



Handelshøyskolen BI

GRA 19703 Master Thesis

Thesis Master of Science 100% - W

Predefinert informasjon

Startdato: 09-01-2023 09:00 CET
Termin: 202310
Sluttdato: 03-07-2023 12:00 CEST
Vurderingsform: Norsk 6-trinns skala (A-F)
Eksamensform: T
Flowkode: 202310||11184||IN00||W||T
Intern sensor: (Anonymisert)

Deltaker

Navn: Camilla Andreassen og Eirill Hoff

Informasjon fra deltaker

Tittel *: The Mediating Role of Motivation on the Relationship between Procedural Justice, Affective Commitment and Turnover Intention
Navn på veileder *: Anders Dysvik

Inneholder besvarelsen Nei **Kan besvarelsen** Ja
konfidensielt **offentliggjøres?:**
materiale?:

Gruppe

Gruppenavn: (Anonymisert)
Gruppenummer: 181
Andre medlemmer i gruppen:

Master of Science Thesis

**- The Mediating Role of Motivation on the
Relationship between Procedural Justice,
Affective Commitment and Turnover
Intention -**

Hand-in date:

03.07.2023

Campus:

BI Oslo

Supervisor:

Anders Dysvik

Examination code and name:

GRA 1974 Master Thesis

Programme:

Master of Science in Leadership and Organizational Psychology

Acknowledgements

To begin with, we would like to express our gratitude to our thesis supervisor, Professor Anders Dysvik, from the Department of Leadership and Organizational Behavior at BI Norwegian Business School. His expertise within the field of Organizational Behavior and his extensive research knowledge has been of great value throughout our master's thesis journey. Dysvik has been providing us with encouragement and motivation, positive energy and a good sense of humor, as well as pointing us in the right direction whenever we needed guidance. Being able to write this thesis as our own project is of great honor, and we are grateful for Dysvik's support and contributions along the way.

Furthermore, we would like to express our gratitude to the survey participants who willingly dedicated their valuable time to respond to the questions in our study. We would also like to thank each other for the enjoyable and rewarding experience of working on this thesis together.

Thank you.

The Authors

Content

ACKNOWLEDGEMENTS	1
ABSTRACT	1
1.0 INTRODUCTION	1
2.0 THEORETICAL FRAMEWORK	4
2.1 PROCEDURAL JUSTICE	4
2.1.1 <i>Procedural Justice and Affective Commitment</i>	5
2.1.2 <i>Procedural Justice and Turnover Intention</i>	6
2.2 EMPLOYEE MOTIVATION	6
2.2.1 <i>Intrinsic Motivation</i>	7
2.2.2 <i>Extrinsic Motivation</i>	8
2.3 THE MEDIATING ROLE OF MOTIVATION BETWEEN PROCEDURAL JUSTICE AND AFFECTIVE COMMITMENT	10
2.4 THE MEDIATING ROLE OF MOTIVATION BETWEEN PROCEDURAL JUSTICE AND TURNOVER INTENTION.....	12
3.0 METHODOLOGY	14
3.1 RESEARCH STRATEGY AND DESIGN.....	14
3.2 DATA COLLECTION	14
3.3 SAMPLE AND PROCEDURE	14
3.4 MEASURES	15
3.4.1 <i>Intrinsic motivation</i>	15
3.4.2 <i>Extrinsic motivation</i>	16
3.4.3 <i>Affective commitment</i>	17
3.4.4 <i>Turnover intention</i>	17
3.4.5 <i>Procedural justice</i>	17
3.5 RESEARCH ETHICS	17
3.6 RELIABILITY AND VALIDITY	18
4.0 RESULTS	19
4.1 ANALYSIS.....	19
4.2 FINDINGS.....	19
4.2.1 <i>Descriptive statistics</i>	19
4.2.2 <i>EFA results</i>	22
4.3 HYPOTHESIS TESTING	22
5.0 DISCUSSION	26
5.1 IMPLICATIONS FOR THEORY AND PRACTICE	30
5.2 LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH.....	32
6.0 CONCLUSION	34
REFERENCES	36
APPENDIX	44
APPENDIX A: RESEARCH QUESTIONNAIRE APPENDIX A: RESEARCH QUESTIONNAIRE.....	44
APPENDIX B: PRINCIPAL COMPONENT ANALYSIS WITH PROMAX ROTATION	54
APPENDIX C: REGRESSION RESULTS FOR DEPENDENT VARIABLES WITH FACETS OF EXTRINSIC MOTIVATION	56

Abstract

This is a quantitative study exploring how procedural justice relates to affective commitment and turnover intention, and whether the proposed relationships are mediated by employee's motivation. The study distinguishes between intrinsic and extrinsic motivation, and improves the understanding of extrinsic motivation by looking at coercive controls in addition to monetary rewards. The findings support our hypotheses, demonstrating that procedural justice has a significant relationship with affective commitment and turnover intention. Moreover, the study reveals that both intrinsic and extrinsic motivation play a mediating role in these relationships. The implications and limitations of the study are discussed, along with suggestions for future research directions.

Keywords: procedural justice, affective commitment, turnover intention, intrinsic motivation, extrinsic motivation, coercive control

1.0 Introduction

Organizational justice, specifically procedural justice, has become vital for organizational functioning (Pathardikar et al., 2023). Extensive research has demonstrated that employees are genuinely concerned about matters of justice and that these concerns significantly impact their job attitudes and behaviors (Greenberg & Tyler, 1987). Procedural justice guarantees fair, consistent, accurate, and objective decision-making for rewards such as compensation, promotions, and bonuses (Colquitt et al., 2001; Greenberg, 1987). Employees highly value fair procedures as they signify ethical conduct, organizational loyalty, and provide a sense of control over decisions. This is found to result in several positive employee behaviors and desirable organizational outcomes such as increased commitment, job satisfaction, and loyalty (Pathardikar et al., 2023; Mohd Kassim & Ibrahim, 2016). Conversely, the absence of procedural justice can lead to adverse consequences, including reduced affective commitment and employee turnover (Pathardikar et al., 2023).

Given the impending increase in the global turnover rate, organizations of all sizes and types are concerned about employee retention (Belete, 2018; Narayanan et al., 2019; Chiat & Panatik, 2019). Employee turnover has been identified as a costly and challenging human resource problem that negatively affects organizational efficiency, effectiveness, and overall performance (Belete, 2018). High turnover rates cause expenses in terms of recruitment and training, hindering the achievement of long-term performance goals. Moreover, they undermine the consistency, quality, and stability of services provided, leading to client dissatisfaction (Dysvik & Kuvaas, 2010). To address these challenges, organizations have recognized the importance of cultivating employees' affective commitment, which reduces the likelihood of turnover (Meyer et al., 2004; Meyer & Herscovitch, 2001).

Affective commitment reflects employees' adherence to organizational values, goals, and objectives, fostering a long-term desire to stay with the organization (Allen & Meyer, 1990). According to Andrews et al. (2008), procedural justice plays a significant role in shaping affective commitment, as the establishment of fair procedures within organizations generates positive responses and cultivates this commitment among employees. Moreover, extensive research has explored the relationships between employee commitment, motivation, and turnover intention (Meyer et al., 2004; Akosile et al., 2022; Dysvik & Kuvaas,

2010; Kuvaas, 2006), whereas motivation has been found to play a central role in predicting affective commitment and turnover intention (Richer et al., 2002; Kuvaas, 2006; Kuvaas et al., 2017), thus making it a critical factor to consider in employee retention efforts.

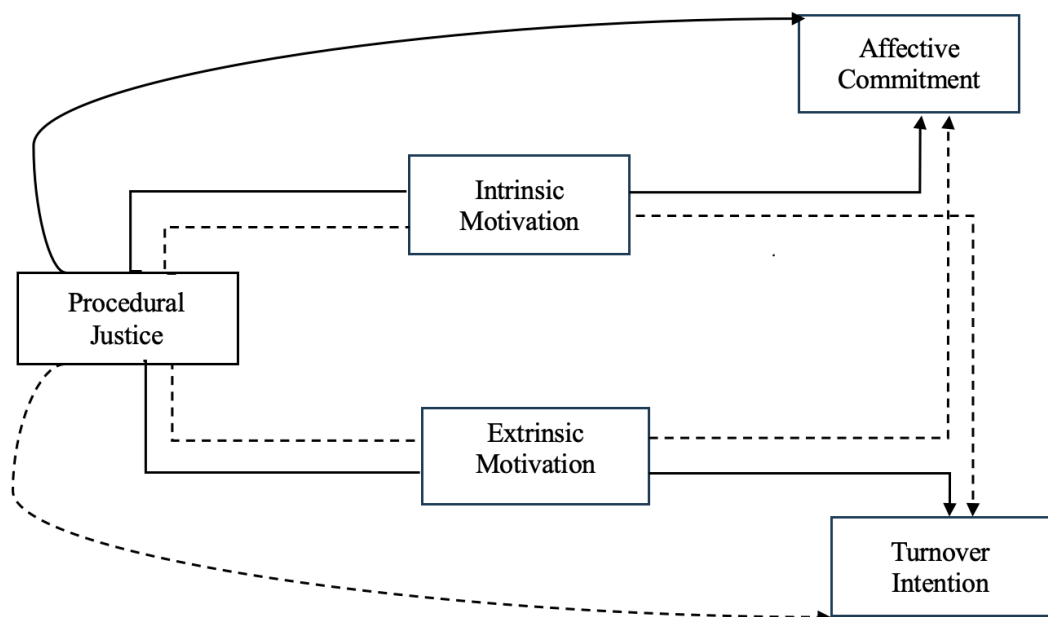
The self-determination theory (SDT), distinguishes between intrinsic motivation and extrinsic motivation, emphasizing their contrasting nature (Kuvaas, 2018). Intrinsic motivation is driven by the pleasure and satisfaction received from the activity itself, independent of its outcomes. The focus is on performing the task, while extrinsic motivation is based on engaging in activities to obtain rewards like promotions, financial incentives, or to avoid negative consequences such as job termination (Kuvaas, 2018). In this sense, intrinsic and extrinsic motivation are negatively associated with one another, and should be treated as two separate constructs; whereas intrinsic motivation has been found to be associated with positive outcomes in terms of affective commitment and turnover intention (Dysvik & Kuvaas, 2010; Meyer et al., 2004), and extrinsic motivation yields the opposite results for employees (Kuvaas et al., 2017; Sahraee et al., 2021).

Consequently, understanding the factors that impact employee motivation is essential for organizations aspiring to become an employer of choice and retaining their employees. Previous research has consistently highlighted the crucial role of employee motivation in shaping perceptions of organizational fairness and cultivating a sense of commitment among employees (Pathardikar et al., 2023; Mohd Kassim & Ibrahim, 2016). Drawing upon existing knowledge, it is reasonable to propose that employee motivation plays a mediating role in the relation between procedural justice, affective commitment and turnover intention. The primary objective of this study is to delve into these relationships, and examine the extent to which employee motivation acts as a mediator.

Although intrinsic and extrinsic motivation have been extensively discussed in research before, the empirical exploration of extrinsic motivation has been limited, and usually only measured by monetary rewards (Kuvaas et al., 2017; Kunz & Linder, 2012). Nevertheless, extrinsic motivation encompasses more than just monetary compensation. Therefore, the purpose of this study is also to add to the existing literature by providing a deeper understanding of employee motivation, and broadening the understanding of extrinsic motivation by incorporating measures of coercive control, specifically deadlines, surveillance

and evaluation (Kuvaas et al., 2017). In light of the research conducted by Amabile et al. (1976), Lepper & Greene (1975), and Ryan & Deci (2000b), the current study explores how these coercive controls contribute to employees' extrinsic motivation. By examining the impact of being observed and evaluated during tasks, as well as being assigned with deadlines, we seek to understand the decline in employees' interest over time, how pressured evaluation intensifies extrinsic motivation through an external locus of causality (Ryan & Deci, 2000b), and whether it diminishes intrinsic motivation, affective commitment and increasing turnover intention.

Ultimately, the goal of this study is to provide valuable insights for organizations to improve their practices and establish motivating work environments that foster employee commitment and reduce turnover intention. Throughout this thesis, we aim to replicate and extend existing theories, by giving further support and strengthening our understanding of the intricate relationship between employee motivation and various employee outcomes. More specifically, the study investigates the relationship between procedural justice, affective commitment, and turnover intention by exploring the mediating role of intrinsic and extrinsic motivation. The links between the variables are illustrated in the conceptual model (Figure 1).



(Figure 1; Conceptual Model, where straight lines represent a positive relationship, and dashed lines represents a negative relationship)

2.0 Theoretical Framework

This section will begin with an explanation of the nature and importance of perceived procedural justice in organizations. The perception of fairness in processes and procedures by employees is essential for understanding the reasons employees remain within organizations. Furthermore, we elaborate on the relationship between procedural justice, affective commitment and turnover intention of employees. Ultimately, motivation is introduced as a mediator between procedural justice, affective commitment, and turnover intention.

2.1 Procedural Justice

Organizational justice is a core need of all organizations, and is an increasingly important topic in society today (Pathardikar et al., 2023). There are several types of justice in organizations (García-Chas et al., 2014). Distributive justice has received the greatest attention initially, which is primarily focused on organizational outcomes (Pathardikar et al., 2023). Still, according to García-Chas and colleagues (2014), procedural justice perception is most relevant in organizational contexts. The latter describes the fairness, consistency, accuracy, and objectivity of the process behind outcome allocation decisions. These outcomes involve rewards such as compensation plans, pay increase, bonuses, promotions and so forth (Colquitt et al., 2001; Greenberg, 1987).

It is widely acknowledged that the procedural justice system is highly regarded among employees as a model of ethical conduct that adheres to organizational objectives, and demonstrates a sense of collective loyalty to its employees (Pathardikar et al., 2023). Furthermore, fair procedures are of value as they ensure that employees have control over the decision-making process (Poon, 2012). Pathardikar and colleagues (2023) argues that this is accomplished through the norms of enabling employee voice, transparency, and promptness in decision-making processes. The authors further emphasize how it enables the growth of integrity and togetherness in working more effectively (Pathardikar et al., 2023). This can be attributed to the fact that it positively affects employee attitudes and behaviors, as well as organizational outcomes associated with job satisfaction, commitment, and trust (Mohd Kassim & Ibrahim, 2016).

Contrary to this, Pathardikar and colleagues (2023) holds that, when procedural justice is absent, organizational outcomes are negatively affected and

result in reduced commitment, disruptive behavior and turnover among employees. Due to its profound impact on employee outcomes, procedural justice is a component of organizations that warrants further investigation.

2.1.1 Procedural Justice and Affective Commitment

It has been argued by Andrews and colleagues (2008) that procedural justice has the most powerful influence on affective commitment. Specifically, the studies conducted by Pathardikar and colleagues (2023) and Kuvaas (2006) have found that procedural justice has a positive relationship with affective commitment. Organizational commitment is a topic of significant interest in organizational psychology, and it has been defined and measured in various ways. However, a consistent finding is the relationship between commitment and employee turnover, where strong commitment is associated with lower likelihood of leaving the organization (Allen & Meyer, 1990).

There are three models of commitment presented by Allen and Meyer (1990), namely affective commitment, continuance commitment, and normative commitment. The prevailing approach to organizational commitment involves an affective commitment and emotional attachment, where individuals who identify with and enjoy being part of the organization are strongly committed (Allen & Meyer, 1990). Affective commitment is characterized by employees adopting organizational values, goals, and objectives and wanting to remain part of the organization for an extended period. Examples of affective commitment include respecting organizational goals and rules, loving and respecting managers, and sharing organizational visions and missions (Töre, 2020).

According to our conceptual model, procedural justice is presumed to be related to affective commitment since it has been found to enhance organizational commitment through system-related outcomes (Andrews et al., 2008). For this reason, it is important to examine how fair procedures may lead to a higher degree of support, resulting in a stronger bond between employees and their organization (Andrews et al., 2008; Pathardikar et al., 2023). Therefore, we propose the following hypothesis:

Hypothesis 1a: *There is a positive relationship between procedural justice and affective commitment*

2.1.2 Procedural Justice and Turnover Intention

Employee turnover is one of the most pressing issues facing organizations today. In this regard, the topic deserves further investigation. Turnover intention refers to the likelihood of an employee leaving their current position voluntarily (Belete, 2018). Due to the adverse effects of employee turnover on an organization's productivity and cost, identifying important predictors of turnover has been a significant research focus. There are many different factors that cause turnover intentions among employees to increase, such as stressful work environments, poor organizational climate, and relational issues between supervisors and employees (Gharbi et al., 2022). According to Poon (2012), there should be further exploration of the relationship between organizational justice and turnover intentions. Throughout the years, various types of organizational justice have emerged to describe the process of justice that binds an employee to their employer (Poon, 2012; Gharbi et al., 2022).

A study conducted by Gharbi and colleagues (2022) found that procedural justice had a significant negative correlation with turnover intention, indicating that it is an essential factor for organizations to consider in the retention of employees. When employees perceive that their supervisors apply fair procedures in outcome processes, their intention to leave is reduced since they are assured that their interests are respected in the long term. In this regard, procedural justice ensures that although outcomes are not granted, if the decisions are perceived as fair, then the employees know that no other alternatives will result in better outcomes (Jawahar, 2002; Poon, 2012). In light of this, we hypothesize that:

***Hypothesis 1b:** There is a negative relationship between procedural justice and turnover intention*

2.2 Employee Motivation

Several studies have been conducted on the relationships between procedural justice, turnover intention and affective commitment separately (Poon, 2012; Gharbi et al. 2022; Kuvaas, 2006, Pathardikar et al. 2023). Beyond that, previous studies have indicated that motivation also relates significantly to the employee outcomes of affective commitment and turnover intention (Kuvaas et al., 2017; Rani & Desiana, 2019; Töre, 2020; Dysvik & Kuvaas, 2010). This suggests that

procedural justice, affective commitment, and turnover intention could be related by indirect mechanisms through motivation. To our knowledge, no recent studies have been conducted researching the relationship in question, so we believe it would be useful to strengthen the findings in this area.

According to Pinder (2008), motivation can be defined as a combination of energetic forces stimulating employee behavior while directing its form, direction, intensity and persistence. Self-determination theory (SDT) refers to a theory of human motivation based on the premise that motivation can be distinguished into specific categories (Deci et al., 2017). Further, the theory of SDT posits that the concept of human psychological needs for autonomy, competence and relatedness are essential for psychological health and wellbeing as well as enabling effective social functioning (Deci & Ryan, 2000; Deci et al., 2017). Deci and Ryan (2017) argues that employees' performance and well-being are influenced by the type of motivation they experience at work. As such, SDT differentiates categories of motivation by maintaining that different types of motivation have different effects and consequences. In light of this, it is important to distinguish between intrinsic and extrinsic motivation for the purposes of this study (Deci et al., 2017).

2.2.1 Intrinsic Motivation

Intrinsic motivation can be described as autonomous motivation in its purest form (Gagne & Deci, 2005, cited in Dysvik & Kuvaas, 2010). Further, Deci and Ryan (2000) explains that intrinsic motivation occurs when an individual engages in an activity for the reason that it leads to satisfaction. The same authors further explain in another study that when individuals are intrinsically motivated, they act out of enjoyment or challenge as opposed to external incentives, pressures or rewards (Ryan & Deci, 2000a). In one sense, intrinsic motivation is present inside people, but it also exists in the relationship among individuals and activities (Ryan & Deci, 2000a).

Vansteenkiste and colleagues (2007) suggest that employees adhering to intrinsic values perceive their occupation as an opportunity to utilize their skills and pursue their personal interests. As a result, the individual needs identified by SDT are satisfied, which ultimately leads to positive work outcomes (Vansteenkiste et al., 2007; Deci & Ryan, 2000). Various studies have proven that if employees hold intrinsic values and goals more strongly and if their workgroup

supports these values and goals, there will be substantial positive outcomes for both the organization and the employees (Deci et al., 2017). In particular, Kuvaas and colleagues (2017) found that intrinsic motivation leads employees to put forth their highest levels of effort, which can be attributed to how the motivational form produces high levels of energy, persistence as well as enthusiasm and engagement. The combination of these factors further enhances the wellbeing of the employees, resulting in a reduction of stress and negative emotions among them (Kuvaas et al., 2017).

2.2.2 Extrinsic Motivation

According to the literature provided, it is widely acknowledged that intrinsic motivation provides significant benefits. Conversely, Ryan and Deci (2000a) argues that the majority of activities that people engage in are not entirely intrinsically motivated. The reason for this is that intrinsic motivation is restricted by social demands and responsibilities requiring individuals to take on responsibility for non intrinsically engaging activities (Ryan & Deci, 2000a). In other words, extrinsically motivated tasks are imposed upon individuals. As stated by Kuvaas (2018), extrinsic motivation takes place when employees do certain tasks to obtain something valuable as a reward such as a promotion, increase of pay or bonus, or as a means to avoid negative consequences such as termination.

Several studies prove that extrinsic motivation leads to a number of negative employee outcomes (Kuvaas et al., 2017; Vansteenkiste et al., 2007). According to Vansteenkiste and colleagues (2007), embracing extrinsic work values as opposed to intrinsic work value orientation contributes to less job satisfaction, commitment, and job vitality. Further, their study found that being predominantly extrinsically motivated was not only limited to negative experiences at work, but was also associated with feelings of overall unhappiness of employees. This can be attributed to emotions of exhaustion and emptiness (Vansteenkiste et al., 2007), in contrast to intrinsically motivated employees (Kuvaas et al., 2017). Consequently, these feelings can further reduce focus and hinder employees to be fully engaged in tasks, thus impeding work performance. In addition, lack of positive feelings and energy may result in burnout (Vansteenkiste et al., 2007; Kuvaas et al., 2017).

Accordingly, continuance commitment can prevail when extrinsic motivation is present as employees will focus on transactional and contingent

parts of their jobs as opposed to relational (Meyer et al., 2004; Kuvaas et al., 2017). In accordance with SDT, a strong emphasis on financial rewards and benefits prevents the satisfaction of the basic needs for autonomy, competence, and relatedness essential for every individual (Ryan, 1995, cited in Vansteenkiste et al., 2007). As the majority of employees have been found to be extrinsically motivated (Ryan and Deci, 2000a), it is imperative to further explore and expand upon previous research to gain a deeper understanding of this issue.

Coercive Control

Kunz and Linder (2012) contend that the majority of research concerning extrinsic motivation has focused on monetary rewards, particularly performance-based monetary rewards such as bonuses or pay for performance. For instance, Kuvaas and colleagues (2017) used a measure of extrinsic motivation in their study that focused solely on tangible incentives. However, extrinsic motivation cannot only be attributed to tangible rewards, but also to coercive controls such as threats, deadlines, directives and competitive pressure. This external pressure reduces intrinsic motivation as employees are subjected to feelings of being controlled. Consequently, self-determination is impossible if the psychological needs relatedness and competence, in particular autonomy, are not satisfied (Ryan and Deci, 2000a).

In light of this, our study will include broader measures of extrinsic motivation as recommended by Kuvaas and colleagues (2017). Specifically, coercive controls, including deadlines, surveillance, and evaluations will be examined in order to expand the field of knowledge (Kuvaas et al., 2017). Amabile and colleagues (1976) conducted an experimental study on deadlines and suggest that they are often used to hinder procrastination and ensure that tasks are performed. However, the external pressure of deadlines may reduce the enjoyment of future tasks. As deadlines cause employees to feel extrinsically motivated, tasks that were initially perceived as enjoyable can become unappealing when feelings of being forced arise (Amabile et al., 1976).

The same authors found that the detrimental influence extrinsic motivation has on intrinsic motivation is not confined only to tangible incentives. It is clear that there is a difference between setting a deadline for an employee to complete a task and offering a reward for engaging in the task. However, according to their study, the pressure of meeting a deadline can produce similar results as receiving

rewards. In both instances, the employee performs a specific task in order to achieve a specific objective. Accordingly, if imposing a deadline leads the employee to feel extrinsically motivated, it may consequently decrease their intrinsic interest in the activity they are pressured to complete (Amabile et al., 1976).

Further, it has been shown that external constraint surveillance increases extrinsic motivation. Surveillance refers to the use of contingent extrinsic incentives by one person to modify or control the behavior of another. This is the continuous or frequent monitoring of the behavior of an employee by an individual with authority or power over them. When employees have the awareness that their performance at a task is being observed and evaluated by someone else, even when no explicit reward is expected for participating in the activity, their interest in performing the task appears to diminish over time (Lepper & Greene, 1975), yielding similar results as Amabile and colleagues (1976) found when employees are imposed with deadlines.

Pressured evaluation can likewise increase extrinsic motivation through an external perceived locus of causality (Ryan & Deci, 2000b). As a result, intrinsic motivation will be adversely affected as a result of the lack of active, constructive approaches to giving personal meaning and significance to employees' motivation (Deci & Ryan, 2000). Contrary to this, positive feedback and an absence of demeaning evaluations increase intrinsic motivation, as free choice, acceptance of employees' feelings, and the opportunity to direct one's own behavior increase intrinsic motivation by enhancing perceived autonomy (Ryan & Deci, 2000b). Having explored the merits and drawbacks of motivation, our focus now shifts towards the mediating aspects of our conceptual model.

2.3 The mediating role of motivation between procedural justice and affective commitment

Research has consistently demonstrated that employee motivation has distinct impacts on affective commitment. Specifically, prior studies have found that intrinsic motivation has a positive influence on affective commitment (Rani & Desiana, 2019; Töre, 2020). When individuals are intrinsically motivated, driven by personal factors or situations, they tend to exhibit higher levels of affective commitment. This occurs when individuals are motivated by the challenge and

excitement of their work, leading to emotional attachment to the organization. Consequently, organizations can increase employee affective commitment by managing intrinsic motivation effectively (Meyer & Herscovitch, 2001; Rani & Desiana, 2019).

Furthermore, Tyler and Blader (2003) states that employees are more likely to engage in their work if they perceive procedural justice in their organization. The reason for this is that employees perceive procedural justice as an indication that the organization values their contributions and treats them with respect, leading to a sense of autonomy and competence which constitutes intrinsic motivation (Poon, 2012; Deci et al., 2017). An employee who is intrinsically motivated is more likely to feel a sense of pride and ownership in their organization, which ultimately leads to increased affective commitment (Meyer & Herscovitch, 2001; Rani & Desiana, 2019). As intrinsic motivation facilitates employees' perceptions of fairness within the organization and enables them to develop affective commitment to it, we can assume that intrinsic motivation mediates a positive relationship between procedural justice and affective commitment.

Still, research indicates that extrinsic rewards, such as pay and bonuses, also contribute to employees' affective commitment (Kuvaas, 2006). However, there is a weaker relationship between extrinsic motivation and affective commitment than intrinsic motivation and affective commitment (Kuvaas et al., 2017). Malhotra et al. (2007) have demonstrated that intrinsic motivations are more influential in predicting affective commitment than monetary rewards, and Gagnè et al. (2010) found that extrinsic motivation negatively correlates with affective commitment and positively correlates with psychological distress and continuance commitment.

This phenomenon could be attributed to employees shifting their focus from the interpersonal and affective aspects of their jobs to the transactional and contingent aspects, leading to a greater emphasis on continuance commitment over affective commitment (Kuvaas et al., 2017). As extrinsic motivation is found to produce opposing results from intrinsic motivation (Kuvaas et al., 2017; Kuvaas, 2018), we can assume that it mediates a negative relationship between procedural justice and affective commitment. Therefore, we propose the following hypotheses:

***Hypothesis 2a:** There is a positive relationship between intrinsic motivation and affective commitment*

***Hypothesis 2b:** There is a negative relationship between extrinsic motivation and affective commitment*

***Hypothesis 3a:** Intrinsic motivation mediates the relationship between procedural justice and affective commitment*

***Hypothesis 3b:** Extrinsic motivation mediates the relationship between procedural justice and affective commitment*

2.4 The mediating role of motivation between procedural justice and turnover intention

The impact motivation has on turnover intentions has received considerable attention in recent years (Richer et al., 2002; Dysvik & Kuvaas, 2010). Specifically, intrinsic and extrinsic motivation have been found to have contrasting impacts on employees' intentions to remain within or leave the organization. Several studies have found that extrinsic motivation is positively correlated to turnover intention (Sahraee et al., 2021; Vansteenkiste et al., 2007, Kuvaas et al., 2017). According to Kuvaas and colleagues (2016), turnover intention increases when employees experience controlled motivation. This is in line with the study of Sahraee and colleagues (2021), who found that extrinsically oriented employees display favorable attitudes relating to leaving the organization. Such outcomes may be explained by the fact that extrinsic motivation may cause job dissatisfaction, diminished well-being, increased ill-being, and adverse implications on physical health (Sahraee et al., 2021; Vansteenkiste et al., 2007).

In contrast, intrinsic motivation has been associated with lower turnover intentions (Kuvaas et al., 2016; Dysvik & Kuvaas, 2010). Dysvik and Kuvaas (2010) suggests that as high levels of intrinsic motivation signal that employees' needs for autonomy and competence at work are fulfilled, they are less likely to intend to leave their jobs. Accordingly, intrinsically motivated employees are more likely to remain persistent in challenging circumstances due to their self-

driving and autonomy-oriented characteristics. Kuvaas and colleagues (2017) argues that high levels of intrinsic motivation cause positive feelings, emotions and attitudes that provide employees with protection from stressors and negative emotions. Consequently, employees who are intrinsically motivated will, therefore, have a lower turnover intention than those who are extrinsically motivated.

We therefore assume that the influence procedural justice has on turnover intentions can be assessed through the mediation of motivation. According to research, procedural justice is positively correlated with intrinsic motivation, as fairly treated employees tend to experience more happiness and positive emotions, thereby enjoying their tasks more (Zapata-Phelan et al., 2009). Further, procedural justice encourages mutual commitment between relationships and decreases turnover intentions (García-Chas et al., 2014). The reasoning can be explained by recognizing that employees are more likely to be satisfied and dedicated to their organization when they experience feelings of autonomy and valued contributions (Deci & Ryan, 2000). In contrast, when employees feel unjustly treated, it will cause a decrease in intrinsic motivation as they will find tasks at work less enjoyable (Zapata-Phelan et al., 2009). Thus, extrinsic motivation will likely prevail among employees (Kuvaas, 2018) and the low levels of procedural justice will increase turnover intentions (García-Chas et al., 2014). In light of this, we hypothesize that:

***Hypothesis 4a:** There is a negative relationship between intrinsic motivation and turnover intention*

***Hypothesis 4b:** There is a positive relationship between extrinsic motivation and turnover intention*

***Hypothesis 5a:** Intrinsic motivation mediates the relationship between procedural justice and turnover intention*

***Hypothesis 5b:** Extrinsic motivation mediates the relationship between procedural justice and turnover intention*

3.0 Methodology

3.1 Research Strategy and Design

In empirical research, two main types of analysis are employed: deductive and inductive. The deductive approach, commonly utilized to comprehend theory-research relationships, involves formulating research questions and objectives based on existing theories (Bryman & Bell, 2011). Given that our study relies heavily on existing theories, we adopt a deductive approach. Further, in order to address our research question, we will employ a descriptive design, which is well-suited for examining the specifics of a particular context and describing the relationships between different variables (Sallis et al., 2021).

3.2 Data Collection

Due to the extensive body of existing research and knowledge on procedural justice, affective commitment, turnover intention, and employee motivation individually, we have chosen to apply a quantitative approach to address our research question, and to employ structured questionnaires as our research tool. A survey study offers the opportunity to examine a larger sample, thereby providing confirmation and expansion of existing theories, while also enabling a greater degree of generalization (Bryman & Bell, 2011). Given the specific nature of our project, we will adopt a cross-sectional design. This design entails collecting data from multiple cases at a single point in time. The aim is to collect quantitative information in relation to the variables, which will be submitted for analysis to identify correlation patterns (Bryman & Bell, 2011).

3.3 Sample and Procedure

The survey was conducted using a structured questionnaire in Norwegian, in order to collect data. The survey itself was conducted using Qualtrics, a widely used web-based platform known for its reliability in designing and distributing questionnaires (Qualtrics, 2023). We made the decision to administer a single questionnaire including measures of the mediator, independent, and dependent variables. To ensure a systematic approach, we carefully ordered the items in a specific order; beginning with affective commitment and turnover intention, which serve as the dependent variables, we aimed to minimize the potential

influence of bias. Following these, we included the mediators intrinsic and extrinsic motivation, and finally, the independent variable procedural justice.

Moreover, we incorporated control variables, such as gender, age, employee situation, tenure, and salary, to account for additional factors that could impact the results. Individual employee data was collected using a convenience sampling approach, which ensured an adequate number of respondents for achieving statistical power in the study (Akobeng, 2016). By using platforms like LinkedIn, Workplace, and Facebook, we distributed the survey across our network to employees in various organizations. In total, we received 311 responses.

3.4 Measures

Most of the measures employed in the study have been validated in previous research. However, since the majority of scale items were originally in English, they required a translation process to Norwegian, involving necessary adjustments and modifications. Appendix A provides details on the adoption and adaption of the items. Furthermore, the survey items were structured according to concepts, with each concept occupying a separate page. However, extrinsic motivation was presented on a single page, encompassing monetary rewards, while coercive control, including surveillance, evaluation, and feedback, was also presented on its own page. At the beginning of each page, participants were provided with 1 or 2 descriptive sentences about the items they would be responding to. Each variable was assessed using a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), with 3 indicating a neutral position.

3.4.1 Intrinsic motivation

Intrinsic motivation was measured on a six-item intrinsic work motivation scale developed by Kuvaas (2006) and further extended by Dysvik and Kuvaas (2010). Participants were asked to rate each item on a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5). Sample items include “*My job is so interesting that it is a motivation in itself*” and “*The tasks that I do at work are themselves representing a driving power in my job*”.

3.4.2 Extrinsic motivation

The concept of extrinsic motivation was divided into two parts; monetary rewards and coercive control. Measurement of the concept of monetary rewards was conducted using items outlined in Kuvaas et al. (2017) and Siyal et al. (2021) developed by Amabile et al., (1994). Participants were asked to rate each item on a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5). Sample items include *“I am strongly motivated by the promotions and other benefits I can earn”* and *“If I am supposed to put in extra effort in my job, I need to get extra pay”*. These kinds of items are used to measure how much motivation participants received from external sources in the form of financial incentives.

To further examine the concept of coercive control, it was subdivided into three distinct categories: deadlines, surveillance, and evaluation. Under each category, the study participants developed sample items in accordance with the relevant literature, which were subsequently reviewed and approved by our supervisor. In the case of deadlines, the items were developed based on Amabile et al. 's (1976) research and aimed to examine participants' motivation levels in response to deadlines. The items were rated on a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Sample items from the scale include *“Deadlines help me ensure that I complete my tasks”* and *“Receiving deadlines makes me feel pressured to perform.”*

Sample items for the concept of surveillance were developed based on Lepper and Greene's (1975) research, which explores the motivational impact of being under continuous monitoring by authority figures. The items were rated on a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Sample items from the scale include *“I feel like my supervisor is constantly watching me when I work”* and *“When I know I am being observed, I feel pressure to perform tasks in a particular way”*.

The sample items of the evaluation scale were developed in accordance with the literature of Ryan and Deci (2000b) and Jawahar (2010), and aims to measure how positive or negative feedback motivates the participants. The items were rated on a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Sample items include *“When being evaluated at work, I feel that I am being compared to other employees”* and *“I do not feel that the performance evaluation I receive reflects my actual performance”*.

3.4.3 Affective commitment

Affective commitment was measured using the 8 item scale retrieved from Kuvaas et al. (2017) and developed by Meyer and Allen (1997). However, we opted to remove two items in order to streamline the scale. Participants were asked to rate each item on a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5). Sample items from the scale include *“I would be very happy to spend the rest of my career in this organization”* and *“I do not feel like “part of the family” at my organization”*.

3.4.4 Turnover intention

For the measurement of turnover intention, we used the six-item turnover intention scale presented in Khatri et al. (2001) and Dysvik and Kuvaas (2010), developed by Kuvaas (2008). Participants were asked to rate each item on a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5). Sample items from the scale include *“I will probably look for a new job in the next year”* and *“I may quit my present job during the next 12 months”*.

3.4.5 Procedural justice

In order to assess procedural justice, we employed Colquitt's (2001) seven-item scale. In order to streamline the scale, we decided to remove one item. Participants were asked to rate each item on a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5). Sample items from the scale include *“You were afforded the opportunity to express your views and feelings during the procedures”* and *“The procedures were consistently applied.”* Additionally, we included a statement at the outset of this section affirming that the procedures and processes under review are clear and comprehensible.

3.5 Research ethics

When conducting our research, it is crucial to consider ethical considerations (Bryman & Bell, 2011). To ensure transparency and informed decision-making, potential participants are provided with comprehensive and easily accessible information regarding the study before deciding whether to participate (Crow et al., 2006). Additionally, participants have the freedom to choose whether or not to participate without facing adverse consequences for their decision (Crow et al., 2006). Those who choose to participate will be assured that the survey is fully

anonymous, and that their responses will be treated confidentially, with only our team and supervisor involved in data collection and analysis. To ensure compliance with ethical standards, information regarding the study's purpose, research design, and potential implications of participation has been assessed and approved by the Norwegian Agency for Shared Services in Education and Research, Sikt.

3.6 Reliability and validity

Reliability and validity are two of the most important criterias for evaluating and measuring the quality of our study, and quantitative research is particularly concerned with reliability. Reliability refers to how repeatable the study's results are, and in particular to the question of whether our measures are consistent and stable. It is essential that the audience finds the study reliable and trustworthy. Several methods can be used to estimate reliability (Bryman & Bell, 2011), and we will test the internal reliability by analyzing the cronbach's alpha of each scale, as shown in table 1. Cronbach's alpha values provide insights into the level of correlation between each item within a set, and acceptable alpha values typically fall within the range of .70 to .95 (Tavakol & Dennick, 2011).

Moreover, the conclusions drawn from this study must be valid. Validity refers to how well the survey actually investigates what it intends to, namely our research question (Bryman & Bell, 2011). There are four primary types of validity: content validity, construct validity, face validity, and criterion validity. To assess content and construct validity, we will employ a principal component analysis. This analysis will help determine the extent to which measures of the different constructs diverge or exhibit minimal correlation, as well as the extent to which the different measures of the same construct converge or strongly correlate with one another. Additionally, we will conduct a correlation analysis to test criterion validity, examining the extent to which the measures relate to another measure as intended, as well as its relationship to scores from already established measures (Taherdoost, 2016).

4.0 Results

4.1 Analysis

IBM SPSS 29.0 software was utilized for this study's statistical analysis. We removed 6 participants with incomplete responses from the sample, leaving us with 305 complete responses. Before testing the hypotheses, an exploratory factor analysis (EFA) was run for the sample $N=305$. The analysis was conducted in order to assess the discriminant and content validity of the constructs. A principal component analysis with promax rotation was chosen as the EFA due to the sample size and high number of items (Osborne & Costello, 2004). To ensure the highest quality of data, the two following thresholds were chosen when deciding which items to retain; 1. Items with factor loadings above .50 on the target construct (Osborne & Costello, 2004) and 2. Items with cross loadings below .35 on constructs (Kiffin-Petersen & Cordery, 2003).

After conducting the EFA, we used Cronbach's alpha (α) to test our scale reliabilities. In order to obtain a satisfactory Cronbach's alpha, items should have a score of greater than .70 (Taber, 2018). Pearson's correlation coefficient was used to assess the strength of the relationship between the independent and dependent variables. We then conducted regression analyses in order to examine the interaction effect in our hypotheses. It should be noted that Pearson's correlation coefficient analysis was utilized to examine the individual facets of extrinsic motivation and assess their correlations with other variables. These facets were later incorporated into the overall extrinsic motivation variable during regression analysis.

4.2 Findings

4.2.1 Descriptive statistics

The control variables included gender, age, employment status, organizational tenure, type of income, and annual income in NOK. In terms of gender, 43.6% of the respondents identified as male and 56.4% identified as female. Based on age, most respondents were between 25-34 years old (43.3%), followed by those aged 18-24 years old (17.4%), 55-64 years old (15.7%), 45-54 years old (14.4%), 35-44 years old (8.9%) and only 0.3% were above 65 years old. According to employment status, 78% of respondents were in full-time jobs, while the

remaining 22% were working part-time. Organizational tenure varied from 0 to 48 years, whereas annual income in NOK ranged from 30,000 to 3,000,000. For type of income, 72.1% of respondents received a fixed salary or hourly wage, followed by fixed salary with bonus (22.6%), fixed salary with provision (4.3%), and only provision (1%).

As displayed in Table 1, descriptive statistics are presented for all variables used in our analysis, including their mean and standard deviation, correlations and Cronbach's alpha (α). A multicollinearity test was also performed and all values were below .10, indicating that there was no multicollinearity (Daoud, 2017). For our control variables, the bivariate correlation analysis shows that the participants gender, age, employment status, tenure, type of income and annual income correlated with the relevant variables as follows: For procedural justice, employment status was negatively correlated ($r = -.201$, $p < .001$), whereas annual income was positively correlated ($r = .212$, $p < .001$). Further, a positive correlation was found between intrinsic motivation and annual income ($r = .377$, $p < .001$), while a negative correlation was found between monetary rewards and annual income ($r = -.188$, $p < .001$). Accordingly, competitive base pay is associated with an increase in intrinsic motivation (Kuvaas et al., 2017).

Regarding the other variables, procedural justice was displayed to be positively correlated with intrinsic motivation ($r = .319$, $p < .001$) and affective commitment ($r = .322$, $p < .001$), as well as negatively correlated with turnover intention ($r = -.321$, $p < .001$). Moreover, procedural justice proved to have a negative correlation to the coercive control facets deadlines ($r = -.296$, $p < .001$), surveillance ($r = -.295$, $p < .001$) and evaluation ($r = -.195$, $p < .001$). This is a noteworthy observation, given that its correlation to monetary rewards was not significant ($r = -.108$, $p > .05$).

In line with established theory, intrinsic motivation was negatively correlated to turnover intention ($r = -.602$, $p < .001$) and positively correlated to affective commitment ($r = .542$, $p < .001$), while monetary rewards was positively correlated to turnover intention ($r = .292$, $p < .001$) and negatively correlated to affective commitment ($r = -.259$, $p < .001$). Of particular interest, monetary rewards was positively correlated with deadlines ($r = .310$, $p < .001$), surveillance ($r = .352$, $p < .001$), and evaluation ($r = .359$, $p < .001$), thus providing support for including coercive control in the theoretical construct of extrinsic motivation.

Table 1: Descriptive Statistics, Correlations, and Scale Reliabilities among Variables

Variable	Mean	S.D.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.
Control variables																
1. Gender	1.56	.49														
2. Age	2.69	1.36	-.017													
3. Employment Status	1.22	.41	.163**	-.340***												
4. Tenure	5.06	7.15	-.020	.542***	-.161**											
5. Type of Income	1.34	.61	-.149**	-.050	-.167**	-.043										
6. Annual Income	625158.89	439558.69	-.100	.454***	-.374***	.270***	.165**									
Variables																
7. Intrinsic Motivation	3.55	.80	-.047	.379***	-.383***	.216***	-.064	.377***	(.897)							
8. Monetary rewards	2.97	.97	-.154**	-.245***	.049	-.158**	.242***	-.188***	-.286***	(.846)						
9. Deadlines	2.92	.83	-.040	-.186***	.067	-.098	.010	-.208***	-.197***	.310***	(.855)					
10. Surveillance	2.17	.98	-.054	-.101	.023	-.124*	.052	-.165**	-.314***	.352***	.449***	(.933)				
11. Evaluation	3.37	.57	.082	-.208***	.082	-.245***	.029	-.200***	-.145*	.359***	.362***	.397***	(.550)			
12. Affective Commitment	3.54	.81	-.021	.167**	-.182***	.185***	-.047	.242***	.542***	-.259***	-.204***	-.291***	-.138*	(.735)		
13. Turnover Intention	2.66	1.17	.083	-.270***	.326***	-.233***	-.054	-.248***	-.602***	.292***	.319***	.341***	.266***	-.529***	(.943)	
14. Procedural Justice	3.15	.94	-.096	-.006	-.201***	.055	.069	.212***	.319***	-.108	-.296***	-.295***	-.195***	.322***	-.321***	(.827)

Notes: N=305; *p < .05; **p < .01; ***p < .001

4.2.2 EFA results

The EFA results following the principal components analysis (Appendix B) included items with factor loadings ranging between .353 and .981. Notably, we detected three new factors that required items to be removed. Due to the fact that items from multiple variables loaded on the same new factors, we chose to not view them as subscales. Further, we eliminated items with cross-loadings exceeding .35 in order to maintain the consistency and validity of the scale. In particular, we removed two items from the extrinsic motivation scale, resulting in a 4-item scale (Cronbach's alpha = .846). In addition, we removed one item from the deadline scale, resulting in a five-item scale (Cronbach's alpha = .855), and two items from the surveillance scale, resulting in a 4-item scale (Cronbach's alpha = .933).

A further step was taken to remove items with factor loadings less than .5. The evaluation scale had two strong factor loadings on a new factor (.739, .537), and one factor loading on intrinsic motivation (.375). Consequently, the evaluation scale ended up with a 3-item scale and a Cronbach's alpha of .550, which was the poorest result in the analysis. With regards to the scale of affective commitment, there were two items loading on a new factor which were removed, resulting in a 4-item scale (Cronbach's alpha = .735). As with the procedural justice scale, we eliminated three items, resulting in a 3-item scale (Cronbach's alpha = .827). The scales of intrinsic motivation and turnover intention, however, did not require item removal, which indicates that they possess a high degree of construct validity and reliability (Bell et al., 2019). In particular, the intrinsic motivation scale had a Cronbach's alpha of (.897), and the turnover intention scale had a Cronbach's alpha of (.943).

4.3 Hypothesis testing

To examine the hypotheses developed from our conceptual model, we employed stepwise multiple regression analyses. As mentioned previously, in order to facilitate further analysis, we merged the facets of monetary rewards, deadlines, surveillance, and evaluation into a composite variable representing extrinsic motivation as a whole. The individual items were removed, and the facets themselves were utilized as indicators when interpreting the relationships. We conducted a regression analysis utilizing the following variables: one independent

variable (procedural justice), two dependent variables (affective commitment and turnover intention), two mediating variables (intrinsic and extrinsic motivation), and the control variables (gender, age, employment status, tenure, type of income, and annual income).

Further, in order to test for mediation, we employed the three criteria proposed by Baron and Kenny (1986): 1) the independent variable must demonstrate a significant association with the mediators, 2) the independent variable should exhibit a significant relationship with the dependent variables, and 3) upon introducing the mediation into the regression model, the relationship between the independent and dependent variables should either diminish significantly (partial mediation) or completely vanish (full mediation). The results can be seen in Table 2 and Table 3.

Table 2: Regression results for mediators

Step 1	Intrinsic Motivation	Extrinsic Motivation
<i>Control Variables</i>		
Gender	.011	-.093
Age	.221***	-.170*
Employment Status	-.218***	-.081
Tenure	-.003	-.055
Type of income	-.132**	.130*
Annual income	.166**	-.162**
<i>Independent Variable:</i>		
Procedural Justice	.253***	-.311***
ΔR²	.300	.190
R²	.316	.208
F	19.563	11.129

Notes: N= 305. We report standardized regression coefficients. *p < 0.05; **p < 0.01; ***p < 0.001. Step 1: correlation between Procedural Justice and Intrinsic Motivation and Extrinsic Motivation

Table 2 demonstrates the initial condition proposed by Baron and Kenny (1986), which states that the independent variable (procedural justice) should have a significant impact on the mediators. Procedural justice has significant relationships to both intrinsic motivation ($\beta = .253$, $p < .001$) and extrinsic motivation ($\beta = -.311$, $p < .001$), allowing us to proceed with the examination of mediation.

Table 3: Regression results for dependent variables

	Affective Commitment		Turnover Intention	
	Step 2	Step 3	Step 2	Step 3
Control Variables				
Gender	.020	.004	.020	.052
Age	.026	-.099	-.129	.020
Employment Status	-.068	.027	.194**	.112*
Tenure	.105	.100	-.110	-.099
Type of income	-.091	-.014	-.009	-.105*
Annual income	.133*	.036	-.027	.093
Independent Variable:				
Procedural Justice	.283***	.127*	-.269***	-.068
Mediators:				
Intrinsic Motivation		.477***		-.473***
Extrinsic Motivation		-.114*		.261***
ΔR²	.143	.322	.199	.439
R²	.163	.342	.218	.456
F	8.250***	17.058***	11.775***	27.381***

Notes: N= 305. We report standardized regression coefficients. *p < 0.05; **p < 0.01; ***p < 0.001.

Step 2: Correlation between Procedural Justice and Affective Commitment, and Procedural Justice and Turnover intention

Step 3: Correlation between Procedural Justice, Affective Commitment, Intrinsic Motivation and Extrinsic Motivation and Procedural Justice, Turnover Intention, Intrinsic Motivation and Extrinsic Motivation

Further, our analysis confirms the second criterion, which states that there should be a relationship between the independent variable and the dependent variable, which are shown in Table 3. Specifically, the results demonstrate a significant positive relationship between procedural justice and affective commitment ($\beta = .283$, $p < .001$), providing support for H1a. Additionally, we find evidence supporting H1b, which suggests a negative and significant relationship between procedural justice and turnover intention ($\beta = -.269$, $p < .001$). Therefore, our findings provide robust support for the hypotheses that procedural justice is positively correlated with affective commitment and negatively correlated with turnover intention.

Based on the third criterion recommended by Baron & Kenny (1986), Table 3 illustrates that the relationship between procedural justice and affective commitment significantly diminish when the mediators are controlled for (standardized coefficients goes from $\beta = .283$, $p < .001$ in step 2, to $\beta = .127$, $p < .05$ in step 3). Accordingly, the relationship between procedural justice and affective commitment remains statistically significant even after accounting for the mediators. Moreover, both intrinsic motivation ($\beta = .477$, $p < .001$) and extrinsic motivation ($\beta = -.114$, $p < .05$) have a significant relationship with affective commitment, thus giving support for H2a and H2b. In sum, the results from the regression analysis indicates that intrinsic motivation partially mediates

the positive relationship between procedural justice and affective commitment, while extrinsic motivation partially mediates the negative relationship between the variables. If full mediation was to be claimed, the initial direct relationship must become non-significant when the mediators were added (Baron & Kenny, 1986). However, the findings support H3a and H3b. Subsequently, the significance of the difference in both mediators was confirmed through a Sobel test with p-values less than .05 (Abu-Bader & Jones, 2021). The mediating relationship between the variables are shown in figure 3.

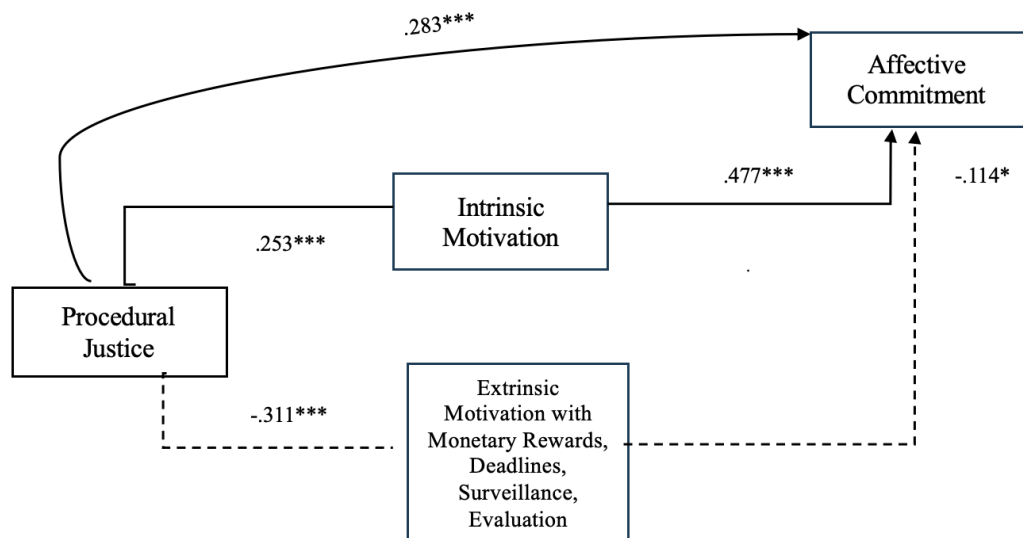


Figure 3: Intrinsic Motivation and Extrinsic Motivation as mediators of the relationship between the observed variables.

Table 3 also reports that both intrinsic and extrinsic motivation has a significant relationship with turnover intention (intrinsic motivation; $\beta = -.473$, $p < .001$, extrinsic motivation; $\beta = .261$, $p < .001$), which supports H4a and H4b. In terms of examining whether intrinsic and extrinsic motivation mediate the relationship between procedural justice and turnover intention, the results indicate that the relationship between the variables diminish when controlling for the mediators, whereas it is not statistically significant anymore ($\beta = -.068$, $p > .05$). Taking all three criteria for a mediating relationship into account, this supports H5a and H5b. The regression analysis results indicate that intrinsic motivation plays a mediating role in the negative relationship between procedural justice and turnover intention.

On the other hand, extrinsic motivation mediates the positive relationship between procedural justice and turnover intention. We can conclude with full mediation because the relationship between procedural justice and turnover intention is reduced after controlling for the mediators, and the relationships are not significant anymore (Baron & Kenny, 1986). Sobel tests were conducted in order to confirm the significance between both mediators. The mediating relationship between the variables are shown in figure 3.

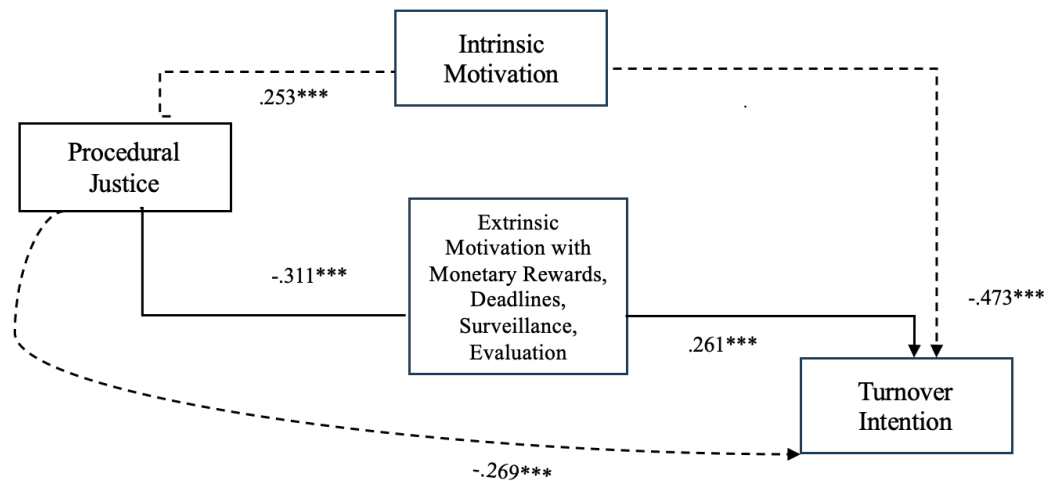


Figure 4: Intrinsic Motivation and Extrinsic Motivation as mediators of the relationship between the observed variables.

For more general findings, the control variable annual income is significantly correlated with affective commitment ($\beta = .133, p < .05$), whereas employment status (step 2: $\beta = .194, p < .01$; Step 3: $\beta = .112, p < .05$) and type of income ($\beta = -.105, p < .05$) are significantly correlated with the full regression model for turnover intention. In terms of the fit of the complete regression models, the included variables account for a higher variance in turnover intention ($R^2 = .456, F = 27.381, p < .001$), in comparison with affective commitment ($R^2 = .342, F = 17.058, p < .001$).

5.0 Discussion

This master thesis aims to make a distinctive contribution to the field of organizational behavior research by drawing upon previous literature. By replicating existing theories, we provide additional support and enhance our understanding of how employee motivation is related to various employee

outcomes. Specifically, the thesis investigates the relationship between procedural justice, affective commitment, and turnover intention by exploring the mediating role of intrinsic and extrinsic motivation. Furthermore, we improve our understanding of extrinsic motivation by incorporating assessments of deadlines, surveillance, and evaluation in addition to monetary rewards when examining these relationships. To our knowledge, there has been no prior research conducted within the field of organizational behavior and psychology that has employed a comparable methodology encompassing these specific variables collectively. In light of this, we will now discuss our findings.

According to our study, procedural justice significantly impacts affective commitment and turnover intention, confirming our direct hypothesis 1a and 1b. In particular, employees who believe that resource allocation processes have been fair are more likely to feel loyal to the organization. This is in line with the established theory suggesting that procedural justice has a powerful impression on affective commitment as it signals trust, integrity and togetherness when organizations treat employees with respect and fairness in those procedures and processes (Andrews et al., 2008; Poon, 2012; Pathardikar et al., 2023).

Consequently, when employees are valued by the organization, positive system outcomes will be achieved (Andrews et al., 2008). This confirms our expectations regarding the positive relationship between procedural justice and affective commitment. Moreover, when procedural justice is present, one can expect that employees experience a less desire to leave the organization. Our findings support existing research asserting that procedural justice is crucial to employee retention since fair procedures reassure employees that their interests are protected in the long run, which reduces their intention to leave (Gharbi et al, 2022; Poon, 2012; Jawahar, 2002).

Moreover, hypothesis 2a proposes that there is a positive relationship between intrinsic motivation and affective commitment, and hypothesis 2b suggests that there is a negative relationship between extrinsic motivation and affective commitment. Our findings support prior research suggesting that when individuals are intrinsically motivated, they tend to exhibit higher levels of affective commitment (Rani & Desiana, 2019; Töre, 2020). This is because intrinsic motivation is driven by personal factors or situations that lead to emotional attachment to the organization (Meyer & Herscovitch, 2001; Rani & Desiana, 2019). The negative relationship between extrinsic motivation and

affective commitment is also in accordance with the literature. While extrinsic rewards such as pay and bonuses can contribute to affective commitment, they have a weaker relationship compared to intrinsic motivation (Kuvaas, 2006). The findings of our study are consistent with those of Gagné and colleagues (2010), who concluded that extrinsic motivation negatively correlates with affective commitment. This implies that organizations should focus on raising intrinsic motivation effectively to enhance employee affective commitment (Meyer & Herscovitch, 2001; Rani & Desiana, 2019).

Following our direct hypothesis, procedural justice is expected to have a relationship with affective commitment in which motivation plays a mediating role. First and foremost, we find that both intrinsic and extrinsic motivation serve as partial mediators between procedural justice and affective commitment. In line with established theory, employees are more likely to engage in their work when they perceive procedural justice as it leads to intrinsic motivation through their needs of autonomy and competence being met (Tyler & Blader, 2003; Poon, 2012; Deci et al., 2017). In turn, intrinsic motivation has been found to be positively related to affective commitment (Rani & Desiana, 2019; Töre, 2020). We can therefore conclude that hypothesis 3a is supported as intrinsic motivation mediates the relationship between procedural justice and affective commitment. Nevertheless, since this is only a partial mediation and not a full mediation, there appears to be a direct relationship between procedural justice and affective commitment (Rucker et al., 2011).

Regarding extrinsic motivation, hypothesis 3b was also supported, although its mediation was found to be less strong, suggesting that its explanatory mechanism has less impact (Rucker et al., 2011). Although both types of motivation have significant findings, the difference may indicate that intrinsic motivation in relation to outcome processes plays a more important role in the explanation of the relationship between procedural justice and affective commitment. However, it is still an interesting finding as one would expect corresponding outcomes for both intrinsic and extrinsic motivation due to their opposing nature (Kuvaas et al., 2017; Kuvaas, 2018).

A possible explanation can also be the fact that the facets of extrinsic motivation were not significant on their own (see Appendix C), therefore, when combined there was a smaller mediation. Notably, according to Pearson's correlation analysis, the facet monetary rewards did not have a significant

correlation with procedural justice, whereas the facets deadlines, surveillance and evaluation had significant correlations. This is an interesting finding as the scale of monetary rewards is not a new concept and has been used in previous research (Kuvaas et al., 2017), hence it should be expected to have more validity compared to the new scales.

Apart from this, the study is consistent with established literature regarding motivation and turnover intentions, as evidenced by the support of hypothesis 4a and 4b. Based on our findings, employees who have high intrinsic motivation are less likely to consider leaving their jobs due to high levels of job satisfaction and fulfillment, consistent with previous studies (Kuvaas et al., 2016; Dysvik & Kuvaas, 2010). Moreover, research suggests intrinsic motivation provides employees with a sense of autonomy and control over their work, which is necessary for employee retention (Dysvik & Kuvaas, 2010).

Conversely, we found that extrinsic motivation is associated with increased turnover intentions, which was expected since numerous studies have shown that extrinsic motivation is associated with positive attitudes towards leaving the organization (Kuvaas et al., 2017; Sahraee et al., 2021; Vansteenkiste et al., 2007). Although employers may use extrinsic motivations to attempt to control their employees, this may actually have the opposite result and increase employees' intentions to leave. Our inclusion of the coercive control facets reveal that external pressure also plays a role in influencing employees' turnover intentions, which can have implications for organizational strategies that are intended to retain employees.

After confirming our direct hypotheses, we can examine the mediating role of motivation in the relationship between procedural justice and turnover intention. In particular, hypothesis 5a posits that intrinsic motivation mediates the relationship between procedural justice and turnover intention. The regression analysis results indicate that intrinsic motivation plays a fully mediating role in the negative relationship between procedural justice and turnover intention. Due to the full mediation, the relationship between procedural justice and turnover intentions can be explained entirely by intrinsic motivation. When procedural justice is high, employees are more likely to be intrinsically motivated and committed to their work, and less likely to be extrinsically motivated by rewards or recognition (Kuvaas, 2006). Consequently, procedural justice decreases turnover intentions because it promotes mutual commitment between relationships

through intrinsic motivation, which is an essential component of employee retention (García-Chas et al., 2014).

Furthermore, hypothesis 5b suggests that extrinsic motivation mediates the relationship between procedural justice and turnover intention. As our results demonstrate, extrinsic motivation operates in a similar manner to intrinsic motivation in that it fully mediates the positive relationship between procedural justice and turnover intention. When procedural justice is deficient, employees are less likely to be intrinsically motivated (Zapata-Phelan et al., 2009). Accordingly, extrinsic motivation will prevail in the absence of intrinsic motivation (Kuvaas, 2018), resulting in increased turnover intentions (Kuvaas et al., 2017). In accordance with theory, our expectations regarding motivation as a mediating factor between procedural justice and turnover intention were fulfilled. As a result, the expansion of extrinsic motivation still appears to provide a complete explanation mechanism, thus emphasizing the significance of coercive control and encouraging further investigation.

5.1 Implications for Theory and Practice

This study makes a significant contribution to theory by demonstrating that the relationship between procedural justice and the outcomes of affective commitment and turnover intention are mediated by motivation. Furthermore, the results of this study will have practical implications for organizations seeking to reduce the increasing turnover rates (Belete, 2018), while enhancing the retention of employees. In discovering the factors that foster affective commitment and reduce turnover intention, companies can create practices that encourage employees to stay with their organization.

Our research indicates that organizations should emphasize fostering procedural justice in promoting employee retention, and this can be accomplished through a variety of practices. This can be accomplished by involving employees in resource allocation processes, such as salary discussions, promotions, and other decisions that directly affect their working conditions (Colquitt, 2001; Greenberg, 1987; Pathardikar et al., 2023). This will enable employees to participate in decisions that affect their work lives and help to build trust and loyalty within the organization. Further, organizations can ensure that policies and procedures are consistent among all employees, and that these processes are transparent

(Pathardikar et al., 2023). Our study holds that when employees perceive procedures and policies fair and consistent, they are more likely to feel valued and committed to the organization through the increase of intrinsic motivation.

Another significant contribution of this study is the expansion of the theoretical construct of extrinsic motivation. In the past, the construct has primarily been investigated in terms of monetary rewards (Kunz & Linder, 2012). As a result of this study, we are able to identify an emerging area of extrinsic motivation involving coercive control through external pressure. This was accomplished by incorporating the facets of extrinsic motivation proposed by Kuvaas and colleagues (2017). We built upon the studies by Amabile and colleagues (1976), Lepper & Greene (1975), and Ryan & Deci (2000b) in developing the new subscales of extrinsic motivation, namely deadlines, surveillance and evaluation. Referring to procedural justice, we argue that being unfairly treated can also be explained by coercive control, as independence and trust are reduced when employees are excluded from important decision-making processes (Poon, 2012; Pathardikar et al., 2023).

When incorporating coercive control into extrinsic motivation the negative relationship between the construct and affective commitment was still observed. Similarly, a positive relationship was still observed between the construct and turnover intention. We therefore suggest that organizations not solely think of incentives as the cause of extrinsic motivation when developing policies and practices, but also consider how coercive control affects employee outcomes in general. In this regard, we recommend that practitioners are cautious about imposing deadlines on employees in order to prevent the loss of autonomy (Amabile et al., 1976). Instead of placing restrictions on employees, organizations should trust them to complete the task on time on their own, in order to prevent them from feeling restricted or that their control has been compromised.

Additionally, it also applies to surveillance as it scrutinizes the employee's ability to be trusted with their responsibilities and over time reduces excitement for tasks (Lepper & Greene, 1975). Providing employees with the freedom to accomplish tasks independently will lead to intrinsic motivation through the needs of competence and autonomy (Deci et al., 2017). In regards to evaluations of employees, our findings indicate that although previous practices in the workplace have been to evaluate employees, in reality, they do not lead to intrinsic motivation but rather extrinsic motivation. We therefore suggest that

organizations focus on positive feedback as opposed to evaluations of performance in order to foster intrinsic motivation through the needs of autonomy, competence and relatedness (Ryan & Deci, 2000b).

Overall, we recommend organizations to strive for fair processes and procedures by actively including employees in their resource allocation processes in order to achieve positive employee outcomes. While involving employees in these processes may appear more costly, it can prove to be beneficial to the organization, as turnover has a high expense (Belete, 2018). Additionally, turnover can negatively impact consistency, quality, and stability of organizational output (Dysvik & Kuvaas, 2010). In light of this, procedural justice serves to benefit organizations through boosting intrinsic motivation and thereby promoting employee retention through affective commitment and decreased turnover intention (Zapata-Phelan et al., 2009; Kuvaas et al., 2017; García-Chas et al., 2014).

5.2 Limitations and directions for future research

Some limitations regarding the current study are worth mentioning. First of all, there are some potential limitations related to our survey methodology. Since we had one single questionnaire instead of two, all the variables were measured at the same time, potentially introducing bias associated with response fatigue (Choi & Pak, 2005) and item context effects may occur. This might result in respondents assigning an item solely based on its relationship to the other items in the survey (Podsakoff et al., 2003).

Consequently, we tried to keep the questionnaire as straightforward and specific as possible. We presented the items of each variable at first, and respondents were unable to revisit and modify their answers once provided. For the purpose of attempting to ensure independence and minimize the potential sources of bias, we arranged the variables in a specific order within the survey with separation of each other (Podsakoff et al., 2003); where the dependent variables were presented in the initial sections, followed by the mediating variables in the middle position. We placed the independent variable, procedural justice, at the end of the survey, aiming to ensure its independence. Furthermore, we attempted to minimize item ambiguity by providing clear definitions for terms

that might be unfamiliar to participants in order to reduce confusion (Podsakoff et al., 2003).

In addition, the survey's public distribution and voluntary participation introduce challenges in determining significant differences between respondents and non-respondents, thereby increasing the risk of non-response bias and volunteer bias (Sedgwick, 2013). Consequently, the potential to generalize the survey findings to a broader population becomes limited. Additionally, since the survey is being conducted only in Norwegian, this limits its generalizability to other countries and cultures. Therefore, further research is necessary to investigate the relevance of our findings in diverse cultural and geographical contexts.

Another limitation is related to the low reliability observed in the evaluation facet of extrinsic motivation and the need to remove several items from the variables during the EFA. Specifically, three items were eliminated from the procedural justice scale, and another three items were removed from the affective commitment scale, resulting in only three items left for each scale. These findings suggest potential issues with the measurement scales or the underlying structure being examined. The reasons for this could be attributed to poor item quality, low factor loadings, which indicate weak relationships between the items and the variables, or high cross-loadings, indicating strong relationships with multiple factors (Schreiber, 2021). Consequently, future research should further focus on improving these reliability issues and measurement scales by improving the item selection process or developing new items in general.

It is important to note that our study, due to the descriptive design, cannot establish causal relationships between the variables or make claims about causality. The descriptive nature of our study allowed us to identify systematic changes, commonly referred to as correlation (Sallis et al., 2021). Accordingly, we recommend future research to employ experimental designs to investigate cause-and-effect relationships, particularly in the context of employee motivation, procedural justice, affective commitment, and turnover intention.

Laboratory experiments offer greater control over the variables and minimize threats to internal validity, thereby assisting the establishment of causal relationships. By manipulating the independent variable and measuring the proposed mediators and dependent variables, researchers can explore how variation in the independent variable influences the dependent variables through the mediators (Podsakoff & Podsakoff, 2019). For example, Allen and Rush

(1998, Study 2) employed a laboratory design in their study, demonstrating the mediating role of liking and affective commitment in the relationship between organizational citizenship behaviors and performance evaluations (Podsakoff & Podsakoff, 2019). Through this method, future research can enhance our understanding of how the variables in this study are related.

Moreover, our study examined monetary rewards and coercive control as a source of extrinsic motivation in the workplace. However, it is worth mentioning that there are numerous other sources of external pressure present in most work settings, such as threats, directives and competitive pressure (Ryan & Deci, 2000a). Future research could explore the development of new and broader measures that capture these aspects of extrinsic motivation.

Another recommendation for future research directions include exploring other mediators beyond intrinsic and extrinsic motivation. Our findings indicate that these variables partially mediate the relationships between procedural justice and affective commitment. The presence of partial mediation suggests the existence of other indirect relationships that should be explored empirically (Rucker et al., 2011). A concrete suggestion for further investigation includes examining the indirect influence of perceived organizational support (POS), as recent research has highlighted its relation to both procedural justice and affective commitment (Dominic et al., 2021; Zhao et al., 2020). Accordingly, it can be of value to investigate further into these areas to gain a better understanding of the underlying mechanisms and their implications.

6.0 Conclusion

This study investigates the extent to which intrinsic and extrinsic motivation serve as mediators between procedural justice and affective commitment, as well as between procedural justice and turnover intention. The findings reveal that intrinsic motivation partially mediates the positive relationship between procedural justice and affective commitment, while extrinsic motivation partially mediates the negative relationship between these factors. Additionally, intrinsic motivation fully mediates the negative relationship between procedural justice and turnover intention, while extrinsic motivation fully mediates the positive relationship between procedural justice and turnover intention.

Through these findings, we highlight the importance of organizations ensuring procedural justice for employees as it translates to intrinsic and extrinsic

motivation, thus increasing affective commitment and reducing the likelihood of turnover intention. Furthermore, this study contributes to the expansion of the concept of extrinsic motivation through the concept of coercive control. The study offers practical implications for practitioners as well as research opportunities for the future.

References

- Abu-Bader, S., & Jones, T. V. (2021). Statistical mediation analysis using the sobel test and hayes SPSS process macro. *International Journal of Quantitative and Qualitative Research Methods*.
- Akobeng, A. K. (2016). Understanding type I and type II errors, statistical power and sample size. *Acta Paediatrica*, 105(6), 605–609.
<https://doi.org/10.1111/apa.13384>
- Akosile, A. L., & Ekemen, M. A. (2022). The Impact of Core Self-Evaluations on Job Satisfaction and Turnover Intention among Higher Education Academic Staff: Mediating Roles of Intrinsic and Extrinsic Motivation. *Behavioral Sciences*, 12(7), 236. <https://doi.org/10.3390/bs12070236>
- Allen, N. J. & Meyer, J. P. (1990). The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of Occupational Psychology*, 63(1), 1–18. <https://doi.org/10.1111/j.2044-8325.1990.tb00506.x>
- Amabile, T. M., DeJong, W., & Lepper, M. R. (1976). Effects of externally imposed deadlines on subsequent intrinsic motivation. *Journal of Personality and Social Psychology*, 34(1), 92–98.
<https://doi.org/10.1037/0022-3514.34.1.92>
- Andrews, M. C., Kacmar, K. M., Blakely, G. L., & Bucklew, N. S. (2008). Group Cohesion as an Enhancement to the Justice—Affective Commitment Relationship. *Group & Organization Management*, 33(6), 736–755.
<https://doi.org/10.1177/1059601108326797>
- Baron, R. M., & Kenny, D. A. (1986). The Moderator-Mediator Variable Distinction in Social Psychological Research. *Journal of Personality and Social Psychology*, 51(6), 1173–1182. <https://doi.org/10.1037/0022-3514.51.6.1173>
- Belete, A. K. (2018). Turnover intention influencing factors of employees: an empirical work review. *Journal of Entrepreneurship & Organization Management*, 7(3), 1-7.
<https://pdfs.semanticscholar.org/c3a2/6253e522d8b3a4cfc15b24c86f841d4e837c.pdf>
- Bell, E., Bryman, A., & Harley, B. (2019). *Business research methods* (Fifth edition.). Oxford University Press.

- Bryman, A., & Bell, E. (2011) *Business Research Methods*. Oxford University Press.
- Chiat, L. C., & Panatik, S. A. (2019). Perceptions of employee turnover intention by Herzberg's motivation-hygiene theory: A systematic literature review. *Journal of Research in Psychology*, 1(2), 10-15. <https://readersinsight.net/jrp/article/view/949/752>
- Choi, B. C., & Pak, A. W. (2005). Peer reviewed: a catalog of biases in questionnaires. *Preventing chronic disease*, 2(1).
- Colquitt, J. A. (2001). On the Dimensionality of Organizational Justice. *Journal of Applied Psychology*, 86(3), 386–400. <https://doi.org/10.1037/0021-9010.86.3.386>
- Colquitt, J. A., Conlon, D. E., Wesson, M. J., Porter, C. O. L. H., & Yee Ng, K. (2001). Justice at the Millennium. *Journal of Applied Psychology*, 86(3), 425–445. <https://doi.org/10.1037/0021-9010.86.3.425>
- Crow, G., Wiles, R., Heath, S., & Charles, V. (2006). Research Ethics and Data Quality: The Implications of Informed Consent. *International Journal of Social Research Methodology*, 9(2), 83–95. <https://doi.org/10.1080/13645570600595231>
- Deci, E. L. & Ryan, R. M. (2000). The "What" and "Why" of Goal Pursuits: Human Needs and the Self-Determination of Behavior. *Psychological Inquiry*, 11(4), 227–268. https://doi.org/10.1207/S15327965PLI1104_01
- Daoud, J. I. (2017). Multicollinearity and Regression Analysis. *Journal of Physics. Conference Series*, 949(1), 12009. <https://doi.org/10.1088/1742-6596/949/1/012009>
- Deci, E. L., Olafsen, A., & Ryan, R. (2017). Self-Determination Theory in Work Organizations: The State of a Science. *Annual Review of Organizational Psychology and Organizational Behavior*, 4(1), 19-43. <https://doi.org/10.1146/annurev-orgpsych-032516-113108>
- Dominic, E., Victor, V., Nathan, R. J., & Loganathan, S. (2021). Procedural Justice, Perceived Organisational Support, and Organisational Citizenship Behaviour in Business School. *Organizacija*, 54(3), 193–209. <https://doi.org/10.2478/orga-2021-0013>
- Dysvik, A. & Kuvaas, B. (2010). Exploring the relative and combined influence

- of mastery-approach goals and work intrinsic motivation on employee turnover intention. *Personnel Review*, 39(5), 622–638.
<https://doi.org/10.1108/00483481011064172>
- Gagné, M., Forest, J., Gilbert, M.-H., Aubé, C., Morin, E., & Malorni, A. (2010). The Motivation at Work Scale: Validation Evidence in Two Languages. *Educational and Psychological Measurement*, 70(4), 628–646.
<https://doi.org/10.1177/0013164409355698>
- García-Chas, R., Neira-Fontela, E., & Castro-Casal, C. (2014). High-performance work system and intention to leave: a mediation model. *International Journal of Human Resource Management*, 25(3), 367–389.
<https://doi.org/10.1080/09585192.2013.789441>
- Gharbi, H., Aliane, N., Al Falah, K. A., & Sobaih, A. E. E. (2022). You Really Affect Me: The Role of Social Influence in the Relationship between Procedural Justice and Turnover Intention. *International Journal of Environmental Research and Public Health*, 19(9), 5162.
<https://doi.org/10.3390/ijerph19095162>
- Greenberg, J. (1987). Reactions to Procedural Injustice in Payment Distributions. *Journal of Applied Psychology*, 72(1), 55–61.
<https://doi.org/10.1037/0021-9010.72.1.55>
- Greenberg, J., & Tyler, T. R. (1987). Why procedural justice in organizations? *Social Justice Research*, 1(2), 127–142.
<https://doi.org/10.1007/BF01048012>
- Jawahar, I. M. (2002). A Model of Organizational Justice and Workplace Aggression. *Journal of Management*, 28(6), 811–834.
[https://doi.org/10.1016/S0149-2063\(02\)00189-7](https://doi.org/10.1016/S0149-2063(02)00189-7)
- Jawahar, I. M. (2010). The Mediating Role of Appraisal Feedback Reactions on the Relationship Between Rater Feedback-Related Behaviors and Ratee Performance. *Group & Organization Management*, 35(4), 494–526.
<https://doi.org/10.1177/1059601110378294>
- Kalleberg, A.L. (1977). Work Values and Job Rewards: A Theory of Job Satisfaction. *American Sociological Review*, 42(1), 124–143.
<https://doi.org/10.2307/2117735>
- Kiffin-Petersen, S., & Cordery, J. (2003). Trust, individualism and job

- characteristics as predictors of employee preference for teamwork. *International Journal of Human Resource Management*, 14(1), 93–116. <https://doi.org/10.1080/09585190210158538>
- Khatri, N., Fern, C. T., & Budhwar, P. (2001). Explaining employee turnover in an Asian context. *Human Resource Management Journal*, 11(1), 54–74. <https://doi.org/10.1111/j.1748-8583.2001.tb00032.x>
- Kiffin-Petersen, S., & Cordery, J. (2003). Trust, individualism and job characteristics as predictors of employee preference for teamwork. *International Journal of Human Resource Management*, 14(1), 93–116. <https://doi.org/10.1080/09585190210158538>
- Kunz, J., & Linder, S. (2012). Organizational Control and Work Effort - Another Look at the Interplay of Rewards and Motivation. *The European Accounting Review*, 21(3), 591–621. <https://doi.org/10.1080/09638180.2012.684498>
- Kuvaas, B. (2006). Work performance, affective commitment, and work motivation: the roles of pay administration and pay level. *Journal of Organizational Behavior*, 27(3), 365–385. <https://doi.org/10.1002/job.377>
- Kuvaas, B. (2018). Chapter 12: The Relative Efficiency of Extrinsic and Intrinsic Motivation. DOI: [10.18261/9788215031583-2018](https://doi.org/10.18261/9788215031583-2018)
- Kuvaas, B., Buch, R., Gagné, M., Dysvik, A., & Forest, J. (2016). Do you get what you pay for? Sales incentives and implications for motivation and changes in turnover intention and work effort. *Motivation and Emotion*, 40(5), 667–680. <https://doi.org/10.1007/s11031-016-9574-6>
- Kuvaas, B., Buch, R., Weibel, A., Dysvik, A., & Nerstad, C. G. L. (2017). Do intrinsic and extrinsic motivation relate differently to employee outcomes? *Journal of Economic Psychology*, 61, 244–258. <https://doi.org/10.1016/j.joep.2017.05.004>
- Lepper, M. R. & Greene, D. (1975). Turning play into work: Effects of adult surveillance and extrinsic rewards on children's intrinsic motivation. *Journal of Personality and Social Psychology*, 31(3), 479–486. <https://doi.org/10.1037/h0076484>
- Malhotra, N., Budhwar, P., & Prowse, P. (2007). Linking rewards to commitment: An empirical investigation of four UK call centres. *International Journal of Human Resource Management*, 18(12), 2095–2017. <http://dx.doi.org/10.1080/09585190701695267>

- Meyer, J. P., Becker, T. E., & Vandenberghe, C. (2004). Employee Commitment and Motivation. *Journal of Applied Psychology*, 89(6), 991–1007.
<https://doi.org/10.1037/0021-9010.89.6.991>
- Meyer, J. P., & Herscovitch, L. (2001). Commitment in the workplace: toward a general model. *Human Resource Management Review*, 11(3), 299–326.
[https://doi.org/10.1016/S1053-4822\(00\)00053-X](https://doi.org/10.1016/S1053-4822(00)00053-X)
- Mohd Kassim, M. A., & Ibrahim, H. I. (2016). Relationship between Distributive Justice, Procedural Justice, Conflict Management Styles and Affective Commitment: A Study among Bank Employees in Northern Malaysia. *Jurnal Pengurusan*, 47(1), 15–27. <https://doi.org/10.17576/pengurusan-2016-47-02>
- Narayanan, A., Rajithakumar, S., & Menon, M. (2019). Talent Management and Employee Retention: An Integrative Research Framework. *Human Resource Development Review*, 18(2), 228–247.
<https://doi.org/10.1177/1534484318812159>
- Osborne, J. W., & Costello, A. B. (2004). Sample size and subject to item ratio in principal components analysis. *Practical Assessment, Research & Evaluation*, 9, 11. <https://doi.org/10.7275/ktzq-jq66>
- Pathardikar, A. D., Mishra, P. K., & Sahu, S. (2023). Procedural justice influencing affective commitment: mediating role of organizational trust and job satisfaction. *Journal of Asia Business Studies*, 17(2), 371–384.
<https://doi.org/10.1108/JABS-08-2021-0356>
- Pinder, C. C. (2008). Work motivation in organizational behavior. New York: Psychology Press. <https://doi.org/10.4324/9781315734606>
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common Method Biases in Behavioral Research. *Journal of Applied Psychology*, 88(5), 879–903. <https://doi.org/10.1037/0021-9010.88.5.879>
- Podsakoff, P. M., & Podsakoff, N. P. (2019). Experimental designs in management and leadership research: Strengths, limitations, and recommendations for improving publishability. *The Leadership Quarterly*, 30(1), 11–33. <https://doi.org/10.1016/j.leaqua.2018.11.002>
- Poon, J. M. L. (2012). Distributive Justice, Procedural Justice, Affective Commitment, and Turnover Intention: A Mediation-Moderation Framework. *Journal of Applied Social Psychology*, 42(6), 1505–1532.
<https://doi.org/10.1111/j.1559-1816.2012.00910.x>

- Rani, R., & Desiana, P. (2019). The Impact of Owners' Intrinsic Motivation and Work-Life Balance on SMEs' Performance: The Mediating Effect of Affective Commitment. *International Journal of Business*, 24(4), 393–411.
- Richer, S.F., Blanchard, C., & Vallerand, R. J. (2002). A Motivational Model of Work Turnover. *Journal of Applied Social Psychology*, 32(10), 2089–2113. <https://doi.org/10.1111/j.1559-1816.2002.tb02065.x>
- Rucker, D. D., Preacher, K. J., Tormala, Z. L., & Petty, R. E. (2011). Mediation Analysis in Social Psychology: Current Practices and New Recommendations. *Social and Personality Psychology Compass*, 5(6), 359–371. <https://doi.org/10.1111/j.1751-9004.2011.00355.x>
- Ryan, R. M. & Deci, E. L. (2000a). Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions. *Contemporary Educational Psychology*, 25(1), 54–67. <https://doi.org/10.1006/ceps.1999.1020>
- Ryan, R. M. & Deci, E. L. (2000b). Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being. *The American Psychologist*, 55(1), 68–78. <https://doi.org/10.1037/0003-066X.55.1.68>
- Sahraee, R., Abdullah, H. B., & Bagherian, F. (2021). How Psychosocial Indicators Push Millennials to Intend Leaving Their Job: A Study of Generational Differences in Iranian Organizations. *Iranian Journal of Management Studies*, 14(4), 681–698. <https://doi.org/10.22059/IJMS.2020.308501.674181>
- Sallis, J., Gripsrud, G., Olsson, U. H., & Silkoset, R. (2021). *Research Methods and Data Analysis for Business Decisions : A Primer Using SPSS*. Springer.
- Schreiber, J. B. (2021). Issues and recommendations for exploratory factor analysis and principal component analysis. *Research in Social and Administrative Pharmacy*, 17(5), 1004–1011. <https://doi.org/10.1016/j.sapharm.2020.07.027>
- Sedgwick, P. (2013). Questionnaire surveys: sources of bias. *Bmj*, 347. DOI: <https://doi.org/10.1136/bmj.f5265>
- Siyal, S., Saeed, M., Pahi, M. H., Solangi, R., & Xin, C. (2021). They can't treat

- you well under abusive supervision: Investigating the impact of job satisfaction and extrinsic motivation on healthcare employees. *Rationality and Society*, 33(4), 401–423. <https://doi.org/10.1177/10434631211033660>
- Taber, K. S. (2018). The Use of Cronbach's Alpha When Developing and Reporting Research Instruments in Science Education. *Research in Science Education (Australasian Science Education Research Association)*, 48(6), 1273–1296. <https://doi.org/10.1007/s11165-016-9602-2>
- Taherdoost, H. (2016). Validity and Reliability of the Research Instrument; How to Test the Validation of a Questionnaire/Survey in a Research. *International Journal of Academic Research in Management (IJARM)* Vol. 5, No. 3, 2016, Page: 28-36.
DOI: <http://dx.doi.org/10.2139/ssrn.3205040>
- Tavakol, M. & Dennick, R. (2011) Making sense of Cronbach's alpha. *International Journal of Medical Education*. 2011;2, 253-55. DOI: [10.5116/ijme.4dfb.8dfd](https://doi.org/10.5116/ijme.4dfb.8dfd)
- Töre, E. (2020) Effects of Intrinsic Motivation on Teacher Emotional Labor: Mediating Role of Affective Commitment. *International Journal of Progressive Education*, 16(5), 390-403. DOI: [10.29329/ijpe.2020.277.24](https://doi.org/10.29329/ijpe.2020.277.24)
- Tyler, T. R., & Blader, S. L. (2003). The group engagement model: Procedural justice, social identity, and cooperative behavior. *Personality and Social Psychology Review*, 7(4), 349-361.
https://doi.org/10.1207/S15327957PSPR0704_07
- Vansteenkiste, M., Neyrinck, B., Niemiec, C. P., Soenens, B., De Witte, H., & Van den Broeck, A. (2007). On the relations among work value orientations, psychological need satisfaction and job outcomes: A self-determination theory approach. *Journal of Occupational and Organizational Psychology*, 80(2), 251–277.
<https://doi.org/10.1348/096317906X111024>
- Qualtrics. (2023). *Online survey software*.
<https://www.qualtrics.com/uk/core-xm/survey-software/>
- Zapata-Phelan, C. P., Colquitt, J. A., Scott, B. A., & Livingston, B. (2009). Procedural justice, interactional justice, and task performance: The mediating role of intrinsic motivation. *Organizational Behavior and*

Human Decision Processes, 108(1), 93–105.

<https://doi.org/10.1016/j.obhdp.2008.08.001>

Zhao, P., Xu, X., Peng, Y., & Matthews, R. A. (2020). Justice, support, commitment, and time are intertwined: A social exchange perspective. *Journal of Vocational Behavior*, 120, 103432.

<https://doi.org/10.1016/j.jvb.2020.103432>

Appendix

Appendix A: Research Questionnaire Appendix A: Research Questionnaire

	English	Norwegian
<p>Intrinsic Motivation (indre motivasjon).</p> <p>Kuvaas (2006), Dysvik & Kuvaas (2010)</p>	<p>The statements below concern your inner drive to carry out your work tasks. To what extent do you agree that:</p> <ul style="list-style-type: none"> • My job is so interesting that it is a motivation in itself • My job is meaningful • The tasks that I do at work are enjoyable • My job is very exciting • The tasks that I do at work are themselves representing a driving power in my job • Sometimes I become so inspired by my job that I almost forget 	<p>Utsagnene under handler om din indre drivkraft til å utføre dine arbeidsoppgaver. I hvilken grad er du enig i følgende påstander:</p> <ul style="list-style-type: none"> • Jobben min er så interessant at det er en motivasjon i seg selv • Jobben min er meningsfull • Oppgavene jeg utfører på jobben min er morsomme • Jobben min er veldig spennende • Oppgavene jeg utfører på arbeidsplassen representerer i seg selv en drivkraft for meg • Noen ganger blir jeg så inspirert av jobben min at jeg nesten glemmer

	everything else around me	alt annet rundt meg
<p>Extrinsic Motivation (ytre motivasjon)</p> <p>Siyal et al., (2021), (Lepper & Greene (1975), Amabile et al., (1976), Kuvaas et al., (2017), Ryan & Deci (2000b), Jawahar (2010)</p>	<p>Monetary Rewards.</p> <p>The statements below concern how the reward system at your workplace affects you in your work. To what extent do you agree with the following statements:</p> <ul style="list-style-type: none"> • I am strongly motivated by the promotions and other benefits I can earn • I am keenly aware of the goals I set for myself. • If I am supposed to put in extra effort in my job, I need to get extra pay • External incentives such as bonuses and provisions are essential for 	<p>Økonomiske Insentiver.</p> <p>Utsagnene under handler om hvordan belønningssystemet på arbeidsplassen din påvirker deg i ditt arbeid. I hvilken grad er du enig i følgende påstander:</p> <ul style="list-style-type: none"> • Jeg blir veldig motivert av forfremmelser og andre fordeler jeg kan tjene på jobben min • Jeg er veldig bevisst på målene jeg har satt for meg selv i jobbsammenheng • Hvis jeg skal anstrenge meg ekstra i jobben min, må jeg få ekstra betalt for det • Økonomiske goder som bonuser og provisjoner er avgjørende for

	<p>how well I perform my job</p> <ul style="list-style-type: none"> • It is important for me to have an external incentive to strive for in order to do a good job • If I had been offered better pay, I would have done a better job <p>Coercive control. The statements below concern to what extent you feel controlled at your workplace. To what extent do you agree with the following statements:</p> <p><u>Deadlines:</u></p> <ul style="list-style-type: none"> • Deadlines reduce the enjoyment I have for my tasks • Deadlines help me to ensure that my tasks are being done 	<p>hvor godt jeg utfører jobben min</p> <ul style="list-style-type: none"> • Det er viktig for meg å ha et økonomisk gode å strebe etter for å gjøre en god jobb • Hvis jeg hadde blitt tilbudt en bedre lønn, ville jeg gjort en bedre jobb <p>Presset Kontroll. Utsagnene under handler om i hvilken grad du føler deg kontrollert på arbeidsplassen din. I hvilken grad er du enig i følgende påstander:</p> <p><u>Tidsfrister.</u></p> <ul style="list-style-type: none"> • Tidsfrister reduserer gleden jeg har for arbeidsoppgavene mine • Tidsfrister hjelper meg å sikre at arbeidsoppgavene mine blir utført • Når jeg mottar tidsfrister, føler
--	---	---

	<ul style="list-style-type: none"> • When I receive deadlines, I am feeling pressured to perform • I feel pressured to focus more about reaching the deadline rather than the quality of the tasks I perform • Due to deadlines, I feel that I do not have as much control (autonomy) over my work as I would like • When I have to adhere to deadlines, I feel that I have to perform my tasks differently to how I prefer <p><u>Surveillance:</u></p> <ul style="list-style-type: none"> • I can sense that I am being observed when I work 	<p>jeg meg presset til å prestere</p> <ul style="list-style-type: none"> • Jeg føler meg presset til å fokusere mer på å nå fristene mine framfor kvaliteten til arbeidsoppgavene jeg utfører • Tidsfrister gjør at jeg har mindre kontroll over arbeidet mitt enn jeg ønsker • Når jeg må forholde meg til tidsfrister opplever jeg at jeg må utføre arbeidet mitt på en annen måte enn jeg foretrekker <p><u>Tilsyn:</u></p> <ul style="list-style-type: none"> • Jeg kan merke at jeg blir observert når jeg utfører mine arbeidsoppgaver. • Når jeg jobber føler jeg at jeg blir observert
--	--	---

	<ul style="list-style-type: none"> • When I work, I feel that I am being observed • It feels like I am being monitored when I work • When I sense that I am being observed, I feel pressured to perform tasks in a specific manner • It feels like I am being monitored by my supervisor when I work • When I feel monitored at work, I experience a lower degree of autonomy <p><u>Evaluation:</u></p> <ul style="list-style-type: none"> • I become more motivated when I receive positive feedback at work • When I am being evaluated at work, I feel 	<ul style="list-style-type: none"> • Det føles som om jeg blir overvåket når jeg utfører mine arbeidsoppgaver • Når jeg blir observert, føler jeg meg presset til å utføre oppgaver på en bestemt måte • Det føles som om jeg blir overvåket av lederen min når jeg utfører mine arbeidsoppgaver • Når jeg føler meg overvåket på arbeidsplassen opplever jeg mindre grad av selvstendighet <p><u>Evaluering.</u></p> <ul style="list-style-type: none"> • Jeg blir mer motivert når jeg får positive tilbakemeldinger på jobb • Når jeg blir evaluert på jobb føler jeg at jeg blir sammenlignet med andre ansatte
--	--	---

	<p>that i am being compared to other employees</p> <ul style="list-style-type: none"> • When I am being evaluated at work, I feel pressured to perform tasks in a specific manner • When I am being evaluated i feel it changes how I perform at work • Evaluations by my supervisor are important for me to be motivated • I do not feel that the performance evaluation I receive reflect my actual performance 	<ul style="list-style-type: none"> • Det er viktig for meg å bli evaluert av lederen min for at jeg skal bli motivert • Når jeg blir evaluert føler jeg meg presset til å utføre oppgaver på en bestemt måte • Jeg føler ikke at evalueringer av arbeidsutførelsen min gjenspeiler mine faktiske arbeidsutførelser
<p>Affective Commitment (affektiv forpliktelse). Kuvaas et al., (2017)</p>	<p>The statements below concern to what extent you feel emotionally connected to the workplace. To what extent do you agree</p>	<p>Utsagnene under handler om i hvilken grad du er følelsesmessig tilknyttet til arbeidsplassen. I hvilken grad er du enig i følgende påstander:</p>

	<p>with the following statements:</p> <ul style="list-style-type: none"> • I would be very happy to spend the rest of my career in this organization • I really feel as if this organization's problems are my own • I do not feel a strong sense of belonging to my organization • I think I could easily become as attached to another organization as I am to this one • I do not feel like "part of the family" at my organization • I do not feel "emotionally attached" to this organization 	<ul style="list-style-type: none"> • Jeg hadde vært fornøyd med å tilbringe resten av karrieren min på min nåværende arbeidsplass • Jeg føler genuint at arbeidsplassen min sine problemer er mine egne • Jeg føler ikke en sterk tilhørighet til arbeidsplassen min • Jeg tror jeg kan bli like tilknyttet til en annen arbeidsplass som jeg er til denne • Jeg føler meg ikke som "en del av familien" på arbeidsplassen min • Jeg er ikke følelsesmessig knyttet til denne arbeidsplassen
<p>Turnover Intention (intensjon om å slutte)</p>	<p>The statements below concern to what extent you have an intention to quit your job. To what</p>	<p>Utsagnene under handler om i hvilken grad du har en intensjon om å slutte i jobben din. I hvilken</p>

<p>Khatri et al., (2001), Dysvik & Kuvaas (2010)</p>	<p>extent do you agree with the following statements:</p> <ul style="list-style-type: none"> • I perceive my future possibilities in this organization as poor • I often think of quitting my present job • I will probably look for a new job in the next year • I will actively look for a new job the next year • I may quit my present job during the next 12 months • I do not see myself staying in my current workplace for a long time to come 	<p>grad er du enig i følgende påstander:</p> <ul style="list-style-type: none"> • Jeg er ikke tilfreds med mine fremtidige muligheter på min nåværende arbeidsplass • Jeg tenker ofte på å slutte i min nåværende jobb • Det er sannsynlig at jeg vil se etter en ny jobb i løpet av det neste året • Jeg vil aktivt søke etter en ny jobb det neste året • Jeg vurderer å si opp min nåværende jobb i løpet av de neste 12 månedene • Jeg ser ikke for meg at jeg blir på min nåværende arbeidsplass i lang tid fremover
<p>Procedural Justice (prosedyremessig rettferdighet).</p>	<p>The following statements describe your evaluation of the perceived fairness of the procedures and</p>	<p>Følgende utsagn beskriver rettferdigheten til prosedyrene og prosessene som brukes i belønningsbeslutninger</p>

<p>Colquitt, J. A. (2001)</p>	<p>processes used in salary decisions (such as base pay, bonuses and provisions) in your organization. To what extent do you agree with the following statements:</p> <ul style="list-style-type: none"> • I have been able to express my views and feelings during those procedures • I feel that I have had influence over the outcome arrived at by those procedures • I feel that the procedures used have been applied consistently (regardless of time and persons). • I feel that those procedures have been free of bias regarding discrimination and favourisation 	<p>(som f.eks lønnsforhandlinger om fastlønn og dens utvikling, bonuser, provisjon) på din arbeidsplass. I hvilken grad er du enig i følgende påstander:</p> <ul style="list-style-type: none"> • Jeg har hatt muligheten til å uttrykke mine synspunkter og følelser under disse prosessene • Jeg opplever at jeg har hatt innflytelse over resultatene som ble oppnådd ved disse prosessene • Det blir brukt prinsippfaste prosedyrer under prosessene på arbeidsplassen (uavhengig av tid og personer) • Jeg opplever at prosedyrene under prosessene har vært upartiske i forhold til diskriminering og favorisering
-------------------------------	---	--

	<ul style="list-style-type: none"> • I have been able to appeal the outcome arrived at by those procedures • The processes I have participated in has held ethical and moral standards 	<ul style="list-style-type: none"> • Jeg har vært i stand til å be om en ny vurdering av resultatet som ble bestemt under disse prosessene • Prosessen jeg har deltatt i har holdt etiske og moralske standarder
--	--	--

Appendix B: Principal Component Analysis with Promax Rotation

Items	IM	EM	DL	SV	EV	AC	TI	PJ	--	--	--
My job is so interesting that it is a motivation in itself	<u>.759</u>										
My job is meaningful	<u>.720</u>										
The tasks that I do at work are enjoyable	<u>.774</u>										
My job is very exciting	<u>.785</u>										
The tasks that I do at work are themselves representing a driving power in my job	<u>.814</u>										
Sometimes I become so inspired by my job that I almost forget everything else around me	<u>.710</u>										
I am strongly motivated by the promotions and other benefits I can earn		.404							.554		
I am keenly aware of the goals I set for myself	.468								.512		
If I am supposed to put in extra effort in my job, I need to get extra pay	<u>.769</u>										
External incentives such as bonuses and provisions are essential for how well I perform my job	<u>.837</u>										
It is important for me to have an external incentive to strive for in order to do a good job	<u>.785</u>										
If I had been offered better pay, I would have done a better job	<u>.705</u>										
Deadlines reduce the enjoyment I have for my tasks				<u>.780</u>							
Deadlines help me to ensure that my tasks are being done				-.480		.435					
When I receive deadlines, I am feeling pressured to perform	<u>.526</u>										
I feel pressured to focus more about reaching the deadline rather than the quality of the tasks I perform	<u>.697</u>										
Due to deadlines, I feel that I do not have as much control over my work as I would like	<u>.823</u>										
When I have to adhere to deadlines, I feel that I have to perform my tasks differently to how I prefer	<u>.844</u>										

I can sense that I am being observed when I work	<u>.923</u>		
When I work, I feel that I am being observed	<u>.975</u>		
It feels like I am being monitored when I work	<u>.910</u>		
When I sense that I am being observed, I feel pressured to perform tasks in a specific manner	.353	.416	
It feels like I am being monitored by my supervisor when I work	<u>.862</u>		
When I feel monitored at work, I experience a lower degree of autonomy		-.387	.378
I become more motivated when I receive positive feedback at work			.739
When I am being evaluated at work, I feel that I am being compared to other employees	<u>.618</u>		
When I am being evaluated at work, I feel pressured to perform tasks in a specific manner	<u>.787</u>		
When I am being evaluated, I feel it changes how I perform at work			.537
Evaluations by my supervisor are important for me to be motivated	<u>.605</u>		
I do not feel that the performance evaluation I receive reflect my actual performance		.375	
I would be very happy to spend the rest of my career in this organization		-.442	
I really feel as if this organization's problems are my own	<u>.394</u>		
I do not feel a strong sense of belonging to my organization	<u>.759</u>		
I think I could easily become as attached to another organization as I am to this one			.371
I do not feel like "part of the family" at my organization	<u>.818</u>		
I do not feel "emotionally attached" to this organization	<u>.795</u>		
I perceive my future possibilities in this organization as poor	<u>.612</u>		
I often think of quitting my present job	<u>.801</u>		
I will probably look for a new job in the next year	<u>.974</u>		
I will actively look for a new job the next year	<u>.980</u>		
I may quit my present job during the next 12 months	<u>.981</u>		
I do not see myself staying in my current workplace for a long time to come	<u>.840</u>		
I have been able to express my views and feelings during those procedure	<u>.891</u>		
I feel that I have had influence over the outcome arrived at by those procedures	<u>.834</u>		
I feel that the procedures used have been applied consistently (regardless of time and persons).			.903
I feel that those procedures have been free of bias regarding discrimination and favoritisation			.883
I have been able to appeal the outcome arrived at by those procedures	<u>.870</u>		
The processes I have participated in has held ethical and moral standards			.423

Appendix C: Regression results for dependent variables with facets of extrinsic motivation

Table 4: Regression results for dependent variables with facets of extrinsic motivation

	Affective Commitment		Turnover Intention	
	Step 2	Step 3	Step 2	Step 3
<i>Control Variables</i>				
Gender	.020	-.008	.020	.049
Age	.026	-.097	-.129	.027
Employment Status	-.068	.024	.194**	.110
Tenure	.105	.108	-.110	-.099
Type of income	-.091	-.006	-.009	-.105
Annual income	.133*	.036	-.027	.095
<i>Independent Variable:</i>				
Procedural Justice	.283***	.133*	-.269***	-.067
<i>Mediators:</i>				
Intrinsic Motivation		.461***		-.482***
Extrinsic Motivation:				
Monetary rewards		-.091		.099*
Deadlines		-.033		.132*
Surveillance		-.068		.059
Evaluation		.040		.067
ΔR²	.143	.320	.199	.435
R²	.163	.347	.218	.457
F	8.250**	12.898***	11.775***	20.429***

Notes: N= 305. We report standardized regression coefficients. *p < 0.05; **p < 0.01; ***p < 0.001.

Step 2: Correlation between Procedural Justice and Affective Commitment, and Procedural Justice and Turnover intention

Step 3: Correlation between Procedural Justice, Affective Commitment, and Turnover Intention with Intrinsic Motivation and Extrinsic Motivation with Monetary Rewards, Deadlines, Surveillance, and Evaluation