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Job Satisfaction and Organizational Commitment in Multicultural Work Environments in Norway

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Abstract

This research investigates whether the classical determinants of job satisfaction and organizational commitment are valid in a Norwegian context, with emphasis on multicultural work environments. Furthermore, this study examines whether employees with different cultural backgrounds in Norwegian-based companies have different levels of job satisfaction and organizational commitment. The topic is relevant in today's work environments as the workforce is more diverse than before, and it is important that employers take the subject into consideration as job satisfaction and organizational commitment affect the job performance and bottom line of the company.

The topic has not been widely researched in a Norwegian context, however according to the available literature on job satisfaction and organizational commitment there are significant differences between people from different countries. As part of the research a general survey was constructed to confirm the presence of cultural differences based on power distance in a Norwegian context, and the model and results were analysed through several statistical methods.

The statistical analysis supported that some of the classical determinants extracted from theory had a positive effect on job satisfaction and organizational commitment. However, no evidence of differences in job satisfaction and organizational commitment between workers from various backgrounds in multicultural work environments in Norway was uncovered. The only exception was that the supervisor was perceived differently between foreigners and Norwegians.

From the analysis it can be concluded that the employers should be aware of the variations in job satisfaction and organizational commitment among the employees, but these are not necessarily determined by cultural differences. By focusing on the integration of the employees in the organization through communication and integration courses, it is likely that the staff will remain in the company.

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1. Introduction

1.1 Background

Labour productivity is a method of measuring business success and profitability, especially in today's labour market where most of the employment in the developed world is in the service sector. Attitudes and behaviour that influence the level of labour productivity comprise of a variety of social and psychological factors, such as job satisfaction and organizational commitment. One can find numerous studies on satisfaction and commitment in the literature of organizational theory, as managers demand to understand the factors that strongly determine labour productivity. The outcomes of job satisfaction and organizational commitment that directly affect the labour productivity include turnover, turnover intentions, absenteeism, job performance, organizational citizen behaviour and employee health and well-being, which are illustrated in figure 1.



Figure 1 Outcomes of Satisfaction and Commitment (Meyer et al, 2002)

Job satisfaction and organizational commitment have been found to be determinants of turnover behaviours, and correlate negatively with turnover (Mathieu & Zajac, 1990; Spector, 1997; Meyer et al., 2002; Porter et al., 1974). High turnover rates are

costly and can reduce a company's profitability, as new employees will require training resources and are less productive after recruitment. Also, turnover can result in losing valuable knowledge to the competitors.

Furthermore, employers are interested in understanding on-the-job behaviour that can affect the productivity of the company's services. On-the-job behaviour consists of factors such as attendance, job performance and organizational citizenship behaviour (Meyer et al., 2002).

Absenteeism is withdrawal behaviour that is highly correlated with organizational commitment (Steers, 1977). Blau and Boal (1987) found that employees with high levels of commitment had lower levels of absenteeism and turnover. Moreover, dissatisfied people are more absent from work than satisfied people (Spector, 1997).

Researchers have found links between job satisfaction, organizational commitment and job performance. However, meta-analysis performed on the subject concluded that the correlation between job performance and job satisfaction is rather moderate (Iaffaldano & Muchinsky, 1985; Judge et al., 2001). Christen et al. (2006) argue that there are conflicting findings in the literature of the relationship between job satisfaction and job performance, as there are inconsistent results in both the measurement and constructs across studies. Only when rewards were tied to job satisfaction and performance, the two variables correlated more strongly (Spector, 1997). There are also conflicting findings in the literature between organizational commitment and job performance. Steers (1977) and Mathieu and Zajac (1990) found a minor relationship between the two variables, but not significantly enough to have a direct association. On contrast, Ricketta (2002) did find some positive correlation between organizational commitment and performance.

The last job behaviour factor is organizational citizenship behaviour (OCB), which is job behaviour that influences business productivity where performance goes beyond the job requirements such as helping co-workers (Spector, 1997). OCB positively correlates with organizational commitment and job satisfaction, but it also correlates marginally with job performance (Meyer, Allen, & Smith, 1993; Organ & Ryan, 1995).

Another concern at work is the health and welfare of the labour force. Even though the subject has not been studied to the same degree as the other outcomes mentioned above, it has become more relevant in the organizational theory literature on topics such as stress and conflict with external factors (Meyer et al., 2002).

The literature on organizational theory is fairly clear with regards to the outcomes of organizational commitment and job satisfaction, as the focus has been on the employer's concern with profitability and productivity growth. However, the antecedents of the two variables are much more varied and inconsistent (Reichers, 1985). This stems from the diverse ways the topics have been expressed by the authors. As the terms are widely defined and considered complex, it is not easy to find universal factors that can be used in any situation.

Norwegian employers have gradually become more interested in employee satisfaction and commitment, especially within international environments, as they have become more dependent on labour productivity. In spite of this, organizational commitment and job satisfaction have not been widely studied in a Norwegian context. Most academic studies are from the health sector, and there are few studies that consider both variables.

According to a report made by Oslo Chamber of Commerce (2013) it is important for Norwegian firms to attract highly educated people in order to be globally competitive in the long run, and to meet the high cost level the country has today. Due to limits in the Norwegian job market, especially within engineering and IT, Norwegian companies are increasingly employing foreigners (Dzamarija & Andreassen, 2013). However, working in intercultural work environments can lead to conflicts, even though it is a source of specialized knowledge and experience (Hofstede & Hofstede, 2005). By understanding the causes of job satisfaction and organizational commitment in a multicultural context, employers can reduce the risk of the negative outcomes, such as turnover and absenteeism.

Most Norwegian managers have numerous tools that they can apply in the work environment to increase the employees' job satisfaction and organizational commitment. For instance, a pay rise or increased responsibilities can make employees more satisfied and committed to the firm. It is natural to assume that the

same measures can have similar effects on people from different cultural backgrounds. However, this might not always be the case. By assessing possible disparities between cultural groups, changes in company policies can indirectly affect the profitability in a positive way.

When using the term culture, it refers to national culture, and must not be confused with organizational culture. National culture is an identity with which one has grown up and associates oneself. Even though there are many different sub-cultures within a country, there will normally be one culture the majority of the population identify themselves with. Organizational culture, on the other hand, is a social system that one joins for a certain time period, and that the members can influence (Hofstede & Hofstede, 2005).

1.2 Research Objective

The objective of this paper is to provide an awareness of job satisfaction and organizational commitment in multicultural work environments in Norway. The focus is on the relationship between job satisfaction and organizational commitment, and the underlying variables. Previous recognized factors of job satisfaction and organizational commitment will be used in the research. Furthermore, the study investigates potential disparities of job satisfaction and organizational commitment between different cultural groups.

The research question is:

Is the effect of the traditional determinants of job satisfaction and organizational commitment different based on the employees' cultural background?

1.3 Structure

The structure of the paper goes as follows: The literature review will explain the concept of job satisfaction and organizational commitment and present the conceptual model and the suggested hypotheses. The methodology will explain how the research is designed and how the data is collected, before the results of the survey will be presented in the analysis. The discussion will consist of a critical view of the results and the research limitations. The conclusion and the appendix are presented at the end of the research paper.

2. Literature Review

2.1 Introduction

The literature review consists of four parts. The first part describes the concept of job satisfaction, while the second part explains organizational commitment. The third section compares the two concepts, while the fourth and final part presents the conceptual model and the hypotheses based on the literature findings.

2.2 Job Satisfaction

Job satisfaction is commonly known as how pleased a person is with his or her work, and can be defined as “*how people feel about their jobs and different aspects of their jobs*” (Spector, 1997, p. 2). The subject has been a popular research area since the 1930s when the industrial companies realized that job satisfaction was to some degree positively correlated with productivity (Vroom, 1967). As a result, today one can observe many different approaches and definitions on the subject.

One should be concerned with job satisfaction for several reasons (Spector, 1997). Firstly, job satisfaction can to some extent reflect how employees are treated with regards to respect and fairness. Secondly, job satisfaction can be an indicator of an employee’s psychological and emotional health. Thirdly, it can affect the behaviour of the employee, and thus the organizational functions and productivity. Moreover, job satisfaction can be a reflection of the organizational performance, where differences between groups can lead to future problems within the company.

There is an argument on whether job satisfaction is a product of the determinants that lie in the job itself, if they reside in the worker’s cognitive mind, or if satisfaction is a result of an interaction between the employee’s psychological mind and the work environments (Locke, 1969; Spector, 1997). It is difficult to find the correct description of job satisfaction due to its complex nature, however, most theories include both environmental and personal factors as shown in figure 2 below. Organizational commitment is shown as a correlating variable to job satisfaction, a term that is discussed in section 2.3.

Needs- and process theories are the two most commonly used concepts to describe job satisfaction, even though they are traditionally applied to describe motivation.

Oldham and Hackman (1980) indicated that job satisfaction was a result of inner motivation, as it could be an indicator of an employee's psychological health. Thus job satisfaction is connected to motivational theory. Due to the similarity of motivation and job satisfaction, it is not uncommon to use the definitions synonymously even though they are different terminologies.

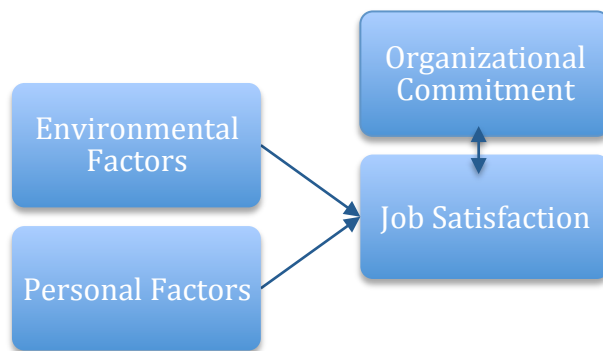


Figure 2 Job Satisfaction

The earliest theories on job satisfaction were based on determinants of a person's needs. To become fully satisfied, Maslow (1954) pointed out five crucial needs: physiological, safety, belongingness and love, esteem, self-actualization and self-transcendence needs. Another job satisfaction theory based on human needs, developed by Herzberg, was called the two-factor (Herzberg, 1968). He identified six satisfaction factors and seven dissatisfaction factors that were independent of each other in his primary research in the late 1950s.

In contrast to needs theory, a process theory is where one emphasizes the individual's cognitive processes (Haukedal, 2007). The most acknowledged process theories are Adams' equity theory and Vroom's expectancy theory. Adams (1963) believed that people were concerned about how fair their performance was rewarded in comparison with similar groups or individuals with the same job. If the other individual or group received a better salary but did not increase the input in the job, the person would experience a disparity in regards to effort. The person would then act in accordance with the imbalance, for example reduce the work effort and productivity due to job dissatisfaction.

Victor H. Vroom (1967) suggested that job satisfaction is an individual's affective orientation towards work roles that he or she is presently occupying. The level of valence, or a person's expected utility, drives the job satisfaction of an employee. If the person has positive attitudes towards the job, the person will feel satisfied, however, if the person has negative attitudes towards the job, the person will be dissatisfied. Vroom identified several factors that drive job satisfaction, such as supervision, the work group, job content, wages, promotional opportunities and work hours.

Since the mid 1980s, researches have emphasized dispositional approaches where personality traits measure job satisfaction. Studies on positive and negative affectivity and self-evaluations have been used to explain dispositional sources of job satisfaction (Judge & Larsen, 2001). Staw and Ross' (1985) study on job satisfaction concluded that prior job satisfaction is a stronger predictor of current job satisfaction than changes in pay or status.

There are limited studies on how non-work related factors affect the level of job satisfaction of the employees. Life satisfaction is strongly correlated with job satisfaction, which makes sense, as work is a significant part of a person's life. Spillover effects between work and life experiences for the employees will always exist, and it is therefore important that the company takes the external job satisfaction indicators into account, as these cannot be influenced (Judge & Klinger, 2008). An example of this is the study of Georgellis et al. (2012) where they discovered that marriage and children impact the employees' level of job satisfaction.

To summarize the different theories, job satisfaction is a wide field of study, and the results vary tremendously due to different viewpoints on the theme. However most authors agree on the main determinants of job satisfaction, although the theme is complex and not clearly defined. There will always be a degree of uncertainty regarding the measurement of job satisfaction, as the level of job satisfaction will differ between individuals depending on age, country of origin, gender and education level.

2.3 Organizational Commitment

Organizational commitment can be defined as “an effective response or attitude resulting from an evaluation of the work situation which links or attaches the individual to the organization” (Mottaz, 1988, p. 468). There is widespread agreement in the literature that organizational commitment is based on attitude (Solinger, van Olffen, & Roe, 2008), however, it can also be based on individual behaviour (Becker, 1960). Porter et al. (1974) point out that organizational commitment is characterized by three factors; a strong confidence in the organization’s goals and values, willingness to exert effort on behalf of the organization, and a strong desire to be a member of the organization.

Meyer and Allen (1991) interpret organizational commitment as a psychological state that consists of three factors called the three-component model (TCM). The TCM ties together three psychological states that describe the employee’s relationship to the organization, and they are decisive outcomes when the employee is deciding whether to stay or leave the organization (Meyer et al., 2002; Solinger, van Olffen, & Roe, 2008). All the components vary in strength over time, depending on the work situation. Figure 3 illustrates the TCM.

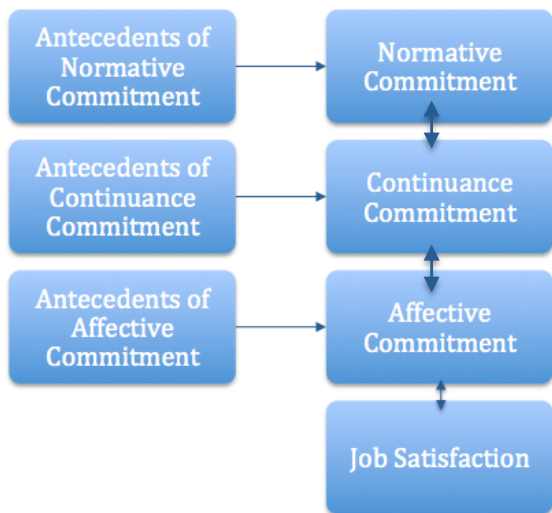


Figure 3 TCM (Meyer, Stanley, Herscovitch, & Topolnytsky, 2002)

The first component, *affective* commitment, refers to the employee’s emotional connection and involvement with the organization (Meyer & Allen, 1991). The factors of organizational commitment explained by Porter et al. (1974) refer to the

characteristics of affective commitment. If the employee has a strong affective commitment, he or she will stay in the organization because he or she *wants* to. Personal characteristics and work experiences are the factors of affective commitment. The former consists mainly of demographic features, and the latter is measured by factors such as job challenge, organizational support, role clarity, transformational leadership, empowerment, and job importance (Allen & Meyer, 1990). In figure 3 affective commitment also correlates with job satisfaction.

The second component called *continuance* commitment, relates to the awareness of costs associated with quitting the firm (Meyer & Allen, 1991). If the variable is strong, the employee will stay in the organization because he or she *needs* to. Continuance commitment is based on personal characteristics, other job alternatives and investments that are measured by factors such as transferable skills, formal education, self-investment and pensions (Allen & Meyer, 1990).

The third component, *normative* commitment, replicates a feeling of responsibility to continue employment (Meyer & Allen, 1991). If the component is strong, the employee feels that he or she should remain in the firm. The factors of normative commitment are personal characteristics, socialization experiences and organizational investments.

The TCM is considered to be the leading model of organizational commitment, but several researchers have criticized it, as it is not consistent with empirical findings. Solinger et al. (2008) do not agree with the interpretation of organizational commitment in the model as they claim that it is more of a predictor of turnover in an organization than serving as a model of organizational commitment. Furthermore, it is argued that normative commitment has been found to correlate strongly with affective commitment, and that there is uncertainty of the validity of continuance commitment. Also, Meyer et al. (2002) found antecedents that correlated with affective and continuance commitments, while no antecedents were found to correlate specifically with normative commitment. Therefore, authors have suggested that the first component, affective commitment, should be used to analyse organizational commitment as it correlates the strongest with the underlying factors of organizational commitment, and has the strongest validity of the three components (Ko, Price, &

Mueller, 1997). For that reason affective organizational commitment is used for research purposes in this paper.

Organizational commitment is also defined as a concept of exchange, also known as the reward-value model (Mottaz, 1988). Just as employers are concerned with the employees' loyalty and contribution to the company, Eisenberger et al. (1986) found evidence that employees are concerned with how the company values their contributions and look after their well-being through a reward system. A person with certain needs, desires and skills (work values) joins an organization where he or she can use his or her abilities and satisfy one's basic needs (work rewards) that the employer provides for (Kalleberg, 1977). Rewards can be directly associated with the job itself, for example through work challenges, work responsibilities, and supportive co-workers (Katz & Van Maanen, 1977). However, if an organization fails to meet a person's expectations, one must expect that the job performance and the organizational commitment of the employee will weaken, and that the employee absenteeism will rise.

A considerable amount of the research performed on organizational commitment involves antecedents, and they are classified as either individual or organizational characteristics (Mottaz, 1988). The former consists of demographic variables such as age, education, gender, religion and personality factors. The latter is related to work experiences such as task characteristics, pay and social environment. The results of the studies that have examined the influence of the determinants on organizational commitment have been inconclusive. The reason for the research inconsistency is that the studies emphasize different variables or characteristics, and it is therefore difficult to compare the studies on organizational commitment (Mottaz, 1988). Some suggest that both individual and organizational characteristics have significant impacts on a person's organizational commitment. Others suggest that only the individual or the organizational characteristic is significant. For example, Mottaz (1988) suggests that demographic characteristics cannot be accounted for, even though they are positively correlated with organizational commitment, because they do not explain why a person is committed.

Similar to job satisfaction, organizational commitment has been described in various ways due to its complexity, however, scholars agree that it is based on individual

attitudes and values. On the other hand, there is much inconsistency regarding the antecedents that describe organizational commitment, as it is a relatively new field of study of organizational theory.

2.4 Comparing Satisfaction and Commitment

Job satisfaction and organizational commitment are different concepts, but several meta-analyses have concluded that there is high correlation between the two variables (Mathieu & Zajac, 1990; Meyer et al., 2002). It is difficult to separate the two concepts completely as the theory suggests that they share many factors, and it is therefore natural to wonder whether these terms actually are different. Several researches have shown a causal relationship between organizational commitment and job satisfaction, while others have shown that job satisfaction is a determinant of organizational commitment (Mathieu, 1991).

Meyer and Allen as cited in Dirani and Kuchinke (2011, p. 1183) concluded that employees with high levels of organizational commitment additionally had overall high job satisfaction, low levels of work-home conflicts, and low levels of work stress. Even though the two variables are considered highly interrelated, they can be both positively and negatively correlated. An employee can have positive feelings towards the organization, its values and objectives, but at the same time he or she can be unsatisfied with the job (Meyer et al., 2002).

An important argument regarding job satisfaction and affective organizational commitment is the similarity of the cognitive processes. In current job satisfaction theory, the feelings and attitudes towards the job are emphasized. In affective organizational commitment, it is about the emotional connection and involvement a person has with the organization (Meyer et al., 2002).

Referring to the notion of exchange, it is implied that organizational commitment is a function of work rewards and work values (Mottaz, 1988). However, work values and work rewards are also important elements in the process theories of job satisfaction (Kalleberg, 1977). The greater the equivalence between work values and work rewards is, the more organizational commitment and job satisfaction an employee has.

It is also argued that organizational commitment as an attitude varies from the concept of job satisfaction (Mowday & Steers, 1979). Organizational commitment reflects employees' general response to the values and goals of the organization, which gives the management a general idea of the majority's attitude. In contrast, job satisfaction reflects the employees' response to the specific job or task (Meyer et al., 2002). Furthermore, employees' organizational commitment is more constant over time than job satisfaction. While organizational commitment tends to develop slowly and steadily because it is affected by continuous evaluations, job satisfaction is less stable as it is affected by daily events (Porter et al., 1974).

2.5 Conceptual model

Figure 4 demonstrates the conceptual model of the relationship between job satisfaction and organizational commitment. The antecedents of each concept are extracted from the different theories in previous research. As the topics are widely defined in organizational theory, it is impossible to account for all the factors related to these variables.

In the following text, several hypotheses are suggested to confirm the relationship between independent variables (factors) and the dependent variables (job satisfaction and organizational commitment). Pay fairness, size of pay, promotion, the supervisor personality and supervisor support are factors of job satisfaction. Role ambiguity, role conflict, goal internalization, perceived control and perceived competence are factors related to affective organizational commitment. As the topic of the paper is based on cultural differences, there are also hypotheses based on moderation. The last hypothesis measures the relationship between job satisfaction and organizational commitment.

2.5.1 Job Satisfaction Hypotheses

2.5.1.1 Pay

Pay is an extrinsic reward where an employer compensates an employee for his or her services depending on how the employer values the work effort (Mottaz, 1988). According to Spector (1997) there is a positive relationship between job satisfaction and payment. There are primarily three methods of valuing an employee's work effort; pay size, pay fairness and promotion.



Figure 4 Conceptual Model

Many economists stress the fact that the size of the payment determines a worker's job satisfaction (Vroom, 1967). The better pay, the more the company values the employee's contributions. The size of the pay is an external motivational factor as the payroll size directly determines the quality of life a person can afford. However, as people are concerned with equity payment according to equity theory, pay fairness is equally important (Patchen, 1961). The greater difference in pay between two people with the same occupational level, the more dissatisfaction the low-paid person feels. Promotion is the advancement in rank or position of the firm hierarchy that is used as rewards and to motivate the company's employees, which is normally based on

seniority or performance valuations (Pergamit & Veum, 1999; Oxford English Dictionary, 2013a). People either stay in their roles, or they may be promoted to positions with higher wages, status and power (Vroom, 1967). As pay is anticipated to be an antecedent of job satisfaction, the first hypothesis to confirm is:

H1a: Pay fairness, the size of the pay and promotion positively affect job satisfaction.

The importance of the pay determinants varies between national cultures. In Norway, where one practices little power distance and salary differences between the employees and management, equality dominates the work culture (The Hofstede Centre, 2013). The size of pay and promotion are therefore not considered as strong predictors of job satisfaction for Norwegians as pay fairness. In many other national cultures where the power distance is more accepted and pay fairness is less valued, it is expected that highly educated people receive larger salaries and get promotions quicker than lower educated people (Oslo Chamber of Commerce, 2013). In international environments, it can therefore be difficult to find a pay policy that pleases all the employees with different cultural backgrounds.

H1b: Pay fairness is a stronger positive predictor of job satisfaction than the size of payment and promotion for Norwegians.

H1c: The size of the pay and promotion are stronger predictors of job satisfaction than pay fairness for employees from cultures with strong power distance.

2.5.1.2 Supervisor

Supervision is defined as the “*function of overseeing, directing, or taking charge of a person, organization, and activity*” (Oxford English Dictionary, 2013b). Through Herzberg’s study, the supervisor is found to be the source of satisfaction, but also a frequent source of dissatisfaction. Early studies on job satisfaction concluded that supervisor factors were the most important determinants of work attitudes, but later studies showed that the importance of supervision was overrated (Vroom, 1967). One can approach supervision as concepts of supervisor personality and supervisor support (Mahoney, 1949; Bell & French, 1950; Vroom, 1967; Babin & Boles, 1996).

There are many personality traits that can describe a good supervisor, however Smith and Canger (2004) point out that subordinates are more satisfied with their jobs when

supervisors have high levels of emotional stability, extraversion and agreeableness. Supervisor support defines how the employees feel the supervisor values their contributions and to which degree they feel the supervisors offer concern and encouragement (Babin & Boles, 1996).

H2a: Supervisor support and supervisor personality positively affect job satisfaction.

People from different cultures value different managerial personalities and support due to different national values (The Hofstede Centre, 2013). For example, national cultures with human orientated values and weak power distance prefer interactivity between the management and employees, while people from national cultures with strong power distance prefer more controlling supervisors and prioritize performance (Hoffman & Shipper, 2012). It can be expected that Norwegians and people from other low power distance cultures who value interactive management are more satisfied with their supervisor in Norway because there is a closer relationship between the management and the employees. On the other hand, it can be expected that the score of supervision is lower for people from cultures that prefer controlling supervisors and strong power distance.

H2b: People from cultures with strong power distance, will have less positive effect of supervisor support and supervisor personality on job satisfaction in the Norwegian work environment than people from cultures with weak power distance.

2.5.2 Organizational Commitment Hypotheses

2.5.2.1 Psychological Empowerment

Theory on psychological empowerment has become popular as management is concerned with increasing employees' organizational commitment through reward methods that are not based on fringe benefits or pay. Spreitzer (1995) defined psychological empowerment as the psychological perception or attitudes employees have regarding their work and organizational roles. The more influence a person feels that he or she has on the work, the more committed a person is to his or her job.

There are primarily three antecedents of psychological empowerment that positively influence the employee's organizational commitment (Menon, 1999). The first factor is perceived control, which refers to the belief of autonomy and the knowledge of own

impact on strategic and administrative results. It suggests that an employee believes that he or she can make a difference in the organization. The second factor, perceived competence, is a belief that the employee holds the capability to perform the job with skill, and can successfully cope with non-routine situations. The third and last factor, goal internalization, refers to an employee's excitement of the firm's goals and vision. It gives the employee job value.

H3a: Perceived control, perceived competence and goal internalization positively affect organizational commitment.

As the Norwegian culture has low power distance, it is important to give employees control, competence and long-term goals in the workplace. The decision-making is traditionally decentralized and one is considerate about the future performance of the firm (The Hofstede Centre, 2013). Hence, the score of the psychological empowerment factors should be high for native workers in Norway. However, in cultures with stronger power distance, centralized decision-making and strict management control is more accepted, as the future is considered to be more unpredictable. It is therefore expected that people from cultures with strong power distance score lower on perceived control in the Norwegian work environment (Dimitriades, 2005). With regards to perceived competence and goal internalization, there is little evidence to suggest that there will be different outcomes between cultures of weak and strong power distance.

H3b: People from cultures with high power distance will have a less positive effect of perceived control on organizational commitment, than people from cultures with low power distance.

2.5.2.2 Job Stress

Job stress is another determinant of organizational commitment, which refers to any characteristic of the workplace that poses a threat to the employee (Larson, 2004). Impaired job stress factors often lead to negative organizational commitment. Even though job stress is recognized to reduce an individual's performance, it can also lead to constructive actions.

Role ambiguity and role conflicts are the two main job stressors. The former is related to a situation where an employee does not have any clear direction about his or her

role expectations in the organization. This can cause an employee to perform ineffectively and to distort the reality of the situation (Rizzo, House, & Lirtzman, 1970). Role conflict occurs when expected behaviour of an employee is inconsistent with the expectations of the company. For example, an employee might prioritize family before work, which interferes with responsibility at work (Pal & Saksvik, 2008).

H4: Role ambiguity and role conflict negatively affect organizational commitment.

Job stress antecedents are impacted by how the individual perceive culture (Beehr & Glazer, 2001). There is a higher probability of conflicts as the supervision, employee expectations, and work values are likely to differ between national cultures when working in a multicultural environment (Javidan & House, 2001). However, it is difficult to measure and compare job stress between national cultures, as the expectations and roles among employees are emphasized differently (Peterson, et al., 1995).

There are several studies on job stress factors between two or three nations. For example, Pal and Saksvik (2008) found evidence that there is a difference in job stress factors between Norwegians and Indians. However, there have been performed few studies on job stress outcomes in multicultural contexts and between many nationalities. Peterson et al. (1995) performed a study including 21 countries, but the results of the study did not show any clear differences in job stress between cultures. Based on the existing international studies on job stress, one must assume there are no differences in job stress between cultures.

2.5.3 Combined hypothesis

Job satisfaction and organizational commitment are connected according to the literature in section 2.4. The final hypothesis is:

H5: Job satisfaction positively affects organizational commitment.

3. Methodology

The chapter on methodology includes a review of the research approach and design. Furthermore, there is an explanation of how the data was collected and analysed, and a description of the data quality challenges based on the research strategy that was chosen.

3.1 Research Approach and Design

The research approach can either be deductive or inductive. In a deductive research approach a strong theory-based hypothesis is developed to explain the causal relationship between the variables that are subject for testing (Saunders, Lewis, & Thornhill, 2009). This approach is based on scientific methods as the tests are normally based on quantitative data and are highly structured. In social sciences, it is more common to use an inductive research approach as theory is based on data that is being collected (Saunders, Lewis, & Thornhill, 2009). The inductive approach is normally based on qualitative data and is fairly flexible, as it is not structured to the same degree as a deductive approach.

An important factor one has to consider when choosing the research approach is whether the data will be quantitative or qualitative. Quantitative data is the result of any data collection method or analysis procedure that produces or uses numerical data, while qualitative data is the outcome of any data collection technique that uses or generates non-numerical data (Saunders, Lewis, & Thornhill, 2009).

To analyse the variables of organizational commitment and job satisfaction, it is appropriate to use a quantitative approach, which is commonly used for deductive methods. The dataset is mainly numerical where the purpose is to explain the causal relationship between the variables. Robson (2002) lists five stages of a deductive research, which is used for the analysis:

1. Deducing a hypothesis from theory
2. Expressing the hypothesis in operational terms
3. Testing the operational hypothesis
4. Examining the outcomes of the analysis
5. Modifying the theory in light of the discoveries

The research design is the general plan on how one will answer the research question (Saunders, Lewis, & Thornhill, 2009). There are three research designs that are commonly used; exploratory, descriptive or explanatory studies. An exploratory study involves finding new insights to a problem depending on the results of the data, descriptive studies are used to expose accurate information of persons, events or situations, and explanatory studies explain the causal relationships between variables. As the thesis is about the relationships between the variables of job satisfaction and organizational commitment, this study will be the explanatory type.

3.2 Data Collection

The data collection technique of a quantitative approach can be based on single data and corresponding analysis procedures called the mono method, or it can be based on more than one data collection technique and analysis procedures called multiple methods (Saunders, Lewis, & Thornhill, 2009). For the research paper, a mono method is used as the data is collected and analysed with numbers.

Experiments, surveys, case studies, and action research are common strategies of data collection for deductive approaches (Saunders, Lewis, & Thornhill, 2009). In order to compare the variables of job satisfaction and organizational commitment, a large amount of standardized data is needed for comparison. For that reason, a survey is the best method to answer the research question using statistics to analyse the results. There is a threshold to the number of questions that the respondents wish to answer, so the length of the survey might limit what one wishes to examine. The data is cross-sectional, as the study is based on an employee's feelings at a certain point in time.

All the employees in Norway who work in multicultural work environments, are regarded as the population n of the research. However, as there is a large number of people working in multicultural environments, it is impossible to obtain answers from the whole population. Therefore, a sample of 183 has been used for the research. The survey was Internet-mediated through the author's personal network, social network and company contacts in order to reach out to as many respondents as possible. Expat groups on Facebook and personal email were the most frequently used platforms. There were no rewards to the participants who chose to participate in the survey. The participation level was therefore driven by the respondents' intrinsic motivation. The disadvantage with Internet surveys is that the response rate is normally much lower

than through for example structured interviews, and it is almost impossible to register the number of people who ignored to answer the survey.

Probability and non-probability sampling are two forms of sampling techniques (Saunders, Lewis, & Thornhill, 2009). In probability sampling every respondent of the population has a chance of being selected for the case, while in non-probability sampling some respondents will have no chance of being selected in a sample at all. As one does not know the selection probability of the respondents and the accurate population size in this thesis, a non-probability sampling was used for this research. There are several types of non-probability sampling; quota, purposive, snowball, self-selection and convenience sampling.

This sample is regarded as a convenience sample as the respondents who participated in the research were the most accessible ones, but it could also be regarded as a self-selecting sample, as the respondents choose to participate (Saunders, Lewis, & Thornhill, 2009). Convenience sampling is easy to administrate, cheap to perform and is preferred in situations where probability sampling is difficult. In self-selection sampling the respondents are likely to be committed and to give honest answers to the survey as they choose to participate. Both sampling methods reduce the amount of time it takes to acquire a decent amount of responses.

3.2.1 The Survey

The survey consists of 6 parts, and the questions are a mix of quantitative and a few qualitative questions. The first part consists of background questions, which are used to map out the respondents' demographic and attribute information. The qualitative questions are used to check whether the data is representative for the whole population in the analysis (Saunders, Lewis, & Thornhill, 2009).

The second, third and fourth part consist of questions related to job satisfaction, organizational commitment, pay, promotion and supervision. The fifth and sixth part consist of questions related to psychological empowerment and job stress (Porter et al., 1974; Allen & Meyer, 1990; Babin & Boles, 1996; Menon, 1999). The survey questions are based upon well-known job satisfaction and affective organizational commitment questionnaires such as Spector's Job Satisfaction Questionnaire and the Job Descriptive Index (JDI) (Brayfield & Rothe, 1951; Smith, Kendall, & Hulin,

1969; Babin & Boles, 1996; Spector, 1997; Abdulla, Djebarni, & Mellahi, 2011). Some of the questions are modified from earlier surveys, and the author has created some of the questions. There are 4 questions/items per variable, and a total of 57 questions.

The questions are opinion-based, as the literature states that job satisfaction and organizational commitment are based on attitudes. The questions are ranked on a likert scale from 1 to 5, where 1 is “strongly disagree”, and 5 is “strongly agree.” The survey is in English or Norwegian, so the participants can choose to answer in the language they are most comfortable with as it is a cross-cultural research. All the questions are formulated positively to avoid any insignificant answers. The survey is found in the appendix.

3.3 Data Analysis

To analyse the collected data from the survey, three statistical methods are used; factor analysis, regression analysis and moderation.

To use the listed multivariate techniques, four important statistical assumptions must be made (Hair et al., 2010). First, the data distribution must correspond with the normal distribution, which is a standard for statistical approaches. Normal distribution can be observed through the use of histograms, or by measuring the kurtosis and skewness of the dataset. Kurtosis measures the degree of peak of the distribution, where the expected value of 3 indicates a perfect normal distribution. Skewness is the measure of the asymmetry of the distribution (Investopedia, 2014). Secondly, the variance between the independent variables must be equally distributed, also known as homoscedasticity. The minority of the independent variables should not determine the correlation of the dependent variable. Thirdly, linearity between the measurements is assumed when factor and regression analysis is used. Last, it is important to remove outliers as they can produce a less accurate result.

3.3.1 Factor analysis

The purpose of the thesis is to understand the relationships between the variables, and a factor analysis is one commonly used method of identifying correlations amongst large number of items or factors of correlating variables (Hair et al., 2010). There are two factor analysis methods; exploratory and confirmatory factor analysis.

Exploratory factor analysis (EFA) explores the data and calculates the number of factors that are needed to present the dataset in the best possible way. All the factors are related to each other by a factor-loading estimate. In the EFA the statistical results determine the number of factors normally based on the eigenvalues that are over 1, and the pattern of item loadings. Confirmatory factor analysis (CFA), on the other hand, uses the pattern of factor loadings to either approve or reject the theory. The model and number of factors are decided by theory in advance, and cross loadings are not permitted. As the variables in this research are proved to be correlated with job satisfaction and organizational commitment in previous studies, a CFA approach is applied in the analysis. An EFA is only used if the primary CFA results are inadequate (ibid).

3.3.1.1 Model fit indices

There are three main measures that are used to assess the fit of a CFA model; absolute, incremental and parsimony adjusted fit indices. The absolute fit indices measure the inconsistency of the model without referring to other models (Blunch, 2008). The most commonly used measures of the absolute fit indices are GFI, RMSEA, RMR, SRMR, CMIN/DF and AGFI. The goodness-of-fit index (GFI) should be over 0,9 to be considered very good. The root mean square error of approximation (RMSEA) should be between 0,05 and 0,08, while the root mean square residual (RMR) and the standardized root mean square residual (SRMR) should be below 0,1. The normed chi-square (CMIN/DF) should be less than 3, but preferably 2. The adjusted goodness-of-fit index (AGFI) should be over 0,9 (Blunch, 2008; Hair et al., 2010).

The incremental fit indices compare the target model with an explicit basis model (Blunch, 2008). To measure the relative fit indices, the normed fit index (NFI), non-normed fit index (NNFI), comparative fit index (CFI) and the relative fit index (RFI) are commonly used. The values should be over 0,9 to be considered a very good fit.

The parsimony fit indices increase the number of parameters to improve complicated model fits to make them more realistic (Blunch, 2008). The parsimonious normed-fit index (PNFI) is normally used in CFA. The PNFI values are between 0 and 1, and values over 0,6 are considered satisfying.

3.3.2 Regression

Several of the hypotheses outlined in the literature review are expected to have a positive or negative relationship between an independent variable and a dependent variable. A regression analysis is a statistical method used to examine the relationship between a dependent variable and one or more independent variables. The target is to predict the dependent variable through the values of the independent variable (Hair et al., 2010).

The formula given for a single linear regression with one independent variable is:

$$y_i = \beta_0 + \beta_1 \chi_i + \varepsilon_i \text{ where } i = 1, \dots, n.$$

y = dependent variable, β_0 = constant, β_1 = regression coefficient, χ_i = independent variable, ε_i = prediction error

The independent variable(s) that is used to predict the dependent variable should correlate strongly, as it will give the model greater predictive accuracy (Hair et al., 2010). In order to accept the hypothesis that the model is predicting, several statistical measures must be approved of the overall model fit. The coefficient of determination, R^2 , is used to measure how well the prediction is made by the independent variable on a scale from 0 to 1. The value should be closer to 1 to be considered a very good predictor, but it should be more than 0,3 to be considered a good model. In field studies lower values of R^2 can be accepted. Furthermore, an ANOVA analysis can be used to check the statistical significance at a pre-defined significance level (normally 95% significance level), where the F ratio must be significant.

In addition to the overall model fit, it is important that the variables are significant. A t-test is used to check the significance of the coefficients (Saunders, Lewis, & Thornhill, 2009). The degrees of freedom at the significance level of 0,05 determine the minimum approved t-value of the coefficient. The beta value indicates how much the coefficient changes the dependent variable in a positive or negative direction. As the independent variables are on a scale from 1 to 5, the beta value reflects how much the scale score increased or decreased.

3.3.3 Moderation

As the main focus of the paper is to analyse job satisfaction and organizational commitment in multicultural environments, it is important to test whether a third variable changes the relationship between the independent and dependent, and this can be executed with the moderation method (Baron & Kenny, 1986). The moderator can be a qualitative or quantitative value, though it is most common to use quantitative moderators such as respondents' characteristics (Hair et al., 2010). In this study, the moderator is based on Hofstede's power distance score based on nationality. When one uses moderation to analyse variable relationships, it is important that the moderator is strongly supported by theory. The moderation effect is valid when the relationship between variables differs significantly.

It is possible to check for a moderation effect between two groups using a Chi-square test in a factor analysis (Hair et al., 2010). The chi-square can specify if there are significant moderation effects for the whole model or for separate paths between items and variables. The test however, does not specify which group has a higher value, but rather states whether there is a case of moderation.

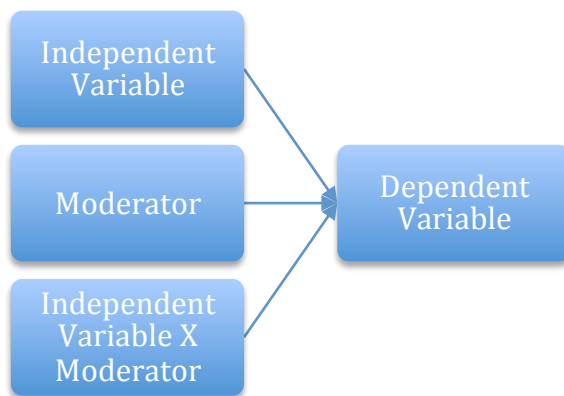


Figure 5 Moderation Model (Baron & Kenny, 1986)

The most common framework of moderation is demonstrated in figure 5. The independent variable, the moderator, and the product of the independent variable and the moderator, impact the dependent variable. If the product is significant, the moderator hypothesis is supported. Furthermore, the moderator should be uncorrelated with the independent and dependent variable (Baron & Kenny, 1986).

3.4 Data Quality

In any form of data collection method, there will always exist measurement error that does not represent the true values of the dataset. Assessing the reliability and validity level of the dataset can reduce the measurement error and ensure an adequate level of data quality (Hair et al., 2010).

3.4.1 Validity

Internal validity is the ability the scale has to measure the concept of interest (Saunders, Lewis, & Thornhill, 2009; Hair et al., 2010). Content and construct validity are the most common forms of internal validity. However, validity can also be external, and refers to what extent the research can be used in different situations and circumstances (Hair et al., 2010).

Content validity refers to how much the survey provides sufficient coverage of the research proposal (Saunders, Lewis, & Thornhill, 2009). To assure content validity of the model, the survey questions were mostly retrieved from previous researches, with some supplement and rephrasing from the author, and then pilot tested before released to the masses.

Construct validity refers to how accurate the questions measure the research variables based on theory (Saunders, Lewis, & Thornhill, 2009). Convergent, discriminant and nomological validity are the main forms of construct validity. Convergent validity evaluates how items correlate with the measured variable. High correlation signifies that the items are measuring the proposed variable. The discriminant validity, on the other hand, measures how two items of the same variable differ. The nomological validity tests whether the correlations between the constructs are reasonable (Hair et al., 2010). Using a correlation matrix in the factor analysis, one can observe if the variables are insignificant or have too high correlations, which can indicate problems with multicollinearity between the items and variables.

Convenience and self-selecting sampling methods are the most common forms of data collection methods, however, they are easily exposed to biases and problems with validity. It is likely that one type of respondent is overrepresented or underrepresented when convenience sampling is used, especially if the population variation is big (Saunders, Lewis, & Thornhill, 2009). If one generalizes the population based on a

small sample, the results are likely to differ from reality. Unfortunately, one will never know exactly how biased the sample is in this research, as the respondents are anonymized, and one does not know why they choose to take the survey or not. Some false information in the dataset must therefore be accounted for.

3.4.2 Reliability

The dataset is normally subject to concerns of reliability, as it is important that the items measure the same construct (Saunders, Lewis, & Thornhill, 2009; Hair et al., 2010). To measure internal reliability between multiple variables one should consider the correlation of each item to the summed scale score and the correlation between the items. If the item correlates more than 0,5 to the summed scale score, and 0,3 between the items, the measures are considered reliable. In a CFA analysis it is preferred that the average correlation is more than 0,7.

Moreover, one should also use Cronbach's alpha, which measures the consistency of the whole scale (Hair et al., 2010). The alpha score should be more than 0,7 to be considered reliable. The construct reliability (CR) is an alternative reliability measurement to Cronbach's Alpha. It is also an indicator of convergent validity, and the value should be over 0,7 to be considered good. If the CR is high, it indicates that all the measures represent the same latent construct. In the factor analysis it is also important to calculate the average variance extracted (AVE) (Hair et al., 2010). The AVE is a summary indicator of convergence, and values over 0,5 are considered sufficient.

There is always a threat of reduced reliability to the dataset. The respondents may not have enough information regarding the topic or are apathetic to the theme (Saunders, Lewis, & Thornhill, 2009). As the survey is Internet based it is impossible to prevent some inaccurate answers, as one can never be 100% sure that the respondents are answering honestly or that they are not biased by colleagues. Furthermore, it is difficult to measure the number of people that choose not to answer the survey, which can result in loss of valuable information. The respondents who do complete the survey, will not produce any missing data, as the settings of the survey force the respondent to answer all the questions before the replies are recorded. The survey is highly structured, which reduces the threat of lacking reliability (Saunders, Lewis, & Thornhill, 2009).

As mentioned earlier, the survey is in two different languages, Norwegian and English. The questions are translated as carefully as possible to avoid divergent meaning to each question. However, one must expect some reduced reliability when respondents may interpret the surveys differently in the two languages.

Last, it is worth noting that the survey is only tested once on the respondents. Individuals are likely to change their opinions over time, depending on the job, time of year and mood. By retesting the survey at two points in time, the consistency of the model is likely to be stronger.

4. Analysis

The results are presented in six parts. The first two sections consist of the descriptive statistics of the respondents, the procedure of the data sorting, and the testing of the statistical assumptions. The third part includes the results of the factor analysis and the necessary modifications that were needed to accept the model in a deductive approach. The fourth and fifth part consist of the hypotheses' test results, and the final section illustrates the relationship between several control variables and job satisfaction and organizational commitment.

4.1 Descriptive Statistics

SPSS statistics and SPSS Amos were used for the analysis of the dataset. There were in total 183 respondents of the survey. Four of the responses were removed before the factor analysis, as the answers had very low standard deviation indicating indifferent replies from the respondents. As the Internet survey required the respondents to answer all of the questions, there were no missing values in the dataset. Furthermore, the qualitative data, such as age and intention to stay was recoded to quantitative values. The mean of each latent variable was calculated and used for the regression analyses.

The descriptive statistics are presented in table 1 below.

4.2 Statistical Assumptions

In addition to the data sorting based on the replies, the statistical assumptions were also tested. The normal distribution was examined using histograms of the means of each dependent and independent variable. The results were diverse, as some of the variables were not fully normally distributed, such as supervisor personality, supervisor support, perceived competence and ambiguity. In addition, the dataset was tested for skewness and kurtosis. All the variables were slightly negatively skewed, except for the variable ambiguity. The kurtosis of the variables was between -1,309 and 1,012, indicating that the dataset was flatter than a normal distribution, where the values are more spread around the mean. The skewness and kurtosis results are found in table 2.

	Number of respondents	Percentage
Gender		
Male	93	52,0 %
Female	86	48,0 %
Region		
Norway	61	34,1 %
Western Europe	58	32,4 %
Eastern Europe	25	14,0 %
Asia	12	6,7 %
North America	8	4,5 %
South America	9	5,0 %
Australia	3	1,7 %
Africa	3	1,7 %
Local		
Foreigners	118	65,9 %
Norwegians	61	34,1 %
Age Group		
21-30	76	42,5 %
31-40	61	34,1 %
41-50	24	13,4 %
51-60	15	8,4 %
61+	3	1,7 %
Education level		
Secondary School	25	14,0 %
Bachelor	76	42,5 %
Master	66	36,9 %
PhD	12	6,7 %
Work Sector		
Administration, economy or law	25	14,0 %
Health Sector	8	4,5 %
Oil and gas	69	38,5 %
Trade, customer service, restaurant or tourism	16	8,9 %
Transportation, logistics, communication or IT	21	11,7 %
Education or research	17	9,5 %
Industry, building, construction or craftsmanship	4	2,2 %
Culture, religion or sports	4	2,2 %
Service or safety	5	2,8 %
Other	10	5,6 %
Size of the company		
Small	25	14,0 %
Medium	30	16,8 %
Large	123	68,7 %
I don't know	1	0,6 %
Stay intentions in the company		
Yes	82	45,8 %
No	45	25,1 %
I don't know	52	29,1 %
Manager		
Yes	38	21,2 %
No	141	78,8 %

Table 1 Descriptive Statistics

Further, scatterplots were used to identify problems with homoscedasticity, the linear relationships between the independent and dependent variables, and to spot any outliers that needed to be removed. The scatterplots did not reveal any significant

outliers, and the observations did not suffer from heteroscedasticity. With regards to the linear relationship, there were clear relationships between the variables predicted in the model. The exceptions were between organizational commitment and ambiguity, and organizational commitment and perceived competence, which had almost no linear relationship with a R2 of 0,004 and 0,037 respectively. There were also weak linear relationships between job satisfaction and pay size, job satisfaction and supervisor personality, and organizational commitment and conflict. The model does not support the statistical assumptions entirely. However, as the model is being tested for its model fit in a CFA, none of the variables are removed in the early stages of the analysis.

	Skewness	Kurtosis
Job Satisfaction	-.590	-.156
Organizational Commitment	-.464	-.333
Pay Fairness	-.368	-.469
Size of pay	-.359	-.648
Promotion	-.083	-.814
Supervisor Personality	-.864	.130
Supervisor Support	-.832	-.063
Perceived Control	-.625	-.003
Perceived Competence	-.702	1.012
Goal Internalization	-.451	-.567
Role Ambiguity	.122	-1.390
Role Conflict	-.551	-.051

Table 2 Skewness and Kurtosis

4.3 Factor Analysis

4.3.1 CFA Structure

The results from the survey were plotted in SPSS Amos as it can be used to calculate and display the model fit of the CFA model. The CFA structure was based on the conceptual model from the theory, and it is illustrated in figure 6.

4.3.1.1 Model fit indices

It is important to look at the key model fit indices to analyse whether the initial CFA model had a good fit. Table 3 summarizes the fit indices of the initial CFA structure. RMSEA, RMR and SRMR were inadequate as the indices had higher values than the maximum criteria. The CMIN/DF on the other hand, complied with the expected values. The absolute fit indices indicated poor model fit, and none of the incremental

fit indices were considered good as none of the values surpassed the 0,9 limit. The parsimony fit did not satisfy the lower limit of 0,6.

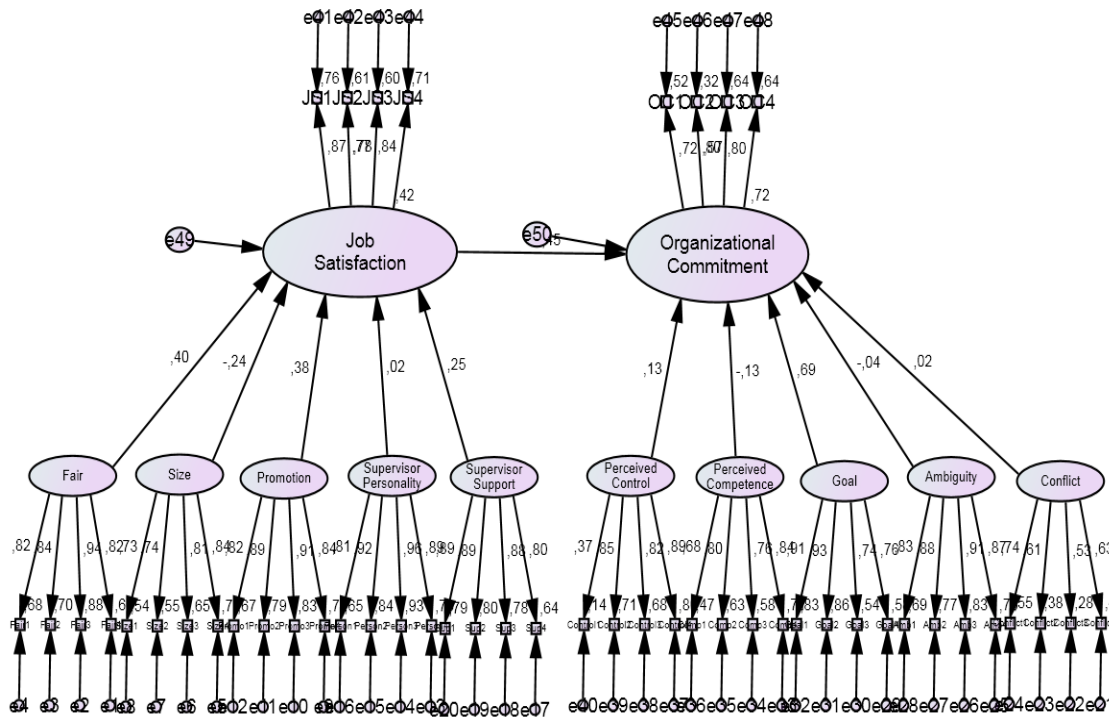


Figure 6 CFA Structure

Goodness-of-fit Statistics	CFA structure	CFA structure modified	EFA structure	EFA structure, JS and Perceived Competence removed
Chi-square	1979,833	1759,171	1904,516	766,769
Degrees of freedom (DF)	1014	968	812	441
Probability <i>p</i>	0,000	0,000	0,000	0,000

Absolute fit indices				
GFI	0,569	0,72	0,663	0,8
RMSEA	0,103	0,068	0,087	0,064
90% conf. int.	0,098; 0,107	0,063; 0,073	0,082; 0,092	0,057; 0,072
RMR	0,346	0,078	0,261	0,087
SRMR	0,2769	0,0642	0,2169	0,0678
Normed Chi-square (CMIN/DF)	2,875	1,817	2,345	1,739
AGFI	0,526	0,674	0,626	0,761

Incremental fit indices				
NFI	0,638	0,791	0,746	0,865
NNFI (TLI)	0,712	0,879	0,825	0,929
CFI	0,727	0,892	0,835	0,937
RFI	0,618	0,766	0,731	0,848

Parsimony fit index				
PNFI	0,604	0,708	0,703	0,769

Table 3 Summary of Model Fit Indices

4.3.1.2 Construct validity

The construct validity consists of convergent, discriminant and nomological validity. The convergent validity is considered good, if the standardized regression weights or factor loading estimates are significant. All the paths between the items and the latent variables in table 4 were significant and did not have large standard errors (SE), however, only 4 out of the 11 regression weights between the latent variables were significant.

Table 5 illustrates the correlation matrix between the latent variables. There were some insignificant correlations marked in yellow, which indicated poor discriminant validity. From the theory, ambiguity was hypothesized to correlate with organizational commitment, however the correlation matrix indicated that this relationship was not significant. The correlation matrix was also used in the nomological validity to analyse whether the correlations seem rational. The high cross-loadings marked in green are worth noticing as these could indicate multicollinearity problems, and should be taken into consideration for any future modifications of the model.

4.3.1.3 Reliability

The reliability is based on correlations between items, Cronbach's Alpha, the average variance extracted (AVE) and the composite reliability (CR) (Hair et al., 2010). The results of the correlations along the structured paths from the CFA model can be found in table 4. All the paths correlated above 0,6 except for the ones including items Control1, Conflict3 and OC2, and the latent variables. Even though the regression weights were low, the correlation of the summated scale of variable was still over 0,6. The weak outcomes must be taken into consideration if an adjustment is needed for the model.

Further, Cronbach's Alpha, AVE and CR are assessed to analyse the reliability of the model, and the results are found in Table 6 and 7. All the alpha values were above 0,7, which indicated good consistency of the scale. All the CR and AVE values were over the lower limits 0,7 and 0,5, respectively. However, the low AVE score of Conflict indicated a problem of convergence in the CFA structure.

Standardized Regression Weights			Estimate	S.E.	P
Job Satisfaction	<---	Fair	0,401	0,092	***
Job Satisfaction	<---	Size	-0,239	0,096	0,071
Job Satisfaction	<---	Supervisor Support	0,245	0,139	0,116
Job Satisfaction	<---	Supervisor Personality	0,018	0,101	0,901
Job Satisfaction	<---	Promotion	0,378	0,064	***
Organizational Commitment	<---	Conflict	0,024	0,112	0,823
Organizational Commitment	<---	Ambiguity	-0,04	0,064	0,643
Organizational Commitment	<---	Goal	0,691	0,08	***
Organizational Commitment	<---	Competence	-0,129	0,078	0,068
Organizational Commitment	<---	Control	0,13	0,047	0,07
Organizational Commitment	<---	Job Satisfaction	0,454	0,08	***
Fair4	<---	Fair	0,815		
Fair3	<---	Fair	0,937	0,079	***
Fair2	<---	Fair	0,836	0,074	***
Fair1	<---	Fair	0,825	0,079	***
Size4	<---	Size	0,837		
Size3	<---	Size	0,809	0,103	***
Size2	<---	Size	0,745	0,107	***
Size1	<---	Size	0,733	0,077	***
Promo4	<---	Promotion	0,845		
Promo3	<---	Promotion	0,911	0,064	***
Promo2	<---	Promotion	0,889	0,065	***
Promo1	<---	Promotion	0,821	0,072	***
Person4	<---	Supervisor Personality	0,887		
Person3	<---	Supervisor Personality	0,963	0,046	***
Person2	<---	Supervisor Personality	0,917	0,048	***
Person1	<---	Supervisor Personality	0,807	0,06	***
Sup4	<---	Supervisor Support	0,798		
Sup3	<---	Supervisor Support	0,882	0,094	***
Sup2	<---	Supervisor Support	0,893	0,093	***
Sup1	<---	Supervisor Support	0,889	0,087	***
Conflict4	<---	Conflict	0,633		
Conflict3	<---	Conflict	0,528	0,153	***
Conflict2	<---	Conflict	0,614	0,168	***
Conflict1	<---	Conflict	0,742	0,169	***
Amb4	<---	Ambiguity	0,87		
Amb3	<---	Ambiguity	0,909	0,061	***
Amb2	<---	Ambiguity	0,876	0,063	***
Amb1	<---	Ambiguity	0,828	0,057	***
Goal4	<---	Goal	0,761		
Goal3	<---	Goal	0,735	0,092	***
Goal2	<---	Goal	0,926	0,097	***
Goal1	<---	Goal	0,909	0,102	***
Comp4	<---	Competence	0,843		
Comp3	<---	Competence	0,759	0,083	***
Comp2	<---	Competence	0,797	0,079	***
Comp1	<---	Competence	0,685	0,1	***
Control4	<---	Control	0,894		
Control3	<---	Control	0,822	0,062	***
Control2	<---	Control	0,845	0,071	***
Control1	<---	Control	0,375	0,084	***
JS1	<---	Job Satisfaction	0,874		
JS2	<---	Job Satisfaction	0,781	0,075	***
JS3	<---	Job Satisfaction	0,772	0,086	***
JS4	<---	Job Satisfaction	0,84	0,062	***
OC1	<---	Organizational Commitment	0,718		
OC2	<---	Organizational Commitment	0,567	0,12	***
OC3	<---	Organizational Commitment	0,802	0,098	***
OC4	<---	Organizational Commitment	0,803	0,1	***

Table 4 Standard Regression Weights – CFA Structure

Construct Correlation Matrix	JS	OC	Fair	Size	Promotion	Personality	Support	Control	Competence	Goal	Ambiguity	Conflict
JS	1											
OC	.634**	1										
Fair	.415**	.474**	1									
Size	.358**	.452**	.784**	1								
Promotion	.482**	.551**	.470**	.616**	1							
Personality	.368**	.304**	.274**	.313**	.378**	1						
Support	.405**	.364**	.350**	.409**	.440**	.886**	1					
Control	.445**	.451**	.178*	.308**	.382**	.282**	.302**	1				
Competence	.383**	.192*	.036	-.031	.047	.270**	.212**	.263**	1			
Goal	.584**	.729**	.306**	.302**	.525**	.374**	.402**	.485**	.274**	1		
Ambiguity	-.179*	-.063	-.127	-.091	-.099	-.201**	-.237**	.037	-.194**	-.138	1	
Conflict	.488**	.313**	.292**	.212**	.314**	.498**	.494**	.124	.431**	.352**	-.331**	1
	.000	.000	.000	.004	.000	.000	.000	.098	.000	.000	.000	

** Correlation is significant at the 0.01 level

* Correlation is significant at the 0.05 level

Pearson Correlation

Table 5 Construct Correlation Matrix – CFA Structure

Cronbach's Alpha		Reliability Table		CR	AVE
Job Satisfaction	0,891	Competence	0,97	0,97	0,59
Organizational Commitment	0,851	Fair	0,98	0,98	0,73
Fair	0,913	Size	0,97	0,97	0,61
Size	0,861	Promotion	0,98	0,98	0,75
Promotion	0,923	Supervisor Personality	0,98	0,98	0,80
Supervisor Personality	0,94	Supervisor Support	0,97	0,97	0,75
Supervisor Support	0,922	Conflict	0,92	0,92	0,40
Control	0,817	Ambiguity	0,98	0,98	0,75
Competence	0,854	Goal	0,97	0,97	0,70
Goal	0,902	Control	0,97	0,97	0,58
Ambiguity	0,924				
Conflict	0,716				

Table 6 Cronbach's Alpha - CFA Structure (Left)

Table 7 CR and AVE – CFA Structure (Right)

Based on the results from the model fit indices, and the reliability and validity measures, it was necessary to improve the model. One way of improving a CFA structure is to add covariances between latent variables and between the error terms of

the items based on the modification indices (MI). The MI reports possible improvements of the model by freeing some of the paths that are constrained by the model (Hair et al., 2010). Any MI's over 4 must be considered in the restructuring of the model, however, because of the many possible MI values due to the large number of items, the limit is set to 10. Covariances cannot be added between error terms of different latent variables.

4.3.2 Modified CFA structure

The initial model had 83 MI's above the value of 10. The number of MI's was reduced to 10 in the modified version by adding covariances to the model. In addition, Controll was removed due to its weak correlation score. The modified CFA structure is illustrated in figure 7.

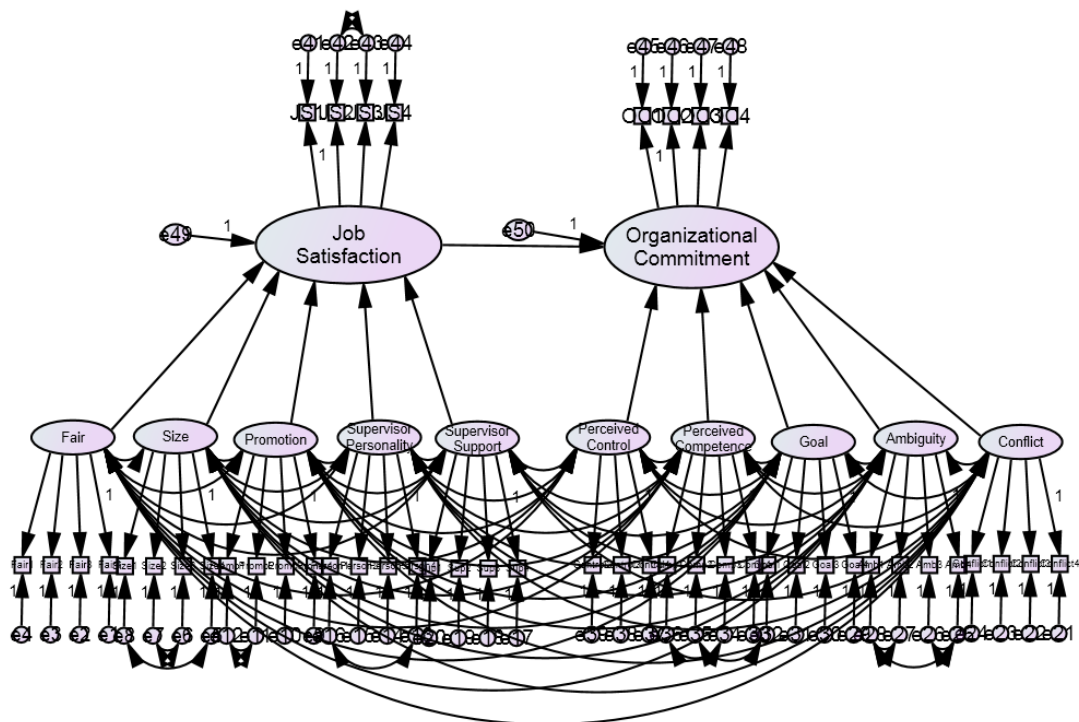


Figure 7 Modified CFA Structure

From the model fit indices of the modified structure in table 3, all the goodness-of-fit indices improved from the first model. The absolute fit indices and the PNFI were satisfying, however, the GFI and AGFI were still poor. The incremental fit indices could still be improved. In total, the model elevated its fit.

Standardized Regression Weights			Estimate	S.E.	P
Job Satisfaction	<---	Fair	5,335	2,124	0,042
Job Satisfaction	<---	Size	-6,659	2,509	0,044
Job Satisfaction	<---	Supervisor Support	2,202	1,534	0,186
Job Satisfaction	<---	Supervisor Personality	-1,76	1,114	0,245
Job Satisfaction	<---	Promotion	2,152	0,753	0,038
Organizational Commitment	<---	Conflict	-7,858	51,875	0,859
Organizational Commitment	<---	Ambiguity	5,968	27,56	0,859
Organizational Commitment	<---	Goal	1,438	4,808	0,766
Organizational Commitment	<---	Competence	0,453	4,557	0,899
Organizational Commitment	<---	Control	-1,805	8,223	0,864
Organizational Commitment	<---	Job Satisfaction	3,318	16,672	0,837
Fair4	<---	Fair	0,826		
Fair3	<---	Fair	0,935	0,075	***
Fair2	<---	Fair	0,833	0,071	***
Fair1	<---	Fair	0,821	0,076	***
Size4	<---	Size	0,823		
Size3	<---	Size	0,795	0,083	***
Size2	<---	Size	0,676	0,088	***
Size1	<---	Size	0,619	0,064	***
Promo4	<---	Promotion	0,842		
Promo3	<---	Promotion	0,941	0,064	***
Promo2	<---	Promotion	0,862	0,065	***
Promo1	<---	Promotion	0,776	0,073	***
Person4	<---	Supervisor Personality	0,888		
Person3	<---	Supervisor Personality	0,956	0,045	***
Person2	<---	Supervisor Personality	0,921	0,047	***
Person1	<---	Supervisor Personality	0,803	0,05	***
Sup4	<---	Supervisor Support	0,792		
Sup3	<---	Supervisor Support	0,876	0,094	***
Sup2	<---	Supervisor Support	0,868	0,093	***
Sup1	<---	Supervisor Support	0,917	0,085	***
Conflict4	<---	Conflict	0,644		
Conflict3	<---	Conflict	0,417	0,116	***
Conflict2	<---	Conflict	0,595	0,137	***
Conflict1	<---	Conflict	0,74	0,115	***
Amb4	<---	Ambiguity	0,917		
Amb3	<---	Ambiguity	0,918	0,054	***
Amb2	<---	Ambiguity	0,824	0,062	***
Amb1	<---	Ambiguity	0,788	0,058	***
Goal4	<---	Goal	0,748		
Goal3	<---	Goal	0,749	0,094	***
Goal2	<---	Goal	0,933	0,1	***
Goal1	<---	Goal	0,903	0,105	***
Comp4	<---	Competence	0,859		
Comp3	<---	Competence	0,684	0,069	***
Comp2	<---	Competence	0,841	0,079	***
Comp1	<---	Competence	0,612	0,086	***
Control4	<---	Control	0,89		
Control3	<---	Control	0,828	0,061	***
Control2	<---	Control	0,843	0,069	***
JS1	<---	Job Satisfaction	0,896		
JS2	<---	Job Satisfaction	0,763	0,073	***
JS3	<---	Job Satisfaction	0,724	0,084	***
JS4	<---	Job Satisfaction	0,831	0,06	***
OC1	<---	Organizational Commitment	0,771		
OC2	<---	Organizational Commitment	0,634	0,12	***
OC3	<---	Organizational Commitment	0,842	0,098	***
OC4	<---	Organizational Commitment	0,846	0,101	***

Table 8 Standard Regression Weights – Modified CFA Structure

From the regression weights in table 8, there was no improvement of the convergent validity and the significance level between the latent variables in the modified CFA

structure. The same variables were insignificant, and Conflict2 and Conflict3 had factor scores below 0,6.

From the correlation matrix in table 9, one could see that there were less insignificant correlations in the modified model, improving the discriminant validity. However, ambiguity and organizational commitment were still not correlating significantly, which was still a problem in order to confirm the model. With regards to the nomological validity, the same cross-loadings over 0,6 were observed. In fact, the correlation between goal internalization and job satisfaction increased noticeably.

Construct Correlation Matrix	JS	OC	Fair	Size	Promotion	Personality	Support	Control 2	Competence	Goal	Ambiguity	Conflict
JS	1											
OC	.627**	1										
Fair	.412**	.459**	1									
Size	.361**	.461**	.796**	1								
Promotion	.465**	.555**	.484**	.617**	1							
Personality	.374**	.291**	.262**	.290**	.354**	1						
Support	.383**	.318**	.360**	.394**	.409**	.857**	1					
Control 2	.428**	.466**	.188*	.267**	.368**	.304**	.306**	1				
Competence	.367**	.197**	.012	-.019	.033	.280**	.199**	.289**	1			
Goal	.609**	.705**	.324**	.308**	.529**	.370**	.349**	.489**	.283**	1		
Ambiguity	-.188*	-.076	-.124	-.117	-.113	-.227**	-.247**	.026	-.207**	-.150*	1	
Conflict	.485**	.336**	.271**	.240**	.326**	.532**	.510**	.153*	.422**	.352**	-.370**	1
	.000	.000	.000	.001	.000	.000	.000	.040	.000	.000	.000	.

** Correlation is significant at the 0.01 level

*Correlation is significant at the 0.05 level
Pearson Correlation

Table 9 Construct Correlation Matrix – Modified CFA Structure

The Cronbach's Alpha measures were unchanged from the unmodified version, with the exception of the latent variable perceived control. By removing Control1, the alpha rose from 0,817 to 0,888. Table 10 lists the CR and AVE values of the modified CFA structure. The CR values in the modified version were not adequate. The CR values should be more than the AVE value and above 0,7, which was not the case for

7 of the variables resulting in poor convergent validity and poor reliability. Furthermore, the AVE value for competence was under the minimum limit.

Reliability	CR	AVE
Competence	0,82	0,49
Fair	1,52	6,27
Size	-0,51	9,29
Promotion	1,09	1,51
Supervisor Personality	1,65	1,25
Supervisor Support	1,09	1,56
Conflict	-1,05	12,64
Ambiguity	1,61	7,72
Goal	0,99	0,97
Control	-0,65	1,36

Table 10 CR and AVE - Modified CFA Structure

The model fit indices and the validity and reliability measures indicated that the model was improved slightly. However, it can be concluded that the CFA structure was not optimal due to the insignificant correlations and poor reliability and validity. The latent variables did not explain as much as expected from the theory. For that reason the results from the survey were assessed in an exploratory factor analysis using SPSS Statistics to test whether another item pattern could make a better model fit. From the correlation matrix it was indicated that several variables could be merged due to high correlation: size and fair, goal and organizational commitment, and supervisor support and supervisor personality.

4.3.3 EFA

In the EFA the number of factors extracted from the dataset were based on the Eigen value of 1. After several trials with different rotation methods, the number of latent variables was reduced from 12 to 8. The best matrix with a varimax rotation is illustrated in table 11. Each of the eight factors had at least 3 items loading above 0,6, and the mean of the summed scale of factor loadings exceeded 0,7, reflecting good internal reliability. In the process, six items were removed due to cross-loadings and low factor scores to make a better model fit (Conflict2 and 3, OC2, Size 2 and 3, Control1).

From the table one can see a clear pattern amongst the items, which was indicated in the CFA structure. The questions related to the supervisor were connected to the same factor, which was also the case for the organizational commitment and goal, pay

fairness and pay size, and ambiguity and conflict. Due to a stronger factor pattern through EFA, the new model was exported into the CFA.

	Component							
	1	2	3	4	5	6	7	8
Person3	0,906							
Person2	0,873							
Person4	0,869							
Sup1	0,858							
Sup3	0,838							
Sup2	0,813							
Person1	0,807							
Sup4	0,780							
Goal4		0,838						
Goal1		0,780						
Goal2		0,763						
OC3		0,758						
OC1		0,752						
OC4		0,642						
Goal3		0,638						
Size4			0,877					
Fair3			0,860					
Fair2			0,854					
Fair1			0,801					
Fair4			0,773					
Size1			0,698					
Amb3				0,875				
Amb4				0,866				
Amb2				0,815				
Amb1				0,802				
Conflict1				0,659				
Conflict4				0,606				
Promo4					0,796			
Promo2					0,788			
Promo3					0,778			
Promo1					0,766			
Comp3						0,847		
Comp4						0,780		
Comp1						0,770		
Comp2						0,714		
JS3							0,732	
JS4							0,708	
JS2							0,703	
JS1							0,651	
Control4								0,849
Control3								0,822
Control2								0,803

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

Table 11 Rotated Component Matrix

4.3.4 EFA Structure

The EFA model seemed more reliable than the previous CFA structure, even though there was a different pattern between the items from the dataset. In order to see if the EFA results could make a better model fit in a structural form, the data was analysed

as a confirmatory factor analysis in SPSS Amos, constraining the correlations between the factors and items. The new model is illustrated in figure 8. From the model fit outputs listed in table 3, all the indices were improved from the initial CFA structure. However, the modified version of the CFA structure, scored better than the constrained EFA structure.

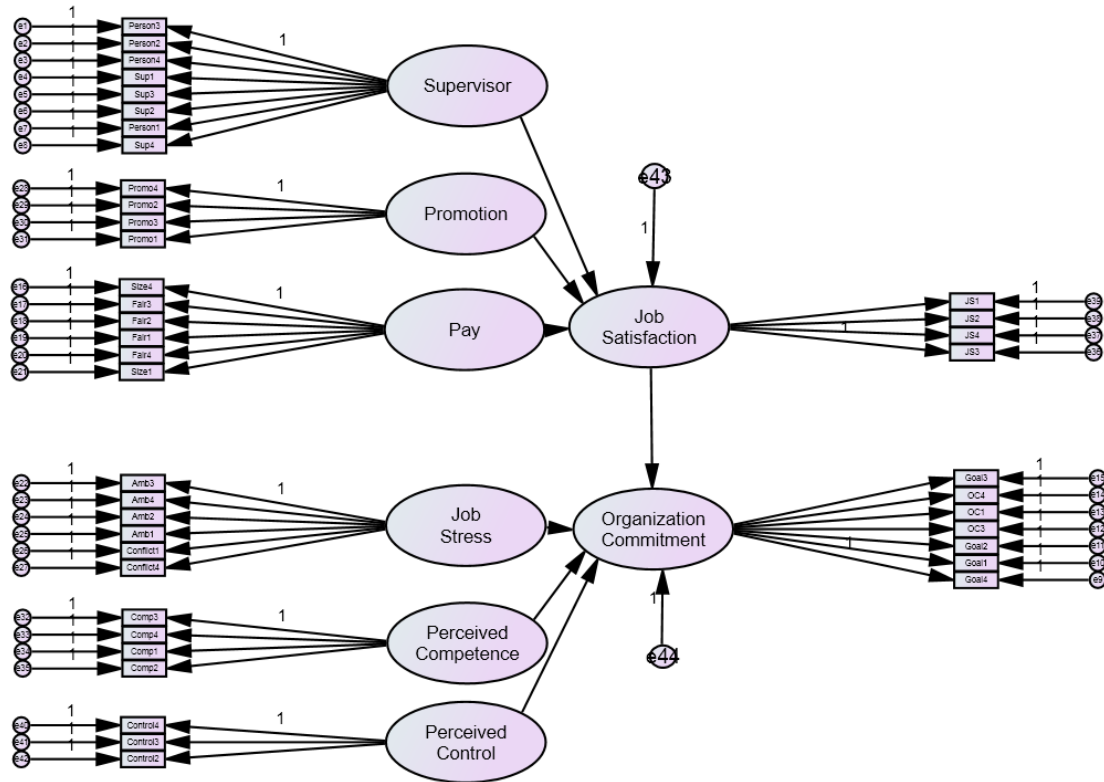


Figure 8 EFA Structure

In table 12, one can observe that the convergent validity improved. Only two paths between the latent variables were not significant, and none of the regression estimates were below 0,6. In the correlation matrix in table 13, there were only two insignificant correlations, indicating an improvement of discriminant validity. However, as the correlations marked in yellow were not part of any hypothesis, the insignificance was not relevant to the model. The high cross loading between job satisfaction and organizational commitment did not cause nomological validity problems, as it was expected from the hypothesis that these would correlate.

Standardized Regression Weights			Estimate	S.E.	P
Job Satisfaction	<---	Pay	0,245	0,057	0,004
Job Satisfaction	<---	Promotion	0,381	0,063	***
Job Satisfaction	<---	Supervisor	0,271	0,059	***
Organization Commitment	<---	Control	0,357	0,055	***
Organization Commitment	<---	Competence	-0,026	0,118	0,741
Organization Commitment	<---	Job Stress	0,015	0,057	0,848
Organization Commitment	<---	Job Satisfaction	0,58	0,091	***
Person3	<---	Supervisor	0,928		
Person2	<---	Supervisor	0,894	0,046	***
Person4	<---	Supervisor	0,903	0,053	***
Sup1	<---	Supervisor	0,905	0,051	***
Sup3	<---	Supervisor	0,855	0,061	***
Sup2	<---	Supervisor	0,84	0,062	***
Person1	<---	Supervisor	0,835	0,059	***
Sup4	<---	Supervisor	0,778	0,059	***
Goal4	<---	Organization Commitment	0,731		
Goal1	<---	Organization Commitment	0,84	0,1	***
Goal2	<---	Organization Commitment	0,876	0,094	***
OC3	<---	Organization Commitment	0,767	0,094	***
OC1	<---	Organization Commitment	0,666	0,09	***
OC4	<---	Organization Commitment	0,742	0,098	***
Goal3	<---	Organization Commitment	0,724	0,089	***
Size4	<---	Pay	0,867		
Fair3	<---	Pay	0,932	0,06	***
Fair2	<---	Pay	0,829	0,059	***
Fair1	<---	Pay	0,827	0,061	***
Fair4	<---	Pay	0,81	0,063	***
Size1	<---	Pay	0,642	0,072	***
Amb3	<---	Job Stress	0,912		
Amb4	<---	Job Stress	0,897	0,052	***
Amb2	<---	Job Stress	0,856	0,053	***
Amb1	<---	Job Stress	0,805	0,048	***
Conflict1	<---	Job Stress	0,69	0,055	***
Conflict4	<---	Job Stress	0,606	0,07	***
Promo4	<---	Promotion	0,845		
Promo2	<---	Promotion	0,89	0,065	***
Promo3	<---	Promotion	0,91	0,064	***
Promo1	<---	Promotion	0,822	0,072	***
Comp3	<---	Competence	0,771		
Comp4	<---	Competence	0,83	0,136	***
Comp1	<---	Competence	0,698	0,111	***
Comp2	<---	Competence	0,79	0,135	***
JS3	<---	Job Satisfaction	0,751		
JS4	<---	Job Satisfaction	0,812	0,07	***
JS2	<---	Job Satisfaction	0,754	0,08	***
JS1	<---	Job Satisfaction	0,851	0,079	***
Control4	<---	Control	0,903		
Control3	<---	Control	0,817	0,061	***
Control2	<---	Control	0,839	0,071	***

Table 12 Standard Regression Weights - EFA Structure

As almost all of the regression weights of the EFA structure were significant and the standard error terms were appropriate, the reliability of the new model was a significant improvement from the initial model. Furthermore, the results of Cronbach's Alpha, AVE and CR of the latent variables in table 14 and 15 were well above the lowest acceptable value.

Construct Correlation Matrix	JS	OC	Pay	Promotion	Supervisor	Job Stress	Competence	Control
JS	1							
OC	.637**	1						
Pay	.398**	.353**	1					
Promotion	.482**	.562**	.488**	1				
Supervisor	.399**	.402**	.322**	.422**	1			
Job Stress	-.428**	-.324**	-.228**	-.276**	-.425**	1		
Competence	.383**	.257**	.024	.047	.248**	-.476**	1	
Control	.444**	.525**	.171*	.375**	.270**	-.246**	.268**	1
	.000	.000	.022	.000	.000	.001	.000	.000

** Correlation is significant at the 0.01 level

* Correlation is significant at the 0.05 level

Pearson Correlation

Table 13 Construct Correlation Matrix - EFA Structure

Reliability	CR	AVE
Supervisor	0,99	0,75
Pay	0,99	0,68
Promotion	0,98	0,75
Job Stress	0,99	0,64
Competence	0,96	0,60
Job Satisfaction	0,98	0,63
Control	0,98	0,73
OC	0,98	0,59

Table 14 CR and AVE – EFA Structure

Cronbach's Alpha	
Job Satisfaction	0,891
Organizational Commitment	0,924
Pay	0,923
Promotion	0,923
Supervisor	0,96
Control	0,888
Competence	0,854
Job Stress	0,909

Table 15 Cronbach's Alpha - EFA Structure

It was clear that the new model fitted remarkably better than the initial CFA structure. However, even though the reliability and validity were almost fully approved, there were still some issues with the model fit indices. It was therefore necessary to improve the model.

4.3.5 Final Model

After several modification rounds based on the modification indices, a final model was created. The number of items was reduced from 42 to 32 to improve model fit due to the previous poor results of perceived competence and job stress. The final model illustrated in figure 9, only had three MI's over the value of 10.

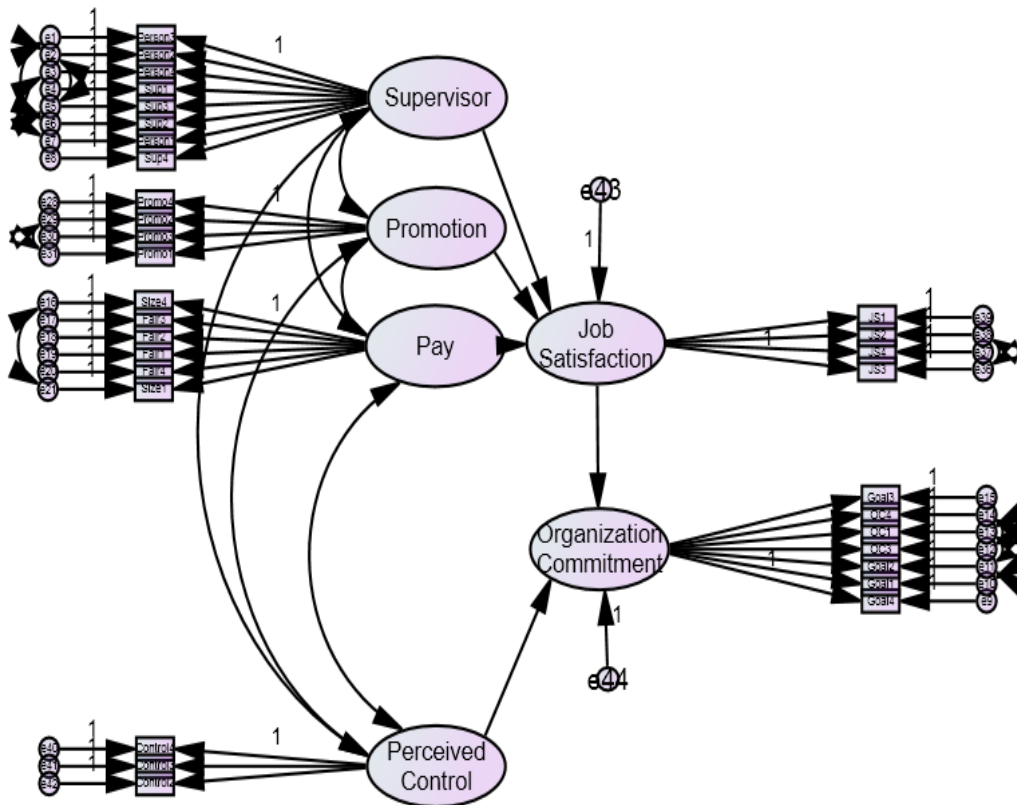


Figure 9 Final Model

The model fit was the best of the four models presented. The absolute fit indices of the final model in table 3 were all acceptable, however, the GFI and AGFI could still be improved. Only two of the incremental indices were not considered very good, and the parsimony fit index was appropriate. In table 16 there were no insignificant paths between the items and variables, and the estimates had improved significantly between the latent variables. In the correlation matrix in table 17 there were no insignificant correlations, meaning no discriminant validity problems. Furthermore, the CR and AVE results in table 18 were accepted, and the model could be considered reliable. Based on the satisfying results of the final model, it was used for further analysis.

Standard Regression Weights			Estimate	S.E.	P
Job Satisfaction	<---	Pay	0,221	0,057	0,006
Job Satisfaction	<---	Promotion	0,343	0,063	***
Job Satisfaction	<---	Supervisor	0,256	0,059	***
Organization Commitment	<---	Control	0,335	0,056	***
Organization Commitment	<---	Job Satisfaction	0,6	0,094	***
Person3	<---	Supervisor	0,917		
Person2	<---	Supervisor	0,852	0,038	***
Person4	<---	Supervisor	0,896	0,057	***
Sup1	<---	Supervisor	0,918	0,052	***
Sup3	<---	Supervisor	0,843	0,065	***
Sup2	<---	Supervisor	0,863	0,071	***
Person1	<---	Supervisor	0,838	0,061	***
Sup4	<---	Supervisor	0,781	0,061	***
Goal4	<---	Organization Commitment	0,761		
Goal1	<---	Organization Commitment	0,804	0,101	***
Goal2	<---	Organization Commitment	0,872	0,094	***
OC3	<---	Organization Commitment	0,793	0,094	***
OC1	<---	Organization Commitment	0,743	0,091	***
OC4	<---	Organization Commitment	0,766	0,099	***
Goal3	<---	Organization Commitment	0,76	0,089	***
Size4	<---	Pay	0,848		
Fair3	<---	Pay	0,945	0,063	***
Fair2	<---	Pay	0,825	0,062	***
Fair1	<---	Pay	0,824	0,065	***
Fair4	<---	Pay	0,816	0,066	***
Size1	<---	Pay	0,599	0,062	***
Promo4	<---	Promotion	0,844		
Promo2	<---	Promotion	0,859	0,064	***
Promo3	<---	Promotion	0,942	0,064	***
Promo1	<---	Promotion	0,768	0,073	***
JS3	<---	Job Satisfaction	0,74		
JS4	<---	Job Satisfaction	0,833	0,079	***
JS2	<---	Job Satisfaction	0,747	0,075	***
JS1	<---	Job Satisfaction	0,894	0,092	***
Control4	<---	Control	0,894		
Control3	<---	Control	0,821	0,061	***
Control2	<---	Control	0,844	0,07	***

Table 16 Standard Regression Weights – Final Model

Construct Correlation Matrix	JS	OC	Pay	Promotion	Supervisor	Control
JS	1					
OC	.637**	1				
Pay	.398**	.353**	1			
Promotion	.482**	.562**	.488**	1		
Supervisor	.399**	.402**	.322**	.422**	1	
Control	.444**	.525**	.171*	.375**	.270**	1

** Correlation is significant at the 0.01 level

*Correlation is significant at the 0.05 level

Pearson Correlation

Table 17 Correlation Matrix – Final Model

Reliability	CR	AVE
Pay	0,89	0,57
Promotion	0,87	0,60
Control	0,83	0,57
Supervisor	0,94	0,67

Table 18 CR and AVE – Final Model

4.4 Regression

A regression analysis in SPSS Statistics was used to reject or accept the suggested hypotheses based on the theory. As the best model fit from the factor analysis structured the data differently than anticipated, some of the hypotheses could not be tested. It was necessary to use the final model from the factor analysis, as this was the most reliable model.

4.4.1 Hypothesis 1a

Pay fairness, the size of the pay, and promotion positively affect job satisfaction.

In the new model there was no separation between pay fairness and the size of the pay. However, the factor *pay* included items from pay fairness and the size of the pay, and therefore a modified hypothesis was tested:

Pay and promotion positively affect job satisfaction.

In table 19, one can observe that pay and promotion positively affected job satisfaction, as the coefficients were positive. With a DF of 177, the t-values must exceed 1,9735 at a significance level of 0,05, which was the case for all the coefficients. The R² was 0,267 and the F-ratio was significant for the sample indicating that the pay and promotion explained job satisfaction fairly well. The hypothesis was accepted.

Job Satisfaction	Coefficients	t-value	sig.
Constant	2,666	14,36	0
Pay	0,166	2,693	0,004
Promotion	0,267	5,103	0

Table 19 Multiple Regression Job Satisfaction - Pay and Promotion

4.4.2 Hypothesis 1b

Pay fairness is a stronger positive predictor of job satisfaction than the size of payment and promotion for Norwegians.

Due to the model modifications in the factor analysis where pay fairness and pay size could not be split but added together in one latent variable called *pay*, the revised hypothesis is:

Pay is a stronger positive predictor of job satisfaction than promotion for Norwegians.

One knows from hypothesis 1a that promotion is already proved to be the strongest indicator of job satisfaction of the two variables. However, it was interesting to see if the results would differ for a sample only consisting of Norwegians even though hypothesis 1b was not a very strong theory based assumption. To perform a regression only for Norwegians, the data on non-Norwegians was removed from the regression, reducing the sample size to 61. From the regression results in table 20, promotion was proved to be the strongest predictor of job satisfaction for Norwegians. However, pay was insignificant even though the model was significant, and for that reason hypothesis 1b was rejected.

Job Satisfaction	Coefficient	t-value	sig.
Constant	2,544	8,423	0
Pay	0,134	1,599	0,115
Promotion	0,352	4,088	0

Table 20 Multiple Regression Job Satisfaction - Norwegians

4.4.3 Hypothesis 1c

The size of the pay and promotion are stronger predictors of job satisfaction than pay fairness for employees from cultures with strong power distance.

As the model was changed in the factor analysis where pay size and pay fairness were merged to one independent variable, the new hypothesis is:

Promotion is a stronger predictor of job satisfaction than pay for employees from cultures with strong power distance.

To test the hypothesis, Hofstede’s power distance score was used to measure the strength of power distance of each respondent in the regression. The respondents from the survey were given a point on a scale from 1 to 100 based on their national background. High scores indicated strong power distance and low scores indicated weak power distance (The Hofstede Centre, 2013). From the 179 respondents that were used in the statistical analysis, two of the respondents came from countries with no power distance score and were removed from the regression. The results from the regression analysis are found in table 21. All the coefficients were significant except the coefficient related to power distance, which implied that promotion was the strongest predictor of job satisfaction, no matter the power distance score. As a result, hypothesis 1c was rejected.

Job Satisfaction	Coefficient	t-value	sig.
Constant	2,694	12,614	0
Pay	0,160	2,744	0,007
Promotion	0,274	5,131	0
Power Distance	-0,001	-0,264	0,792

Table 21 Multiple Regression Job Satisfaction – Power Distance

4.4.4 Hypothesis 2a

Supervisor support and supervisor personality positively affect job satisfaction.

In the final model, the supervisor support and personality were not defined as separate variables, as the same items loaded to the same variable, *supervisor*. The modified hypothesis is:

The supervisor positively affects job satisfaction.

From table 22, it is evident that the supervisor affected job satisfaction positively as the coefficient t-values and F-ratio were significant. The R2 for the supervisor was only 0,159, which indicated that the regression did not explain the reason for job satisfaction very well, however the hypothesis was still accepted.

Supervisor	Coefficients	t-value	sig.
Constant	2,819	13,425	0
Supervisor	0,309	5,783	0

Table 22 Single Regression Job Satisfaction - Supervisor

4.4.5 Merging the Independent Variables of Job Satisfaction

Table 23 illustrates the results of the regression, where pay, promotion and supervisor are used to estimate job satisfaction combined. The regression was significant as the F-ratio was acceptable, the t-values were significant and the R² had a value of 0,303. The regression supported the findings from the factor analysis where pay, promotion and supervisor can significantly explain job satisfaction in a compound model.

Job Satisfaction	Coefficients	t-value	sig.
Constant	2,276	10,209	0
Pay	0,141	2,484	0,014
Promotion	0,215	3,979	0
Supervisor	0,164	2,012	0,003

Table 23 Multiple Regression Job Satisfaction

4.4.6 Hypothesis 3a

Perceived control, perceived competence and goal internalization positively affect organizational commitment.

In the factor analysis, perceived competence and its corresponding items were excluded in the final model. Perceived competence was therefore rejected as a significant variable of organizational commitment. Furthermore, the goal internalization items did not correlate with a separate factor in the EFA, but correlated with the same factor as the organizational commitment items. Therefore, only one independent variable from the 3a hypothesis could be tested:

Perceived control positively affects organizational commitment.

From table 24, one can observe that the coefficient of perceived control positively affected organizational commitment as expected. The regression had a R² value of 0,276 and a significant F-ratio, however, the coefficient score of perceived control was not a very strong predictor of organizational commitment. The hypothesis was accepted.

OC	Coefficients	t-value	sig.
Constant	1,945	8,844	0
Control	0,468	8,206	0

Table 24 Single Regression Organizational Commitment – Perceived Control

4.4.7 Hypothesis 4

Role ambiguity and role conflict negatively affect organizational commitment.

This hypothesis was rejected as the variables were excluded from the model in the factor analysis.

4.4.8 Hypothesis 5

Job satisfaction positively affects organizational commitment.

From the regression results in table 25, it was clear that job satisfaction affected organizational commitment positively. With a R2 of 0,405, significant coefficients and approved F-ratio, job satisfaction was a clear predictor of organizational commitment. The hypothesis was accepted.

OC	Coefficients	t-value	sig.
Constant	0,694	2,503	0,013
Job Satisfaction	0,749	10,986	0

Table 25 Single Regression Organizational Commitment – Job Satisfaction

4.4.9 Merging the Independent Variables of Organizational Commitment

Table 26 illustrates the results of the regression, where both job satisfaction and perceived control are used to estimate organizational commitment. As the R2 was 0,478, it was clear that both variables are important. Almost half of the variance of organizational commitment was explained by satisfaction and control. However, it is worth noticing that the coefficient of the constant was not significant even though the F-ratio was. It was therefore inconclusive whether the regression should be rejected.

OC	Coefficients	t-value	sig.
Constant	0,324	1,197	0,233
Job Satisfaction	0,591	8,272	0
Control	0,269	4,962	0

Table 26 Multiple Regression Organizational Commitment

4.5 Moderation

In the third part of the analysis, the differences in job satisfaction and organizational commitment between respondents from nationalities with weak and strong power distance was examined. The moderation framework in section 3.3.3 was used in this section.

4.5.1 Chi-square Test

In order to perform a chi-square test to compare the respondents with high and low power distance, it was necessary to separate the respondents into two groups. The moderation calculations were based on James Gaskins' CFA tools package, which simplified the chi-square test (Gaskin, 2014).

By comparing results from an unconstrained and a fully constrained model, the chi-square test measured group differences for the whole model. The results from table 27 indicated that there were no differences in job satisfaction and organizational commitment between low and high power distance nationalities. It was also possible to check for group deviations at path level, and the path results are found in table 28. In 9 out of 37 paths there were disparities between the groups, but only one of the irregular paths was between two latent variables. The remaining deviations were between an item and a latent variable. It is interesting to see that the paths with group disparities clustered around the same variables. Unfortunately, the chi-square test did not explain which group was more satisfied than the other. To discover which group was more satisfied, it was necessary to use a regression analysis.

Chi-square Test Overall Model	Chi-square	DF	p-value	Invariant?
Unconstrained	1500,924	882		
Fully constrained	1540,828	913		
Number of groups		2		
Difference	39,904	31	0,131	Yes
Chi-square Thresholds for Path Analysis				
<i>90% Confidence</i>	1503,63	883		
Difference	2,71	1	0,100	
<i>95% Confidence</i>	1504,77	883		
Difference	3,84	1	0,050	
<i>99% Confidence</i>	1507,56	883		
Difference	6,63	1	0,010	

Table 27 Chi-square Results

Multigroup Chi-square Difference Test			Chi-square	Confidence Level
JS	<---	Pay	1501,210	
JS	<---	Promotion	1501,374	
JS	<---	Supervisor	1508,821	99%
OC	<---	Control	1500,924	
OC	<---	JS	1500,932	
Person3	<---	Supervisor	1503,760	90%
Person2	<---	Supervisor	1501,052	
Person4	<---	Supervisor	1501,766	
Sup1	<---	Supervisor	1502,362	
Sup3	<---	Supervisor	1500,925	
Sup2	<---	Supervisor	1501,603	
Person1	<---	Supervisor	1503,210	
Sup4	<---	Supervisor	1502,745	
Goal4	<---	OC	1502,500	
Goal1	<---	OC	1503,613	
Goal2	<---	OC	1502,500	
OC3	<---	OC	1502,232	
OC1	<---	OC	1505,860	95%
OC4	<---	OC	1502,954	
Goal3	<---	OC	1502,484	
Size4	<---	Pay	1503,910	90%
Fair3	<---	Pay	1516,126	99%
Fair2	<---	Pay	1502,656	
Fair1	<---	Pay	1503,183	
Fair4	<---	Pay	1504,573	90%
Size1	<---	Pay	1509,091	99%
Promo4	<---	Promotion	1501,172	
Promo2	<---	Promotion	1501,169	
Promo3	<---	Promotion	1500,930	
Promo1	<---	Promotion	1502,325	
JS3	<---	JS	1504,968	95%
JS4	<---	JS	1503,118	
JS2	<---	JS	1501,050	
JS1	<---	JS	1504,968	95%
Control4	<---	Control	1500,939	
Control3	<---	Control	1501,842	
Control2	<---	Control	1502,337	

Table 28 Chi-Square Path Analysis

4.5.2 Hypothesis 2b

People from cultures with strong power distance, will have less positive effect of supervisor support and supervisor personality on job satisfaction in the Norwegian work environment than people from cultures with weak power distance.

Revised hypothesis due to merged items in the factor analysis:

People from cultures with strong power distance, will have less positive effect of the supervisor on job satisfaction in the Norwegian work environment than people from cultures with weak power distance.

From the regression results in table 29 it was indicated that there were no significant consequence of power distance on the relationship between supervisor and job

satisfaction. However, the Chi-square test results were not consistent with the findings of the regression. In table 28 the path between the supervisor and job satisfaction was significantly different, while the moderation in the regression analysis did not support this evidence. Further research is needed to reject or confirm this hypothesis.

Job Satisfaction	Coefficients	t-value	sig.
Constant	2,800	13,216	0
Supervisor	0,315	5,826	0
Power Distance	-0,014	-0,121	0,904
Moderator	0,057	1,037	0,301

Table 29 Moderation - Supervisor and Power Distance

4.5.3 Hypothesis 3b

People from cultures with high power distance will have a less positive effect of perceived control on organizational commitment, than people from cultures with low power distance.

According to the hypothesis, the power distance between the two groups should be significantly different. However, table 30 shows that this is not the case, as the power distance and moderator variables were not significant. With support from the chi-square test, the second moderation hypothesis was rejected.

OC	Coefficients	t-value	sig.
Constant	1,887	8,040	0
Perceived Control	4,78	8,122	0
Power Distance	0,050	0,387	0,699
Moderator	-0,042	-0,739	0,461

Table 30 Moderation - Perceived Control and Power Distance

4.6 Control Variables

As a final part of the analysis, some control variables were used to test the model for consistency, but also to reveal any other significant characteristics from the dataset that could have affected the dependent variables. The control variables include: Gender, age, education level, if the employee is a manager or not, the size of the company, years of work in the company, and if the respondent intends to stay in the firm.

The multiple regression for job satisfaction in table 31 was significant and had a R2 of 0,600. The only control variable that affected job satisfaction was the stay intentions of the respondents. Surprisingly, pay became insignificant in the regression.

JS	Coefficients	t-value	sig.
Constant	2.702	7.731	.000
Pay	.104	1.721	.087
Promotion	.197	3.423	.001
Supervisor	.155	2.766	.006
Gender	.163	1.584	.115
Age	-.003	-.367	.714
Education	-.029	-.454	.650
Manager	.080	.653	.515
Size	-.116	-1.657	.099
Years of Work	.006	.536	.593
Stay Intentions in the Company	.326	2.942	.004

Table 31 Control Variables - Job Satisfaction

Table 32 represents the multiple regression results for organizational commitment. The model was significant and had an R2 of 0,733, indicating that it explained organizational commitment well. Not unexpectedly, the constant was still insignificant. The only control variable to be significant was the stay intentions.

OC	Coefficients	t-value	sig.
Constant	.499	1.233	.219
JS	.487	6.562	.000
Perceived Control	.253	4.543	.000
Gender	.161	1.577	.117
Age	-.001	-.191	.849
Education	.059	.956	.340
Manager	.032	.258	.797
Size	-.032	-.458	.647
Years of work	-.014	-1.240	.217
Stay Intentions in the company	.443	4.059	.000

Table 32 Control Variables - Organizational Commitment

5. Discussion

The discussion section highlights the strengths, weaknesses and limitations of the research (Saunders, Lewis, & Thornhill, 2009). What does the analysis point out with regards to the research question?

5.1 Descriptive Statistics

The descriptive statistics give a clear overview of the type of respondents that chose to take the survey. Even though the sample size is adequate, the respondent types can cause limitations to the conclusion, as they may not represent the actual work force in the international work environment in Norway. For example, in the survey, 38,5% of the respondents worked in the oil and gas sector, while only 4,5% of the respondents came from the health sector. The health and construction sectors have a high percentage of foreign workers compared to many other sectors, indicating that the sample is skewed. Furthermore, many of the respondents have higher education and origin from Europe, indicating that many employees from international work environments have the same background. The sample in this particular research is likely to misrepresent the population, possibly leading to false conclusions and poor reliability.

A limit to the study is that the survey does not take into account the seasonal employment. Only 11,1% of the replies came from workers in the industry and tourism sectors, which typically consist of seasonal jobs. The only indication that a respondent might be a seasonal worker is through the question on stay intentions. The survey was released in the winter season when there are usually fewer seasonal workers, and therefore the sample may not represent the average work force in the international work environment during the summer. A solution to this problem would be to redo the data collection in the summer season.

5.2 Statistical Assumptions

As the variables did not have perfect normal distribution and poor linear relationships in the initial model, it can be argued whether the model initially should have been discarded. Still, the dataset was accepted. Yet, no statistical assumptions were tested for in the final model, as it was anticipated that the statistical assumptions were better due to the improved model fit indices.

5.3 Factor Analysis

The relationship between the independent and dependent variables was statistically investigated in the factor analysis. The purpose of the factor analysis was to find a suitable model that connected organizational commitment and job satisfaction in the best possible way. However, it was necessary to modify it through an EFA analysis, which was recommended in the literature, before continuing with the hypothesis testing. Interestingly, the pattern of the EFA output was fairly similar to the initial model.

The initial model was based on theories that supported strong relationships between the variables, so why did the initial CFA model fail to have a good model fit? One reason could be that the items that were used to measure the latent variables, also measure other variables and items of the model. A poor model fit occurred when the CFA analysis did not allow the items to cross-correlate. By adding covariances based on the modification indices the model fit was improved, but at the expense of the reliability of the model. Another reason for the poor model fit may be that the model was incompatible with the observed data, where the items did not measure what was intended by the model. One item was removed due to a low factor score, but it was not enough to improve the model fit notably.

Model fitting is complex, and sample size also plays a role in model fitting. The ratio between the number of observations and the number of variables should be at least a 5:1, but preferably a 10:1 ratio (Hair et al., 2010). Furthermore, if the number of respondents is less than 100, a factor analysis of the data is not recommended. The initial model had 48 items, indicating that the ratio was not sufficient when the dataset only included 179 respondents. The number of variables should either be reduced, or the sample size should be increased. The CFA structure had to be rejected on the basis of this criterion, and the number of items was in the end of the factor analysis reduced to 32 items, making the ratio of 5,6:1.

It can be difficult to duplicate the complex model presented in this paper if the items cause poor model fit. However, modifying a model is not an action one should do without thorough thought. Small changes in the details can make large variations in the outcome, and the results might not be fully supported by theory. To some degree, it is a game of chance when one simplifies and remodels the factors. With too many

changes to the original model, one must consider to use an inductive research approach instead of a deductive research approach.

In this study the modification process was successful as the complexity of the model was reduced, and most of the regression weights were considerably improved. For example, the regression weights between job satisfaction and organizational commitment increased from 0,454 to 0,6. Also, the regression weight of the path between perceived control and organizational commitment became significant when one of the items with low factor loadings was removed. On the other hand, the paths between organizational commitment and perceived competence and job stress were never significant in any of the modifications, which indicates that poor model fit cannot always be solved with alterations. Nevertheless, it can be speculated if the factors perceived competence and job stress would become significant in the model if the sample size was much larger.

5.4 Regression Analysis

In order to complete the regression analysis, it was necessary to revise most of the hypotheses, as some of the variables did not exist in the final model. Luckily, it was easy to adjust the assumptions, as the final model had a similar pattern to the initial model. If this had not been the case, the research topic must have been approached from a different angle. In the worst-case scenario, the research question would have to be rejected.

As expected from strong theoretical support, pay, promotion and supervisor had positive and significant impact on job satisfaction in hypotheses 1a and 2a. Promotion had the strongest effect on job satisfaction, which was also supported by the regression weights from the final model in the factor analysis. The similar results from both statistical methods indicate model consistency, and that they are measuring the same thing. Still, one would expect a stronger value of R² in the regression including all three independent variables in table 23, due to the strong theoretical support, but it only explained 30,3% of the model variance.

Furthermore, there were two hypotheses that were related to culture differences with regards to pay and promotion. Hypothesis 1b assumed that pay was a stronger predictor of job satisfaction than promotion for Norwegians, and hypothesis 1c

suggested that promotion was a stronger predictor of job satisfaction than pay, for employees from cultures with strong power distance. Both of the assumptions were rejected due to insignificant coefficients, however if the coefficients had in fact been accepted, hypothesis 1c would not be rejected. In both cases promotion was the stronger predictor of job satisfaction.

In hypotheses 3a and 5 it was proved that perceived control and job satisfaction had positive effects on organizational commitment, which was supported by the regression weights from the factor analysis model. Job satisfaction was a much stronger indicator of organizational commitment than perceived control, and the coefficient of job satisfaction was even larger than the coefficient of the constant. Unfortunately, the constant of the multiple regression in table 26 was not significant. Statistically, the regression should be rejected when the constant was insignificant, but the constant should not be removed from the equation, as there might have been other reasons for the insignificance. It may be that the constant would become significant with a larger sample size, or it may indicate that the relationship between the independent and dependent variables is not linear, which is a statistical assumption in this analysis.

The hypotheses themselves are not dependent on good model fit, as they simply determine the relationships between the dependent and independent variables. It can therefore be argued that the initial hypotheses, including hypothesis 4, could have been tested regardless of the remodelling, because the statistical assumptions were accepted. However, as one wanted to test a model theory, it was necessary to have the model fit in place before continuing with the details of the research.

5.5 Moderation

In the moderation analysis hypotheses 2b and 3b were explored. There were some inconclusive results of hypothesis 2b. From the Chi-square test in table 28 it was indicated that the supervisor affected job satisfaction differently between people from cultures with strong and weak power distance. However, the moderator and the power distance coefficient in table 29 were both insignificant.

With the dilemma of two different conclusions, should the hypothesis be rejected or accepted? The chi-square test result was significant at a 99% confidence interval,

meaning that there is only a statistical mistake in 1 out of 100 tests. Furthermore, there can be an issue of type 1 or type 2 error, causing the insignificant regression. The type 1 error, alpha, is the probability of rejecting a null hypothesis that is true. The type 2 error, beta, is a failure to reject a null hypothesis that is false (Hair et al., 2010). The relationship between alpha and beta is influenced by sample size and the actual correlations between variables. As one wants to avoid type 1 error more than type 2 error, it is better to assume that hypothesis 2b is not rejected, and that the regression will be significant with a larger sample size. A clear statistical weakness of the moderation analysis is that one should have tested the data for type 1 or type 2 error in advance.

With regards to hypothesis 3b, both the chi-square test and the regression analysis in table 30 indicated that the effect of perceived control on organizational commitment was not different between the two groups. Furthermore, none of the individual paths between the control items and organizational commitment in the chi-square test were significant. Based on the two statistical tests, the hypothesis was rejected.

Although there were only two moderation hypotheses extracted from the theory, other possible moderations between the low and high power distance groups were tested for at path level in the chi-square test. The test indicated that some paths were different, and most of them clustered around items that correlated with job satisfaction and pay. In fact, 4 out of 6 items that regressed with pay were statistically different. In contrast, hypothesis 1c, which was also related to power distance, only states that promotion is a stronger independent variable than pay and does not assume that there are any differences between groups. Even though the path between job satisfaction and pay is insignificant from the chi-square test, further research may result in different outcomes.

5.6 Control Variables

In the last part of the statistical analysis, several control variables were used to spot other significant relationships in the dataset that might affect job satisfaction and organizational commitment. The relationship between the control variables and dependent variables is not directly associated with the hypotheses, but it can be used to interpret the correlation between the variables.

By comparing the multiple regressions of job satisfaction in table 23 and table 31 that include the control variables, some interesting findings were discovered. When the control variables are added into the model, the coefficients of the independent variables that were used in both regressions were reduced, and pay became insignificant. None of the control variables affected job satisfaction significantly, except for the stay intentions of the respondents. In fact, the stay intentions influenced job satisfaction more than pay, promotion and supervisor. The explanation degree measured by R2 increased from 0,303 to 0,600, which further supports that some of the control variables were important predictors of job satisfaction.

Moving on to the regression analysis of organizational commitment, it is necessary to compare the results from table 26 and table 32 that include the control variables. In both regressions, the constant was insignificant. The stay intention was the only significant control variable, and it was a stronger indicator of organizational commitment than perceived control. The R2 of the regression increased from 0,478 to 0,733, which indicated that the control variables affect organizational commitment.

The large increase in the R2 of both models indicates that the stay intentions had a strong impact on the dependent variables. From theory one knows that job satisfaction and organizational commitment cause stay intentions of employees, and the results from the analysis also indicated that the relationship was reversed. Even though the stay intentions had a significant relationship with the dependent variables, they did not necessarily *cause* job satisfaction and organizational commitment, but rather *correlated* with the dependent variables. The stay intention was not likely the cause of job satisfaction and organizational commitment, but an outcome.

5.7 What do the results indicate?

From the analysis it is clear that the variables pay, promotion, supervisor and perceived control behaved according to the hypotheses. In contrast, perceived competence and job stress factors were not recognized to be determinants of job satisfaction and organizational commitment in the model. Furthermore, it is not clear whether there are any differences in job satisfaction and organizational commitment between people with different cultural backgrounds in the Norwegian work environment, as the hypotheses related to culture with the exception of one were all

rejected. What do the results mean for the employers if the cultural analysis based on power distance is either correct or incorrect?

5.7.1 Cultural Analysis is True

The Norwegian government expects an increased immigration to Norway, and it is anticipated that immigrants often have different criteria for the work environment than Norwegians. A survey performed by Oslo Chamber of Commerce (2013) points out several important factors that impact the foreign employees' job satisfaction in Norway. Primarily, it is important that the partner also has a relevant job in Norway, and that there is a school available for the children. Furthermore, it is critical that there is some kind of social network separately from work, and that the Norwegian co-workers integrate them into the workplace through mentoring and cultural exchange. Learning the local language is also an important factor as it is easier to communicate with the local community.

In reality, the same factors are just as important for Norwegians as foreigners when considering employment, which is supported by the model. The rejected cultural hypotheses with the exception of the one regarding the role of the supervisor, strengthen the belief that job satisfaction and organizational commitment must be considered at an individual level, rather than at group level based on nationality. An employee's need is distinct in every work situation, no matter the employees' cultural background. Normally, there is a human resources department that takes care of the staff's well-being at an individual level in a company. If a firm needs to improve the job satisfaction and organizational commitment of their employees, the HR department should create a plan on how to handle the problem. The outlined theory on job satisfaction and organizational commitment is a good pointer to which topics a company should focus on in their employee integration.

It can be argued that the rejected hypotheses on cultural differences reflect the success of the Norwegian way of handling employees in the work environment. In Norway, it is valued that employees have long-term contracts, which likely makes the employees feel safe and certain about future income regardless of cultural background. It may be that job security is a much stronger cause of organizational commitment and job satisfaction than any of the classical variables that were used in the statistical analysis. However, it is not possible to extract the information on job security directly from the

dataset, unless one uses the descriptive statistics such as stay intention in the company or the number of years the employee has worked for the company. For future research on the topic, job security should be included as a variable to determine job satisfaction and/or organizational commitment.

The analysis proved that there were no differences between the respondents' national cultures based on power distance. However, it may be that disparities in job satisfaction and organizational commitment lie in other factors that determine cultural differences. In this research there has only been a focus on power distance when explaining cultural differences but, according to Hofstede (2005) there are at least four other dimensions that could be used to measure cultural difference: Individualism vs. collectivism, masculinity vs. femininity, uncertainty avoidance and long-term orientation. By creating new country scores based on any of the four other cultural dimensions, it might be possible to extract new information from the dataset. If there are significant findings with the other culture measures, it is still crucial that the outcome has some theoretical support. Without it, the difference between cultures is more likely to be a causal correlation rather than a *cause* of job satisfaction and organizational commitment.

Job security and uncertainty avoidance can be seen as synonymous terms. The uncertainty avoidance dimension explains the degree a person deals with an unknown future (The Hofstede Centre, 2013) Currently, the average job security is decreasing since the labour market trend consists of more seasonal work and an increased unemployment. With a change in job security, it is also likely that an employee will experience an increased uncertainty avoidance score. It would therefore be interesting to retest the same subjects in a couple of years to observe any significant changes in their job satisfaction, organizational commitment, and their stay intentions in the firm, especially since labour immigration is expected to increase to Norway.

5.7.2 Cultural Analysis is False

Until now the results have been discussed with the assumption that the analysis is correct. However, it may also be that the results of the cultural hypotheses are false due to statistical limitations such as sample size, statistical error or a skewed sample. If there are employee differences in job satisfaction and organizational commitment

based on cultural differences in the Norwegian work environment, what implications do this have for the employers?

If the analysis was incorrect, the employers should reconsider how they handle their employees. For example, if the majority of the employees in a company originate from cultures with strong power distance, the pay structure should be more hierarchical as one would expect the pay size to be important. Furthermore, there should be a larger professional distance between the supervisor and regular staff members, which is not the standard in the Norwegian work environment. However, in most cases Norwegians are the majority of the workforce in international workplaces in Norway. They prefer that the employers keep the fair pay and the informal relationship with their subordinates.

In practice, the employers in a multicultural work environment will face the dilemma of not satisfying all its employees based on cultural background. The management could simply treat the employees differently based on cultural background, but that would probably cause more discontent than increased satisfaction. A solution to the issue could be an implementation of intercultural communication. For example, international employees should be offered language courses or mentoring to integrate quickly into the Norwegian labour force (Oslo Chamber of Commerce, 2013). When people feel they are included in a group, the work performance, job satisfaction and organizational commitment are likely to be improved. Besides the direct communication, it is also important to consider the indirect communication. In Norway the culture is very informal; people address each other with their first names, and jeans are accepted in many work places. People from cultures with strong power distance might find this informality unusual and even rude.

To accommodate any cultural miscommunications, the companies that have employees of many different backgrounds should consider arranging cultural sensitivity courses for all of the workers. Improved intercultural communication can reduce the misunderstandings among the workers, and also increase the spillover of implicit knowledge. Aiding the awareness and knowledge of other cultures is especially important in businesses based on the employee's know-how.

It is important that the employers and HR departments of multicultural companies take cultural differences utterly serious. From theory, one knows that job satisfaction and organizational commitment directly affect labour productivity. If the present work conditions make some people discontent, there is a risk of increased turnover or absenteeism that can directly affect the profitability of the company.

A way to reduce the risk of poor job performance is to construct a two-way communication between the management and staff members, but also across nationalities. Again, the key is cross-communication between the employees of the firm. By including all the employees in the process of forming the rules and norms of their work environment, more workers are likely to appreciate the company, as their welfare is being taken care of.

If the results from the analysis were wrong, the job stress hypothesis that was strongly supported by the literature would probably have been included in the analysis. If role conflict and role ambiguity were added to the multiple regression of organizational commitment, the model's explanatory degree would most likely have increased. This would also have been the case if perceived competence was included in the model. As there were no hypotheses relating culture and job stress factors, including these factors in the model would most likely not have changed the results of the moderation analysis.

5.8 Limitations

The limitations section points out the implications and necessary improvements of the study. All research has its limitations and model constraints (Saunders, Lewis, & Thornhill, 2009).

One of the most obvious physical limitations to the study is the sample size. As the model in the factor analysis is fairly complex with many variables and items, a minimum sample size is required. The initial model that was based on the literature had a poor model fit as there were not enough respondents to the survey, but it may have been accepted if the sample size had been larger. Furthermore, increasing the sample size reduces the possibility of statistical error and can improve the significance of the regression and moderation results.

The sample also had its limitations with regards to the type of respondents. The respondents consisted of employees from different nations, education levels and work sectors. Even though the hypotheses are rejected based on statistical assumptions, there may be some truth to the hypotheses since the dataset consists of respondents with varied backgrounds. In future research it might be better to emphasise on fewer nationalities or divide the responses into focus groups based on other background information, in order to analyse differences in the international work environment in Norway. For example, there might exist significant disparities between respondents based on education level and not power distance. Focus groups can be more interesting for Norwegian employers who hire employees with a specific background. An analysis with focus groups might be more applicable in real situations, but it is crucial that the new hypotheses based on different information have strong theoretical support.

Another limitation to the study is that the data collection method is unilateral. Instead of using convenience and self-selection sampling, other research methods such as interviews should be included to crosscheck the results (Saunders, Lewis, & Thornhill, 2009). However, this is depending on knowing the population size, which is difficult to uncover with a volatile labour market. By using different data collection methods, the conclusions of the study would be strengthened. On the negative side, doing interviews with a large sample requires large resources, and it may not be the best way to analyse the research question, as it might be difficult to keep track of huge quantities of information.

The results from the analysis are static as the dataset is collected once. Job satisfaction and organizational commitment are based on individuals' opinions, but it is likely that the respondents change their views over time. Individuals' beliefs are variable and prone to shift, and as the study has not been repeated on the same group of people at a later point in time, it signifies a limit to the validity of the research. In addition, new control variables may become significant and relevant further on. This limitation is not critical, as the variables of the model have been carefully selected based on strong theoretical evidence, but should be taken into account.

Furthermore, people from different cultures think and act differently. Some cultures are more outspoken than others, and the results from some respondents may be biased

due to dishonesty or exaggeration, changing the actual truth of the situation. With few respondents of each nationality, the statistical testing is more prone to biases and rejection. It is difficult to overcome biased data, especially since the responses are based on people's feelings. A larger dataset is therefore necessary to avoid such problems.

A different limitation to the study is that one has no knowledge of the number of people who received the survey and ignored to take it. Furthermore, one cannot be completely sure that the sample consists of the target respondents, even though it is specified in the introduction of the survey. Indirectly, this causes missing and biased data, which is impossible to detect.

Finally, the complexity of the model can make it difficult to find significant relationships in a dataset. When too many variables are accounted for, there is a risk of statistical error and wrong interpretation of the results. Even though simple relationships between variables are statistically significant, such as in the regression and moderation analyses, it may not be very realistic. A model should to some degree reflect reality.

6. Conclusion

The purpose of the research was to analyse the relationship between organizational commitment and job satisfaction in multicultural work environments in Norway. A model was generated on the basis of existing theory, and an online survey to gather the appropriate information was released to employees in multicultural workplaces in Norway.

The key findings of the research were inconclusive. Not all of the determinants of job satisfaction and organizational commitment were significant in a model context, as the number of significant variables was reduced from 12 to 6 through a factor analysis. The remaining determinants were significant and correlated positively as hypothesized. Still, the research could not confirm that employees from backgrounds with high power distance had different levels of job satisfaction and organizational commitment than people from cultures with low power distance. There was however a difference in how the supervisor was perceived.

Regardless whether the results of the research are true or false, the employers should consider the workers' job satisfaction and organizational commitment at an individual level rather than group level based on the employees' background. Today, it may seem that the way employers handle their employees in multicultural work environments in Norway is a success, as there are no significant differences in the way people from different cultures feel about their work. However, the job satisfaction and organizational commitment are not static, indicating that the employees' opinions change over time. There will always be a dilemma of satisfying all the employees, and it is therefore important that the management properly integrates all their employees into the company, for example through courses and other means of improving intercultural communication. In the end, it is all about accomplishing the best possible employee job satisfaction and organizational commitment, with the purpose to avoid inefficiency, turnover and absenteeism that can reduce the company's bottom line.

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8. Appendix

8.1 Job Satisfaction and Organizational Commitment Survey

English:

Dear Participant,

I am currently a master student at the Norwegian School of Economics in Bergen who is majoring in International Business. In relation to my thesis I have created a survey with the intent of mapping out employees' opinions regarding job satisfaction and organizational commitment in intercultural work environments in Norway.

As I depend on your answer, I would appreciate very much if you could spend 5 minutes filling out this survey.

The survey consists of 6 parts: General Information, Job Satisfaction and Organizational Commitment, Pay, Supervisor, Psychological Empowerment and Job Stress.

All the questions can be answered on a scale from 1 to 5, from "strongly disagree" to "strongly agree".

All the replies are anonymous, so please be as honest as possible.

If you have any questions, please contact me on email: Imiden@gmail.com

Thank you for your time and effort!

Sincerely,

Louise Iden

Norwegian:

Kjære deltaker,

Jeg er en masterstudent som tar hovedfag i International Business ved Norges Handelshøyskole i Bergen. I forbindelse med masteroppgaven min har jeg laget en undersøkelse der jeg ønsker å kartlegge ansattes synspunkter knyttet til trivsel og engasjement i interkulturelle arbeidsmiljøer i Norge.

Denne undersøkelsen er avgjørende for oppgaven min, og jeg vil derfor sette stor pris på om du kunne bruke 5 minutter av din tid på å svare på noen enkle spørsmål.

Spørreskjemaet består 6 deler: Generell informasjon, trivsel og engasjement, belønningssystem, lederen, selvstendighet og jobbstress.

Alle spørsmålene er på en skala fra 1 til 5, fra "svært uenig" til "svært enig".

Alle svarene er anonyme, så vennligst svar så ærlig som mulig.

For spørsmål kan du kontakte meg på epost:

Imiden@gmail.com

På forhånd tusen takk!

Med vennlig hilsen

Louise Iden

1. General Information

Nationality	Nasjonalitet
Gender <ul style="list-style-type: none"> • Male • Female 	Kjønn <ul style="list-style-type: none"> • Mann • Kvinne
Year of birth	Fødselsår
Highest achieved education <ul style="list-style-type: none"> • Primary School • Secondary School • Bachelor • Master • PhD 	Høyest oppnådd utdannelsesnivå <ul style="list-style-type: none"> • Grunnskole • Videregående/Gymnas • Bachelor • Master • PhD
Field of work <ul style="list-style-type: none"> • Administration, economy or law • Trade, customer service, restaurant or tourism • Health sector • Industry, building, construction or craftsmanship • Farming, fishing or food production • Culture, religion, or sports • Service or safety • Education or research • Transportation, logistics, communication or IT • Oil and gas • Other 	Arbeidssektor <ul style="list-style-type: none"> • Admin./økonomi eller jus • Handel, kundeservice, restaurant eller reiseliv • Helsesektoren • Industri, bygg/anlegg, håndverk eller verkstedarbeid • Jord-/skogbruk, fiske eller matproduksjon • Kultur, religiøst arbeid eller idrett • Service- eller sikkerhetsarbeid • Skole eller forskning • Transport, logistikk, kommunikasjon eller IT • Olje og gas • Annet
Are you a supervisor/manager in your company? <ul style="list-style-type: none"> • Yes • No 	Er du daglig leder/overordnet i ditt firma? <ul style="list-style-type: none"> • Ja • Nei
How long have you been working in the organization?	Hvor lenge har du arbeidet i bedriften?
What is the size of your company? <ul style="list-style-type: none"> • Small (1-19 employees) • Medium (20-99 employees) • Large (100+ employees) • I don't know 	Hvor stor er din bedrift? <ul style="list-style-type: none"> • Liten (1-19 ansatte) • Mellomstor (20-99 ansatte) • Stor (100+ ansatte) • Jeg vet ikke
Do you plan to stay long term in the	Planlegger du å jobbe i selskapet på lang sikt? <ul style="list-style-type: none"> • Ja

company?	<ul style="list-style-type: none"> • Yes • No • I don't know
	<ul style="list-style-type: none"> • Nei • Jeg vet ikke

The scale is from 1 to 5:

1 = Strongly disagree

2 = Disagree

3 = neither agree nor disagree/not sure/undecided

4 = Agree

5 = Strongly agree

2. Job Satisfaction and Organizational Commitment (Porter, Steers, Mowday, & Boulian, 1974; Allen & Meyer, 1990; Brayfield & Rothe, 1951)

I am satisfied with my job	Jeg er fornøyd med jobben min
I find enjoyment in my work	Jeg trives med arbeidet mitt
I consider my job rather interesting	Jeg synes jobben min er ganske spennende
In general, I like my job	Generelt liker jeg jobben min
I am committed to the organization	Jeg føler lojalitet overfor organisasjonen
I want to spend my career within the organization	Jeg ønsker å ha min karriere i organisasjonen
I am confident in my organization's goals and values	Jeg er fornøyd med organisasjons mål og verdier
I feel a strong sense of belonging to my organization	Jeg føler en sterk tilknytning til min organisasjon

3. Pay

Pay Fairness, Pay Size and Promotion (Spector, 1997; Abdulla, Djebarni, & Mellahi, 2011)

I am being paid fairly for the work I do	Jeg blir betalt rettferdig for det arbeidet jeg utfører
My organization has an appropriate salary scale	Min organisasjon har et fornuftig lønnsregulativ
I feel appreciated by the organization when I think about what they pay me	Jeg føler meg verdsatt av organisasjonen når jeg tenker på hva de betaler meg
The payroll (wages, bonuses etc.) in my organization is fair	Inntektssystemet (fastlønn, bonuser osv.) i min organisasjon er rettferdig
My salary is adequate for my living expenses	Lønnen min er tilstrekkelig for mine levekostnader
The periods between pay rises are reasonable	Periodene mellom lønnsøkningene er rimelige
I am satisfied with my chances for salary increases	Jeg er fornøyd med mine muligheter for lønnsøkning
I am very satisfied with my salary size	Jeg er veldig fornøyd med størrelsen på lønnen min
My organization has a clear career path	Min organisasjon har en tydelig karrierestige
My organization has a clear and fair promotion policy	Min organisasjon har en klar og rettferdig forfremmelsespolitikk
I am satisfied with my chances for promotion	Jeg er fornøyd med mine muligheter for forfremmelse
There are many opportunities of promotion in the organization	Det er mange muligheter for forfremmelser i organisasjonen

4. Supervisor

Supervisor Personality and Supervisor Support (Babin & Boles, 1996; Spector, 1997; Abdulla, Djebarni, & Mellahi, 2011)

My supervisor is very competent in doing his/her job	Sjefen min er svært dyktig i sitt arbeid
My supervisor is very pleasant	Sjefen min er veldig hyggelig
I like my supervisor	Jeg liker sjefen min
My supervisor is a great role model	Sjefen min er en god rollemodell
My supervisor supports me	Sjefen min støtter meg
My supervisor stands up for the employees	Sjefen min forsvarer de ansatte
My supervisor cares about the employees' feelings	Sjefen min tar hensyn til de ansattes følelser
My supervisor is available when needed	Sjefen min er tilgjengelig ved behov

5. Psychological Empowerment

Perceived Control, Perceived Competence and Goal Internalization (Menon, 1999)

I can plan my own work day	Jeg kan planlegge min egen arbeidsdag
I can influence decisions taken in my department	Jeg kan påvirke beslutninger som tas i min avdeling
I have the authority to make decisions at work	Jeg har myndighet til å ta avgjørelser på jobben min
I can influence the way work is done in my department	Jeg kan påvirke hvordan arbeidet blir utført i min avdeling
I have the competence required to do my job well	Jeg har kompetansen som kreves for å utføre arbeidet mitt godt
I do an efficient and good job	Jeg utfører et effektivt og godt arbeidet
I have the necessary skills to do my job well	Jeg har de nødvendige ferdigheter til å utføre mine arbeidsoppgaver godt
I am pleased with the quality of the work I do	Jeg er fornøyd med kvaliteten på arbeidet jeg utfører
I am inspired by what the organization is trying to achieve	Jeg er inspirert av det organisasjonen min prøver å oppnå
I am positive about the organization's objectives	Jeg er positiv til organisasjonens mål
I am enthusiastic about my contribution to the organization	Jeg er entusiastisk over mitt bidrag til organisasjonen
The goals of the organization are important for me	Organisasjonens mål er viktig for meg

6. Job stress

Role Ambiguity and Role Conflict (Babin & Boles, 1996)

I know what my responsibilities are	Jeg vet hva som er mitt ansvarsområde
I know exactly what is expected of me	Jeg vet nøyaktig hva som blir forventet av meg
My role in the organization is clear	Min rolle i organisasjonen er klar
My work assignments are clear	Arbeidsoppgavene min er klare
My work is consistent with the expectations of the company	Jeg utfører arbeidet slik selskapet forventer
I have resources and materials to execute assignments adequately	Jeg har nok ressurser og utstyr til å utføre arbeidsoppgavene mine
I always follow the rules and policies in order to carry out my assignments	Jeg følger alltid regler og retningslinjer for å kunne utføre arbeidsoppgavene mine
The work that I do matches my job description	Arbeidet mitt er i samsvar med stillingsbeskrivelsen min