in three predetermined steps: the first step included demographic control variables (participants' age, sex, and pay level), the second step included performance-based pay variables (instrumentality of the pay system, performance-based pay raise, and procedural pay-setting justice), and the third step included support of psychological needs variables (job autonomy, feedback, and social support from colleagues).

RWA was used in order to lessen the risks of overestimating the impact of the independent variables with the strongest association to the dependent variable, and of underestimating the impact of the independent variables with the weakest association to the dependent variable, which is a common problem in statistical regression techniques, particularly when the independent

variables are highly correlated (Tonidandel & LeBreton, 2011). The procedure created a new set of uncorrelated variables by transforming the set of independent variables into their maximally related orthogonal counterparts (Johnson, 2000). The original predictors were then entered to the new set of uncorrelated predictor variables, and the relative weights calculated using an index of the new and original set of predictors (see, e.g., Lundby & Johnson, 2006; Johnson, 2000; Tonidandel & LeBreton, 2011). In addition, RWA was used for pedagogical reasons, to increase the clarity of the statistical presentation by recalculating the regression beta weights into percentages that would be more easily understandable for a broader readership.

Study II

This study relied on latent profile analysis (LPA; Gibson, 1959). By using this statistical method, it is possible to interpret the interactions of many variables (Howard et al., 2016). Based on individual respondents' levels for measures of a number of different variables, latent profile analysis separates the study population into subgroups containing individuals with similar levels for certain measures (Bergman & Magnusson, 1997; Morin et al., 2018). The variables that were used to identify latent profiles were monthly pay-level amount, perceived horizontal pay dispersion, transactional leadership, and procedural pay-setting justice. The number of latent profiles was determined based on fit indices recommended in previous research (e.g., Howard et al., 2016; Nylund et al., 2007; Peel & McLachlan, 2000).

The Bolck, Croon, and Hagenaars approach (BCH; Bolck et al., 2004) was used to determine the associations of the latent profiles with the work outcomes (task performance and turnover intention) and health-related outcomes (self-rated health and exhaustion). It was also used to determine what distinguished the latent profiles in regard to demographic background variables (age, education level, sex, managerial status, and occupational status) and psychosocial work environment factors (job demands, job control, and social support). The BCH approach keeps the character of the latent profiles (i.e., the mean level of the profiles) constant when examining their differences in regard to the auxiliary variables (Asparouhov & Muthén, 2020). These associations were investigated by Wald chi-square tests (Mann & Wald,

1942). The computer program Mplus 8.3 (Muthén. L. K. & Muthén. B. O., 1998–2018) was used to perform the LPA and the Wald chi-square tests using the BCH approach.

Study III

To begin with, text databases were searched to find previously published research and theoretical frameworks about performance-based compensation (e.g., individual performance-based pay setting and bonus programs) that were inspired by or based on SDT or certain other theories (e.g., expectancy theory, tournament theory, and justice theories); more focus was put on the former. Particular attention was paid to finding sources that had made theoretical assumptions and produced empirical findings about the potential implications of performance-based compensation for employee motivation, job performance, retention, well-being, and psychological need satisfaction. In addition, the literature search focused particularly on studies that may contribute to further developing SDT's current perspective on performance-based compensation. Special emphasis was placed on identifying research of this nature (including that from other theoretical angles) that could be considered to be of substantial value for the research subject of interest (e.g., theory descriptions, meta-analyses, and literature reviews).

After identifying the relevant material, it was reviewed by the three authors according to their areas of expertise and with an eye to selecting those texts which had made either (a) a profound general contribution to the research field of workplace compensation and performance-based compensation or (b) a contribution to SDT research that could be used to further elaborate SDT's present assumptions. It is noteworthy that the aim of the study was not to present a systematic compilation of previous research, but to shed light on a possible up-to-date perspective on performance-based compensation based on SDT.

Chapter 10. Summary of studies

Study I. “It’s [not] all ‘bout the money”: How do performance-based pay and support of psychological needs variables relate to job performance?

Background

It is commonly argued in the management literature (e.g., Shaw, 2014) based on instrumentalism-driven theories (e.g., expectancy theory; Vroom, 1964) and equity theory (Adams, 1965) that individual performance-based pay setting can drive employee performance. A number of meta-analyses on performance-based compensation (i.e., where individual performance-based pay setting is one aspect) have supported this claim by finding positive associations between this type of pay system and certain dimensions of job performance (e.g., performance quantity) (e.g., Cerasoli et al., 2014, 2016; Jenkins et al., 1998). However, whether such effects and, in particular, if various aspects of individual performance-based pay setting (e.g., performance-based pay raises, performance–reward connections, and pay-setting perceptions) might be significantly related to other, less resource-intensive, aspects of motivating employees to perform has received less research attention. Points of comparison were gathered based on self-determination theory (SDT; Deci & Ryan, 1985), which holds that it is more important for organizations to work strategically to address employees’ needs for competence, autonomy, and relatedness through a supportive work design, in order for employees to be motivated to perform their high-quality work, than to expect work motivation to arise from focusing on work-related reward systems (Deci et al., 1999; Gagné & Deci, 2005; Gagné & Forest, 2020).

Aim

The overall aim was to investigate the relative importance of performance-based pay variables (instrumentality of the pay system, performance-based pay-raise amount, and procedural pay-setting justice) and support of psychological needs variables (feedback, job autonomy, and social support from colleagues) for two aspects of job performance, namely, task and contextual performance. This study was based on an organizational sample, and its analytic strategy relied on hierarchical multiple regression analysis supplemented with relative weight analysis.

Results

The demographic control variables that were entered in the first step of the hierarchical multiple regression analysis and the performance-based pay variables that were entered in the second step accounted for low proportions (Step 1: 3%–5%, Step 2: 2%–3%) of the variance in the performance outcomes, while the support of psychological needs variables in Step 3 accounted for 11 and 9 units in task and contextual performance, respectively. Among the performance-based pay variables in Step 2, two of the characteristics were significantly related to at least one of the performance outcomes. Of these, high levels of instrumentality of the pay system was found to be related to lower task performance and to lower contextual performance, while high levels of the performance-based pay-raise amount was found to be associated with higher contextual performance. Procedural pay-setting justice was not found to be significantly associated with these outcomes.

Among the support of psychological needs variables in Step 3, both feedback and job autonomy were related to higher levels in the performance outcomes, while social support from colleagues was found to be unrelated to these outcomes. In total, the model variables accounted for 16 percent of the variance in task performance and 17 percent of the variance in contextual performance.

The results of the RWA (conducted to investigate how much of the explained variance in the outcomes could be attributed to specific predictors) showed, in regard to the explained variance accounted for by performance-based pay variables (Step 2), that the figures were 12.6 percent for task

performance and 29.2 percent for contextual performance. This can be compared to the proportion of explained variance of 68.1 percent for task performance and 56.1 percent for contextual performance accounted for by the support of psychological needs variables (Step 3). The control factors (Step 1) accounted for the remaining explained variance in task performance (19.3%) and contextual performance (14.7%). A couple key results were that job autonomy accounted for slightly more than half of the explained variance in task performance (52.5%) and slightly less than half of it in contextual performance (45.8%). The performance-based pay-raise amount was found to have a substantially larger relative importance for contextual performance (23.1%) as compared to task performance (8.4%). Another finding was that two of the pay-system variables (i.e., instrumentality of the pay system and procedural pay-setting justice) accounted for a small proportion of the explained variance in the performance outcomes (together they accounted for 4.2%–6.1%). Among the support of psychological needs variables, social support from colleagues accounted for the lowest proportion of the explained variance (4.9% in task performance and 3.2% in contextual performance).

Conclusions

On the whole, Study I demonstrates that an organizational focus on addressing employees' psychological needs at work – particularly by providing job autonomy – may, to a larger extent than would various aspects of individual performance-based pay setting, positively drive task and contextual performances. From a practical point of view, to encourage employee performance, it might thus be better for organizations to spend time and resources on improving their work design and facilitating the influence of employees over how they carry out the work, rather than investing much of its managerial resources into improving motivation through individual performance-based pay setting.

However, receiving a high pay raise for one's work contributions may serve as a positive motivational injection that might enhance an employee's willingness to engage in contextual performance, and perhaps add to other positive sources of motivation (e.g., job autonomy). Nevertheless, it seems rather unlikely that the pay raises positive relation with contextual

performance was due to the fact that the pay raises were performance based, and thus instrumental, considering that instrumentality of the pay system had a low explanatory value for task and contextual performances. Perhaps the explanation is rather simple: that employees react positively to receiving a high pay raise because they interpret it as type of praise from the organization, with the reverse being the case for those receiving a low pay raise.

As neither instrumentality nor procedural pay-setting justice were of any substantial relative importance for job performance, the study provides weak support for expectancy theory-based (Vroom, 1964) propositions, nor does it provide support for assumptions in justice theories concerning procedural pay-setting justice (e.g., Stråberg, 2010). SDT's assumption that support of psychological needs variables are more important as a means of encouraging job performance received support.

Study II. Compensation profiles among private sector employees in Sweden: Differences in work-related and health-related outcomes

Background

There has been extensive previous research on matters relating to whether or not organizations should base pay raises on performance evaluations (see Gagné & Forest, 2020; Murphy, 2020; Shaw & Gupta, 2015). However, less is known about what characterizes positive outcomes and perceptions of pay-related factors more generally in the labor market, where pay systems other than individual performance-base pay setting are represented, such as traditional pay systems (Hellgren et al., 2017). One way to shed light on this is to explore how similar outcomes and perceptions of pay-related factors (i.e., compensation characteristics) differ in regard to work-related and health-related outcomes that are desirable outcomes from the organizations point of view (e.g., that employees perform well) as well as from the employees' perspective (e.g., that their work-related exhaustion does not increase).

A number of compensation characteristics that are stressed by many theoretical perspectives (employee pay, horizontal pay dispersion levels, and

various aspects relating to pay setting, such as transactional leadership levels and procedural pay-setting justice levels) were used to identify groups (i.e., latent profiles) with similar levels of these characteristics. The differences between the latent profiles in how they associated with work-related and health-related outcomes, their demographic features, and psychosocial work environment factors could then be explored, in order to improve our holistic understanding of compensation characteristics among private sector employees in Sweden. Especially beyond the Swedish context, providing a greater holistic understanding of compensation characteristics may contribute to better pay-setting practices in terms of producing positive results for organizations and their employees.

Aim

The first aim was to identify groups of individuals (with different profiles) based on their pay-related outcomes (pay level) and pay-related perceptions (perceived horizontal pay dispersion, and transactional leadership and procedural pay-setting justice). The second aim was to explore how such groups differ in how they associated with work-related (task performance and turnover intention) and health-related outcomes (self-rated health and work-related exhaustion). To contribute to an in-depth understanding of such differences, the third aim was to characterize the groups in terms of demographic background variables (age, education level, sex, managerial status, and occupational status) and psychosocial work environment factors (job demands, job control and social support). A national sample was used, and the analytic strategy was person oriented, relying on latent profile analysis (LPA).

Findings

Identification of compensation profiles

Based on employees' pay levels, perceived horizontal pay dispersion, and characteristics relating to pay setting (transactional leadership and procedural pay-setting justice), the LPA detected six distinct latent profiles containing individuals with similar patterns for these variables. These profiles were

together labeled ‘compensation profiles.’ The profiles were divided into four different brackets based on the relative mean values of their monthly pay, whose pay levels were labeled as low, slightly below average, average, or high, in accordance with how they compared to the average monthly pay levels in Sweden for 2016. The next characteristic, horizontal pay dispersion, polarized the latent profiles further. Low levels of perceived horizontal pay dispersion characterized three of the compensation profiles (labeled ‘compressed’), moderate levels characterized another (labeled ‘moderately dispersed’), and high levels characterized the remaining profiles (labeled ‘highly dispersed’). The characteristics relating to pay setting (transactional leadership and procedural pay-setting justice) further increased the internal differences between the identified compensation profiles. Based on the two pay-setting characteristics showing a varying pattern only in one profile (although their mean levels varied) – a finding that some (i.e., adherents of expectancy theory; Vroom, 1964) would consider to reflect a quality marker of pay setting (e.g., Han et al., 2015; Shaw, 2014) – these characteristics were together labeled ‘procedural quality.’ Low levels of procedural quality characterized two of the profiles (labeled ‘low procedural quality’), moderate levels characterized one profile (labeled ‘moderate procedural quality’), and high levels characterized two profiles (labeled ‘high procedural quality’). In one profile the two different aspects of procedural quality differed substantially in terms of the means; thus this pattern was labeled as ‘mixed’ (i.e., referring to low transactional leadership and high procedural pay-setting justice levels).

Differences in work-related and health-related outcomes and in other characterizations of the compensation profiles

The associations of the profiles with outcome variables and psychosocial work environment factors were labeled based on the mean values (i.e., following the same procedure as for the profile variables), with the main categories being ‘high,’ ‘moderate,’ and ‘low.’ The labeling of the profiles’ differences in regard to the demographic characteristics were more descriptive (e.g., as ‘shares,’ ‘few,’ ‘many’ or ‘majority,’ ‘minority’). Figure 3 presents how the compensation profiles were categorized as well as the characteristics of the

six compensation profiles and their relative associations with work-related and health-related outcomes as a whole.

Profile 1: Low pay: Compressed with low procedural quality

Outcomes: moderate task performance, high turnover intention, low/ moderate self-rated health and high work-related exhaustion.

Demographic background variables: slightly older, few university educated, ~ 1/3 woman, mostly non-managerial and blue collar.

Psychosocial work environment factors: moderate job demands, low job control, and low social support.

Profile 2: Slightly below average pay: Compressed with mixed procedural quality

Outcomes: moderate task performance, low/moderate turnover intention, moderate self-rated health and low/moderate work-related exhaustion.

Demographic background variables: average age, minority university educated, ~ 1/5 woman, mostly non-managerial, and blue collar.

Psychosocial work environment factors: moderate job demands, moderate job control, and moderate social support.

Profile 3: Slightly below average pay: Highly dispersed with low procedural quality

Outcomes: moderate task performance, high turnover intention, moderate self-rated health, and high work-related exhaustion.

Demographic background variables: slightly younger, large minority university educated, ~ 1/2 woman, mostly non-managerial, and slight majority blue collar.

Psychosocial work environment factors: high job demands, low job control, and low social support.

Profile 4: Average pay: Compressed with high procedural quality

Outcomes: high task performance, low turnover intention, high self-rated health, and low work-related exhaustion.

Demographic background variables: average age, minority university educated, ~ 1/3 woman, many managers, and mostly white collar.

Psychosocial work environment factors: low job demands, high job control, and high social support.

Profile 5: Average pay: Moderately dispersed with moderate procedural quality

Outcomes: low task performance, moderate turnover intention, moderate self-rated health, and moderate work-related exhaustion.

Demographic background variables: average age, large minority university educated, ~ 1/3 woman, mostly non-managerial, and white collar.

Psychosocial work environment factors: moderate job demands, moderate job control, and low/moderate social support.

Profile 6: High pay: Highly dispersed with high procedural quality

Outcomes: moderate/high task performance, low/moderate turnover intention, high self-rated health, and low work-related exhaustion.

Demographic background variables: average age, slight majority university educated, ~ 1/5 woman, many managers, and mostly white collar.

Psychosocial work environment factors: moderate job demands, high job control, and high social support.

Figure 3. Descriptions of the compensation profiles in terms of outcomes, demographic background variables, and psychosocial work environment factors.

Key findings concerning the relative associations with outcomes

A first key finding was that profiles containing on average well-paid individuals generally were found to be associated with better outcomes, especially with regard to the health-related outcomes. This was the case, however, for only two out of the three profiles (4 and 6) with average to high salary levels. In addition, the task performance of Profile 6 (High pay: Highly dispersed with high procedural quality) was relatively modest. However, the profile with relatively worse outcomes (Profile 5: Average pay: Moderately dispersed with moderate procedural quality) had a rather different character than the other two profiles with average to high income levels (e.g., much fewer managers and more moderate levels for the psychosocial factors). Thus, the income differences hardly provide the whole picture regarding the differences in the associations between profiles.

Furthermore, the combination of at least average salaries combined with low perceived horizontal pay dispersion and high procedural quality (i.e., high

levels of both transactional leadership and procedural pay-setting justice) were characterized by the most favorable levels for task performance and turnover intention (i.e., Profile 4). Profile 4 was also characterized by the highest levels of self-rated health, together with the best paid profile (Profile 6). Although there were some differences regarding these profiles (i.e., 4 and 6), they were rather similar in regard to their mean levels for the demographic background variables, psychosocial work environment factors, and procedural (pay-setting) quality. Thus, a second key finding was that low levels of perceived horizontal pay dispersion may relate more strongly to higher task performance and lower turnover intention than high levels.

Furthermore, Profile 6, despite being characterized by high perceived horizontal pay dispersion, associated relatively positively with the outcomes on the whole. Thus, a third key finding was that, if accompanied by a generally strong psychosocial work environment and high-quality pay setting, in what is likely more high-skilled contexts, high procedural quality might to some extent mitigate the potential downsides (e.g., increased turnover) of high horizontal pay dispersion.

Moreover, Profile 2, the profile containing individuals with salaries slightly below the average, low levels of perceived horizontal pay dispersion, high levels of perceived procedural justice, and non-prominent transactional leadership, was found to be associated with among the lowest levels of turnover intention and work-related exhaustion. Moreover, the task performance and self-rated health levels for this profile were similar to those for other approximately comparable profiles that had lower procedural pay-setting justice and only slightly more modest levels for the psychosocial work environment factors (i.e., Profiles 1, 3, and 5). Thus, a forth key finding was that low perceived horizontal pay dispersion in combination with high procedural pay-setting justice and low instrumentality from pay-setting managers (i.e., as reflected by low transactional leadership) evidenced more favorable associations with the outcomes than did other largely comparable profiles (i.e., 1, 3, and 5).

Another finding deserving mention concerns Profile 1 (Low pay: Compressed with low procedural quality). This profile showed similarities regarding the outcomes with two profiles that were characterized by high pay dispersion but which evidenced a higher pay-setting quality, and whose

members also perceived higher job control and social support levels. Although the levels of job demands were a bit lower in Profile 1 than in the two profiles characterized by high or moderate horizontal pay dispersion, the latter likely contained a larger proportion of high-skilled employees (e.g., university educated and white collar) with higher pay.

Conclusions

Taken together, the explorative findings of Study II suggest that the combination of receiving at least average pay, without perceiving that pay levels are highly dispersed among one's peers, together with one's pay setting being characterized by procedural fairness seems to deliver the best possible results in respect to the work-related and health-related outcomes that are important for organizations and their employees. This overall finding seems to apply regardless of the potential impact of the comparability of the different profiles in terms of demographics and psychosocial work environment factors.

Furthermore, a medium to high level of instrumentality of the pay system (i.e., as has been claimed to be important in order for individual performance-based pay setting to render its expected results), which in this study was reflected by transactional leadership, generally also seemed to contribute positively to the work-related and health-related outcomes. In this regard, however, the findings were less conclusive, at least in relation to turnover intention and work-related exhaustion, as Profile 2 had low values for transactional leadership but still showed among the lowest levels for these outcomes. In addition, perceived horizontal pay dispersion also has a kind of instrumentality component built in, where large wage differences are assumed to reflect a larger focus on pay comparisons and pay competition in organizations (Bloom, 1999; Lazear, 2018). On the whole, it is thus doubtful whether instrumentality really had a positive impact on the profiles' associations with the outcomes. Perhaps some aspects of instrumentality, such as transactional leadership, did, while other aspects, such as horizontal pay dispersion, did not. Future research may need to include a broader range of aspects of instrumentality (e.g., more directly concerning the distribution of monetary rewards, leadership, and pay-dispersion levels) to increase our

understanding of the importance of pay-related instrumentality for work-related and health-related outcomes in organizations.

From a practical point of view, Study II indicates on the whole that designing pay systems in a more egalitarian manner, where horizontal pay dispersion is kept low and procedures are fairly managed, and accompanied by a strong psychosocial work environment, may have the greatest potential to lower turnover intention and work-related exhaustion. In addition, in the higher income brackets, such characteristics also seem to drive higher task performance. Thereby, the findings partly contrast the assumptions of tournament theory (Lazear, 1995, 2018) and expectancy theory (Vroom, 1964), which claim that pay systems aiming to increase horizontal pay dispersion will have a positive impact on motivation (Shaw, 2014, 2015).

Study III. How important is money to motivate people to work?

Background

Throughout history, the nature of the motivating effects of monetary rewarding has given rise to substantial debate. A major point of contention is whether extrinsic stimuli (e.g., financial rewards) or autonomous stimuli (e.g., meaningfulness and importance) are the main drivers of human motivation and well-being. One testing ground for this dispute is performance-based compensation (e.g., individual performance-based pay setting and bonus programs). Do they enhance motivation or do they constitute a mechanism of control that might even have a negative impact on motivation, and induce pressure?

Relatedly, one psychological theory that has received considerable attention for its view on monetary rewarding and for its critical perspective about performance-based compensation is SDT (Deci & Ryan, 1985). According to the original SDT hypothesis that was established in cognitive evaluation theory (Deci & Ryan, 1980), today considered a subtheory of SDT (Gagné & Deci, 2005), monetary rewards that constitute an external regulator controlling the direction of individual behaviors can diminish people's

inherent autonomous motivation (an interest- or enjoyment-based drive for engaging in certain activities), particularly because control inhibits the need for autonomy (Deci et al., 1999).

This hypothesis has given rise to many research perspectives on monetary rewards in general, inspiring a great deal of research since the 1980s. In 2005, the SDT hypothesis was more clearly formulated in relation to the working context (see Gagné & Deci, 2005), which again led to a new wave of research and new developments. Given the extensive amount of new research that has occurred since 2005, both from the lens of SDT and other theories that provide contrasting (e.g., expectancy theory; Vroom, 1964) and supplemental (e.g., justice theories; e.g., Colquitt, 2001) perspectives, there is a need to again update SDT to account for performance-based compensation as a driver of work and of improving employees' well-being.

Aim

The overall aim of this study was to compile research on current relevant perspectives regarding SDT's view on workplace compensation and formulate an updated version of it for application in new research. The gathered research literature was examined to determine their stances on three main questions that relate to SDT's view on performance-based compensation. These questions were about (1) how performance-based compensation might influence employee motivation, well-being, job performance, and psychological need satisfaction at work; (2) how the relative distribution of money and fairness might underlie how performance-based compensation influences these outcomes; and (3) how payment norms affect recruitment decisions. In terms of the literature bases, the theory in this study relied on previous theoretical frameworks and research findings, whereas the analytic strategy relied on content- and impact-related expertise judgments of the literature.

Findings

In regard to the first question, it was identified that performance-based compensation systems may be more likely to influence extrinsically controlled work motivation (i.e., being motivated to work by rewards or by the avoidance

of sanctions) than autonomous work motivation (i.e., work motivation derived from the meaning and stimulation of the job or from the job appealing to personal values), and that performance-based compensation systems could increase stress by generating performance pressure. It was also identified that non-controlling reward systems can positively influence job performance through their positive effects on the psychological needs for autonomy, competence, and relatedness and on autonomous work motivation – and that such effects may be stronger than in reward systems that are characterized by more control.

As concerns the second question, perceived pay inequality between peers doing similar jobs was identified as a factor that could possibly worsen the relationships of performance-based compensation with employee outcomes. Procedural fairness was identified as a factor that might improve the outcomes of performance-based compensation. In addition, procedural fairness might boost the effects of other types of compensation systems, such as those that are characterized by pay compression as well.

Regarding the third question, it was identified that organizations preferably will want to recruit autonomously motivated employees rather than those who are extrinsically motivated. However, recruitment decisions might suffer from the motivation purity bias (Derfler-Rozin & Pitesa, 2020). It was identified that while organizations may actively try to avoid recruiting employees who are driven by monetary motivations, they simultaneously try to attract them through emphasizing monetary motivations for working (e.g., their monetary reward systems). It might also happen that organizations continue to motivate newly recruited, autonomously motivated employees by offering the possibilities of externally motivated rewards, although they were recruited for other reasons. However, more research is needed to determine how externally motivated rewards affect the motivation of autonomously motivated employees in general and over time.

Conclusions

According to this evaluation of relevant research literature through the lens of SDT, a key conclusion was that pay systems based on securely contracted pay, combined with a work design that hinges on autonomous motivation, might

constitute an alternative to the performance-based compensation systems (e.g., bonus programs and individual performance-based pay setting) that are currently highly regarded in many companies and public organizations, not least in Sweden, for motivating job performance and for attracting and retaining employees. While there were many reasons for this conclusion, one was that performance-based compensation systems seem rather likely to stimulate extrinsically controlled work motivation, which was shown to have weak correlations with job performance quality, and which may lower the perceived meaning of the job, thereby risking an attenuation of retention and well-being in organizations. In addition, performance-based compensation systems may to some extent increase managerial control and increase workplace competition, thereby potentially frustrating the need for autonomy and relatedness, which are generally linked with many positive work attitudes, including performance and well-being.

In terms of recommendations for future research, a key suggestion was that in order to understand more about the effects of performance-based compensation systems on work-related and health-related outcomes, there needs to be more far-reaching and fair comparisons with other types of pay systems (e.g., traditional or egalitarian). In addition, a large number of factors surrounding performance-based compensation systems need to be taken into account in such investigations to determine the holistic meaning of such monetary policies, including motivational types, the pay or reward system's instrumentality, how well pay procedures are managed, and the relative resources it takes into account compared to other pay systems. Only after conducting more far-reaching and fair comparisons can a clearer understanding of the many different theoretical propositions (e.g., expectancy theory vs. SDT) surrounding performance-based compensation be given more clarity.

From a practical point of view, the study presents alternative ways of dealing with employee compensation, based on SDT's psychological needs theory, which contrast with the current trend towards more performance-based compensation systems at workplaces.

Chapter 11. Discussion

Through three empirical studies, this dissertation aimed at contributing to present scientific knowledge concerning how different components regarding pay-related outcomes (e.g., pay levels and perceived pay differences) and pay setting (e.g., procedural justice) associate with work-related and health-related outcomes, especially emphasizing various aspects of individual performance-based pay setting. Study I investigated the relative importance of various aspects of individualized performance-based pay setting (e.g., perceptions of performance–reward connections and performance-based pay raises) and support of psychological needs variables (e.g., job autonomy) for employee task and contextual performance. Study II investigated how groups of employees with similar levels and combinations of compensation characteristics (regarding pay levels, horizontal pay dispersion, transactional leadership, and procedural pay-setting justice) differed in various work-related and health-related outcomes. The study also took into account the general character of the groups with regard to demographic background variables and psychosocial work environment factors. The focus of Study III was on summarizing and further developing self-determination theory's (SDT; Deci & Ryan, 1985) present perspective on performance-based compensation (where, among other things, individual performance-based pay setting and bonus programs are typical examples of such systems). In terms of context, the main focus in Study I and Study II was on employees in Sweden's private sector, whereas the literature review in Study III had a global focus.

A short recap of the controversies regarding compensation

The many different views on how to compensate people for their work that have been highlighted throughout the dissertation have given rise to different

approaches on how organizations should structure their pay systems so as to create the greatest utility for themselves (e.g., improved performance) and their employees (e.g., maintained well-being) (Dahl & Pierce, 2020; Gagné & Forest, 2008, 2020; Lazear, 2018; Shaw & Gupta, 2015). In this regard, it has been described that private companies and public organizations (and their respective employer organizations) and unions (who defend the shared interests of employees) typically have several alternative types of pay setting, especially in regard to pay raises, that they could agree on utilizing: based on the individuals' contributions (individual performance-based pay setting; Maaniemi, 2013); based on employment-related factors, such as employment tenure (i.e., traditional pay systems; Pfeffer, 1997); or based on the difficulty of certain work roles (i.e., egalitarian pay systems; Bloom, 1999). Even though hybrids of these pay system types could occur in organizations, pay agreements usually emphasize one or another (Hellgren et al., 2017).

It has also been described that traditional, egalitarian and performance-based pay systems each have their potential advantages (Bloom, 1999; Gagné & Forest, 2020; Pfeffer, 1997; Shaw et al., 2002). For example, the main aims of performance-based systems include that they should encourage higher goal-fulfillment in organizations, stimulate the retention of top performers, attract new competent personnel, clarify work expectations, and render equity-based fairness perceptions (see Downes & Choi, 2014; Eisenberger et al., 1999; Gerhart & Fang, 2015; Malmrud et al., 2020; Shaw & Gupta, 2015). Regarding traditional and egalitarian pay systems, both are held to be rather easy to administrate and have been described as risk averse types of pay systems (e.g., rather unlikely to increase stress due to performance pressure; e.g., Dahl & Pierce, 2020; cf. Murphy, 2020; Pfeffer, 1997, 1998). In addition, the latter, in particular, is also held to lower the meaningfulness of pay comparisons on the peer level and, thus, not considered likely to give rise to pay-related inequality perceptions among groups of coworkers (Bloom, 1999). On the other hand, egalitarian pay systems are not explicitly meant to encourage employees to perform better, while traditional pay systems, to some extent, aim to at least maintain present levels of performance by rewarding experience (Pfeffer, 1997, 1998).

Furthermore, in recent decades (since around the end of the 1980s), the proportion of performance-based pay systems in labor markets around the

world has increased like an avalanche (Maaniemi, 2013), not least in Sweden (Hellgren et al., 2017). However, as has been described in the introductory chapters, research-wise, they have remained controversial, particularly regarding the motivational role of certain components of these systems, such as their salient performance–reward connections (see, e.g., Gagné & Forest, 2020; Shaw & Gupta, 2015). Their impact on employee health is also in question, as some perspectives hold that a greater focus on individuals' contributions can increase job clarity and thereby potentially reduce uncertainty-related ill-health (cf. Rowold & Schlotz, 2009), while others hold that salient performance–reward connections involve the risk of increasing employees' stress levels (e.g., Parker et al., 2019).

Study I: The relative importance of performance-based pay

Study I aimed at examining the relative importance of various aspects of individual performance-based pay setting (instrumentality of the pay system, performance-based pay-raise amount, and procedural pay-setting justice) and work design factors aimed at addressing employees' psychological needs for competence (feedback), autonomy (job autonomy), and relatedness (social support from colleagues) for employee performance (task and contextual performance). Overall, the results of the last steps of the hierarchical multiple regression analyses, supplemented by a relative weight analysis for each of the performance outcomes (RWA; Johnson, 2000), were supportive of SDT (Deci & Ryan, 1985), inspired assumptions regarding individual performance pay setting (e.g., Gagné & Forest, 2008, 2020), but less so regarding the expectancy theory (Vroom, 1964) inspired assumptions (e.g., Shaw & Gupta, 2015).

Performance-based pay variables

In regard to expectancy theory (Vroom, 1964), the instrumentality of the pay system (i.e., the perceived performance–reward connection) evidenced a negative relationship with the self-rated performance outcomes. The supplementary RWA, however, indicated a low relative importance of this

negative relationship (2.2% and 3.7% of the explained variance in task and contextual performance, respectively). The key finding, thus, was that instrumentality did not seem to play a major role for employee performance, besides its giving rise to slightly lower performance.

This result is not entirely in line with SDT, which maintains, rather, that instrumentality can lead to negative effects on employee performance, at least in terms of performance quality (Ryan & Deci, 2017). However, such effects are assumed by SDT to occur via instrumentality stimulating extrinsically controlled work motivation (e.g., doing one's work because it can result in monetary rewards or pleasing one's environment) or via it dampening autonomous work motivation (e.g., doing one's work because it carries meaning or is of personal importance), or perhaps both (Deci et al., 1999; Gagné & Deci, 2005).

The fact that instrumentality was of minor importance for job performance is, however, in contrast to expectancy theory's (Vroom, 1964) assumptions, which, instead, highlights instrumentality as potentially being of key importance for performance-based pay systems to encourage job performance (Shaw & Gupta, 2015; Lazear, 2018). Relatedly, it has been shown through a meta-analysis that direct performance–reward connections (where it is possible to identify exactly how to get the available monetary rewards) typically have weaker associations with positive performance outcomes (at least in terms of quality) – via their dampening effects on autonomous work motivation – as compared to indirect performance–reward connections (where employees understand that their performance matters for their pay but are unable to identify precisely how) that have been found to be more positively related to autonomous work motivation (Cerasoli et al., 2014).

To increase our understanding of the relative importance of performance–reward connections for performance when utilizing individual performance-based pay setting, it may be useful to capture instrumentality through more nuanced measures (since all paid work is characterized by a certain degree of instrumentality), for example, in terms of direct or indirect instrumentality (Cerasoli et al., 2014, 2016). In addition, future research may need to include motivation types such as autonomous and extrinsically controlled work motivation, as these types of motivation may constitute important mediators

in the association between instrumentality and job performance (Gagné & Deci, 2005).

The next aspect of individual performance-based pay setting, namely, the performance-based pay-raise amount, was found to be unrelated to task performance, although it still explained 8.4 percent of the total variance in this outcome. However, it evidenced a positive relation with contextual performance, with an explanatory value of 23.1 percent.

To begin with, the finding that the performance-based pay-raise amount was significantly related with higher contextual performance, but not with higher task performance, may, perhaps, in line with expectancy theory (Vroom, 1964), be explained by at least some aspects of contextual performance, such as taking up extra work duties, needing more of an extrinsic push (Detnakin & Rurkkhum, 2019; Gilbreath & Harris, 2002). Nevertheless, it may also have a contrary explanation: in line with SDT (Deci & Ryan, 1985), contextual performance may be less likely to be affected by pay-raise decisions, unless they are emphasized through the performance criteria and insofar as the criteria do not negatively impact employees' perceived autonomy (cf. Cerasoli et al., 2014, 2016).

Perhaps the last explanation is most probable because the instrumentality of the pay system evidenced a very low explanatory value, thus indicating, in line with previous research (Cerasoli et al., 2014), that it was not strong performance–reward connections that were driving the positive relation of the pay raises with contextual performance. At the same time, the results are a bit at odds with previous research (in which bonuses are also considered) (e.g., Jenkins et al., 1998) which found that it is quality markers regarding job performance (which are rather closely connected with contextual performance) that demand autonomy, while quantity markers (which quantitative measures of task performance may capture) may be complemented by rewards. This suggests that previous research (e.g., Locke et al., 1980; Shaw, 2015) may have devoted too little energy to studying quality-related aspects of task performance to the benefit of examining quantitative measures (i.e., as our self-reported measure of task performance concentrated on the quality of the performance of such tasks). As the performance of tasks, including standardized routine tasks, seems to require more and more in terms of skills in modern working life (Gagné et al., 2021),

future research may need to concentrate on the quality markings of such activity. However, it cannot be ruled out that the performance-based pay raises examined were simply too small to encourage task performance (e.g., Chen, 2018; Gneezy & Rustichini, 2000).

Procedural pay-setting justice

Another aspect that was investigated was procedural pay-setting justice, which was theoretically derived from justice theories (e.g., Rawls, 1971) and equity theory (Adams, 1965) and adapted to employee pay (e.g., Stråberg, 2010) to reflect employees' perceptions of transparency, consistency, and use of acceptable standards in regard to the organization's pay-setting procedures. Procedural pay-setting justice was found to be unrelated to the performance outcomes, with a relative explanatory value of 2 percent in task performance and 2.4 percent in contextual performance.

This result is generally in contrast to findings from research on procedural fairness where it has been shown that how organizational procedures are applied and/or perceived by employees is relatively important for the outcomes they produce (see Colquitt et al., 2001). This has also been shown in salary contexts, including for individual performance-based pay setting systems (e.g., Olafsen et al., 2015; Sung et al., 2017). Finding procedural pay-setting justice to be so weakly related to performance, in an organization that actively works to improve their pay setting, could, however, indicate that, even when an organization has actively worked to improve their pay-setting, procedural pay-setting justice may not result in increased performance when the pay-setting system is based on individual performance. Perhaps this can be explained by incongruences regarding managers' enacted and employees' perceived justice, which previous research on individual performance-based pay setting has demonstrated (Malmrud et al., 2020). However, it is conceivable that procedural pay-setting justice stimulates performance more indirectly via other variables such as perceived equity or pay-raise satisfaction. In accordance with equity theory (Adams, 1965), this latter explanation may apply if the perceived procedural fairness reflects that pay raises were based on correct and objective measures and determined using reliable criteria, and that there was an opportunity for some participation in the pay setting. The results regarding procedural pay-setting justice might

otherwise have a simpler explanation: perhaps the quality of the pay setting in the organization was not high enough among a sufficient number of employees for it to impact performance directly, or other potential factors (e.g., performance feedback) may have had a more direct positive impact on employee performance.

Support of psychological needs variables

Among the support of psychological needs variables, job autonomy and feedback evidenced positive relations with the performance outcomes, with an explanatory value of 52.5 to 45.8 percent for job autonomy, and 10.7 to 7.1 percent for feedback in regard to task and contextual performance. Social support from colleagues was unrelated to the performance outcomes (but still explained 4.9% and 3.2% of the variance in task and contextual performance, respectively). Without going into too much detail (as these variables mainly serve as a point of comparison), the results are in line with SDT, which often highlights that job autonomy has a particularly significant role for better performance in organizations, and which claims that the motivational role of job autonomy is much greater than that of instrumental rewarding (Deci et al., 1999; Gagné & Deci, 2005; Ryan & Deci, 2017).

Feedback, on the other hand, is a little more complicated. Several studies have shown that the feedback needs to be either constructively positive or constructively negative, with a sensitivity to people's feelings, if it is to positively impact performance (Deci et al., 1999; Kluger & DeNisi, 1996). Feedback is also a single component in supporting employees' psychological need for competence, rather than a major organizational strategy for competence fulfillment – like providing job autonomy is for autonomy fulfillment (cf. Cerasoli et al., 2016). Of course, in the context of our study, feedback may also have been integrated into the organization's pay procedures, suggesting that the positive role of feedback for performance may also demonstrate a need for integrating performance feedback into performance-based pay setting.

Future research may, however, use other measures of feedback that are less general and that, instead, cover different types of feedback (e.g., positively and negatively constructive feedback) to understand more about its value for

performance and how it could influence the psychological need for competence. This could also perhaps contribute to increasing our understanding of the type of feedback needed in order for a performance-based pay system to drive job performance. Overall, however, this study shows that feedback, even on a rather overall level, may encourage employee performance.

Furthermore, there could be many explanations for the finding that social support from colleagues was of no great relative value for the performance outcomes. Among the potential explanations is that social support from colleagues may have encouraged team-based performance by stimulating group cohesion (Ryan & Deci, 2017) or that it may have increased individual performance via its positive effects on employees' well-being, rather than directly (Chiaburu & Harrison, 2008). It could also be the case that supporting each other with various work tasks (as is captured by the measure) does not support employees' need for relatedness well enough and, thus, successfully doing so may depend on additional factors (e.g., strong friendships at work). Overall social support (including both from managers and from colleagues), however, has previously been found to be a stronger positive correlate of relatedness than it is of the other psychological needs (Van den Broeck et al., 2016). So, according to my own interpretation, relatedness is, perhaps, not the most important need to support if particular individual performance outcomes are desired, although it may have many other benefits, such as stimulating higher job satisfaction, higher work engagement, and positive emotions regarding one's work (Van den Broeck et al., 2016).

Finally, the hypothesis, based on previous SDT research (Cerasoli et al., 2016; Van den Broeck et al., 2016), that certain work factors are more related to the individual psychological needs than others can be tested by including psychological needs as mediators in future research, such that work factors are used as a point of comparison, for example, when it comes to performance-based pay setting systems relative importance for performance outcomes.

Practical and theoretical implications

From a practical point of view, Study I demonstrates that relatively cost-effective methods (such as providing employees with autonomy) may have

larger potential to encourage job performance as compared to administering a rather complex performance-based pay system in organizations (Pfeffer, 1997). From a theoretical point of view, Study I showed weak support for expectancy theory (Vroom, 1964) inspired assumptions, which much of the favoring of performance-based pay systems in modern organizations has been built on (Pfeffer, 1997, 1998; cf. Murphy, 2020).

Study II: Grouping together compensation characteristics: What combinations work best?

Study II took the results of the first study further. It aimed at identifying groups (i.e., different profiles) with similar pay-related outcomes and perceptions regarding pay setting, among employees in private industries of the Swedish labor market, based on certain pay-related theoretical perspectives such as justice theories (e.g., Leventhal, 1980) equity theory (Adams, 1965), expectancy theory (Vroom, 1964) and tournament theory (e.g., Lazear, 2018). Employee pay levels, perceived horizontal pay dispersion levels, perceptions of transactional leadership, and procedural pay-setting justice levels were the variables that formed the basis for the profile analysis, with the revealed profiles being labeled ‘compensation profiles.’ Secondly, this study aimed at exploring the differences between compensation profiles in regard to work-related outcomes (job performance and turnover intention) and health-related outcomes (i.e., self-rated health and exhaustion). Thirdly, this study aimed at contributing to a holistic understanding of the revealed differences between the profiles by also taking into account demographic background variables (age, education, sex, managerial status, and occupational status) and psychosocial work environment factors (job demands, job control, and social support; based on the job demand–control–support model; Karasek, 1979; Karasek & Theorell, 1990).

Identifying compensation profiles

With respect to the first aim, six compensation profiles were identified that had rather different characters. For example, the compensation profiles reflected perceptions of pay compression (i.e., low horizontal pay dispersion;

Bloom, 1999) versus pay dispersion (i.e., moderate and high levels) in combination with different levels of transactional leadership and procedural pay-setting justice (e.g., high/high, low/low & low/high), and in combination with four different pay levels. Given that expectancy theory (Vroom, 1964) inspired perspectives (e.g., Han et al., 2015; cf. Shaw, 2014) claim that instrumentality (in this study reflected by transactional leadership) and procedural justice go hand in hand, and thus form a kind of quality marker for the pay setting, these were together labeled as “procedural quality.” The one profile that showed a low/high pattern was labeled ‘mixed procedural quality,’ referring to low transactional leadership and high procedural pay-setting justice.

The identified compensation profiles were labeled as follows: Profile 1: ‘Low pay: Compressed with low procedural quality’; Profile 2: ‘Slightly below average pay: Compressed with mixed procedural quality’; Profile 3: ‘Slightly below average pay: Highly dispersed with low procedural quality’; Profile 4: ‘Average pay: Compressed with high procedural quality’; Profile 5: ‘Average pay: Moderately dispersed with moderate procedural quality’; and Profile 6: ‘High pay: Highly dispersed with high procedural quality.’

Differences between compensation profiles

Regarding the second aim (i.e., regarding differences in work-related and health-related outcomes), there were four main findings that emerged from this study. First, there was a general tendency that higher-income profiles evidenced the most favorable associations with the outcomes, especially with the health-related outcomes, which provides support for previous research that has shown similar trends (e.g., Ettner, 1996; Sieweke et al., 2017). However, in line with previous research (cf. Thibault-Landry et al., 2017), dependent on the levels for other compensation characteristics, one of these profiles (Profile 4 ‘Average pay: Compressed with high procedural quality’) evidenced among the most favorable levels for all outcomes, while the level of task performance of another (Profile 6 ‘High pay: Highly dispersed with high procedural quality’) was more moderate. In addition, another profile (Profile 5 ‘Average pay: Moderately dispersed with moderate procedural quality’) evidenced the lowest task performance level of all profiles, and was characterized by rather

moderate levels of turnover intention, work-related exhaustion, and self-rated health. Thus, at this point the findings point to pay levels not giving a complete picture of the differences that can arise from work-related compensation, even if they have a certain positive significance.

The second main finding regarding outcomes was that Profile 4 ('Average pay: Compressed with high procedural quality') evidenced the highest task performance and lowest turnover intention, and also had among the most favorable levels for the health-related outcomes. Another profile with a similar character, but which was characterized by high pay levels and was highly pay-dispersed (Profile 6), evidenced lower task performance and higher turnover intention as compared to Profile 4. In line with some of the previous research (e.g., Bloom, 1999, Bloom & Michel, 2002), this result thus provides some support for the hypothesis that employees will perform better and be less likely to resign if they perceive their pay to be equal to that of their coworkers, rather than unequal. However, some have argued (e.g., Shaw, 2014) that this will not occur if the pay differences are performance based and procedural justice is high. This study shows, conversely, that procedural pay-setting justice can also be important for pay perceived as compressed.

A third main finding was that Profile 6 ('High pay: Highly dispersed with high procedural quality') evidenced fairly positive work-related outcomes, and very positive health-related outcomes. This indicates, in line with a previous literature study (Shaw, 2014), that high pay and high procedural quality could mitigate potential negative consequences of high horizontal pay dispersion or, conversely, strengthen the positive effects of having a high pay regarding performance, turnover, and health. The question is, however, whether it is necessary to have pay differences among coworkers (such differences have been suggested to drive performance by supporters of performance-based pay systems; Lazear, 2018), given that perceiving compressed pay along with having rather similar combinations in other regards (e.g., procedural quality) gave rise to better work outcomes.

The fourth main finding concerned the outcomes of Profile 2 ('Slightly below average pay: Compressed with mixed procedural quality'), where the 'mixed' pattern refers to relatively low transactional leadership and relatively high procedural pay-setting justice. While this profile evidenced rather similar levels of task performance and self-rated health to other profiles of rather

similar character with respect to pay level, it evidenced among the lowest levels of turnover intention and of work-related exhaustion, the former level being rather similar to that for the highest-paid profile, Profile 6. This again points to pay-compressed profiles (Bloom, 1999) that are procedurally fair (Stråberg, 2010) having a certain advantage over pay-dispersed profiles. It also illustrates that pay without major instrumental elements (reflected by high transactional leadership) in combination with high procedural pay-setting justice might yield rather positive outcomes (cf. Olafsen et al., 2015). This is illustrated, for instance, by Profile 2 evidencing lower turnover intention and slightly lower work-related exhaustion than Profile 5, which had fairly comparable procedural quality (although slightly more modest procedural pay-setting justice) and higher salaries. One objection to the basis of these findings, however, could be that they are undermined by not having identified a pay-dispersed group other than those whose members had both the very highest incomes and who perceived large pay differences in combination with high procedural (pay-setting) quality.

Finally, one other set of findings deserves commentary: namely, that the profiles with the most negative outcomes in regard to the work-related and health-related outcomes, Profile 1 ('Low pay: Compressed with low procedural quality') and Profile 3 ('Slightly below average pay: Highly dispersed with low procedural quality'), did not differ much in regard to the outcomes. The former, which was pay compressed, however, had worse conditions (i.e., lower salary and lower procedural quality). This may indicate that in jobs that do not offer a high wage, any pay differences would require more robust procedures than if the pay were compressed in order for the pay system to positively impact work-related and health-related outcomes.

Demographic and psychosocial characteristics of the compensation profiles

With regard to the third aim (i.e., concerning differences in demographic background variables and psychosocial work environment factors), among the average-to-high-income profiles, the profile with moderate pay dispersion and moderate procedural quality (Profile 5) stood out in a demographic sense in that its lower proportion of managers was a similar characteristic to that found

in the profiles with below average incomes. With respect to what characterizes a good psychosocial work environment (i.e., reasonable job demands, high job control, and high social support; e.g., Karasek & Theorell, 1990), this profile was worse off than the profiles with average-to-high pay levels. Regarding the other two average-to-high-income profiles that were associated with the most positive outcomes, they were rather similar to each other but not with other profiles. However, comparing the two, Profile 6 ('High pay: Highly dispersed with high procedural quality') contained a higher proportion of white-collar workers than Profile 4 ('Average pay: Compressed with high procedural quality'), while Profile 4 was characterized by lower job demand levels than Profile 6. Taken together, it was mainly Profiles 4 and 6 that were in many respects comparable (even though the averagely payed Profile 5 showed some similarities with these two profiles, it actually showed more similarities with the other profiles with below average pay levels).

Regarding the profiles with pay levels below the average, the main difference was that Profile 1 ('Low pay: Compressed with low procedural quality') had a lower proportion of workers in white-collar occupations and fewer members with a university education compared to the other profiles, especially Profile 3 ('Slightly below average pay: Highly dispersed with low procedural quality'). Profile 1 also had lower job control and lower social support levels than the other profiles with below average pay levels, especially in comparison with Profile 2 ('Slightly below average pay: Compressed with mixed procedural quality'). That the profile with the lowest pay level showed comparable values in regard to the outcomes to Profile 3 should thus be seen in light of the fact that it had worse conditions.

Practical and theoretical implications

From a practical point of view, Study II demonstrates that whether the pay structure is perceived as compressed or dispersed does not have to matter greatly as long as the salaries are relatively high and the pay setting has been carried out with adequate methods (Shaw, 2014). Nevertheless, there may still be certain advantages to employees perceiving that the pay is compressed (Bloom, 1999), insofar as it is accompanied by high procedural quality and, above all, the pay setting is characterized by procedural justice (Stråberg,

2010). However, in order to increase our understanding of what these results mean in a more practical way, future research could include type of pay system (e.g., indirectly or directly performance-based, traditional or egalitarian) as an indicator in identifying latent compensation profiles.

From a theoretical point of view, the explorative findings of Study II demonstrate the complexity and importance of the interrelations of compensation characteristics, where many factors are involved in a broader system. This view is supported by almost all theories related to employee pay, but has rarely formed the basis for empirical research. Thus, there is a need to continue on the established path, with more person-centered approaches (Bergman & Magnusson, 1997) where holistic experiences of pay systems are taken into greater account in light of relevant theories in the field.

Study III: An SDT perspective on performance-based compensation

This study took the results of the first two studies even further. Based on our compilation of previous research, Study III aimed at providing an update on SDT's (Deci & Ryan, 1985) assumptions regarding employment-related compensation; special emphasis was put on the effects of performance-based compensation (e.g., individual performance-based pay setting and bonus programs) on work-related outcomes (e.g., employee performance and retention) and on employee well-being and psychological need satisfaction at work. The study also intended to offer practical advice from an SDT perspective and to inspire new SDT-based research on the topic.

The first question of this study concerned the types of work motivation that may be most likely to be affected by a performance-based compensation system. In this regard, previous SDT research has established rather well that performance-based compensation could lead to increases in extrinsically controlled work motivation, while rendering small, or negative, effects on autonomous work motivation (e.g., Kuvaas et al., 2016, 2020; cf. Deci et al., 1999; Cerasoli et al., 2014). Autonomous work motivation has been found to be a positive correlate of, among other things, performance quality (Cerasoli et al., 2014, 2016), pro-activity performance, intentions to stay in the

organization, and employee well-being (e.g., Gagné et al., 2015). Extrinsically controlled work motivation, on the other hand, has been found to be a poor or negative correlate of certain work outcomes, such as job performance quality and employee well-being (Cerasoli et al., 2014; Gagné et al., 2015; Van den Broeck et al., 2021).

According to SDT, these motivational effects are due to salient performance–reward contingencies in organizations encouraging employees to engage in their work in order to receive the available rewards (by meeting the performance criteria), thus inducing a certain control over employees’ work situation and thereby lessening employee autonomy (Deci et al., 1999). However, there is one meta-analysis (Cameron & Pierce, 1994) regarding performance-based compensation whose findings contradict the motivational effects that SDT maintains; also, a plethora of individual studies (for a review, see Shaw & Gupta, 2015) have argued that the type of motivation (i.e., what quality a certain motivation carries) does not matter very much as long as a performance-based system drives performance – that is, that one type of motivation is not necessarily better or worse than the other in this respect. In general, however, there is quite extensive scientific support for the assumption that autonomous work motivation brings with it many advantages as compared to extrinsically controlled work motivation (e.g., Gagné et al., 2015, 2021).

Even though there is general disagreement in the research regarding how work motivation types may underlie the effects of performance-based compensation, there has been some progress in recent times. Fairly recent meta-analyses (Cerasoli et al., 2014, 2016) have established that organizations might be able to counteract the potential encouragement of extrinsically controlled work motivation resulting from pay or incentive systems by reducing the saliency of performance–reward connections (i.e., the instrumentality) in the reward criteria and pay procedures. The emphasis on clear connections between performance and rewards, which have often been presented as decisive for performance-based compensation to have the intended effects (e.g., Lazear, 2018), has thus been called into question (see Gagné & Forest, 2020). The latest substantial research on the topic suggests, rather, that the best performance–reward connections are those that make it rather difficult for employees to exactly understand how to perform to get a

certain reward while at the same time encouraging an underlying sense that their performance matters for their pay (Cerasoli et al., 2014, 2016).

The second question of Study III concerned the potentially modifying role of horizontal pay dispersion (i.e., pay differences on the peer level), especially with respect to fairness perspectives regarding employment-related compensation. Salient (or large) horizontal pay dispersion has been identified as a potential negative modifier (at least for certain groups of employees) regarding performance-based compensation systems' associations with work-related outcomes. The research on horizontal pay dispersion in organizations, however, has produced mixed results (i.e., both negative and positive correlations have been reported, e.g., regarding work performance outcomes; Bloom, 1999; Shaw, 2015). In accordance with assumptions in behavioral economics theories, for example, on loss aversion (Kahneman et al., 1991; Kahneman & Tversky, 1979) and inequality aversion (Fehr & Schmidt, 1999), perceived or real economic losses or disadvantages may carry with them more disutility than would gains carry with them utility.

Relatedly, in a natural field experiment (Card et al., 2012), it was observed that after one of the experiment groups was made aware of the actual horizontal pay differences, those finding themselves worse off had decreased job satisfaction and increased job search intentions. Those favored, on the other hand, were unaffected by the information, thus indicating that it was the worse off who were impacted, rather than the knowledge stimulating job satisfaction and retention among those who found themselves to be favored. Whether these results should be interpreted, in line with the theory of inequality aversion (Fehr & Schmidt, 1999), as demonstrating that wage differences negatively affect those who receive lower wage increases, and thus may hamper these employees' motivation to engage in their jobs, rather than the differences encouraging motivation among those favored (Card et al., 2012), or as a 'sorting effect' (Shaw, 2014) is, however, disputed. The study also showed that as long as employees are not aware of the size of the wage differences, such differences did not affect job satisfaction or job search intentions (Card et al., 2012). As individual performance-based pay setting clearly aims to make pay differences more salient among coworkers, one conclusion was that future studies need to focus on such perceptions, rather than being limited to actual pay dispersion levels. In addition, future research

needs to take into account that those with poorer pay outcomes are likely to be more affected by it than other groups may be (Vansteenkiste & Deci, 2003).

This is also reminiscent of assumptions in social comparison theory (Festinger, 1954) in two ways. On the one hand, employees may be discouraged by a pay comparison and thus lower their work effort if they are unable to construe a worse salary outcome than others as being a kind of clue regarding how to improve their work. On the other hand, if they are able to interpret the pay difference as a signal that improvement is needed (e.g., because their managers give them constructive feedback on how to improve their performance) and feel that it is something that they can affect in the future (i.e., by increasing their engagement), they may potentially increase their motivation. Much more research needs to be done to understand the effects of performance-based compensation on those who are disadvantaged by it (e.g., low performers). In this regard, social comparison theory is a possible point of departure.

In other research, the procedural fairness of reward determinations was identified as a potential positive modifier of the outcomes that performance-based compensation may render. A potential explanation for this is found in justice theories (e.g., Colquitt, 2001) which hold that procedural justice contributes to perceiving that things have been done correctly and objectively, which has the potential to alleviate certain injustices (Rawls, 1971). While it is rather well established that performance-based pay systems provide better results if they are procedurally fair (Shaw, 2014), research is still needed that investigates whether this also applies to traditional and egalitarian pay systems; if so, it should be accompanied or followed by investigations into whether procedural fairness might even out the potential beneficial effects of performance-based systems on job performance. At present, it is unclear whether traditional and egalitarian pay systems also require fairly extensive administration to function well. Future research needs to put more focus on sorting this out.

The third question concerned the estimated employee attraction efficacy of performance-based compensation. While many of the theories making positive assumptions about performance-based compensation assume that organizations with pay systems based on it are likely to attract and retain top performers (see Shaw, 2014), using such systems might come with a potential

disadvantage: the attraction of individuals whose work motivation is primarily driven by money (i.e., it risks attracting those with high levels of extrinsically controlled work motivation) (Derfler-Rozin & Pitesa, 2020). This calls for new research about how performance-based compensation may attract employees. In this regard, future research could establish what type of job applicant's performance-based compensation systems may be most likely to appeal to. Will it attract autonomously motivated individuals or those who are motivated by extrinsic sources? In addition, more research is also needed that sheds light on the question of what might happen to employee motivation over time among employees who are initially driven by autonomous motivations, but who work in an organization that prioritizes motivating through monetary rewards. More research is needed to answer such questions.

Practical and theoretical implications

When it comes to practical SDT-based recommendations, Study III suggests that securely-contracted pay agreements, where performance–reward connections are less apparent, constitute a robust alternative to the use of performance-based compensation (e.g., individual performance-based pay setting and bonus programs) to motivate working. It seems better to focus on addressing employees' psychological need satisfaction by designing work so that it meets employees' autonomy, relatedness, and competence needs, and also to train managers so that they facilitate fostering a friendly work environment with development opportunities. In terms of future research recommendations, comparisons between different types of pay systems (traditional or egalitarian vs. performance-based) must be made on a much fairer basis than what has been done so far. Such investigations also need to take into account how employees' motivation, psychological needs satisfaction, and well-being are affected by their pay-system experiences in order to understand the eventual effects on work performance and retention.

Chapter 12. Methodological considerations

Limitations

The empirical studies of this dissertation have some limitations that deserve commentary. There are also a number of more specific limitations in the empirical studies that are not addressed here but that are mentioned in the studies.

Causality

A major point of contention concerns the causality of the findings. This is a limitation of almost all research but is especially (when quantitative statistics are used) the case in research that is relational and where there are limited possibilities to isolate the relations from other influencing factors (i.e., third-variable problem; Bollen, 1980). This limitation is also potentially more likely when the sustainability of statistical relationships over time is not determined (as in cross-sectional research) and when it is difficult, other than based on theory, to ascertain the direction of a relationship (Cook et al., 2002).

All of the dissertation's studies are affected by this limitation. Although in regard to Study III (i.e., the literature compilation), this limitation is difficult to gauge because its conclusions were based on a large number of studies that used a large variety of study designs permitting differing degrees of causality to be inferred. In Study I and Study II, on the other hand, this limitation is more evident, as these studies were based on cross-sectional survey data, thus not involving a time lag between hypothesized antecedents and outcomes. Even though Study I and Study II provide evidence for associations between independent variables and the different outcome variables (Study I) and differences in the outcome variables of latent profiles (Study II), the revealed relations do not indicate whether the independent variables and latent profiles might have, time-wise, just preceded the outcome variables or, potentially, if

a third variable might have ‘caused’ or influenced any of the relationships (see Bollen, 1989). However, since a source for establishing the most probable direction of the statistical relationships is previous research and theory (see Griffiths & Tenenbaum, 2009), interpretations were made based on this material, which included meta-analyses (e.g., Cerasoli et al., 2014, 2016). In addition, in Study I the survey distribution was preceded by the organization recently completing its annual determination of pay raises, and employees had similar performance criteria (in terms of each department’s manager specifying by the organization’s general criteria). Nevertheless, it was not possible to control for other potential factors that might have characterized the situation at the organization shortly before, or over the time in between the pay setting and the end of the surveying. Taken together, studies similar to Study I and Study II, but which incorporate longitudinal research and are able to reduce the risk of potential third-variable problems, are needed, such as field experiments.

Self-rated measurements

The heavy reliance on self-rated measurements in Study I and Study II constitutes a potential limitation in these studies (see Spector, 1994). One criticism of self-rated measurements is that they may not capture an objective reality very well, thus potentially not providing evidence for the occurrence of a certain phenomenon (Spector, 2006). However, as these studies focused on measuring employees’ subjective experiences of pay setting (and other phenomena), gathering subjective ratings could be considered the best possible approach for capturing perceptions of real-life events (Bartlett, 2005). Relatedly, others have argued (cf. Podsakoff et al., 2012) that certain subjective phenomena that exist or occur within a natural environment (e.g., in organizations) can be properly captured by measuring individuals’ perceptions.

A second criticism is that participants may be overly optimistic when evaluating themselves, such that they indicate that they performed well even if they did not do so (i.e., a social desirability bias; Maccoby & Maccoby 1955). However, previous research has shown that self-rated outcomes, similar to those in Study I and Study II, correlate relatively well with other

types of measures of the same phenomenon (for task performance, see, e.g., Heidemeier, 2005; for health-related outcomes, see, e.g., De Salvo et al., 2006; De Ridder et al., 2000; Jylhä et al., 2006; for turnover intention, see, e.g., Griffeth et al., 2000).

A related potential limitation of Study I and Study II concerns the risk for mono-method bias (Campbell & Fiske, 1959), which may occur when the independent and dependent variables overlap too much as a result of them being measured through the same source (e.g., a survey), potentially leading to an overestimation or an underestimation of the statistical effects. As most independent and outcome variables in Study I (the exception was performance-based pay-raise amount and the control variables that were obtained from register data) and almost all of the variables in Study II (except for a few of the demographic background variables) were measured through surveys, the results may have been affected by this limitation. It has, however, been argued that the risk of mono-method bias is often overstated for studies investigating subjective phenomena such as is found in organizations (cf. Spector, 2006). Nevertheless, the results of these two studies are in need of replication through other measurements capturing the same phenomena regarding work-related and health-related outcomes (e.g., through supervisor-rated performance measures and biological health indicators).

Single items

Another potential limitation concerns the use of single items in Study II to measure certain phenomena (i.e., perceived horizontal pay dispersion, turnover intention, self-rated health and work-related exhaustion). Single items may not be as good as multi-item measures for capturing an entire phenomenon (Hays et al., 2012). However, the use of single items does not necessarily create a problem with validity as long as the phenomenon being captured does not contain more than one dimension that can be captured by a single item (Gilbert & Kelloway, 2014). Most of the single-item measurements in Study II captured relatively one-dimensional phenomena, especially with regard to perceived horizontal pay dispersion, turnover intention, and self-rated health. To some extent, however, work-related exhaustion may be considered an exception as its measurement did not include

items capturing other aspects of work fatigue, such as how a person's work may lead to fatigue in regard to their life outside of work. However, single-item measurements similar to the one that was used in Study II have been found to correlate well with multi-item measurements of work-related exhaustion (e.g., West et al., 2009). Nevertheless, future research could replicate the findings of this dissertation by including multi-item measures of the same phenomena.

Potential variable-specific limitations

A final potential limitation of Study I and Study II concerned multicollinearity (Daoud, 2017), as a few independent variables (especially in Study I) were rather highly correlated. This may have resulted in these variables' relations to the outcome variables potentially not being distinguished because their associations were affected by their internally high correlation (which could result in unreliable significances or insignificances). In particular, there was a high bivariate correlation (.73) between 'instrumentality of the pay system' and 'procedural pay-setting justice' in Study I. The former variable evidenced a weak positive bivariate correlation that was not significant, whereas the beta weights from the regression evidenced a significant negative relationship with the performance outcomes, thus indicating that its relations had been influenced by the inclusion of other variables (i.e., the other components of performance-based pay variables in step 2 and the support of psychological needs variables in step 3). There was uncertainty regarding whether instrumentality of the pay system was negatively related to the performance outcomes, as evidenced by the beta weights. However, there was reason to deem, on the whole, that 'instrumentality of the pay system' had a very weak relative significance, in line with the results of the supplementary RWA³. Perhaps though, the high correlation described above might have contributed to procedural pay-setting justice being unrelated to the performance outcomes (despite it evidencing

³ RWA separates the independent variables based on the bivariate correlations to the greatest extent possible, making them their orthogonal counter-parts, while it also accounts for the beta-weights obtained from the model as a whole before calculating the predictor variables relative weights in regard to an outcome variable. Thus, RWA partly mitigates the risk of the type of over and underestimation that regression models can sometimes produce (Johnson, 2000).

significant positive bivariate correlations with the performance outcomes) due to the instrumentality of the pay system or to other rather highly correlated variables (e.g., feedback) that may have suppressed its relations to performance. However, the supplementary RWA was not supportive of such an interpretation, as it confirmed a low relative importance of procedural pay-setting justice for the performance outcomes.

In addition, in Study II there was a rather high correlation (.54) between transactional leadership and procedural pay-setting justice. This likely contributed to the detected latent profiles not differing very much in respect to these factors (with one major exception), thus making it rather difficult to distinguish the impact of these factors individually. However, factor analysis confirmed an acceptable discriminant validity of these measurements, and the common patterns of these variables were partly in line with one another (i.e., as ‘procedural quality’) based on theoretical perspectives about employee compensation. Finally, the analysis of multicollinearity in both studies indicated that none of the independent variables exhibited statistically critical levels of multicollinearity with another independent variable.

Generalizability

As regards the generalizability of the findings, there are some potential limitations that can be addressed by future research. To begin with, Study I and Study II were carried out in a single country (Sweden). Study I examined a single organization in which only white-collar workers and academics were paid according to individual performance-based pay setting, whereas Study II was based on a nationally representative sample of private sector workers. This limits the generalizability of these studies, and thus Study I calls for replication in other companies and among blue-collar workers, while Study II calls for replication among public employees in Sweden and elsewhere, and among private sector workers in other national contexts. In addition, the results of Study I call for replication through comparative research that is able to include the effects of individual performance-based pay setting in organizations that have not worked as comprehensively with their pay setting, and able to draw comparisons with the effects regarding perceptions of other pay systems (e.g., traditional). In terms of generalizability, the conclusions of

Study III were more robust, as they were based on previous findings relating to many different national and organizational contexts, and they were also generally supportive of the findings in Study I and Study II. Thus, Study III suggests that the findings of Study I and Study II may have a larger bearing than their rather context-limited samples indicate.

Chapter 13. Concluding remarks

Despite some methodological limitations, this dissertation contributes to the literature concerning the implications of pay and pay setting for employees' work-related attitudes, behavior, and health. All in all, the dissertation as a whole (including the review of previous research in the introductory chapters) demonstrates that pay setting is a complex phenomenon and must be understood in relation to factors such as pay levels, the amount given in reward distributions, perceptions of pay differences, performance–reward connections, procedural justice, and leadership.

To begin with, Study I demonstrated that work factors addressing employees' psychological needs may have a larger positive impact on employee task and contextual performance as compared to various aspects of individual performance-based pay setting. However, the investigation also revealed that the importance of individual factors varied. Among these, performance-based pay-raise amount predicted contextual performance but not task performance, while job autonomy (addressing the need for autonomy) and feedback (addressing the need for competency) were positively related to both of the performance outcomes. The explanatory values of instrumentality of the pay system, procedural pay-setting justice, and social support from colleagues (addressing the need for relatedness) were, however, low. In addition, job autonomy evidenced the largest positive importance of all variables.

Study II took these results further by examining whether there are different combinations (i.e., profiles) of compensation characteristics that may impact work-related and health-related outcomes. The investigation identified six compensation profiles among private sector employees in Sweden that differed in regard to the outcome variables. The results showed that a pay compressed profile that was also characterized by average pay levels and high procedural quality had the most positive levels for the work-related outcomes.

In terms of health-related outcomes, however, a similar profile, but with higher pay and that was pay-dispersed had equally positive health-related outcomes. Another profile that evidenced low levels of turnover intention and work-related exhaustion was the combination of pay levels slightly below average, low horizontal pay dispersion, low transactional leadership, and relatively high procedural pay-setting justice. Worse combinations with respect to work-related and health-related outcomes were characterized by low levels in all compensation characteristics (one profile), rather low levels for all characteristics but with high horizontal pay dispersion (one profile), and moderate levels for all characteristics (one profile).

After analyzing the groups' average demographic representation and perceived psychosocial work environment levels, a main finding was, however, that the two profiles with the most positive outcomes (one regarding all outcomes, and the other regarding health-related outcomes in particular) stood out from the rest (they had, for example, much higher managerial representation and better psychosocial work environments).

The study of work-related rewards and perceptions of pay setting as a common entity is in line with many theoretical perspectives on this topic, but it has seldom formed the basis for empirical research. It is thus recommended that future research utilizes holistic approaches to a greater extent (e.g., latent profile analysis (LPA); Gibson, 1959) when examining the potential effects of compensation experiences.

Finally, Study III took the results of the first two studies further by compiling previous (international) research on performance-based compensation (where individual performance-based pay setting is one aspect) from the lens of self-determination theory (SDT; Deci & Ryan, 1985). Overall, it was described how work is not all about performance or being rewarded, and that there are many other aspects that organizations need to be able to take into account in order to stimulate better performance while also avoiding increased turnover and lower employee well-being.

The third study also described that if certain components of a performance-based compensation system (e.g., performance–reward connections) give rise to negative effects on one or more of the psychological needs or on employee well-being (which has been assumed but tested on a relatively small scale), it may give rise to lower autonomous work motivation and increase extrinsically

controlled work motivation (Gagné & Deci, 2005). Given the consequences that these motivational effects are expected to have for employee performance (e.g., less focus on quality), organizations must ask themselves whether they should retain the elements that contribute to this, or if they should design their pay system so that it does not risk giving rise to extrinsically controlled work motivation.

One way to reduce this risk, which is supported by rather considerable research evidence (e.g., Cerasoli et al., 2014, 2016; cf. Deci et al., 1999), is for organizations to decrease the saliency of performance–reward connections in their pay setting by making it harder for employees to exactly identify how to perform in order to get the rewards, while also making sure that employees have an underlying sense that their performance does matter for their pay. For organizations to achieve this, as suggested by Study III, securely-contracted pay agreements where the salary is primarily set according to the difficulty of the job position in combination with other means of encouraging job performance and employee retention (e.g., establish common purposes, give job autonomy, use constructive positive performance feedback, and stimulate group cohesion) could be utilized as a potentially strong alternative to the presently increasingly popular performance–reward approach to employee pay. Thus, implementing a strategy for meeting employees’ psychological needs for autonomy, relatedness, and competence at work (Van den Broeck et al., 2016) is potentially the crucial key to encouraging performance and retention that many organizations are seeking, and such a strategy is likely to have more of a valuable motivational effect than would promoting monetary rewards (see Pfeffer, 2018; Gagné et al., 2021).

The results of this dissertation point in the direction that in order to facilitate their employees’ performance and well-being, organizations should attend to employees’ basic psychological needs and ensure securely-contracted pay agreements where the salary is compressed and less overtly associated with performance.

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Appendix 1: References, scale ranges, and items used for the self-reported measurements

This section presents all references, scale ranges, single-item questions, and all items for the measurements that were combined from more than one item (i.e., index variables) that were self-reported, except for self-reported control variables (study I) and demographic background variables (study II).

Measures of Study I

Independent variables

1. Instrumentality of the pay system

This scale was comprised of three items designed to capture aspects of instrumentality, according to expectancy theory (Vroom, 1964), regarding pay systems. Item 1 was developed for the aim of Study I; item 2 was based on Colquitt (2001); and item 3 on Yukl (1999).

Items

1. To what extent do you think that your pay is based on your work performance?
2. To what extent do your pay and the work you actually do relate to each other?
3. My supervisor explains what has to be done in order to receive rewards such as a pay increase or promotion.

Response scales

Items 1 and 2: 1 (to a very small extent) – 5 (to a very large extent).

Item 3: 1 (strongly disagree) – 5 (strongly agree).

2. Procedural pay-setting justice

Based on Colquitt (2001), and adapted to the pay-setting context.

Items

To what extent...

1. ...have you been able to express your views and feelings on pay-setting issues?
2. ...have you had an influence over the process that determined your pay?
3. ...have you had the opportunity to present your opinions on how the pay-setting went?
4. ...has the pay-setting process been applied in a consistent manner?
5. ...has the pay-setting been conducted impartially?
6. ...has the pay-setting process been based on accurate information?
7. ...has the pay-setting process been ethically and morally acceptable?

Response scale

1 (to a very small extent) – 5 (to a very large extent)

3. Job autonomy

Based on Hackman and Oldham (1975); Sverke and Sjöberg (1994); and Walsh et al. (1980).

Items

1. I have a sufficient degree of influence regarding my work.
2. I can make my own decisions on how to organize my work.
3. There is opportunity for me to take initiative in my work.

Response scale

1 (strongly disagree) – 5 (strongly agree)

4. Feedback

Based on Hackman and Oldham (1975).

Items

1. I receive continual feedback on my work performance from my supervisor.
2. My manager generally lets me know how satisfied he/she is with my work effort.
3. Performance feedback from my supervisor is usually received in direct connection with carrying out the work.
4. My manager generally lets me know if I am carrying out my work satisfactorily or not.

Response scale

1 (strongly disagree) – 5 (strongly agree)

5. Social support from colleagues

Based on Näswall et al. (2006).

Items

1. I usually receive help from my co-workers when something needs to be done quickly.
2. I always receive the help I need from my co-workers when difficulties in my work arise.
3. There is always a co-worker to turn to when I encounter problems at work.

Response scale

1 (strongly disagree) – 5 (strongly agree)

Outcome variables

6. Task performance

Based on Koopmans et al. (2014).

Items

In the past 3 months...

1. ...I have managed to plan my work so that it was done on time.
2. ...my planning has been optimal.
3. ...I have been focused on the results that were to be achieved in my work.
4. ...I have been able to focus on my main work assignments.
5. ...I have been able to perform my work well within the shortest possible time.

Response scale

1 (strongly disagree) – 5 (strongly agree)

7. Contextual performance

Based on Koopmans et al. (2014).

Items

In the past 3 months...

1. ...I have taken on extra responsibility.
2. ...I started working on new work tasks on my own initiative after finishing previous tasks.
3. ...I have taken on new work challenges when the opportunity arose.
4. ...I have kept my work-related knowledge up to date.
5. ...I have kept my work skills up to date.

6. ...I have come up with creative solutions to work problems
7. ...I have looked for new challenges in my job.
8. ...I have actively contributed to company operations.

Response scale

1 (strongly disagree) – 5 (strongly agree)

Measures of Study II

Independent variables

8. Monthly pay-level amount

Developed for the aim of Study II.

Item

1. How much (in Swedish crowns) do you usually earn each month through your regular employment (before the tax deduction)?

9. Perceived horizontal pay dispersion

Developed for Study II.

Item

1. To what extent are there salary differences among employees with similar jobs at your workplace?

Response scale

1 (to a very small extent) – 5 (to a very large extent)

10. Transactional leadership

Based on Yukl (1999).

Items

1. My supervisor checks the quality of my work.
2. My supervisor asks me to report on how my work is going.
3. My supervisor explains what has to be done in order to receive rewards such as a pay increase or promotion.
4. My supervisor reward employees who positively contribute to the organization.

Response scale

1 (strongly disagree) – 5 (strongly agree)

Outcome variables

Work-related outcomes

11. Task performance

Based on Koopmans et al. (2014).

Items and response scale

Same as for task performance in Study I. See the items presented below the subheading Measure of Study I.

12. Turnover intention

Based on Sverke and Sjöberg (2000).

Item

1. I feel like resigning from my current employment.

Response scale

1 (strongly disagree) – 5 (strongly agree).

Health-related outcomes

13. Self-rated health

Developed by Odéen et al. (2013, p. 245).

Item

1. How would you rate your general state of health?

Response options

(1) very poor, (2) rather poor, (3) neither good nor poor, (4) rather good, (5) very good.

14. Work-related exhaustion

Based on Maslach et al. (1996).

Item

1. I feel completely exhausted when the work day is over.

Response scale

1 (strongly disagree) – 5 (strongly agree)

Psychosocial work environment factors

Based on Beehr et al. (1976) (job demands), and Näswall et al., (2006) (social support).

15. Job demands

Item

1. I am given enough time to complete my work tasks. (Reversed before analysis)
2. I fairly often have to work under heavy time pressure.
3. I often have too much to do at work.

Response scale

1 (strongly disagree) – 5 (strongly agree)

16. Job control

Items and response scale

Same as for job autonomy in Study I. See the items presented below the subheading Measures of Study I.

17. Social support

Item

1. I always receive the help I need from my co-workers when difficulties in my work arise.
2. My manager helps me when I encounter problems in my work that I cannot solve by myself.
3. I usually receive help from my co-workers when something needs to be done quickly.
4. I can always ask my manager for advice when I encounter problems at work.
5. There is always a co-worker to turn to when I encounter problems at work.
6. I always receive help from my manager when difficulties in my work arise.

Response scale

1 (strongly disagree) – 5 (strongly agree)