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Preface

This master thesis was written as a conclusion to the Executive MBA program at the University of Stavanger. The process of completing this work has been challenging, interesting and rewarding. Through many years of work experience, I have always been interested in the performance appraisal process and work motivation, so this was a great opportunity to gain better insight into these subject areas.

I would like to extend my gratitude to those who have contributed to the completion of this work. I would like to thank my advisor, Thomas Laudal, for providing constructive advice. This was a great help for me in structuring and completing this work. My appreciation is also extended to those who took the time to respond to my survey and to the human resource department in the participating organization who made this research project possible. Finally, I would like to thank my family for supporting me during this process.

Deanna Scott

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Abstract

The aim of this study was to examine job performance feedback and its impact on work motivation. Quantitative data from 221 employees, working for an organization, was gathered and hypotheses were tested using variables identified by the self-determination theory of motivation and human resource literature surrounding performance appraisal effectiveness. The findings revealed that satisfaction with performance feedback is a moderate predictor of intrinsic motivation in a work setting. It was also found that informal, day-to-day feedback was a much stronger predictor of feedback satisfaction than a quality performance appraisal session. Furthermore, the study provided empirical support for some individual differences, which influence these relationships. For employees with a low autonomy orientation, feedback played a more important role in enhancing motivation than for employees with a high autonomy orientation. This indicates that autonomy orientation is a moderator in the relationship between job performance feedback and work motivation. Different perceptions of the informal feedback environment were also found to exist between employees in differing roles, which in turn impacted both satisfaction with feedback and intrinsic motivation for these groups.

This research underscores the importance of the role that leaders play with regards to providing employees with a supportive feedback environment and how the organization should prioritize with regards to facilitating this. Future research should continue to move away from the traditional performance appraisal process to a more holistic contextual view, considering both the day-to-day feedback environment and the needs of the individual.

Key Words: motivation, feedback, performance appraisal, self-determination theory, autonomy, human resource management

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Chapter 1 Introduction

1.1 Background

How does a leader motivate employees? This is a broad question that leaders often ask (Martinsen, 2012). It is recognized that people, when at their best, can be proactive, engaged and self-motivated but there are also many instances when people become passive, alienated and irresponsible (Ryan & Deci, 2000, p.68). When considered in a work setting, employees who lack motivation can cost an organization in terms of productivity, safety and competitiveness. On the other hand, employees that are highly motivated can give an organization a competitive edge. Motivation is shown to be a predictor of performance (Cerasoli, Nicklin, & Ford, 2014) and is often categorized as either intrinsic or extrinsic. While extrinsically motivated behaviours are governed by the prospect of instrumental gain and loss, intrinsically motivated behaviours are engaged for their very own sake, out of task enjoyment and not because of a specific reward. Therefore it is easy to see the importance of intrinsic motivation, especially in the long-term, but what can be done to enhance it?

Motivational theories have given varying criteria for work motivation ranging from fulfillment of needs, to creation of job content and context, to goal setting and performance management (Martinsen, 2012). One of the criteria that shows-up across various motivational theories is feedback (e.g Locke & Latham, 2002; Ryan & Deci, 2000). Work motivation is influenced by receiving information on the results of work efforts. In alignment with these theories, organizational development and human resource policies have sought to increase organizational effectiveness by designing organizations which facilitate various criteria related to work motivation. Performance appraisal is often considered one of the most important human resource (HR) practices (Boswell & Boudreau, 2002), providing a framework to regulate and enhance a leader's ability to provide important feedback. This is one of the mechanisms that a leader can potentially use to motivate his or her employees.

However the topic of feedback and performance appraisal also seems to create a great deal of dissatisfaction amongst employees. It has been claimed that feedback actually

leads to worse presentation one third of the time and that evaluations based on annual ratings can be perceived as inaccurate, unfair or judgemental (Kuvaas, 2014). However removing the evaluation aspect and focusing on developmental feedback does not necessarily lead to better outcomes either (Boswell & Boudreau, 2002). Based on these observations, the effectiveness of performance appraisals and feedback is seemingly limited much of the time. It also seems questionable that a performance appraisal, lasting perhaps one or two hours per year, can really have that much impact in itself on a person's performance for the remainder of the year.

The media often presents articles reporting how feedback is perceived as overwhelming and controlling (e.g Sjøberg, 2014, "Control, control control", 2015). But, on the other hand, it is reported that employees do not feel that they get enough regular feedback on the job (e.g Hellstrøm, 2013, "Four of ten..", 2011)

When considered from a leader's perspective, these mixed messages create uncertainty with regards to job performance feedback and its role in motivating employees. There clearly seems to be a balance, which is difficult to meet, despite the well intended policies in the work setting.

The relationship between feedback and work motivation is therefore an important area of research for many reasons. This is an issue that impacts virtually all employees, their leaders and ultimately the organizations they belong to. Motivation is a fundamental component of any credible model of human performance (Pinder, 2011 as cited in Cerasoli et al., 2014) and therefore a key contributor to competitiveness and success in an organization. If as suggested, one third of employees are actually demotivated by job performance feedback, a major potential is lost for any organization and a major improvement potential exists with regards to feedback processes and policies and the way in which they are implemented. A positive psychosocial work environment is important to prevent sick leave and other health problems ("Four of ten..," 2011). Therefore creating positive feedback environments are also an important key to managing work related stress and personal wellbeing. Finally, the workplace and the norms of leaders and employees are continually evolving. Therefore there will continue

to be a need to understand how well established practices should be adapted to meet the changing needs of both the employees and their organizations

1.2 Purpose and Structure

The aim of this research is to examine the relationship between feedback and motivation in order to answer the following question; how does feedback in a work setting contribute to work motivation? In order to examine this problem, the following research questions will be addressed:

Research Question 1: Is job performance feedback an important driver of intrinsic motivation in a work setting?

Research Question 2: Feedback between leader and employee can be informal or a part of a formal performance appraisal process; how do these feedback types compare in terms of importance and what is the significance of the leadership role in this exchange?

Research Question 3: Do significant individual differences exist between either individuals or groups of employees, which should be taken into account when giving an employee job performance feedback?

The problem will be approached mainly from the perspective of frontline leader and therefore analysis will be based on the perspective of the individual employee, which of course is the building block for the organization. The problem will be analyzed with a basis in the existing motivation literature. Human resource literature surrounding performance appraisal and feedback will also form the basis from which to examine the effectiveness of these feedback processes. To gain insight into employee perceptions and experiences with feedback, empirical data will be collected from the individual employees in an organization. This study will seek to identify relationships between applicable variables using this data.

Chapter 2 Theory

2.1 Introduction to Main Theoretical Perspectives

Research regarding motivation is quite extensive and complex. Various perspectives have been taken to study human motivation, which is relevant for various domains in life including work. As a result various theories have been proposed.

The following examples are just a few of the commonly cited theories, although several other theories of motivation have been developed. Herzberg presents a two-factor model in which work consists of motivating factors, such as challenging work and responsibility and then hygiene factors, which do not give positive satisfaction or motivation, although dissatisfaction can result due to their absence (Herzberg, 1966 as cited in Gagné & Deci, 2005). Hackman and Oldham present a job characteristics model in which it is argued that optimal design of jobs is the most effective means of motivating individuals (Hackman & Oldham, 1980 as cited in Gagné & Deci, 2005). Locke and Latham outlined a goal-setting theory, indicating that motivation and performance are created through definition of specific and challenging goals combined with the influence of various moderators and mechanisms (Locke & Latham, 2002). Whereas Deci & Ryan have developed the self-determination theory, which separates intrinsic and extrinsic motivation with intrinsic motivating being enhanced with fulfillment of the needs of autonomy, competence and relatedness (Ryan & Deci, 2000). The theories have both similarities and differences. Feedback as a variable is one of the similarities.

For the purposes of this research, motivation will be examined from the perspective of intrinsic motivation, with consideration given to individual differences. Therefore the self-determination theory has been chosen as the main theoretical perspective for work motivation as it addresses both of these issues.

On an organizational level, there is also an interest in understanding what specific policies make companies productive and profitable and how and why these policies are effective. Research in this area has led to the identification of a set of human resource

practices, coined “best practice human resource management” which drive various individual and organizational mechanisms such as motivation and commitment which in turn lead to better performance. Performance appraisal is one of the elements that have been identified in this set of practices (Huselid & Becker, 2011), which represents a formalized feedback process. Feedback can however come in many forms and have different objectives and outcomes. A body of research surrounding the contributors to effectiveness and outcomes of job performance feedback based on performance appraisal effectiveness has therefore developed over time, which will be examined as a part of this research.

Finally, the role of the leader will also be examined given the responsibility a leader has for delivering performance feedback to the employee, thus creating an important exchange between employer and employee. This relationship will be examined through the lens of social exchange theory.

2.2 Intrinsic Motivation and the Self-Determination Theory

2.2.1 Fundamental Needs and the Social Environment

The self-determination theory, through empirical research has identified three needs; competence, relatedness and autonomy of which fulfillment is essential in order to maintain or enhance intrinsic motivation (Ryan & Deci, 2000). A central distinction in the theory is between autonomous motivation and controlled motivation. Autonomous motivation involves acting with a sense of being able to make and act on decisions and having the experience of choice, whereas controlled motivation is applied in some way by someone else to achieve a specific outcome (Gagné & Deci, 2005). This theory of motivation has been tested and applied across various domains such as education, healthcare, sport and work environments.

Ryan and Deci’s self-determination theory presents motivation as a continuum, on one end is intrinsic motivation and on the other end is amotivation. Intrinsic motivation is characterized by interest and enjoyment in the task and is inherently self-determined. This type of motivation is autonomous. Amotivation is wholly lacking self-

determination and represents a complete lack of intention and motivation (Gagné & Deci, 2005). In the middle of this continuum are stages of extrinsic motivation, which have incremental degrees of self-determination, ranging from autonomous to controlled. Because extrinsically motivated behaviours are not typically interesting, at least not to the same degree, the primary reason people initially perform such actions is because the behaviours are prompted, modeled or valued by others to whom they feel attached or related. When an extrinsically motivated activity becomes internalized (people identify with the value of a behavior for their own self-selected goals), the motivation becomes autonomous as well and is therefore closely related to intrinsic motivation. In a work context this is demonstrated by being willing to do tasks that are not necessarily interesting because one appreciates the importance of the activity (Gagné & Deci, 2005). Relatedness is centrally important for internalization, but competence and autonomy will also facilitate internalization (Ryan & Deci, 2000).

When self-determination theory is considered in the context of a work setting, aspects of the job and the work climate will impact the motivation of the employees. The theory also recognizes the individual differences of the employees have an impact on their motivation. The aspect then of feedback and performance appraisal at work will be a part of the environment, which will shape and influence employee motivation based on the fulfillment of the needs of autonomy, relatedness and competence. This will then ultimately impact important related outcomes including job satisfaction, organizational trust, commitment and job performance as illustrated in Figure 1 (Gagné & Deci, 2005).

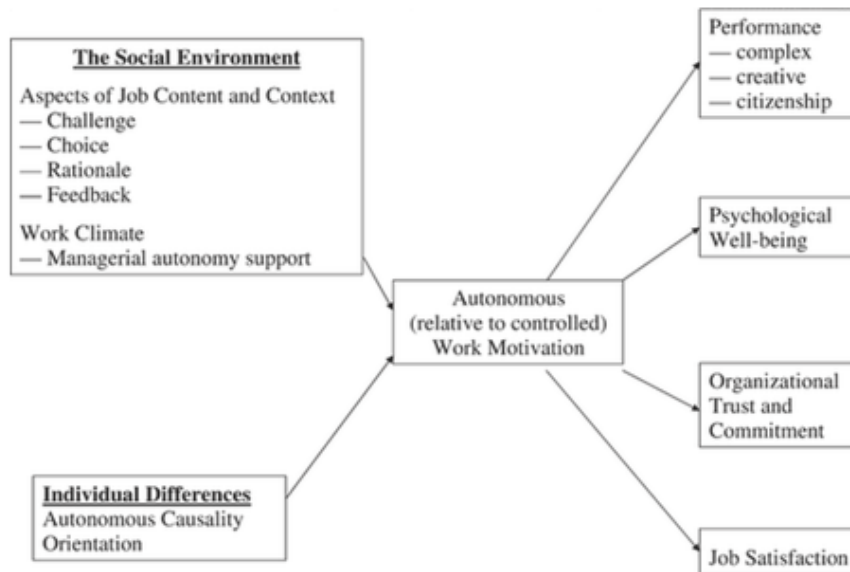


Figure 1: Self-determination theory model of work motivation (Gagné & Deci, 2005)

On an experimental level, meta-analysis has confirmed that positive feedback enhances intrinsic motivation, and further more it has been demonstrated that controlling positive feedback leads to less intrinsic motivation than informational positive feedback (Deci, Koestner, & Ryan, 1999). It has also been shown experimentally that supervisor feedback was found to increase a subordinate’s self-perceived competence, thus leading to enhanced intrinsic motivation (Harackiewicz & Larson, 1986).

Therefore, in line with this theory and applied in a work setting, intrinsic motivation will increase if performance feedback enhances the perception of competence. Feedback given to underscore the importance of one’s tasks in terms of the goals and values of the company, providing meaning rationale for behaviour and providing support for autonomy will also enhance intrinsic motivation. Systematic feedback on work performance may also impact intrinsic motivation through increased experienced responsibility of outcomes and knowledge of the actual results of the work (Ryan & Deci, 2000).

The self-determination theory has been further applied in the Norwegian workplace setting showing that performance appraisal satisfaction and intrinsic motivation have a positive relationship and that intrinsic motivation can be a mediator in the relationship between performance appraisal satisfaction and job performance (Kuvaas, 2006). Thus

suggesting also that intrinsic motivation is the key when striving for performance. Meta-analysis of intrinsic motivation and extrinsic incentives shows that there is a consistent positive relationship between intrinsic motivation and performance especially for tasks that require quality, not just quantity (Cerasoli et al., 2014).

In summary, there is clear evidence that intrinsic motivation is an individual psychological mechanism through which positive outcomes are achieved. As such a leader and organizations should have focus on creating contexts that are supportive of this.

2.2.2 Individual Differences

The self-determination theory addresses that there are individual differences with regards to initiation and regulation of behaviour, which are referred to as general causality orientations, which are trait-like concepts. These orientations index the degree to which people are autonomy oriented, control oriented and impersonally oriented. Autonomy oriented individuals tend to experience social contexts and autonomy supportive; whereas control oriented individuals can experience the same context as controlling. Impersonal orientations reflect the general tendency to be amotivated, fully lacking in any type of motivation. Therefore as illustrated in Figure 1, the concept of autonomous motivation for one's job is predicted by not only the aspects of the social environment, but is also predicted by these individual differences (Gagné & Deci, 2005).

Kuvaas (2007) found that the autonomy orientation strongly moderated the relationship between the perceptions of a developmental performance appraisal and work performance. In this research population, the relationship between the perception of the performance appraisal and work performance was only positive for employees with a weak autonomy orientation, suggesting that for employees with a low autonomy orientation, positive feedback and satisfaction with feedback will be more important contributor to intrinsic motivation. Employees with a high autonomy orientation may cross over into a control orientation and therefore experience performance appraisal as

controlling. In alignment with the self-determination theory these individuals, may then experience a loss of autonomy and erosion of intrinsic motivation (Kuvaas, 2007).

Based on these findings, we can view an individual's autonomy orientation as both a predictor of intrinsic motivation, but also as a moderator of the relationships between contextual elements and intrinsic motivation.

2.3 Strategic Human Resource Management

Significant research efforts have been put into studying why some businesses over time perform better than others. As summarized by Huselid and Becker, since the 1990's, over 300 academic articles have been published in academic literature relating to HR strategy. The primary conclusions from this line of research have been that the financial returns to investments in high-performance work systems are both economically and statistically significant (Huselid & Becker, 2011). Based on these findings it has been noted that the high performance work systems consist of a broad specter of HR practices encompassing recruiting, compensation and performance appraisal as well as training and development. Integration of these multiple factors is a determinant for performance. The micro area of research in the HR domain is focused on the impact of practices on the individual, while the macro domain focuses on the impact of HR policy on groups or organizations. Both areas are important with regards to outcomes and Huselid and Becker (2011) argue that future progress in the literature will require integration of the micro and macro perspectives across the various field of literature, from human resource management, to economics, sociology, psychology and strategy.

At the micro level, the frontline manager has the role of implementer for many human resource policies, such as performance appraisals. It is often observed that there is a gap between what is formally required by policy and what is actually delivered by frontline managers. In addition, the way in which managers exercise their roles with regards to human resource policies is linked to leadership behaviours (Purcell & Hutchinson, 2007).

Therefore the outcome of human resource policies is influenced by both the policies themselves and the way in which the leader executes them. Employee perceptions of and reactions to the human resource practices are at the heart of all HRM-performance models because it is the link between employee reactions and their subsequent behaviour, which is critical (Purcell & Hutchinson, 2007).

2.3.1 Performance Appraisal Effectiveness

While there is no universal definition of what a performance appraisal should entail or achieve, the practice is rooted in giving performance feedback and formalizing and documenting important communications between the employee and leader and communicating decisions related to pay and rewards. However, the performance appraisal can also cover a wider range of objectives, including; developing goals, mapping competencies and career paths, improving employee and organizational performance and motivating employees (Mikkelsen, 1996). A performance appraisal can be and is often used for both development and evaluation within organizations (Boswell & Boudreau, 2002). Therefore a performance appraisal in both theory and practice can take many different forms.

Research historically has been focused on the appraisal or evaluation component of the process; construction of rating scales and the cognitive process domains surrounding receiving an evaluation, largely focusing on accuracy and bias issues surrounding the feedback that is given (Levy & Williams, 2004). This research highlights many potential pitfalls with regards to the feedback given in performance appraisals ranging from halo effects, to liking and friendship biases, to first impressions and timing of events.

But in later years, the shift has been towards understanding the social context of the performance appraisal and the effect on employee reactions, as these factors, combined with the accuracy and bias factors also play in to the overall effectiveness of employee performance appraisal (Levy & Williams, 2004). In line with this direction of research, performance appraisal activities in general have moved towards developmental performance appraisal, which may be defined as any effort concerned with enriching

attitudes, experiences and skills that improves the effectiveness of employees (Kuvaas, 2006).

Levy and Williams' (2004) review of over 300 articles of performance appraisal research found that there are a multitude of variables that have been studied which impact the outcome and effectiveness of a performance appraisal. These variables include process variables, which have a direct impact on how the appraisal process is conducted, structural variables, which are aspects of the system that make up the organization or design of the performance management system and distal variables which are broadly construed as contextual factors that affect many human resource systems. The outcome of all of the factors related to the performance appraisal context is measured by rater and ratee behaviour and reactions as seen in the figure below (Levy & Williams, 2004).

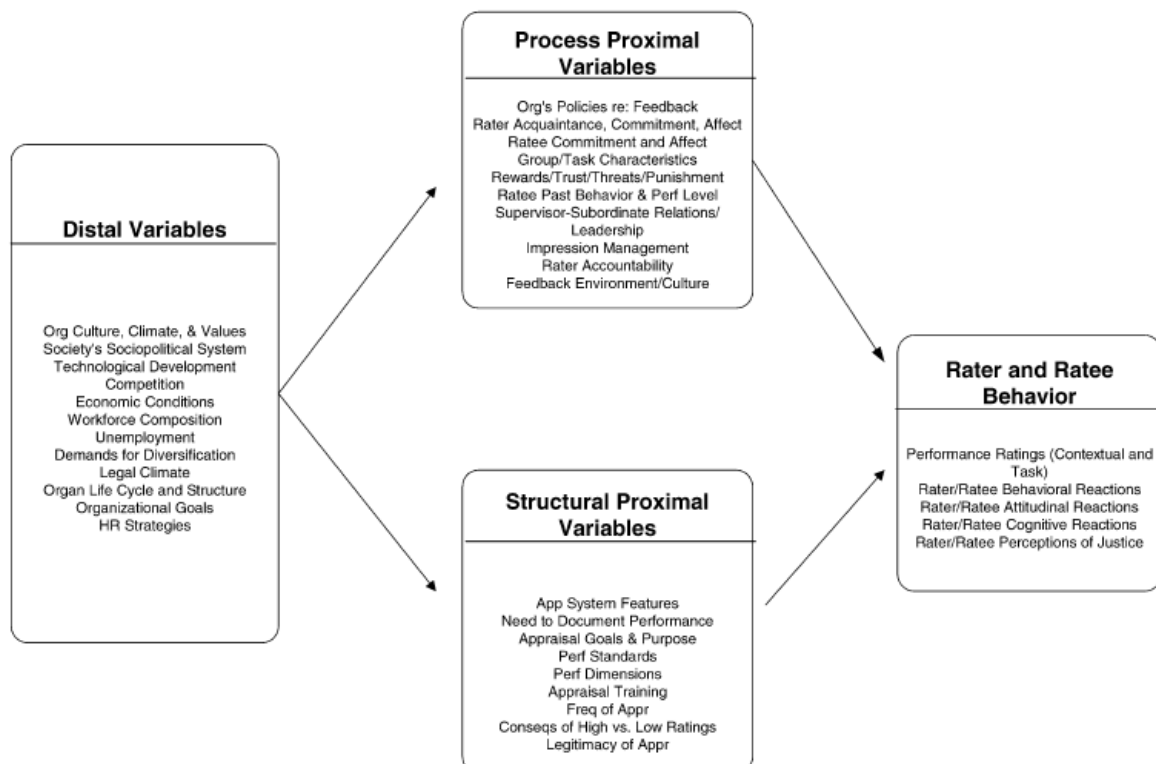


Figure 1. The social context of performance appraisal.

Figure 2: The social context of performance appraisal (Levy & Williams, 2004)

As demonstrated by the above model, the effectiveness of the performance appraisal process is much more comprehensive than just what happens in the time reserved for the yearly performance appraisal session. However, structural variables guiding the type and content of the appraisal session definitely do play a role. Content of the appraisal in terms of how the evaluation is done, career discussion and employee participation all contribute positively to positive reactions to the review e.g. (Nathan, Mohrman Jr, & Milliman, 1991). In the Norwegian context, results of research show that the quality of a performance appraisal session is positively related to job satisfaction (Mikkelsen & Lie, 1998). On a broader scale, meta-analysis shows that the aspects of the appraisal session do have a positive relationship to the appraisal reaction, but are not necessarily the most significant factors (Pichler, 2012).

Performance appraisals occur relatively seldom, generally speaking once a year. Whereas it is highly probable that many employees do receive feedback throughout the year via other informal methods. This can depend on the feedback culture and how comfortable managers and employees feel with regards to both providing and receiving feedback. The overall feedback environment and culture is a factor, as identified as a process proximal variable in Levy and William's review (2004), which could have an effect on employees, their behaviour and the ultimate reaction and effectiveness of the performance appraisal. Levy and William's observation was that there is not a great deal of research related to this area and that measurements of feedback environment and culture and related outcomes are only starting to emerge.

When the role of informal feedback was examined in a Norwegian context, it was found that positive performance appraisal reactions need to be accompanied by high levels of perceived regular feedback in order to be related to work performance, thus suggesting that there is an interactive effect between these two activities and that both forms of feedback are important (Kuvaas, 2011). Otherwise there has been limited empirical research to draw upon with regards to the informal feedback mechanisms.

As with the self-determination theory, there is also recognition that in performance appraisal settings, different people react differently to the feedback that they receive. Individual differences and characteristics of the recipient can impact both perception

and response to individual feedback in performance-oriented organizations (Ilgen, Fisher, & Taylor, 1979). The impact of HR policies has been found to differ across various employee job roles, indicating that one size does not fit all (Kinnie, Hutchinson, Purcell, Rayton, & Swart, 2005). It has been found that with regards to the meaningfulness that employees perceive in the performance appraisal process, operative (blue-collar) employees typically find such processes less meaningful than other groups of employees (Mikkelsen, 1996). Employees with managerial responsibility could have different perceptions of appraisals since they have acted as appraisers themselves (Wright, 2004 as cited by Kuvaas, 2011).

2.4 Leadership and Social Exchange Theory

Performance feedback is very often between an employee and their leader, and as discussed previously the frontline leader is often the agent between human resource policy and the employee. Feedback and the response to it can be viewed as a type of reciprocal process. Given this interactive relationship, the link between performance feedback and the employee response can be interpreted using social exchange theory.

Social exchange theory argues that obligations are generated through a series of interactions between parties who are in a state of reciprocal interdependence. This provides a theoretical basis for the Leader-Member Exchange (LMX) theory, which describes how effective leadership relationships develop between dyadic partners in and between organizations and thus gain access to the many benefits that these relationships bring (Graen & Uhl-Bien, 1995, p.225). LMX views the relationship between leader and employee as more than just a transactional relationship in which the leader requires some effort on behalf of the employee and the employee receives pay. LMX is based on an exchange in which there exists mutual respect, trust and quality in the relationship. LMX has been extensively studied and has shown to demonstrate a strong positive relationship to job satisfaction, organization commitment and other indicators of effective leadership (Martinsen, 2012).

In meta-analysis of the social context of the performance appraisal and appraisal reactions it was concluded that the performance appraisal reaction was significantly

driven by the relationship quality between employee and supervisor, with these effects being much more significant than the performance appraisal session in itself (Pichler, 2012).

2.5 Evaluation and Summary

The topic of performance appraisal is clearly a well-documented area of research that has evolved over time and will continue to evolve as the workplace norms and strategies change. Levy and Williams' (2004) review of the performance appraisal literature found initially 600 published articles on this subject in the period from 1990 to 2003. This review has shown a movement into the direction of contextual factors contributing to appraisal reactions. Appraisal reactions in this literature are considered the key determinant and most important measurement of effectiveness in this process. Within this line of research we also see that some more abstract contextual items such as feedback environment and culture, which are perhaps more complicated to measure, have not been given as much attention as the other variables with regards to their role in the appraisal reaction.

Motivation literature is also a well-documented area of research with several perspectives, which branch into many domains of life including work motivation. Theories around intrinsic motivation, such as the self-determination theory have an extensive experimental background and have also been studied in organizations, providing support for the proposition that autonomy supportive, rather than controlling, work environments promote the satisfaction of the needs of autonomy, competence and relatedness. Satisfaction of these needs enhances autonomous and intrinsic motivation. This type of motivation in turn leads to positive organizational outcomes. It was noted in 2005, that although the self-determination theory has strong empirical support experimentally, the testing in organizational settings is not extensive. The theory has often been applied in other contexts, such as school or sport (Gagné & Deci, 2005).

This study will contribute to the literature in two main areas. First, the concept of job performance feedback will be examined both from the perspective of the performance

appraisal session and from the informal feedback perspective. Including perceptions of informal feedback give a more balanced view of performance feedback and add empirical data to the less researched area related to feedback culture and environment. These variables, combined with the important component of leadership and the quality of this relationship will be considered as components of the appraisal reaction, based on the well-established framework for performance appraisal effectiveness.

Secondly, this study will contribute to integration of the HR literature and performance appraisal perspective to the self-determination theory literature, which has its basis in human psychology and is less tested in the work environment. This is in line with the integrative direction that Huselid and Becker (2011) indicated is necessary in order to further advance HR research and is in line with the need that Gagne and Deci (2005) expressed for more research of the self-determination theory in a work setting.

2.6 Model and Hypothesis

Based on the presented literature and theory, the following research model is proposed.

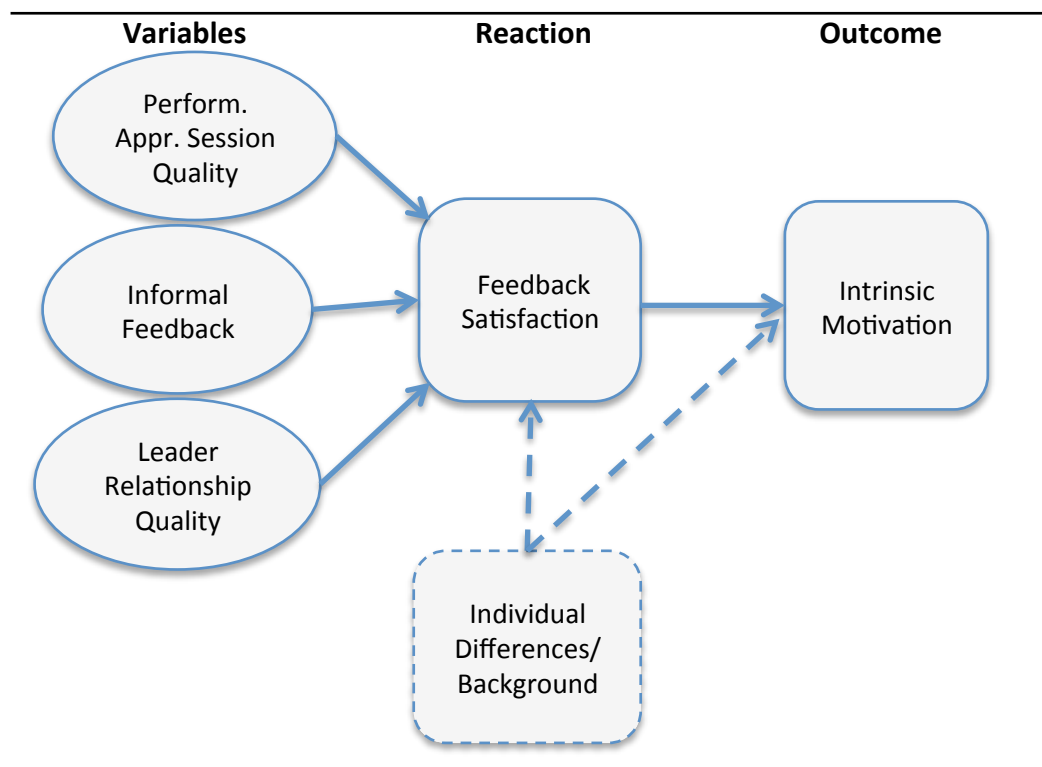


Figure 3: Research model

With background in the previous discussion, the research model as shown in Figure 3 will be the basis for this study. The three variables leading to the appraisal reaction variable of feedback satisfaction (selection of this reaction variable is further discussed in Chapter 3) are aligned with the model for performance appraisal literature as shown in Figure 2. Given that the outcome that is of interest in this case is work motivation, measured by intrinsic motivation, feedback satisfaction will then be examined as the feedback component in the framework for the self-determination theory's model of work motivation as seen in Figure 1. The individual differences that have been identified by the self-determination theory (autonomy orientation) and other individual differences recognized in performance appraisal and feedback literature will be measured and examined in order to consider the impact on reactions and outcomes.

The subsequent effect of appraisal reactions have typically been measured from a HR perspective in terms of organizational outcomes such as commitment, job satisfaction and performance (e.g. Brown, Hyatt, & Benson, 2010; Kinnie et al., 2005; Kuvaas, 2006). These are similar to the outcomes shown in Figure 1 that the self-determination theory identifies from work motivation. Given that the objective of this research is to primarily approach the issue from a micro perspective, the focus will be placed on the individual outcome of intrinsic motivation. Given scope limitations for this study, the link to performance (individual or organizational) or other organizational outcomes will not be tested empirically here, but can be inferred by reliance on other research (e.g. Cerasoli et al., 2014).

The following hypotheses (H) have been proposed based on the theory presented previously in order to address the research questions posed in Chapter 1:

Research Question 1: Is job performance feedback an important driver of intrinsic motivation in a work setting?

H1: Feedback Satisfaction is positively related to Intrinsic Motivation.

Research Question 2: Feedback between leader and employee can be informal or a part of a formal performance appraisal process; how do these feedback types compare in terms of importance and what is the significance of the leadership role in this exchange?

H2: Performance Appraisal Session Quality is positively related to Feedback Satisfaction.

H3: Informal Feedback is positively related to Feedback Satisfaction.

H4: Leader Relationship Quality is positively related to Feedback Satisfaction and will make the strongest contribution of the three tested variables.

Research Question 3: Do significant individual differences exist between either individuals or groups of employees, which should be taken into account when giving an employee job performance feedback?

H5: For employees with low Autonomy Orientation, the relationship between Feedback Satisfaction and Intrinsic Motivation will be stronger than for employees than for those with high Autonomy Orientation.

H6: Managerial and office employees will have higher Feedback Satisfaction than operational employees.

Chapter 3 Design and Methodology

3.1 Research Design

Given the extensive research in the fields of motivation and performance appraisal, many hypotheses, variables and constructs have been tested and researched over the years. Therefore the primary research design for this study is descriptive, as a descriptive research study starts with a well-defined issue or question and tries to describe it accurately (Neuman, 2014, p.38). This research design type is then aligned with the objective of this study, which is to describe and quantify the relationships between job performance feedback and motivation. By conducting the research it will be determined whether the data collected in this context agrees with or contradicts previous data.

For the same reasons as above we can also conclude that a deductive approach is appropriate in this circumstance as hypotheses can be constructed based on pre-existing test data. To use an inductive approach would imply going into the empirical research without any expectations and then developing general theories out from analysis (Neuman, 2014, p.70). Given the magnitude of existing theory and subject literature this approach would not be as relevant for this research.

When evaluating the choice between extensive and intensive design, the large body of existing literature was also a influential factor. The availability of previously tested constructs and variables allows for a specific problem formulation based on the pre-existing literature. This makes extensive design feasible alternative. When extensive design is chosen, quantitative data is most often appropriate (Busch, 2014, p.53). Using survey research to collect quantitative data gives the possibility to reach a large number of people in a short period of time, therefore giving the possibility for a larger population of respondents. A large population of respondents in turn can give a stronger basis for generalization and reduce the risk of sampling error of what we observe empirically (Neuman, 2014, p. 271).

Based on the discussion above, a quantitative survey was chosen as the design for research for this research project as it best fits both the background and objectives for this study.

3.2 Participants

In the economic climate during the period of this research, many companies have announced, or are in the middle of significant downsizing programs. This can have an adverse effect on employees' motivation and behaviour (Iverson & Zatzick, 2011). Therefore in order to reduce risk of spuriousness due to this effect, which would be difficult to quantify and separate from the main relationships between feedback and motivation, participants were sought that were not within the scope of a downsizing process.

Cross-sectional research was considered to be challenging due to less homogeneity in the populations operating in different contexts, thus creating the need for increased mapping of variables and possibly reduced generalizability. Therefore it was determined that a sample would be sought from one organization, thus ensuring that the employees were subject to the same performance appraisal and human resource framework.

After contacting potential participants, a participant was confirmed. The participating company operates a group supply bases through-out Norway and provides a broad range of services to the oil and gas industry. The company is well established, has been in operation for several decades and is currently in a stable growth phase.

The HR department has developed guidelines related to processes for performance appraisal, which are consistent for all employees. The guidelines are focused around developmental feedback and scoring and grading of performance is not used. Salaries are generally speaking regulated by collective agreements. Therefore there is not a strong link between performance appraisal and compensation. The company has had focus on leadership development in recent periods as an action to boost competence and to drive performance.

3.3 Measures

A questionnaire survey was developed based on previously validated scales to measure the elements in the research model shown in Figure 3. When choosing the scales, consideration was given to both length of the survey and to the reliability and validity of the scales. Many employees in the population do not spend a significant amount of time at a computer during the day. Therefore response time had to be limited to ensure that the survey could be completed during break periods. Given time constraints for the research period available, the survey was limited to one point in time.

The original survey is presented in Appendix 1. The survey was distributed in Norwegian. The majority of the questions have been developed in English. When available, published translations were used. Otherwise translations were subject to third party review to ensure adequacy and accuracy.

The following measures were used to quantify the variables in the research model:

Performance Appraisal Session Quality

This variable was intended to measure the perceived quality of the annual performance appraisal session, which is the main form of individual formal feedback in the organization. The performance appraisal session is, according to policy, to be held yearly between the employee and their leader. First, the employees were asked whether they had a performance appraisal in the last year or not. There is the possibility that, for various reasons, there is non-compliance in terms of the policy. Employees who had not had a performance appraisal were not required to answer these questions, as they did not have a recent basis with which to answer the questions.

The perceived quality of the performance appraisal session was measured by six items, which have been developed and used for many years by a large Norwegian company for the objective of internal follow-up for their performance appraisal process (Mikkelsen, 1996). The questions have also been used for other research related to performance appraisals in a Norwegian context (Mikkelsen & Lie, 1998).

The items were formulated as follows:

How effective was your last performance appraisal with regards to:

- your own preparation
- your leader's preparation
- your leader's feedback on achieved results and qualifications
- your own feedback to your leader
- the discussion and formulation of own developmental actions
- the documentation form that was used

The items were measured on a four-point scale with poor being the lowest rating to very good being the highest.

These questions, although developed for use in another company, were also representative of the elements that the performance appraisal policy and guidelines intended to cover in the participant organization. Therefore this scale provided an adequate measure of the quality of performance appraisal session as perceived by the employee.

Given that these are measuring different elements on the session, the inter-item correlation does not necessarily have to be high in order to give a reliable result. The results are combined to form an index for performance appraisal session quality.

Informal Feedback

The Informal Feedback variable was intended to measure the perception of informal or regular day-to-day feedback outside of formal feedback systems.

The feedback culture is identified as a factor contributing to the successful outcome of a performance appraisal (Levy & Williams, 2004), however this factor is difficult to define in a concrete manner, therefore leaving limited choices with regards to validated measures. One validated measure was considered to measure feedback environment (Steelman, Levy, & Snell, 2004 as cited in Levy & Williams, 2004), however this scale,

with over forty items was deemed too extensive to be used for the purposes of this study.

Informal feedback was measured using five items based on a scale developed and used to measure regular day-to-day feedback (Kuvaas, 2011). The scale includes the following items:

- I receive frequent and continuous feedback on how well I do my job.
- I receive clear and direct information about my work performance through continuously provided feedback.
- I rarely get feedback, except for formal feedback systems such as performance appraisal.
- In my job, I am continuously informed about what I have done well or could have done better.
- I know little about what my colleagues think about my work performance.

The items were scored on a five-point Likert response scale ranging from 1 (strongly disagree) to 5 (strongly agree).

This scale was developed specifically for the study performed by Kuvaas, which was a cross-sectional survey of three Norwegian organizations (bank, government and pharmaceutical). In this survey, all items fell within the inclusion criterion for validity had a coefficient alpha of .89 (Kuvaas, 2011), therefore it is deemed to have adequate reliability and validity for use in this study. It should however be noted that the scale has not been validated by other studies and it was used on employees in different industries than the population for this survey, which may impact the reliability for the current research.

Leader Relationship Quality

Relationship quality with one's leader has been measured in various ways in the performance appraisal literature. Relationship quality variables are often measured with validated measurements of supervisor trust, supervisor support or supervisor satisfaction. The Leader-Member Exchange scale (LMX) has also been extensively used

(Pichler, 2012). The LMX scale was chosen due to its extensive use in research giving the scale a high degree of reliability and validity.

The LMX scale consists of the following seven items:

- Do you know where you stand with your leader?
- How well does your leader understand your job problems and needs?
- How well does your leader recognize your potential?
- Regardless of how much formal authority he/she has built into his/her position, what are the chances that your leader would use his/her power to help you solve problems in your work?
- Regardless of the amount of formal authority your leader has, what are the chances that he/she would “bail you out”, at his/her expense?
- I have enough confidence in my leader that I would defend and justify his/her decision if he/she were not present to do so.
- How would you characterize your working relationship with your leader?

The items were scored on a five-point scale 1 being low and 5 being high. The terms used for scoring vary as appropriate per question (e.g. 1: Not at all, Strongly Disagree and 5: Fully, Strongly Agree).

The measurement of the LMX construct has been developed and changed over the years, but in 1995 Graen and Uhl-Bien recommended this seven item scale (Graen & Uhl-Bien, 1995), which has since then been broadly used. The scale has also been translated and validated in a Norwegian context and found to have high reliability in this context as well, with a Cronbach’s Alpha value of .905 (Mykletun & Furunes, 2007).

Feedback Satisfaction

Performance appraisal literature emphasizes that appraisal reactions are critical with regards to appraisal effectiveness (Levy & Williams, 2004). Appraisal reactions have been studied with a wide range of terms including system and session satisfaction, perceived utility, perceived accuracy, justice (all types) and motivation to use the feedback amongst others (Keeping & Levy, 2000). There is not one universally accepted,

validated scale, which represents a concise measure of appraisal reactions or the outcomes of an appraisal or appraisal effectiveness. Keeping and Levy's (2000) analysis shows that the multiple constructs mentioned above are highly correlated, although separate, and that appraisal or feedback satisfaction is a very frequently measured appraisal reaction.

The scale chosen to measure the appraisal reaction is a satisfaction measure used by Kuvaas and applied in a Norwegian bank context (Kuvaas, 2006). This feedback satisfaction scale is a seven-item scale, based on a previously used scale (Meyer & Smith, 2000).

The scale consists of the following seven items:

- I am satisfied with the way my organization provides me with feedback.
- The feedback I receive on how I do my job is highly relevant.
- My organization is good at providing recognition for good performance.
- The feedback I receive agrees with what I have actually achieved.
- I think that my organization attempts to conduct performance appraisal in the best possible way.
- My organization seems more engaged in providing positive feedback for good performance than criticizing poor performance.
- Performance appraisal is valuable to myself as well as to my organization.

The items were scored on a five-point Likert response scale ranging from 1 (strongly disagree) to 5 (strongly agree).

When used previously, the scale showed acceptable reliability and validity, although one item was removed following a principal component analysis, giving a resulting coefficient alpha of .86 (Kuvaas, 2006). The full scale will be used for the current research and assessed based on the results of the sample.

Intrinsic Motivation

Intrinsic motivation has been widely measured and is commonly used in research related to motivation (e.g. Kuvaas, 2007, Kuvaas & Dysvik, 2010). This is deemed to be representative of the term autonomous work motivation described in Figure 1.

Autonomous work motivation is a slightly wider concept than pure intrinsic motivation, including types of extrinsic motivation that are internalized, but given the correlation between these categories of motivation on the self-determination continuum (Gagné & Deci, 2005), this intrinsic motivation measurement is deemed appropriate.

The scale used is a six-item scale consisting of the following items:

- The tasks that I do at work are enjoyable.
- My job is so interesting that it is a motivation in itself.
- The tasks that I do at work are themselves representing a driving power in my job.
- My job is meaningful.
- I feel lucky being paid for a job I like this much.
- This job is like a hobby to me.

The scale shows good validity and high reliability, (e.g. Kuvaas, 2007), showing a coefficient alpha of .86.

Individual Differences

Individual differences are divided into two groups; 1) autonomy orientation, which is identified by the self-determination theory and 2) background differences including employee roles and demographic control variables, which are commonly tested in the performance appraisal literature.

1) Autonomy Orientation

The self-determination theory recognizes autonomy orientation as an individual difference, which influences intrinsic motivation (Gagné & Deci, 2005). The research

backing the self-determination theory has developed and validated a scale to measure general causality orientations, including autonomy orientation in individuals. However this scale is extensive with over thirty items and was therefore not suitable for the scope of this study and duration of the survey.

An alternative scale chosen to measure autonomy orientation is a validated Norwegian eight-item scale (Martinsen, 2004), which was also utilized in 2007 by Kuvaas.

The scale consists of the following eight items:

- If I believe something is wrong, I speak out, regardless of whom I'm talking to.
- I am able to say what I mean, regardless of the situation I'm in.
- I have a greater need than most people to make decisions on the basis of my own independent thinking.
- I seek out situations that provide room for independent decision-making.
- I am more independent than most people.
- The opportunity to determine my own schedule is not important for me.
- Freedom to make my own decisions is not important for me.
- I do not have a great need for self-determination in what I do.

The items were scored on a five-point Likert response scale ranging from 1 (strongly disagree) to 5 (strongly agree).

This scale has shown some issues with validity and reliability in subsequent use (Kuvaas, 2007). Although not all items were retained on the scale when used by Kuvaas, the factors with the highest reliability showed a coefficient alpha of .7, suggesting adequate reliability for the scale for the purpose of this research. The full scale will be used for the purposes of this research and assessed based on the results of the sample.

2) Background and Demographic Control Variables

It has been demonstrated that employees in different roles and positions perceive and respond to performance appraisals differently (e.g Mikkelsen, 1996). Therefore

employees were asked to identify whether they worked in functional positions (office work) or operative positions (base work) and whether they had a management position or not.

Age of the feedback recipient appears to influence the degree to which feedback is accepted. Age may often be correlated with experience in a job setting and with more experience. One may use past experience as a source of feedback and are therefore more likely to reject the feedback of others (Ilgen et al., 1979). Employees were asked to place their age in a range of three categories.

Length of employment in a company can also have significance as it can be related to both the amount of experience an employee has and their need of autonomy. It can impact the aspects of employee-supervisor relationships, which are dependent on time to reach a mature phase (Graen & Uhl-Bien, 1995). Employees were asked to place their length of employment with the company in a range of three categories.

Education is also a commonly measured demographic variable, although no clearly consistent significance has been noted with regards to its effect (e.g. Kuvaas & Dysvik, 2010, Brown et al., 2010). Employees were asked to categorize their educational level between four categories.

At the request of the company for their internal use, the employees were asked to identify the location and department that they belonged to.

3.4 Ethical Considerations

Employees were informed of the nature of the study, what the data would be used for and that their responses to this survey would be treated confidentially. The data was collected in a manner such that all responses were anonymous and could not be traced back to individual employees. During the planning phase, confidentiality was discussed and it was determined that in some locations gender would not be disclosed due to few women at these locations, in order to protect the confidentiality of these employees. Therefore gender was not used in the analysis. Participation in the survey was

voluntary although employees were encouraged to take the time to participate. Based on these considerations it was deemed the individual confidentiality was well taken care of during the research process and that formal concession was not required.

3.5 Procedure and Achieved Sample

The survey was sent from Google Forms to all employees belonging to the fully owned group companies via the internal mail system. The central human resource department provided the contact information. The response period was slightly over two weeks, with two reminder mails being sent during this time. The employees received a brief description of the study and link to the survey (see Appendix 1). The human resource department had also contacted the employees in advance to encourage participation and to prevent the email link being regarded as a potential data security threat.

Responses were submitted by 221 of 529 employees, representing a response rate of 41.8%. All of the responses were complete and were used in the analysis of data.

65% of respondents identified their position as being functional (office employees) and 35% were operative (base employees). 37% of the respondents were in a management position. 49% of respondents had been employed in the company 0-5 years, while 29% had been employed 6-15 years with the company and 23% had been employed over 15 years with the company. 17% of respondents were between 18-29 years of age, 36% between 30-45 years, 42% between 46-59 year and 5% were over 60. In terms of education 6% reported middle school education, 49% had completed secondary school, 33% had completed up to four years over university, while 12% had five or more years of university education.

3.6 Reliability and Validity

The primary consideration given to ensure adequate validity and reliability for this research was, to the degree possible, the use of previously validated instruments that showed strong reliability as discussed in section 3.3. Given that the constructs measured are abstract as opposed to concrete, there cannot be absolute confidence

regarding validity (Neuman, 2014). There is no one clear-cut indicator of a scales' validity and constructs that are valid amongst a certain group for a particular purpose or definition may not show the same validity and reliability as in other groups (Pallant, 2013, p.7). To the extent possible, scales were chosen that had been used in a Norwegian context, thus ensuring some similarity in this contextual element. The sample population for this research can differ to some degree compared to other organizations that have been tested using the same scales, but this risk is deemed adequately low and mitigated by further testing of validity and reliability on the reported data. As noted in the description of measures, the choice of scales also had to be weighed against the total length of the survey as in order to secure the possibility of an adequate response rate and thus a better basis for generalization. Therefore some scales have not been utilized and tested to the same extent as others, but still show acceptable reliability and validity for use in this research.

In order to further evaluate the construct validity, a principal component analysis was done to examine the inter-correlations between the constructs measured (see Appendix 2). It was noted that there was a very high correlation between three of the measures, Informal Feedback, LMX and Feedback Satisfaction as they loaded on the same component. This implies an increased risk for confounded measures, as it is difficult to separate one construct from another. At the same time, it is natural to expect that these constructs are closely related as one would expect that they go hand in hand with one another. For example, as part of having a good leader relationship within the context of social exchange, it would be expected that informal feedback would be received on a regular basis. No variables were merged as a result of these findings, but these relationships will be considered further as a part of the statistical analysis and discussion. Some individual items from certain scales were noted to load on separate components from the remainder of the items on the scale. These items were considered together with the Cronbach's alpha values to determine the final retention of items.

The reliability of the data was tested using Cronbach's alpha coefficient. The recommended value of Cronbach's alpha is above .7, although scales with fewer than ten items can often have lower values (Pallant, 2013, p.101). The scales used for this research each had fewer than ten items, but the value of .7 was used as a rule of thumb.

The results for the retained values in each scale with continuous variables are seen below, followed by a discussion of the considerations made for the results of each scale.

Variable	Cronbach's Alpha
Performance Appraisal Quality	.868
Informal Feedback	.889
Leader Relationship Quality	.912
Feedback Satisfaction	.857
Intrinsic Motivation	.939
Autonomy Orientation	.726

Figure 4: Cronbach's alpha coefficient

The Performance Appraisal Session Quality scale have been previously used as an index, therefore there may not necessarily be high correlation between the items. However, the Cronbach's alpha was calculated for the six items, revealing a coefficient of .868. Therefore the items show high internal consistency and the principal component analysis also showed grouping on one component, thus indicating sufficient validity and reliability for the performance appraisal session.

Informal feedback consisted of five items, two of which were reverse scored. After adjusting the reversal, the two reversed items showed lower correlation than the other items, particularly one item. This item (I know little about what my colleagues think...) also showed loading on another factor in the principal component analysis (revIF5, see Appendix 2), therefore this item was removed from the final scale. The final Cronbach alpha coefficient of the four retained items was .889.

Feedback Satisfaction consisted of a seven-item scale. The preliminary Cronbach's alpha of .850 suggests good internal consistency. However, one item (Performance appraisal is valuable to myself...), showing the lowest inter-item correlation was also noted to load on a different component than the remainder of the items (FS7, see Appendix 2). This was also the same finding noted in the study from which the scale was previously used (Kuvaas, 2006), therefore this item was removed. The final Cronbach's alpha was calculated to .857.

Intrinsic Motivation was a six-item scale showing with a Cronbach's alpha coefficient of .939 for this sample. All items show high correlation, therefore all items were retained.

The Leader Relationship Quality, measured by the LMX scale, consisted of seven items. There has been some discussion in the literature whether the LMX construct measures multiple dimensions or a single dimension. It has been concluded that the LMX construct has multiple dimensions, but these dimensions are so highly correlated they can be tapped into with the single measure of LMX (Graen & Uhl-Bien, 1995). The Cronbach's Alpha confirms this showing high internal consistency at .912.

Autonomy orientation, although previously validated had previously shown some issues in terms of reliability and validity in subsequent studies. The scale consists of eight items, three of which were reverse coded. After the reverse coded items were recoded, the Cronbach alpha values were generated. The initial coefficient was shown to be .589, implying lower than recommended internal consistency. Upon inspection of the individual values, it was noted that the three reverse coded items showed the lowest item-total correlation, ranging from .000 to .274. It should be noted that these items were the last three items in the survey. Therefore a possible explanation is that the questions were misread in haste to complete the survey. These three items were removed from the scale and the Cronbach's alpha was recalculated on the remaining five items. A coefficient of .726 was calculated, thus showing an acceptable level of internal consistency. The principal component analysis split the remaining items into two separate components but these items did not crossload with other constructs. Therefore given an adequate reliability value, these five items were then retained for the final value of the scale.

3.7 Statistical Analysis Procedures

Statistical analysis was carried out on the data using IBM SPSS Statistics Version 21. Significance levels not exceeding a threshold of .05 were considered statistically significant. The retained items on the continuous variables were averaged to form a final score and mean values for each variable.

Bivariate correlation was used to assess the relationship between Feedback Satisfaction and Intrinsic Motivation in H1. Standard multiple regression was also used to investigate the predictive power of the overall model for Intrinsic Motivation, taking into consideration both Feedback Satisfaction and the individual difference variable Autonomy Orientation based on the self-determination theory model of work motivation as seen in Figure 2. This provides the empirical support for H1 and provides a basis to answer Research Question 1.

Bivariate correlation was used to assess the relationships in H2, H3 and H4. Furthermore, standard multiple regression analysis was also used to assess predictive power of the three variables related to Feedback Satisfaction and relative strength as hypothesized in H4 and thus providing a basis to answer Research Question 2. An independent samples t-test was also used to provide a further assessment of the impact of the Performance Appraisal Session, between the groups of employees who did not have a performance appraisal compared with those who did, thus providing additional empirical support for H2.

In terms of Research Question 3 and the underlying hypotheses, several comparisons of groups were performed. To test H5, employees were split at the median into two groups; high autonomy orientation and low autonomy orientation. Bivariate correlations were ran for these two groups in order to examine relative strength in the relationships between Feedback Satisfaction and Intrinsic Motivation between the two groups. Independent sample t-tests were used to assess difference in mean scores in Feedback Satisfaction and Intrinsic Motivation between groups of employees in order to provide empirical support for H6. Additional t-tests were run as necessary to look deeper into the relationships. ANOVA tests were also used for the demographic control variables groups (with three or more categories) in order assess whether there were any significant differences in the results of the dependent variables; Feedback Satisfaction and Intrinsic Motivation, for these groups.

Chapter 4 Results

4.1 Mean and Bivariate Correlations: Continuous Variables

Preliminary analyses were performed on the data to assess the quality of the data for use in statistical procedures. For the six continuous variables, histograms of each variable showed that the values did not follow the normal distribution with a tendency for values to indicate negative skewness, indicating a clustering of scores at the higher (positive) end of the scale. The negative skewness was the most significant for the measurement of intrinsic motivation.

Linearity and homoscedasticity were assessed by the scatterplots and no significant deviations of these assumptions were noted. Examination of the scatterplots did reveal one outlier, which was seen throughout the analysis. The scores for this case were inspected, there was no indication of error in the submission and the item was retained given that the sample sized was large enough to prevent significant impact on the data.

Given the negative skewness, as recommended for data not following a normal distribution, the Spearman Rank Order Correlation (ρ) was used to generate and present the bivariate correlation values (Pallant, 2013). Pearson correlation coefficient is included in Appendix 3 for comparative purposes, the results being quite similar. Correlations over .5 are considered to be large, whereas correlations under .3 are considered to be small (Pallant, 2013, p.139).

	Mean	SD	1	2	3	4	5	6
1. Performance Appraisal Session Quality	3.15	.49	1					
2. Informal Feedback	3.08	1.0	.405**	1				
3. Leader Relationship Quality	3.61	.71	.603**	.761**	1			
4. Feedback Satisfaction	3.22	.81	.462**	.769**	.730**	1		
5. Intrinsic Motivation	3.97	.84	.324**	.388**	.410**	.427**	1	
6. Autonomy Orientation	3.64	.61	.021	.183**	.167*	.139*	0.301**	1

* correlation is significant at the 0.05 level (2-tailed)

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

Performance Appraisal Session Quality, scored on a 4-point scale, all other variables 5-point
N=221, except for Performance Appraisal Session Quality (N=138)

Figure 5: Mean and bivariate correlations

4.2 Regression Analysis: Predictor Variables of Intrinsic Motivation

The bivariate correlation between Feedback Satisfaction and Intrinsic Motivation shows a medium, positive correlation ($r=.427, p<.01$), with higher levels of Feedback Satisfaction being associated with high levels of Intrinsic Motivation. The relationship can then be further analyzed through use of standard multiple regression, thus assessing the combined relationships in the model.

Dependent Variable	R	R Square	Std. Error	Sig.
Intrinsic Motivation	.511	.261	.728	.000

Contribution of Independent Variables	Beta	Sig.
Feedback Satisfaction	.422	.000
Autonomy Orientation	.229	.000

Figure 6: Regression model 1, predictors of intrinsic motivation

Standard multiple regression analysis was used to assess the relative predictive strength of independent variables, Feedback Satisfaction and Autonomy Orientation, with regards to the dependent variable, Intrinsic Motivation. The data for the model was inspected using the scatterplot and p-plot to check for outliers, normality, linearity and homoscedasticity. Although the p-plot indicated some deviation from normality, this was assessed as not significant. No other significant deviations were noted. No systematic patterns of residuals were noted. No adjustments for outlying points were deemed necessary.

The regression model reaches statistical significance, with R square value of .261 ($p<.0005$). This implies that just over a quarter of the variance in intrinsic motivation is explained by the two independent variables. In this model we see that Feedback Satisfaction makes a statistically significant contribution (Beta= .422, $p<.0005$) to Intrinsic Motivation, while Autonomy Orientation also contributes significantly, but to a lower degree (Beta= .229, $p<.0005$).

Based on the above findings, H1 is supported. Feedback Satisfaction is positively related to Intrinsic Motivation.

4.3 Regression Analysis: Predictor Variables of Feedback Satisfaction

Based on the bivariate correlation, with regards to Feedback Satisfaction; Performance Appraisal Session Quality ($r=.462, p<.01$), Informal Feedback ($r=.769, p<.01$) and Relationship Quality ($r=.730, p<.01$) are all positively related. Thus a second standard multiple regression analysis can be used to assess the predictive power of the three independent variables, Performance Appraisal Session Quality, Informal Feedback and Relationship Quality against the dependent variable Feedback Satisfaction when considered together in a model.

Dependent Variable	R	R Square	Std. Error	Sig.
Feedback Satisfaction	.829	.687	.461	.000

Contribution of Independent Variables	Beta	Sig.
Performance Appraisal Session Quality	.173	.007
Informal Feedback	.501	.000
Leader Relationship Quality	.259	.005

Figure 7: Regression model 2, predictors of feedback satisfaction

The data for the model was inspected using the scatterplot and p-plot to check for outliers, normality, linearity and homoscedasticity. Although the p-plot indicated some deviation from normality, this was assessed as not significant. No other significant deviations were noted. No systematic patterns of residuals were noted. No adjustments for outlying points were deemed necessary. Regression models are sensitive to multicollinearity. Multicollinearity is considered to exist when the independent variables are highly correlated. Multiple regression does not work well when this problem exists (Pallant, 2013, p.157). It should be noted that there is high correlation between the variables Informal Feedback, Feedback Satisfaction and Relationship Quality ($r > .7$), however the correlation does not exceed the upper threshold of .9 therefore it is deemed acceptable to continue with the regression analysis. Tolerance values were above the lower limit of 0.1, which is a commonly used cut-off point (Pallant, 2013, p.164); therefore the risk due to multicollinearity is also reduced to an acceptable level.

The regression model in Figure 7 reaches statistical significance ($p < 0.005$), with R square value of .687 implying a high explanation level for Feedback Satisfaction due to the three independent variables tested.

Informal Feedback makes the largest contribution (Beta .501, $p < .0005$), while the Performance Appraisal Session Quality makes the smallest contribution (Beta .173, $p < .007$). All independent variables make a statistically significant, unique contribution to the prediction of the dependent variable, Feedback Satisfaction.

Therefore, based on this data H2 and H3 are supported; Performance Appraisal Session Quality and Informal Feedback are positively related to Feedback Satisfaction. H4 is partially supported in that Leader Relationship Quality and Feedback Satisfaction are positively related, however Leader Relationship Quality did not carry the strongest weight as was hypothesized.

4.4 Comparison of Groups

Independent-Samples T-Test: Performance Appraisal Session Yes/No

The data for the Performance Appraisal Session Quality was only based on those employees that had a performance appraisal in the past year. 83 employees had not had a performance appraisal and therefore did not respond to these questions. In order to analyze the differences between these two groups, an independent sample t-test was used to further assess the impact of a performance appraisal session on Feedback Satisfaction and Intrinsic Motivation.

Groups	Variable	N	Mean	Mean Difference	Sig.
Performance Appraisal - Yes	Feedback Satisfaction	138	3.35	0.34	.003
Performance Appraisal - No		83	3.01		
Performance Appraisal - Yes	Intrinsic Motivation	138	4.11	0.37	.003
Performance Appraisal - No		83	3.73		

Figure 8: Independent samples, t-test, Performance Appraisal Session: Yes/No

The t-test showed a statistically significant positive effect of a performance appraisal on both Feedback Satisfaction (mean difference = .34, $p < .003$) and Intrinsic Motivation

(mean difference=.37, $p<.003$). This lends further support to H2, in that not only the Performance Appraisal Session Quality is positively related to Feedback Satisfaction, but also the Performance Appraisal in itself, without factoring in quality, contributes to higher Feedback Satisfaction and Intrinsic Motivation.

Bivariate Correlation: High/Low Autonomy Orientation

Employees were divided into two groups, with median score and higher being classified as high autonomy orientation and the remainder falling under a low autonomy orientation classification. Given the skewness of the data and the scales not meeting the assumption of normal distribution, as recommended (Pallant, 2013), the Spearman Rank Order Correlation (ρ) was used to generate the bivariate correlation values.

	Mean	N	r	sig
Autonomy Orientation - High	4.00	140	.333**	.01
Autonomy Orientation - Low	3.01	81	.555**	.01

** correlation is significant at the .01 level (2-tailed)

r=correlation between Feedback Satisfaction and Intrinsic Motivation

Figure 9: Bivariate correlation, high/low Autonomy Orientation

Based on the bivariate correlation in Figure 9, the relationship between Feedback Satisfaction and Intrinsic Motivation is stronger for employees with low autonomy ($r=.555, p<.01$), than for employees with high autonomy orientations ($r=.333, p<.01$) therefore H5 is supported.

Independent-Samples T-Test: Employee Roles

Independent sample t-tests were run to determine mean differences on the dependent variables Feedback Satisfaction and Intrinsic Motivation between functional and operative employees and between management and non-management employees.

Groups	Variable	N	Mean	Mean Difference	Sig.
Functional Employee	Feedback Satisfaction	144	3.37	0.43	.000
Operative Employee		77	2.95		
Functional Employee	Intrinsic Motivation	144	4.10	0.40	.001
Operative Employee		77	3.71		

Figure 10: Independent samples t-test, functional/operative

Groups	Variable	N	Mean	Mean Difference	Sig.
Manager	Feedback Satisfaction	82	3.32	0.15	.174
Non-Manager		139	3.17		
Manager	Intrinsic Motivation	82	4.25	0.45	.000
Non-Manager		139	3.80		

Figure 11: Independent samples t-test, manager/non-manager

The above data shows that operative employees show a significantly lower mean for both Feedback Satisfaction and Intrinsic Motivation. Managers have higher Feedback Satisfaction and Intrinsic Motivation, although only the difference in the mean scores for Intrinsic Motivation is significant. Therefore H6 is only partially supported, as operative employees were less satisfied than functional employees as hypothesized, but managers were not significantly more satisfied with feedback as it was stated in the hypothesis.

In further analyzing the variables contributing to Feedback Satisfaction some additional t-tests were run for the predictor variables of Feedback Satisfaction. It was noted that operative employees have a significantly lower average score for Informal Feedback (mean difference= .45, $p < .001$) and Relationship Quality (mean difference= .27, $p < .007$) than functional employees, whereas scoring for Performance Appraisal Session Quality does not vary significantly.

In running the same additional tests for management employees, the result is that management employees show a significantly higher score for Performance Appraisal Session Quality (mean difference= .20, $p < .019$) and Relationship Quality (mean difference= .25, $p < .008$), whereas Informal Feedback perceptions did not vary significantly.

ANOVA: Background and Demographic Control Variables

ANOVA tests were used to examine various groups of employees identified by the demographic control variables in order to determine whether or not significant differences existed within these groups for the dependent variables Feedback Satisfaction and Intrinsic Motivation.

Variable	Categories	Dependent Variable	N	Mean	Sig.
Age	18-29	Feedback Satisfaction	37	3.28	.919
	30-45		80	3.24	
	46-59		92	3.18	
	60+		12	3.22	
Age	18-29	Intrinsic Motivation	37	3.70	.201
	30-45		80	4.01	
	46-59		92	4.04	
	60+		12	3.94	
Employment Length	0-5 years	Feedback Satisfaction	108	3.29	.496
	6-15 years		63	3.14	
	15+ years		50	3.20	
Employment Length	0-5 years	Intrinsic Motivation	108	3.94	.462
	6-15 years		63	3.90	
	15+ years		50	4.09	
Education	Middle School	Feedback Satisfaction	13	2.61	.000
	Secondary School		109	3.07	
	University 1-4 years		72	3.32	
	University 5+ years		27	3.85	
Education	Middle School	Intrinsic Motivation	13	3.92	.290
	Secondary School		109	3.87	
	University 1-4 years		72	4.05	
	University 5+ years		27	4.17	

Figure 12: ANOVA, Background and control variables

ANOVA tests for the categorical variables age and employment length did not reveal any significant differences between the categories for the variables Feedback Satisfaction and Intrinsic Motivation. Education level was significant with a linear effect between education level and Feedback Satisfaction, but the effect on Intrinsic Motivation was not significant. However it should be noted that in this relationship the difference was only significant between top and bottom levels where there were few employees. Employees in the middle two categories were not statistically different.

See Appendix 3 and 4 for test details from SPSS.

Chapter 5 Discussion

The aim of this study was to examine the relationship between performance feedback and motivation to determine how performance feedback in a work setting influences intrinsic motivation. The findings related to the hypotheses will be discussed in terms of the research questions that were posed.

5.1 Discussion of Findings

Research Question 1: Is job performance feedback an important driver of intrinsic motivation in a work setting?

Given the support for H1, in response to Research Question 1, there is support for the fact that satisfaction with job performance feedback is a driver of intrinsic motivation in a work setting. These results are in line with previous findings (e.g. Kuvaas, 2006) that indicate a positive relationship between performance feedback satisfaction and intrinsic motivation. It should be noted that the key is satisfaction with job performance feedback, not just the existence of feedback in itself. Feedback Satisfaction is measured in this case, based on the perception of the respondent.

The data, in showing a medium strength correlation (Figure 5), also then indicates consistencies with the self-determination theory which points to the fact that motivation is not just influenced by one element, but an integrated set of environmental factors influencing aspects of job content, context and work climate (Gagné & Deci, 2005). While feedback is one of these elements, the relationships are complex such that the total concept of work motivation according to the self-determination theory is pieced together of many interactive elements which at the core support autonomy, competence and relatedness. This finding then underscores the fact that leaders can influence the intrinsic motivation of the employees to some degree, by creating a feedback context that supports the needs of competence, autonomy and relatedness. The organizational policies can also play a role in facilitating this context. This will benefit both the individual employee and the company through positive outcomes related to performance, job satisfaction organizational commitment (e.g Gagné & Deci, 2005, Cerasoli et al., 2014).

Looking at the results of regression model 1 (Figure 6), gives us a better perspective of the predictive values of these variables within the model of the self-determination theory. The variables Feedback Satisfaction and Autonomy Orientation explain 26% of the variance in Intrinsic Motivation, also indicating that these factors are pieces in a larger puzzle, but are significant enough that they should not be ignored. What is also observed is that the contextual factor of Feedback Satisfaction plays a more significant role than the individual factor of Autonomy Orientation. Autonomy orientation is modeled as both a predictor of intrinsic motivation, but also as influencing the outcomes of other contextual factors on intrinsic motivation (see Research Question 3). These findings can indicate that the environment employees are in has more to say with regards to intrinsic motivation than their individual differences, supporting the self-determination theory's basis that human motivation is primarily a function of the social conditions that humans function within (Ryan & Deci, 2000). Environment is something that can be influenced by management and organizational policies as opposed to individual differences, which are trait-like and perhaps more complex and difficult to influence.

However, only individual differences with regards to general causality orientations are identified by the self-determination theory for work motivation. A fairly simple scale was chosen for the measurement of autonomy orientation for the purposes of this study, which can limit the degree to which these findings can be interpreted. This view of individual differences should not be interpreted in an oversimplified manner. There are other factors outside of the work context, which could impact the individual and their choices and experiences within the work context. For example, the reason why people have the job that they do, can be a function of the pursuit of personal goals. As summarized by Ryan and Deci (2000), it has been found that there are individual differences with regards to the emphasis people place on intrinsic goals such as affiliation, personal growth and community compared to extrinsic goals such as wealth, fame and image. The former being positively associated with well-being and the latter being negatively associated with this outcome. The varying degree of these focuses in individuals can be influenced by many factors outside of work context, from media to childhood experiences (Ryan & Deci, 2000). Therefore, why a person has chosen the job

or profession that they have, can impact how a person experiences the work environment, including other elements which were not measured for the purposes of this study (e.g. choice, challenge), which in turn can impact intrinsic motivation. Quantifying these effects is beyond the scope of this study, but the various contexts that shape individuals outside of work and their career decisions should not be overlooked when considering the conclusions around the meaning and impact of individual differences.

To summarize the response to Research Question 1, job performance feedback is a moderately important driver of intrinsic motivation, when the performance feedback is in a manner such that the employee experiences satisfaction with the feedback. Employee satisfaction with feedback then indicates fulfillment of the human needs for autonomy, competence and relatedness

Research Question 2: Feedback between leader and employee can be informal or a part of a formal performance appraisal process; how do these feedback types compare in terms of importance and what is the significance of the leadership role in this exchange?

When examining Research Question 2, the sources of feedback were split into two possible arenas, the performance appraisal session and informal feedback. The performance appraisal session is well researched, while informal feedback is acknowledged as a component in the appraisal reaction, but is less studied. An employee's leader is a key person in these interactions, but it should be kept in mind that perceptions can be influenced by a broad numbers of factors from job roles to relationships with colleagues, performance management systems and organizational policies.

As noted in Chapter 4 (Figure 5), the positive correlation results supports the related hypotheses. When considered in regression model 2 (Figure 7), the dependent variable, Feedback Satisfaction shows a high level of variance explanation with 68% of the variance being explained by the tested variables; Performance Appraisal Quality, Informal Feedback and Leader Relationship Quality. Therefore in response to the Research Question 2, in this context there is evidence that suggests that regular informal

feedback and a strong leader relationship outweigh the performance appraisal session in terms of importance, but that each component in itself makes a positive contribution to creating favorable perceptions of feedback.

The results related to the quality of the performance appraisal session confirm what extensive research has shown, that a high quality performance appraisal is related to a number of desirable reactions and outcomes (e.g. Brown et al., 2010, Kuvaas, 2006, Mikkelsen & Lie, 1998, Selvarajan & Cloninger, 2012), which ultimately contribute to effectiveness in the process. The t-test data (Figure 8) also could give indication that perhaps any performance appraisal is better than no performance as employees who hadn't had a performance appraisal in the past year scored statistically lower for both Feedback Satisfaction and Intrinsic Motivation than employees who had had a performance appraisal. There is uncertainty of the reasons why fairly significant percentage of employees (38%) had not had a performance appraisal. This could potentially be attributed to timing or delays or other systematic reason, such as new employees, employees who had changed jobs internally, employees who were weaker performers or employees who have high job dissatisfaction (thus reluctance for the managers to have an appraisal), which could ultimately explain the different outcomes. But despite not having a performance appraisal session, employees still scored an average of 3.01 for Feedback Satisfaction and 3.73 for Intrinsic Motivation, indicating that respectable outcomes can be achieved even though this element is missing. Upon further inspection of the data it was also noted that very few employees reported poor quality in performance appraisal session, therefore it cannot be inferred that even a low quality performance appraisal is better than no performance appraisal.

It is interesting to note, that Informal Feedback (Beta= .501, $p < .0005$) shows a much stronger relationship to Feedback Satisfaction than Performance Appraisal Session Quality (Beta= .173, $p < .007$). Thus indicating that the infrequent performance appraisal session, while making some impact, is not the most important arena for feedback in this appraisal reaction model. Despite the multitude of research on the performance appraisal session or system in itself, the informal feedback or feedback culture/environment is a more abstract area that has not been examined to the same extent as the more concrete measures related to performance appraisal session and

system. Little research has considered how the feedback environment affects workplace motivation (Gabriel, Frantz, Levy, & Hilliard, 2014), therefore solid data weighing the importance of this factor against other factors has not yet become prevalent. This indicates that as Levy and William noted, performance appraisal research has been moving into the social context arena (Levy & Williams, 2004) and should continue to do so in the future. The nature of this study does however not reveal the sources and type of informal feedback in this context. While we see it is important, this study provides limited insight into what specifically is or can be done to achieve strong perceptions in this area.

Leader Relationship Quality, as measured by the LMX scale, when considered in the regression model, falls in the middle of the three predictor-variables. This is consistent with previous findings in the performance appraisal literature that show that the relationship quality element is a much more significant factor than the performance appraisal session in itself when looking at the drivers of appraisal reactions (Pichler, 2012). However, based on Pichler's meta-analysis, it was hypothesized that relationship quality would be the strongest driving factor in the performance appraisal reaction. This finding was not quite replicated in the current research as Informal Feedback did have a higher beta value than the LMX measurement with regards to Feedback Satisfaction. The current findings again underscore that the contextual elements outweigh the performance appraisal session and that social exchange relationship bears a strong link to the way in which employees perceive their job performance feedback.

It should also be noted that LMX measurement, Informal Feedback and Feedback Satisfaction were all highly correlated. From a statistical point of view, this can be viewed as a limitation in terms of validity as the constructs show convergent validity which lends uncertainty as to whether these constructs are actually separate indicators or whether they are in reality measuring the same thing. High correlations also introduce problems in regression models associated with multicollinearity (Pallant, 2013) and although these risks are considered to be within acceptable limitations, these close relationships can add uncertainty to the regression model's robustness.

On the other hand, it also makes sense that these three constructs are closely related. This gives evidence that an important component of a quality leader relationship is the informal feedback that occurs on a regular basis and that these things in turn contribute to satisfaction with feedback. Therefore it would also be unusual if these elements were significantly divergent. With regards to the self-determination theory, it is also clear that the role of leadership is important in setting the tone for the work climate and the degree to which the leadership role is experienced by employees as autonomy supportive versus controlling (Gagné & Deci, 2005). So these variables, which ultimately predict intrinsic motivation, cannot be viewed as completely separate items in a chain event of perceptions and reactions, but rather an interactive set of factors that build on and contribute to each other.

To summarize the response to Research Question 2, informal day-to-day feedback is an important but undervalued source of feedback when compared to the performance appraisal session. Having a quality relationship with one's leader goes hand in hand with informal feedback in creating a context which supports a positive reaction to job performance feedback.

Research Question 3: Do significant individual differences exist between either individuals or groups of employees, which should be taken into account when giving an employee job performance feedback?

Autonomy Orientation

The way in which individuals react to feedback has been found to play a role with regards to the reaction and response to the feedback. The self-determination theory identifies autonomy orientation as an important individual difference based on the theory's definition of general causality orientations, which are trait-like characteristics (Gagne, Deci, 2005).

The fact that H5 was supported (Figure 9) was consistent with expectations that for employees with a low autonomy orientation, a positive feedback experience is more important and beneficial than for employees with a high autonomy orientation. The findings in this study are similar to Kuvaas's findings previously, (Kuvaas, 2007) which

demonstrated that the relationships between feedback and positive outcomes were moderated by autonomy orientation, being strengthened for employees with low autonomy orientation. Kuvaas however found a negative outcome relationship for employees with high autonomy orientation, suggesting that feedback for this group had possibly been interpreted as controlling. In the current study, the relationship between feedback and the outcome of intrinsic motivation is positive for both groups, only slightly weaker for employees with high autonomy orientation.

The way in which a high autonomy orientation is interpreted a critical distinction with regards to interpretation of the results. High autonomy orientation can be interpreted either as an indicator of strong self-efficacy, positive self-esteem and a predictor of intrinsic motivation, or as an indicator of a tendency towards a control orientation. Self-efficacy implies a level of perceived competence, which is a fundamental component in the self-determination theory, thus influencing belief in one's ability to complete tasks and reach goals. With high self-efficacy, feedback can be experienced as competency affirming and thus enhancing intrinsic motivation. A control orientation is characterized by: self-consciousness, defensive functioning, placing high importance on extrinsic motivators and a general tendency to experience social contexts as controlling (Gagné & Deci, 2005, p. 339). For these types of individuals, feedback can often be experienced as controlling thus leading to a negative effect on intrinsic motivation. The results of this study indicate the former interpretation.

One of the limitations mentioned previously relates to the use of this scale chosen for Autonomy Orientation. A more comprehensive mapping of the individual differences according to the self-determination theory's validated scale for general causality orientations could have been advantageous in terms of identifying more clearly the divide between high autonomy orientation and control orientation. However this detailed mapping was deemed beyond the feasibility of this research.

This balance between support and control for employees that are highly autonomous is a balance that is important, but perhaps difficult to find with regards to feedback. One possible explanation of the balancing factors between autonomy supportive and controlling perceptions can be related to the rationale given behind the feedback.

According to the self-determination theory's continuum from amotivation, extrinsic motivation and intrinsic motivation, if an individual recognizes the importance and coherence of goals, values and regulations, although the source of motivation is extrinsic (not a free-choice behaviour, done for enjoyment or interest), the response becomes integrated and is autonomous (Gagné & Deci, 2005). This translates into an extrinsic motivation that nears and is correlated with intrinsic motivation. Therefore if an employee is given and accepts the rationale behind feedback, the chances of the perception being negative in terms of the control perception are likely reduced. What determines whether a person accepts or agrees with the rationale is difficult to determine, but is likely a combination of factors that are individually unique, such as past experience, personal beliefs and values.

Employee Roles

In moving back to the more traditional HR based employee groupings, the other groups that demonstrated significant differences in their results were functional versus operative employees. Management versus non-management employees did not show the same difference therefore lending only partial support to H6. Functional employees are employees that work in the office (white collar), whereas operative employees work out of the office (blue collar), directly with the operations of the company. There can also be a wide variety of tasks and positions within these two groups as this is a very broad categorization. Therefore the groups in themselves are by no means uniform with regards to job content, thus limiting the extent to which generalizations can be drawn.

The results of the T-tests (Figure 10) show that on average, there is a statistically significant difference with regards to the average scores for both Feedback Satisfaction and Intrinsic Motivation for functional and operative employees. This is not unexpected, as similar results have been seen previously, that operative employees do not find performance appraisal feedback as meaningful. One explanation offered for this difference is that functional groups that work with a more office type of work may be more used to verbal feedback in the performance appraisal form and have a greater need for career development and enhancement than employees who work in operative roles (Mikkelsen, 1996).

To explore this relationship by looking further into the data, it is seen that operative employees do not view the quality of their performance appraisal differently than functional employees, with a mean difference of only 0.11, which is statistically insignificant. It is also observed that performance appraisals completed in these two groups was at a similar level (60% of Operative Employees had indicated that they had a performance appraisal in the last year, compared to 64% of Functional Employees). These findings do not support explanation that this group of employees is less accustomed to verbal feedback in performance appraisal context. However, operative employees do show significantly lower levels of perceived informal feedback (mean difference of 0.45), which demonstrates that in their work environment, the informal feedback context is not as strong. This can be due to the nature of the jobs and perhaps the amount of interaction between people in job roles or just indicative of feedback culture within which they work.

Employees employed in a management role were compared to non-management roles (Figure 11). No significant difference was noted in the levels of Feedback Satisfaction, however the level of Intrinsic Motivation was statistically higher. This makes sense given the link between intrinsic motivation and job performance (Cerasoli et al., 2014) and it would be expected that highly motivated employees would be promoted into higher-level positions. However it was expected that management employees would have a higher level of feedback satisfaction, given that they are also formally responsible for giving feedback themselves, and therefore are more aware of its importance. This was not found to be the case. It was found that managers do in fact rate their performance appraisal session more highly but again we see that the most important predictor, Informal Feedback, is similar between manager and non-managers. This gives an explanation as to why the overall satisfaction level is the same for these two groups.

Background and Demographic Control Variables

Other demographic differences; age, employment length and education were also examined to determine whether they were indicative of any significant differences in the outcomes, Feedback Satisfaction and Intrinsic Motivation.

Age did not show any significant differences in scoring for these variables. This is consistent with review findings, which show there is no theoretical evidence that motivation declines with age, but age can impact the type of work environment and context (Kanfer & Ackerman, 2004). Age can influence the degree to which feedback is accepted, since past experience may be used as a source of feedback, thus being less reliant on the feedback of others (Ilgen et al., 1979). However it should be kept in mind that this study measured the perception related to feedback. Therefore perceptions can be similar although the specific quantity and type of feedback received either formally or informally can differ in these groups even though the overall perception results in the same outcome measurement. It is for example possible that leaders automatically adapt the ways in which they give feedback based on age, such that the outcomes can be similar, although the inputs may be different.

Employment length did not reveal any significant differences. Employment length could impact the relationship between a supervisor and his groups of employees, an employee's perceived competence or autonomy in one's position. However, no differences were noted. The employment categories were quite wide, perhaps too general to show any specific differences.

Education level showed a significant difference with regards to the highest and lowest groups, but the majority of employees fall in the middle two categories and there are no significant differences associated between these two groups. Therefore the impact of any differences in the high and low groups here are difficult to generalize due to small population size.

Therefore the analysis shows that the demographic characteristics of the employees do not contribute significantly to any of the outcomes that were measured or provide additional explanatory factors.

In sum, in response to Research Question 3, we see that there are certain differences which leaders and organizations should be aware of when giving feedback and designing feedback policies. For employees who have lower autonomy, feedback plays an even more important role for boosting motivation. It is not typical to map an employees autonomy orientation or design a policy around it, therefore it is important for a manager to be observant of cues which can give indicators of the employees' needs in this regards. Employee roles do give rise to difference in perceptions of feedback, but this mostly appears to be associated to the informal feedback environment. When it comes to the formal policy for performance appraisal, this appears to be equally effective for each group. This implies that there is no need to set differing policy or guidelines. Finally the simple categorizations of demographics do not appear to contribute to any differences in satisfaction with feedback or motivation. This indicates that it is not possible to influence motivation by recruiting employees into a certain category or generalize feedback guidelines targeted to specific demographic groups.

5.2 Challenges and Limitations

In this study, the focus of the analysis is on the individual, but in the context of this company. The ultimate aim of the study is then to make inferences not only regarding the entire population of the employees in the company, but to employees in general. In terms of generalization, there is always a risk that the sample obtained is not representative of a larger population and a large sample size does not alone guarantee a representative sample (Neuman, 2014, p. 269). Populations with a small degree of homogeneity will have larger sampling errors than homogenous populations (Neuman, 2014, p. 271). Given that the employees in this sample are quite diverse, in terms of roles, individual differences and background, this increases the risk that inferring the results on a larger population of individuals can be incorrect. However, a sampling ratio of around 30% is considered adequate for populations under 500 (Neuman, 2014), therefore the obtained sample size of 41.8% reduces the risk of sampling area for the

population of the company significantly, and it is reasonable to make generalizations for individuals within the context of the company. In terms of employees in general, the findings of the study should not be used independently to make generalizations, but considered in relation to other literature of similar subject matter. The finds in this research were generally consistent with previous literature, thus adding further empirical support to these theories and hypotheses.

Timing is also a limitation in the data collection process. Employees can potentially be overly influenced by recent events that may positively or negatively impact the way in which they respond to the questions. For example, a recent positive performance appraisal experience or leader interaction could make employee perceptions different for a short point in time than they would be otherwise. It has also been found that for measurement of performance appraisal reactions, neither positive nor negative affect presented a bias in this measure (Keeping & Levy, 2000), so there is at least some evidence that emotional state may not compromise the data. In addition, the scope of this study only allows for measurement at one point in time therefore no consideration can be given to whether employees responses are stable over time and represent a stable set of measurements and relationships.

Another limitation of this study is related to self-reported data. Employees report data based on their perceptions, which is the critical link with regards to the subsequent reactions (Purcell & Hutchinson, 2007). However, this gives us little information in some circumstances about how and why they have that perception. This is especially relevant for constructs such as Informal Feedback. While a positive perception is measured, we have little concrete evidence to tell us what exchanges happen to get to that point, such as differences between delivery of good news feedback versus bad news feedback.

Finally, given the number and complexity of factors, which interlink in these models, there is always a risk of spuriousness as not all variables can be quantified. This is especially true for more abstract distal factors such as economic conditions, organizational culture, competition etc. This risk has been reduced by choosing some of the most prevalent factors, but cannot be completely eliminated. In terms of measurement, in some circumstances more simplified question scales had to be chosen

over more detailed question scales, which could possibly have given more accurate data. There is a trade off between sample size achieved and quality of information, which was weighed during the planning phase.

Chapter 6 Conclusion

The aim of the study was to examine the relationship between performance feedback in the work setting and work motivation, determining how job performance feedback impacts intrinsic motivation. The branch of HR literature dedicated to performance appraisal, with focus on performance appraisal effectiveness, has been placed within the framework of the self-determination theory, measuring intrinsic motivation as the outcome. Through quantitative analysis, the results show that the appraisal reaction of being satisfied with performance feedback is a moderate predictor of intrinsic motivation. This gives empirical support with regards to integration of micro HR literature its associated perceptions to motivational theory and psychological outcomes.

Feedback that creates a positive reaction in the work environment does indeed lead to enhanced intrinsic motivation, which implies that the human resource policy surrounding feedback can make a contribution towards facilitation of a motivated staff. However, based on the data from this population, there is a clear indicator that the informal feedback environment is a more important contributor to these positive outcomes than the formalized performance appraisal session. Both types of feedback each play their own contributive role, but the focus on the performance appraisal process, guidelines, system and execution for this session has seemly become disproportional compared to the time spent by leaders and human resource departments evaluating, understanding and enhancing the regular day-to-day feedback environment. This informal feedback environment can vary based on job roles as seen through the analysis of functional and operative employees. This plays a key factor in the outcomes between these two groups. This implies that each work environment will have its own culture, which application of common human resource procedures will not necessarily even out. Thus it can be concluded that focus on reciprocal leadership practices and the entire context of feedback should be the focus of both leaders and their organizations.

In this study we see evidence that trait-like individual differences do play a role in determining the reaction to performance feedback. This research provides additional support to the self-determination theory in demonstrating that autonomy orientation is an influential factor in the model. This is demonstrated by finding that for employees

with a low autonomy orientation a positive reaction to feedback plays a more important role with regards to motivation, than for employees with a high autonomy orientation. The autonomy orientation can therefore be considered a moderator in the relationship between feedback and motivation. Other background and demographic characteristics, do not present significant difference across groups, therefore indicating that a leader needs to read the signals of the employee's personality and needs, not just consider age and experience when they consider what they can do to cultivate motivation in the individual employees.

Areas for future research should continue to shift away from the performance appraisal session in itself and focus on the informal feedback environment, which clearly has an important role, but is less researched. Research should be directed towards how specific actions influence the informal feedback culture over time, as culture is not something that is easily changed. Another area for future research is feedback in the context of more complex organizational structures, such as matrix organizations, which have more complex reporting lines. The role of the leader changes in these type of organizational structures, with direct and dotted reporting lines and the day-to-day interactions are also impacted. Therefore it is important to understand how these organizational structures can ensure that the contexts they create are supportive of positive feedback reactions and intrinsic motivation.

Leaders often wonder how they can motivate employees. They can take away from this study that their feedback does count and can motivate employees, if it is perceived in the right way. Feedback is not the only key to motivation, but one that should be taken seriously and viewed in a wider lens than just the annual performance appraisal.

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Appendix 1: Questionnaire Survey

 [Edit this form](#)

Spørreundersøkelse

Hei!

Som en del av min avsluttende masteroppgave på UiS, prøver jeg å forstå hva som gjør at mennesker blir motivert (eller ikke!) på jobb. Jeg ber om at du bruker ca. 5-10 minutter på å besvare en spørreundersøkelse med noen spørsmål rundt dette temaet.

Hver enkelt bidrag er viktig!!

Jeg setter pris på om du kan svare innen 1-2 uker. Alle besvarelser blir behandlet anonymt.

Tusen takk!

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Spørreundersøkelse

* Required

Litt om deg

Alder *

- 18-29
- 30-45
- 46-59
- 60+

Hvilken kategori beskriver stillingen din best? *

- Funksjonær (kontoransatt)
- Operatør (basesansatt)

Hvilket selskap hører du til? *

- NorSea Group
- NorSea AS
- Stordbase
- Polarbase
- Norbase
- Vestbase
- Maritime Logistic Services, Martime Waste Management, NSG Maritime AS

Hvilket utdanningsnivå har du? *

- Grunnskole
- Videregående skole
- Universitet og høyskole - 1-4 år
- Universitet og høyskole - mer enn 4 år

Hvor lenge har du vært ansatt i selskapet? *

- 0-5 år
- 6-15 år
- 15+ år

Har du lederansvar? *

- Ja
- Nei

Hvilken avdeling jobber du i? *

- Logistikk
- Teknisk
- Eiendom
- Fellesadministrasjon (Økonomi, HMSSK, Marked, HR, administrasjon)

Har du hatt medarbeidersamtale i løpet av det siste året? *

- Ja
- Nei

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Medarbeidersamtale

Hvordan fungerte siste medarbeidersamtale med hensyn til egen forberedelse? *

- Svært godt
- Godt
- Mindre bra
- Dårlig

Hvordan fungerte siste medarbeidersamtale med hensyn til leders forberedelse? *

- Svært godt
- Godt
- Mindre Bra
- Dårlig

Hvordan fungerte siste medarbeidersamtale med hensyn til leders tilbakemelding på oppnådde resultater og kvalifikasjoner? *

- Svært godt
- Godt
- Mindre bra
- Dårlig

Hvordan fungerte siste medarbeidersamtale med hensyn til egen tilbakemelding til leder? *

(ie at du selv kan komme med synspunkter)

- Svært godt
- Godt
- Mindre bra
- Dårlig

Hvordan fungerte siste medarbeidersamtale med hensyn til diskusjon og utarbeidelse av tiltak for egenutvikling/opplæring. *

- Svært godt
- Godt
- Mindre bra
- Dårlig

Hvordan fungerte medarbeidersamtale med hensyn til skjema som ble brukt? *

- Svært godt
- Godt
- Mindre bra
- Dårlig

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37% completed

Lederrelasjoner

Vet du vanligvis hvor tilfreds din nærmeste leder er med arbeidet du utfører? *

- Slett ikke
- I liten grad
- I noen grad
- I stor grad
- I svært stor grad

Hvor godt forstår din nærmeste leder problem og behov du støter på i ditt arbeid? *

- Slett ikke
- I liten grad
- I noen grad
- I stor grad
- I svært stor grad

Hvor godt kjenner din nærmeste leder din kapasitet og dine evner? *

- Slett ikke
- I liten grad
- I noen grad
- I stor grad
- I svært stor grad

I hvilken grad ville din nærmeste leder bruke sin innflytelse for å hjelpe deg med vansker i ditt arbeid? *

- Slett ikke
- I liten grad
- I noen grad
- I stor grad
- I svært stor grad

I hvilken grad ville din nærmeste leder stille opp for deg hvis det gikk på hans/hennes egen bekostning? *

- Slett ikke
- I liten grad
- I noen grad

-
- I stor grad
 - I svært stor grad

Vennligst ta standpunkt til følgende påstand: Jeg har så mye tillit til min nærmeste leder at jeg vil forsvare hans/hennes avgjørelser når han/hun ikke er til stede. *

- Svært uenig
- Uenig
- Verken enig eller uenig
- Enig
- Svært enig

Hvordan vil du karakterisere ditt forhold til din nærmeste leder med tanke på effektivitet i samarbeidet dere imellom. *

- Ekstremt lite effektivt
- Lite effektivt
- Av og til effektivt
- Vanligvis effektivt
- Ekstremt effektivt

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50% completed

Hverdagen din

Vurder følgende spørsmål rundt hvordan du opplever å få uformell tilbakemelding på arbeidet ditt i det daglige.

Jeg får hyppig og kontinuerlig tilbakemelding på hvor bra jeg gjør jobben min. *

1 2 3 4 5

Sterkt uenig Sterkt enig

Jeg får klar og direkte informasjon om resultatene av arbeidet mitt gjennom regelmessig tilbakemelding. *

1 2 3 4 5

Sterkt uenig Sterkt enig

Med unntak av formelle tilbakemeldingssystemer, som for eksempel medarbeidersamtale, får jeg sjelden tilbakemelding. *

1 2 3 4 5

Sterkt uenig Sterkt enig

I min jobb er jeg løpende orientert om hva jeg har gjort bra eller hva jeg kunne ha gjort bedre. *

1 2 3 4 5

Sterkt uenig Sterkt enig

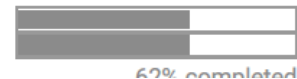
Jeg vet lite om hva mine kolleger mener om mitt arbeid. *

1 2 3 4 5

Sterkt uenig Sterkt enig

« Back

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Tilfredshet med tilbakemelding

Jeg er fornøyd med måten organisasjonen min gir meg tilbakemelding på. *

1 2 3 4 5

Sterkt uenig Sterkt enig

Tilbakemeldingen jeg får om hvordan jeg utfører jobben min er relevant. *

1 2 3 4 5

Sterkt uenig Sterkt enig

Organisasjonen min gjør en god jobb av å gi anerkjennelse av gode prestasjoner. *

1 2 3 4 5

Sterkt uenig Sterkt enig

Tilbakemeldingen jeg mottar stemmer med det jeg faktisk har oppnådd. *

1 2 3 4 5

Sterkt uenig Sterkt enig

Organisasjonen min er mer opptatt av å gi positiv tilbakemelding på gode prestasjoner enn å kritisere svake prestasjoner. *

1 2 3 4 5

Sterkt uenig Sterkt enig

Jeg mener organisasjonen min forsøker å utføre medarbeidersamtaler på best mulig måte. *

1 2 3 4 5

Sterkt uenig Sterkt enig

Medarbeidersamtale er verdifull både til meg og organisasjonen min. *

1 2 3 4 5

Sterkt uenig Sterkt enig

« Back

Continue »

 75% completed

Motivasjon

Mine arbeidsoppgaver er i seg selv en viktig drivkraft i jobben min. *

1 2 3 4 5

Sterkt uenig Sterkt enig

Det er gøy å jobbe med arbeidsoppgavene jeg har. *

1 2 3 4 5

Sterkt uenig Sterkt enig

Jeg føler at den jobben jeg gjør er meningsfull. *

1 2 3 4 5

Sterkt uenig Sterkt enig

Jobben min er veldig spennende. *

1 2 3 4 5

Sterkt uenig Sterkt enig

Jobben min er så interessant at den i seg selv er sterkt motiverende. *

1 2 3 4 5

Sterkt uenig Sterkt enig

Av og til blir jeg så inspirert av jobben min at jeg nesten glemmer ting rundt meg. *

1 2 3 4 5

Sterkt uenig Sterkt enig

« Back

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87% completed

Og til slutt, litt mer om deg

Jeg er mer selvstendig enn folk flest. *

1 2 3 4 5

Sterkt uenig Sterkt enig

Jeg oppsøker situasjoner som gir rom for selvstendige beslutninger. *

1 2 3 4 5

Sterkt uenig Sterkt enig

Jeg har et større behov enn folk flest å treffe beslutninger basert på egne vurderinger. *

1 2 3 4 5

Sterkt uenig Sterkt enig

Dersom jeg mener at noe er galt, snakker jeg ut uansett hvem jeg snakker med. *

1 2 3 4 5

Sterkt uenig Sterkt enig

Jeg er i stand til å si hva jeg mener, uavhengig av situasjonen rundt meg. *

1 2 3 4 5

Sterkt uenig Sterkt enig

Jeg har ikke stort behov for å treffe alle beslutninger selv i det jeg gjør. *

1 2 3 4 5

Sterkt uenig Sterkt enig

Frihet til å ta mine egne avgjørelser er ikke viktig for meg. *

1 2 3 4 5

Sterkt uenig Sterkt enig

Muligheten til å bestemme min egen timeplan er ikke viktig for meg. *

1 2 3 4 5

Sterkt uenig Sterkt enig

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Submit



100%: You made it.

Appendix 2: Principal Component Analysis

Rotated Component Matrix^a

	Component					
	1	2	3	4	5	6
IF1	.873					
IF2	.850					
FS3	.816					
FS4	.792					
FS1	.778					
IF4	.768					
LMX1	.731					
LMX2	.663					.355
revIF3	.644					
LMX7	.623		.338			
LMX6	.615		.348			
LMX5	.589		.405			
LMX4	.566		.408			.319
FS5	.556					
LMX3	.540		.336			.426
FS2	.520					
FSS	.444	.390	.347			
IM5		.897				
IM4		.892				
IM2		.889				
IM3		.815				
IM1		.809				
IM6		.731				
PAQ1			.812			
PAQ2			.777			
PAQ3	.467		.689			
PAQ4			.682			
PAQ5	.412		.669			
PAQ6			.644			.318
FS7			.558			
AO1				.795		
AO3				.783		
AO2		.304		.714		
AO4					.891	
AO5					.862	
revIF5						.661

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

IF= Informal Feedback, FS= Feedback Satisfaction, LMX= Relationship Quality, IM= Intrinsic Motivation, PAQ= Performance Appraisal Session Quality, AO=Autonomy Orientation

Appendix 3: Descriptive Statistics, Correlation and Regression Analysis

Descriptive Statistics/Correlation

Correlations

[DataSet1] /Users/deannalynnscott/Documents/MBA - Oppgave/SPSS files/oppgavedatafinal.sav

Descriptive Statistics

	Mean	Std. Deviation	N
Informal Feedback	3.0848	1.00475	221
Feedback Satisfaction	3.2240	.81494	221
Autonomy Orientation	3.6389	.61269	221
LMX	3.6102	.71010	221
Intrinsic Motivation	3.9661	.84341	221
Performance Appraisal Session	3.1546	.49476	138

Correlations

		Informal Feedback	Feedback Satisfaction	Autonomy Orientation	LMX	Intrinsic Motivation	Performance Appraisal Session
Informal Feedback	Pearson Correlation	1	.781**	.178**	.776**	.420**	.458**
	Sig. (2-tailed)		.000	.008	.000	.000	.000
	N	221	221	221	221	221	138
Feedback Satisfaction	Pearson Correlation	.781**	1	.159*	.760**	.458**	.570**
	Sig. (2-tailed)	.000		.018	.000	.000	.000
	N	221	221	221	221	221	138
Autonomy Orientation	Pearson Correlation	.178**	.159*	1	.147*	.296**	.003
	Sig. (2-tailed)	.008	.018		.029	.000	.975
	N	221	221	221	221	221	138
LMX	Pearson Correlation	.776**	.760**	.147*	1	.452**	.648**
	Sig. (2-tailed)	.000	.000	.029		.000	.000
	N	221	221	221	221	221	138
Intrinsic Motivation	Pearson Correlation	.420**	.458**	.296**	.452**	1	.295**
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	221	221	221	221	221	138
Performance Appraisal Session	Pearson Correlation	.458**	.570**	.003	.648**	.295**	1
	Sig. (2-tailed)	.000	.000	.975	.000	.000	
	N	138	138	138	138	138	138

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

* . Correlation is significant at the 0.05 level (2-tailed).

Nonparametric Correlations

[DataSet1] /Users/deannalynnscott/Documents/MBA - Oppgave/SPSS files/oppgavedatafinal.sa
v

Correlations

			Informal Feedback	Feedback Satisfaction	Autonomy Orientation	LMX	Intrinsic Motivation	Performance Appraisal Session
Spearman's rho	Informal Feedback	Correlation Coefficient	1.000	.769**	.183**	.761**	.388**	.405**
		Sig. (2-tailed)	.	.000	.006	.000	.000	.000
		N	221	221	221	221	221	138
	Feedback Satisfaction	Correlation Coefficient	.769**	1.000	.139**	.730**	.427**	.462**
		Sig. (2-tailed)	.000	.	.038	.000	.000	.000
		N	221	221	221	221	221	138
	Autonomy Orientation	Correlation Coefficient	.183**	.139**	1.000	.167*	.301**	.021
		Sig. (2-tailed)	.006	.038	.	.013	.000	.803
		N	221	221	221	221	221	138
	LMX	Correlation Coefficient	.761**	.730**	.167*	1.000	.410**	.603**
		Sig. (2-tailed)	.000	.000	.013	.	.000	.000
		N	221	221	221	221	221	138
	Intrinsic Motivation	Correlation Coefficient	.388**	.427**	.301**	.410**	1.000	.324**
		Sig. (2-tailed)	.000	.000	.000	.000	.	.000
		N	221	221	221	221	221	138
	Performance Appraisal Session	Correlation Coefficient	.405**	.462**	.021	.603**	.324**	1.000
		Sig. (2-tailed)	.000	.000	.803	.000	.000	.
		N	138	138	138	138	138	138

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

* . Correlation is significant at the 0.05 level (2-tailed).

Regression Model 1:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.511 ^a	.261	.255	.72820

a. Predictors: (Constant), Feedback Satisfaction, Autonomy Orientation

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	40.894	2	20.447	38.559	.000 ^b
	Residual	115.601	218	.530		
	Total	156.495	220			

a. Dependent Variable: Intrinsic Motivation

b. Predictors: (Constant), Feedback Satisfaction, Autonomy Orientation

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	1.411	.331		4.257	.000	.757	2.064					
	Autonomy Orientation	.315	.081	.229	3.886	.000	.155	.475	.296	.255	.226	.975	1.026
	Feedback Satisfaction	.437	.061	.422	7.155	.000	.316	.557	.458	.436	.417	.975	1.026

a. Dependent Variable: Intrinsic Motivation

Regression Model 2:

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.829 ^a	.687	.680	.46081

a. Predictors: (Constant), Informal Feedback, Performance Appraisal Session, LMX

b. Dependent Variable: Feedback Satisfaction

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	62.531	3	20.844	98.159	.000 ^b
	Residual	28.454	134	.212		
	Total	90.985	137			

a. Dependent Variable: Feedback Satisfaction

b. Predictors: (Constant), Informal Feedback, Performance Appraisal Session, LMX

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics		
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF	
1	(Constant)	-.003	.262		-.012	.991	-.521	.515						
	Performance Appraisal Session	.285	.105	.173	2.716	.007	.078	.493	.570	.228	.131	.575	1.740	
	Informal Feedback	.406	.062	.501	6.507	.000	.283	.530	.781	.490	.314	.394	2.539	
	LMX	.298	.103	.259	2.886	.005	.094	.502	.760	.242	.139	.289	3.461	

a. Dependent Variable: Feedback Satisfaction

Appendix 4: Comparison of Groups: T-Tests, ANOVA, Correlation

T-test: Performance Appraisal: Yes/No

✦ T-Test

[DataSet1] /Users/deannalynnscott/Documents/MBA - Oppgave/SPSS files/oppgavedatafinal.sav

	PA	N	Mean	Std. Deviation	Std. Error Mean
Feedback Satisfaction	Ja	138	3.3514	.77958	.06636
	Nei	83	3.0120	.83284	.09142
Intrinsic Motivation	Ja	138	4.1063	.73217	.06233
	Nei	83	3.7329	.96164	.10555

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower		Upper
Feedback Satisfaction	Equal variances assumed	1.372	.243	3.055	219	.003	.33940	.11111	.12041	.55839
	Equal variances not assumed			3.005	163.946	.003	.33940	.11296	.11635	.56245
Intrinsic Motivation	Equal variances assumed	5.704	.018	3.256	219	.001	.37335	.11468	.14733	.59936
	Equal variances not assumed			3.046	139.031	.003	.37335	.12258	.13098	.61571

T-test: Functional/Operative

T-Test

[DataSet1] /Users/deannalynnscott/Documents/MBA - Oppgave/SPSS files/oppgavedatafinal.sav

	positiontype	N	Mean	Std. Deviation	Std. Error Mean
Intrinsic Motivation	Funksjonær (kontoransatt)	144	4.1042	.80037	.06670
	Operatør (baseansatt)	77	3.7078	.86609	.09870
Feedback Satisfaction	Funksjonær (kontoransatt)	144	3.3727	.76312	.06359
	Operatør (baseansatt)	77	2.9459	.84051	.09579

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower		Upper
Intrinsic Motivation	Equal variances assumed	.346	.557	3.408	219	.001	.39637	.11630	.16717	.62558
	Equal variances not assumed			3.327	145.170	.001	.39637	.11912	.16094	.63181
Feedback Satisfaction	Equal variances assumed	1.205	.273	3.823	219	.000	.42680	.11165	.20675	.64684
	Equal variances not assumed			3.712	143.000	.000	.42680	.11497	.19953	.65407

T-test: Manager/Non-Manager

T-Test

[DataSet1] /Users/deannalynnscott/Documents/MBA - Oppgave/SPSS files/oppgavedatafinal.sav

Group Statistics

	leader	N	Mean	Std. Deviation	Std. Error Mean
Intrinsic Motivation	Ja	82	4.2520	.67700	.07476
	Nei	139	3.7974	.88755	.07528
Feedback Satisfaction	Ja	82	3.3211	.66604	.07355
	Nei	139	3.1667	.88851	.07536

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower		Upper
Intrinsic Motivation	Equal variances assumed	5.064	.025	4.001	219	.000	.45467	.11363	.23072	.67862
	Equal variances not assumed			4.285	204.892	.000	.45467	.10610	.24549	.66385
Feedback Satisfaction	Equal variances assumed	7.867	.005	1.364	219	.174	.15447	.11326	-.06874	.37768
	Equal variances not assumed			1.467	206.658	.144	.15447	.10531	-.05314	.36208

ANOVA: Age

Oneway

[DataSet1] /Users/deannalynnscott/Documents/MBA - Oppgave/SPSS files/oppgavedatafinal.sav

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Feedback Satisfaction	18-29	37	3.2838	.82108	.13498	3.0100	3.5575	1.33	4.67
	30-45	80	3.2417	.86538	.09675	3.0491	3.4342	1.00	4.83
	46-59	92	3.1812	.80810	.08425	3.0138	3.3485	1.17	5.00
	60+	12	3.2500	.51493	.14865	2.9228	3.5772	2.67	4.17
	Total	221	3.2240	.81494	.05482	3.1159	3.3320	1.00	5.00
Intrinsic Motivation	18-29	37	3.6982	1.03476	.17011	3.3532	4.0432	1.17	5.00
	30-45	80	4.0104	.77693	.08686	3.8375	4.1833	1.00	5.00
	46-59	92	4.0380	.83611	.08717	3.8649	4.2112	1.50	5.00
	60+	12	3.9444	.55201	.15935	3.5937	4.2952	3.00	4.83
	Total	221	3.9661	.84341	.05673	3.8543	4.0779	1.00	5.00

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Feedback Satisfaction	1.842	3	217	.141
Intrinsic Motivation	2.108	3	217	.100

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Feedback Satisfaction	Between Groups	.334	3	.111	.166	.919
	Within Groups	145.773	217	.672		
	Total	146.107	220			
Intrinsic Motivation	Between Groups	3.294	3	1.098	1.555	.201
	Within Groups	153.201	217	.706		
	Total	156.495	220			

ANOVA: Employment Length

Oneway

[DataSet1] /Users/deannalynnscott/Documents/MBA - Oppgave/SPSS files/oppgavedatafinal.sav

Descriptives

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	
					Lower Bound	Upper Bound			
Feedback Satisfaction	0-5 år	108	3.2870	.83313	.08017	3.1281	3.4460	1.00	4.83
	6-15 år	63	3.1376	.75819	.09552	2.9466	3.3285	1.17	4.67
	15+ år	50	3.1967	.84829	.11997	2.9556	3.4377	1.00	5.00
	Total	221	3.2240	.81494	.05482	3.1159	3.3320	1.00	5.00
Intrinsic Motivation	0-5 år	108	3.9429	.90578	.08716	3.7701	4.1157	1.17	5.00
	6-15 år	63	3.9048	.72384	.09119	3.7225	4.0871	2.33	5.00
	15+ år	50	4.0933	.84660	.11973	3.8527	4.3339	1.00	5.00
	Total	221	3.9661	.84341	.05673	3.8543	4.0779	1.00	5.00

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Feedback Satisfaction	.072	2	218	.930
Intrinsic Motivation	.604	2	218	.548

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Feedback Satisfaction	Between Groups	.937	2	.469	.704	.496
	Within Groups	145.170	218	.666		
	Total	146.107	220			
Intrinsic Motivation	Between Groups	1.105	2	.552	.775	.462
	Within Groups	155.391	218	.713		
	Total	156.495	220			

ANOVA: Education

Oneway

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Descriptives

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	
					Lower Bound	Upper Bound			
Feedback Satisfaction	Grunnskole	13	2.6154	.57889	.16056	2.2656	2.9652	1.67	3.50
	Videregående skole	109	3.0749	.83933	.08039	2.9156	3.2343	1.00	5.00
	Universitet og høgscole - 1-4 år	72	3.3241	.72291	.08520	3.1542	3.4940	1.00	4.50
	Universitet og høgscole - mer enn 4 år	27	3.8519	.62929	.12111	3.6029	4.1008	1.83	4.83
	Total	221	3.2240	.81494	.05482	3.1159	3.3320	1.00	5.00
Intrinsic Motivation	Grunnskole	13	3.9231	.57581	.15970	3.5751	4.2710	3.00	5.00
	Videregående skole	109	3.8670	.88418	.08469	3.6991	4.0348	1.00	5.00
	Universitet og høgscole - 1-4 år	72	4.0486	.81479	.09602	3.8571	4.2401	1.50	5.00
	Universitet og høgscole - mer enn 4 år	27	4.1667	.83845	.16136	3.8350	4.4983	1.17	5.00
	Total	221	3.9661	.84341	.05673	3.8543	4.0779	1.00	5.00

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Feedback Satisfaction	1.730	3	217	.162
Intrinsic Motivation	.823	3	217	.483

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Feedback Satisfaction	Between Groups	18.602	3	6.201	10.553	.000
	Within Groups	127.505	217	.588		
	Total	146.107	220			
Intrinsic Motivation	Between Groups	2.671	3	.890	1.256	.290
	Within Groups	153.824	217	.709		
	Total	156.495	220			

Correlation: Autonomy Orientation, Low Autonomy Orientation

Correlations

[DataSet1] /Users/deannalynnscott/Documents/MBA - Oppgave/Data Analysis/analysis low AO.sav

Descriptive Statistics

	Mean	Std. Deviation	N
AO Index	3.0074	.40428	81
IM Index	3.7509	.81323	81
FS Index	3.0494	.76396	81

Correlations

		AO Index	IM Index	FS Index
AO Index	Pearson Correlation	1	.303**	.153
	Sig. (2-tailed)		.006	.174
	N	81	81	81
IM Index	Pearson Correlation	.303**	1	.582**
	Sig. (2-tailed)	.006		.000
	N	81	81	81
FS Index	Pearson Correlation	.153	.582**	1
	Sig. (2-tailed)	.174	.000	
	N	81	81	81

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

```
NONPAR CORR
/VARIABLES=AOIndex IMIndex FSIndex
/PRINT=SPEARMAN TWOTAIL NOSIG
/MISSING=PAIRWISE.
```

➤ Nonparametric Correlations

[DataSet1] /Users/deannalynnscott/Documents/MBA - Oppgave/Data Analysis/analysis low AO.sav

Correlations

			AO Index	IM Index	FS Index
Spearman's rho	AO Index	Correlation Coefficient	1.000	.193	.058
		Sig. (2-tailed)	.	.084	.609
		N	81	81	81
	IM Index	Correlation Coefficient	.193	1.000	.555**
		Sig. (2-tailed)	.084	.	.000
		N	81	81	81
	FS Index	Correlation Coefficient	.058	.555**	1.000
		Sig. (2-tailed)	.609	.000	.
		N	81	81	81

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

Correlation, Autonomy Orientation, High Autonomy Orientation

[DataSet2] /Users/deannalynnscott/Documents/MBA - Oppgave/Data Analysis/Analysis high AO.sav

Descriptive Statistics

	Mean	Std. Deviation	N
FS Index	3.33	.829	140
IMIndex	4.09	.838	140
AO Index	4.0043	.36499	140

Correlations

		FS Index	IMIndex	AO Index
FS Index	Pearson Correlation	1	.369**	-.009
	Sig. (2-tailed)		.000	.920
	N	140	140	140
IMIndex	Pearson Correlation	.369**	1	.197*
	Sig. (2-tailed)	.000		.020
	N	140	140	140
AO Index	Pearson Correlation	-.009	.197*	1
	Sig. (2-tailed)	.920	.020	
	N	140	140	140

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

* . Correlation is significant at the 0.05 level (2-tailed).

NONPAR CORR

```
/VARIABLES=FSIndex IMIndex AOIndex
/PRINT=SPEARMAN TWOTAIL NOSIG
/MISSING=PAIRWISE.
```

Nonparametric Correlations

[DataSet2] /Users/deannalynnscott/Documents/MBA - Oppgave/Data Analysis/Analysis high AO.sav

Correlations

		FS Index	IMIndex	AO Index	
Spearman's rho	FS Index	Correlation Coefficient	1.000	.333**	-.001
		Sig. (2-tailed)	.	.000	.987
		N	140	140	140
	IMIndex	Correlation Coefficient	.333**	1.000	.232**
		Sig. (2-tailed)	.000	.	.006
		N	140	140	140
	AO Index	Correlation Coefficient	-.001	.232**	1.000
		Sig. (2-tailed)	.987	.006	.
		N	140	140	140

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

Appendix 5: List of Figures

Figure 1: Self-determination theory model of work motivation

Figure 2: The social context of performance appraisal

Figure 3: Research model

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Figure 5: Mean and bivariate correlations: continuous variables

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Figure 7: Regression model 2, predictors of feedback satisfaction

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Figure 9: Bivariate correlation, high/low Autonomy Orientation

Figure 10: Independent samples t-test, functional/operative

Figure 11: Independent samples t-test, manager/non-manager

Figure 12: ANOVA, Background and Control Variables