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CORRELATION BETWEEN PERCEIVED INNOVATION AND JOB SATISFACTION

Bachelor's thesis

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I have written this Research paper/Bachelor Thesis independently. Any ideas or data taken from other authors or other sources have been fully referenced.

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(signature of the author and date)

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Introduction

The goal of the thesis is to find out whether a correlation exists between perceived innovation and job satisfaction. To the best of the author's knowledge, there is not a significant body of research that discusses the intersection of these two phenomena. Of the body of literature analyzed, two sources were noticeable: (Park, Tseng, & Kim, 2016) and (Blömeke, Nilsen, & Scherer, 2021). Both of the mentioned studies discovered positive correlations between innovation and job satisfaction. However, both of these studies used actual innovation. In the author's view, based on the literature presented in the review regarding job satisfaction, the perception of innovation is different, but also important.

Job satisfaction is a vital part of a firm aiming to retain its top staff. A satisfied workforce is more likely to give the organization the best work relating to their capabilities, as well as remaining at their job and furthering the organization's goals. However, low job satisfaction leads to opposite results: a less committed workforce that is more likely to do the minimum amount of work required of them and that is more likely of changing jobs, or at least looking to do so. In a competitive marketplace, job satisfaction can prove vital for a firm to provide the best results it can, especially during an era of significant labor shortages in key fields, such as healthcare and STEM research (McGrath, 2021).

Innovation is a key aspect of many modern markets, as it is an important factor in pushing economic development and improving competitiveness (Dahesh, Tabarsa, Zandieh, & Hamidzadeh, 2020). As such, firms have been quick to capitalize on it. However, as innovation causes rapid changes due to relying at least in some part on the Schumpeterian concept of *creative destruction*, it can be difficult for employees to keep up.

The goal of this thesis is to build a case for studying how the perceived innovativeness of a firm affects the morale and job satisfaction of the firm's employees. This aspect of innovation has been scarcely researched and, as such, could unearth a significant finding if the assumptions raised along with the research problem are proven true.

In the first part of the content of the thesis, a literature review was compiled. Its goal was to generate a theoretical background for the concepts of job satisfaction and innovation, along with its perceptions. Additionally, prior research was reviewed to attain information on measurements that have been used for either concept, both historically and in the present day.

In the second part of the study's content, basic research questions and tasks were presented. The problem that the thesis based on this thesis will study has been formulated into a research question. Additionally, a basic framework was developed in order to set a plan for the conducting of empirical research.

To conduct empirical research, the Minnesota Satisfaction Questionnaire short form (Weiss, Dawis, England, & Lofquist, 1967) was adapted (see Appendix A). In the original version, there were 20 questions that strictly regarded various aspects of job satisfactions. The author of this thesis added two questions that concern the employees' perception of the firm's innovativeness. Additionally, five questions were added to add demographic and work-related information, such as years of education, tenure, and organizational level. Those questions enabled the author to take a further look into whether the assumed correlation between perceived innovation and job satisfaction are consistent along groups. Additionally, the answers to these questions could show whether there are differences in perception of innovativeness between different groups within a firm.

Keywords: innovation, job satisfaction, human resource management

1. Literature review

1.1. Job satisfaction

Job satisfaction has long been perceived as an important aspect of workforce management. Already almost a century ago, while working environments and arrangements were drastically different from today, holding high morale among staff and improving their attitudes towards their work was seen as "the central objective of modern labor management and personnel work" (Kornhauser, 1930). As today's economic situation presents more options for employees to choose their place of work, promoting their happiness can be the deciding factor for retainment and acquirement of high-quality staff.

Job satisfaction has been defined in various ways. One of the more general definitions is "the attitudes and feelings people have about their work" (Abdolshah, Khatibi, & Moghimi, 2018). Another definition of the term, which is also the mainly used one in research, focuses upon the positive emotional responses from employees towards their job, which is typically derived from their appreciation for the job or their experience with work in general (Locke, 1976).

Job satisfaction is a highly important part of successful companies. Firms attempt to manage to keep their employees satisfied with their work reap many benefits, such as higher morale, less staff turnover, and smaller costs of training and recruitment, to name just a few. Additionally, these factors contributed to a relationship the employees have with the firm and the industry, along with an increase in behaviour outside of their role to advance the firm. All of these factors contribute to a more productive workforce. As such, it would be beneficial from the perspective of any company to keep their employees' satisfaction high and take active steps in managing their workforce well. (Bowling, 2009)

Based on a body of research such as (Hackman & Oldham, 1976), (Brayfield & Rothe, 1951), (Miller, 1980), and (Ting, 1997), it was concluded that there are many factors that codependently affect an employee's satisfaction with their job. At first thought, the compensation offered for the work and relationships with co-workers and management seem obvious, as they are significant contributors to the issue. However, the level of satisfaction a worker feels regarding their employment is not only limited to these variables. Additionally, a good physical environment of the workplace, recognition given for performing well, and career advancement opportunities available have been shown to have a significant positive impact on the employee's contentment with their work. (Baloch, 2008)

One such factor that definitely affects the satisfaction that one receives from their job can be the stress related to their work. Working in more stressful fields tends to reduce the morale of the employees, as the stress they perceive is uncomfortable and tiring. As such, they will not feel happy about what is causing it. It has been shown that job-related stress and the satisfaction assumed from work are correlated, based on a study of the banking sector conducted in India. (George & Zakkariya, 2015)

The sector of work can also be a variable that affects the job satisfaction of the staff. Here, the sectors are meant as the economic sectors of governmental establishments, private enterprises, and volunteer-based organizations. It was found that, in the Indian banking sector, the people employed at a public sector bank were more satisfied than their peers at two distinctions of the private banks in India, the classic private banks and the ones known as 'new generation' banks. The distinction comes from the nationalization of banks in 1969. In the 1990s, these 'new generation' banks were permitted to be established. The reasons for the difference was not assessed, however, the differences mentioned were the higher technical requirements in both types of private sector banks and the higher job security in their public counterparts. Additionally, connecting to the previous paragraph, job-related stress was lower in public banks, possibly due to the same factors. (George & Zakkariya, 2015)

The societal expectations and norms are also significant in how job satisfaction is perceived. It is believed that, in societies that promote individualistic approaches, such as many Western nations, the career advancement opportunities and the prestige of the job are more important to satisfying a workforce. On the other hand, countries with more collective approaches appreciate job security, group performance, and organizational culture the most. As such, the approach to a multinational enterprise aiming to generate satisfaction among their employees cannot be a general solution. Without adapting the approach in a manner that

takes such cultural differences into account, the effect of any changes could be insignificant or even harmful to morale in specific cases. (Dirani & Kuchinke, 2011)

Another of the many factors that affect the satisfaction an employee feels regarding their job concerns their educational background. More specifically, the more their current job matches the education that they have attained. As they have specialized in a field that they are presumably interested in, they aim to be successful in it. Additionally, a job that fits the education a worker has received generates more congruence between their expectations and the reality of their work. The impact of this was the most significant in the private sector, as even a high salary could not make up for a poor job-education match, unlike in the public and the non-profit sector. (Lee & Sabharwal, 2016)

Low job satisfaction, on the other hand, has been shown to be a contributing factor in an increased staff turnover. Additionally, it has been reported that characteristics such as age, gender, and level of schooling, among others, affect the level of satisfaction an employee feels regarding their job. Research has shown that men, young people, and people with lower levels of schooling are more prone to be dissatisfied with their job, compared to women, older workers, and highly educated people, respectively. (Aguiar do Monte, 2012)

The gender difference regarding job satisfaction is likely to be dependent on the work culture at the firm. It has been found that female workers preferred a friendlier, clan-like organization, while reporting to work in hierarchically structured firms. The responses of male workers at the researched Cypriot banks revealed that they preferred a workplace that is competitive and resembles a market culture. Contrarily to female workers, the male employees reported to work in a firm that fits their preferred culture. (Belias & Koustelios, 2014)

The satisfaction discrepancy regarding age has been considered to be a natural occurrence. As people age, they tend to progress in their careers. Given that they have chosen fields that they are interested in, they would tend to move towards and to the positions that they find the most appealing. This means that the job attributes that they perceive to have (income, tasks, role, etc.) resemble the attributes that they desire from work. Younger professionals usually enter the workforce in entry-level positions. As these are not considered desirable roles, the perceived attributes of such jobs tend to be further apart from the attributes these workers would like their jobs to have. However, aging in and of itself was not concluded to be a contributing factor for improving job satisfaction. (O'Brien & Dowling, 1981)

For effective workforce management, the Maslow pyramid is a useful tool. Essentially, the managers should pinpoint which level their employees are at in terms of the pyramid, and approach them accordingly. This means that the superior should look to offer the employee whatever they are lacking at any time. While this is a highly individualized approach, taking more time than developing a single, structured system to approach all possible issues regarding employee morale, it is worth it. This is exactly due to the individual-based approach: the people feel that their needs at the lower levels are met and the job supports their attempts to fulfil the higher levels. As such, they are more likely to feel satisfied with their job. (Abdolshah, Khatibi, & Moghimi, 2018)

1.2. Perceived and actual innovation

Innovation has been defined in different manners across time. Typically, the definition has been linked to organizational behaviour. One of the earliest definitions of innovation is “the successful utilization of processes, programs or products which are new to an organization and which are introduced as a result of decisions made within that organization” (Rowe & Boise, 1974). One other definition from the period of heightened innovation research in the latter half of the 20th century is “an idea, practice, or material artefact *perceived to be new* by the relevant unit of adoption” (Dewar & Dutton, 1986). The Oslo Manual, considered to be a reference guide for innovation data collection and use, defines innovation as the adoption of new or significantly improved product (good/service) or such production, marketing methods or business practices (Eurostat, 2018).

The history of the concept is as long as history itself. Throughout it, animals of various species have learned new things to ensure the best possible chance of survival, such as exploring new masses of land to better fit a species’ needs or finding new ways to hunt and/or gather to find food more effectively. Technically, one could count the movement of species to dry land as innovation. Additionally, species of plants have evolved to better protect themselves against predators and adapt to their surrounding ecosystem better. While these are not necessarily innovations in the sense of the modern workplace or society, they are nevertheless important historic steps in biology which were brought upon by change. As such, they are the very first noteworthy changes that could loosely be called innovation. Keeping to the modern definition of innovation within the human species, inventions such as the rope or the wheel would be some of the more noteworthy early examples of the phenomenon. (Erwin, 2015)

Innovation research in the form that it is currently known is agreed to have begun around 1930s, with the work of the Austrian-American economist Joseph Schumpeter. Prior

to that, the phrase held a different meaning, such as being a reference to the people who sought to rewrite religious texts in the Middle Age. In between the Middle Age and Schumpeter's work, during the Industrial revolution, the idea was associated with the creation of new products or production methods. Schumpeter worded the modern meanings of *invention*, being the creation of a new good, and *innovation*, which is the implementation of the new idea. Eventually, the term *innovation* overtook the term used for processes of companies that sought to bring new ideas to the market, a distinction which was held by *invention* prior to that. By the 1980s, this turn was solidified and *innovation* was the word mainly used. This also laid the groundworks for modern innovation research, in which the new idea and the actual implementation of it are considered to be separate processes, instead of the previous view, which joined them together under the term *invention*. After that, the modern research of innovation began. (Krippendorff, 2017)

Attitudes towards innovation can vary between people, groups, and countries. At all of those levels, there are different causes to the variation, mostly connected to barriers of use and/or access. At a personal level, these barriers can be caused by education, income, and age, with the biggest factor being a perceived inability to use the new innovation. (Porter & Donthu, 2006).

Innovation is far from being a monolith. Under the rather abstract term, there is a selection of multiple forms of innovation. One of the main categories being referred to when discussing innovation is product innovation. The goal of product innovation is to generate new or improved products, which can be goods and/or services, and the production methods and elements of them. While the former part is self-explanatory (a new product is released), the latter part regarding production methods and elements can mean reduction of cost or improvements of efficient production. Another key part that is often referred to when innovation is discussed is process innovation. This means the firm makes changes to its processes in order to improve output speed and quality. In essence, innovation refers to any changes made to a firm's way of operating with a goal to improve their results and outputs. (Kahn, 2018)

However, innovation is not without its faults. In certain contexts, innovation can be harmful to people, firms, and the larger society as a whole. The negative impacts that it can cause are often the unforeseen side effects of the new idea being implemented, however, sometimes these effects are well-known to the innovating entity and covered up to gain an advantage over the competition. Such side effects can be the environmental issues caused by the change in question. One such example is the innovations done in the financial field, such

as sub-prime mortgages, which were one of the direct causes and worst aggravators of the 2008 financial crisis. Another innovation that has caused a significant by-product has been the invent and development of communication technology and social media. While intended as a novel way to keep in contact with people, it has led to decreased productivity, addiction to smart devices and the Internet, poorer health, and reduced happiness due to a negative effect these products have on their users' social life and mental health. In reference to Schumpeter's *creative destruction*, the term *destructive creation* has been coined to refer to innovations that had unintended negative consequences that potentially outweigh their benefits. (Biggi & Giuliani, 2021)

To account for the faults mentioned, a lot of innovation has turned its sights to making business processes more ethical. Corporate social responsibility (CSR) is becoming important in the eyes of the consumers who wish to support businesses that have a positive influence on the society around it and the world in general (Ferrell, Harrison, Ferrell, & Hair, 2019). Due to these client developments, it is important for firms to adjust their practices towards more ethical, principles-based approach, instead of the classical profit motive dominance.

As of late, the issue of workload has come up as a key aspect of innovative performance. Workload management is important, as there has been found to be an inverted U-shaped connection between the workload of the employees and their innovative behaviour, as they are engaged in their job, but not stressed by it (Montani, Vandenberghe, Khedhaouria, & Courcy, 2020). Additionally, the last decade has seen an increase in the discussion of the 4-day work week, which is considered a possible innovation that would lead to further innovation, as people have more idle time for creativity while reducing the risks of burnout (Pang, 2020).

1.3. Measuring job satisfaction

In order to measure job satisfaction, a framework needs to be used to determine the subjective phenomenon in a quantitative way. Since scientific research into it began in the middle of the 20th century, several such instruments have been developed. However, there is considered to be no ideal set of factors that should be considered in measuring job satisfaction. This is due to the varying applicability of certain factors when examining jobs as a bigger picture. The quality and reliability of any element of job satisfaction is determined by their internal consistency, designated as the Cronbach's alpha, and their test-retest reliability, which is shown by the Pearson correlation test. The aforementioned quality and reliability constitute the responsiveness of a factor, meaning its performance over time. (van Saane, Sluiter, Verbeek, & Frings-Dresen, 2003)

One of the first scientifically accepted tools for measuring job satisfaction was the Minnesota Satisfaction Questionnaire (MSQ), developed in 1967 as a result of the research done in the process of the “Work Adjustment Project” run by the University of Minnesota. It was designed as a method to gain a better overview of work adjustment and job satisfaction. The project had shown that the needs of workers were individual and, therefore, their satisfaction was dependent upon the fulfilment of these personal needs. This meant that the research into job satisfaction could become more individualized and more precise, as this measure looked at the parts that make up job satisfaction, not just the concept as a whole. (Weiss, Dawis, England, & Lofquist, 1967)

The MSQ was developed as a easy-to-use, reliable, and valid instrument to measure job satisfaction. The questions are worded in a manner that matched the fifth-grade English reading capability at the time and the questionnaire was meant to take up to 20 minutes to administer. There were two forms of the MSQ developed: the “long form” and the “short form”. The long form consisted of 100 questions, which measured 20 subscales of job satisfaction, while the short form measured the 20 subscales directly, using one question for each scale. The long form is more thorough, taking between 15 and 20 minutes to properly finish, while the short form was meant to be used within 5 minutes. The test uses a 5-part scale to assess the satisfaction of an employee: very dissatisfied, dissatisfied, neither, satisfied, and very satisfied. The total results are to be summed and an average must be calculated. The authors of the test made the assumption that an employee that receives a percentile score of 75 or above (meaning that the employee’s result is higher than 75% of the received answers), they are considered to have a high degree of satisfaction, while a percentile score of 25 or less would indicate low satisfaction. All of the scores that fall into the middle were considered by the authors to represent a moderate level of satisfaction. 2

The scales that Weiss, Dawis, England and Lofquist (1967) measured were:

1. Ability utilization, meaning how well the job utilizes the person’s abilities;
2. Achievement, or getting a feeling of accomplishment from the job;
3. Activity, or the possibility to keep busy at work;
4. Advancement, or the chances for career development on the job;
5. Authority, or the chance to command other people;
6. Company policies and practices, meaning the application of the firm’s policies;
7. Compensation, or the fairness of the pay in relation to the amount of work done;
8. Co-workers, meaning the relationships with colleagues;
9. Creativity, meaning the possibility to try various methods to complete tasks;

10. Independence, or the chance to work individually;
11. Moral values, which shows whether or not the employee's tasks go against their conscience;
12. Recognition, meaning the praise received for positive work outcomes;
13. Responsibility, or the possibility to judge situations and make decisions;
14. Security, meaning the steadiness of employment at the job;
15. Social service, meaning the ability to do things that benefit other people;
16. Social status, or the prestige of the job;
17. Supervision—human relations, meaning how supervisors interact with their subordinates;
18. Supervision—technical, relating to the competence of the supervisor;
19. Variety, or whether or not the job is tedious;
20. Working conditions, which are not explained in depth.

After the MSQ, many other tools were developed. In the modern day, the Job in General (JIG) scale is one of the most prevalent tools used. It was developed by Ironson, Smith, Brannick, Gibson, and Paul (1989). It has 18 items and is measured on a three-point scale, in which a person agrees, disagrees, or is not sure. In contrast to the MSQ, it measured the employee's responses to statements regarding the job, such as it being pleasant, a waste of time, or undesirable, to name a few. JIG was also noticed as one of the only measuring tools for job satisfaction that could provide information on the responsiveness of factors. However, its construction enables to measure attitudes regarding the job. While useful, it does not give a numeric measure of job satisfaction. (Ironson, Smith, Brannick, Gibson, & Paul, 1989; van Saane, Sluiter, Verbeek, & Frings-Dresen, 2003)

1.4. Measuring innovation

Throughout scientific history, innovation has been measured in a variety of ways. As the study of the concept has evolved throughout time, it also underwent changes in the measures that were considered adequate for it. The history of the used measurements can roughly be divided up into four periods: the first stage, which occurred in the 1950s and 1960s, the second period, which took place in the 1970s and 1980s, the third stage, in the 1990s, and the final stage, considered to be from the 2000s onwards. (Nazli & Mutlu, 2018)

In the first stage, advanced markets saw unprecedented growth and the emergence of new industries, as well as the re-emergence of existing markets brought on by new technologies. During this time, science and technology were beginning to be seen as the likely solutions to any problem, with universities, governments, and for-profit companies

collaborating on discovering new possibilities to improve the society's wellbeing. During this period, research and development (R&D) was the main focus of firms, as there was a linear approach to the innovation process, which assumed that the more resources went into R&D, the more successful innovative outputs would come as an inevitable result. (Rothwell, 2002)

In the second phase, most advanced economies were slowing down in growth, while the competition increased. Many new products were being pushed onto the market; however, they were not as revolutionary, with most of them being based upon already existing technological options. During this time, R&D became seen as a reactive part of the innovation model, which was dominated by research into market needs. Instead, measurements became based upon outputs, such as patents and transformation of quality. (Nazli & Mutlu, 2018; Rothwell, 2002)

During the third period of innovation processes and measurement, inflation increased significantly and market demand saturated, requiring firms and institutions to develop a better understanding of the process of innovation. New developments in the field brought along a more complex system of innovation systems, in which markets and the company's production and idea generation systems were interlinked with multiple other processes. As such, the need was to develop a better understanding of which capabilities of the firm were of interest to the market. Due to that, market surveys and comparisons of innovative capabilities became important measurements for innovative performance. (Rothwell, 2002; Nazli & Mutlu, 2018)

The fourth period of the innovation measurement saw a lot of importance being placed upon systems used at the firm. This entailed a new period of innovation research, with heavy emphasis on optimization. As competition became more global with the improvement of the Internet, firms saw a need to optimize their systems and structures in order to stay competitive. During that time, the measurement techniques started to more closely resemble the Oslo Manual and were becoming available for wider use, instead of narrow industry use. (Nazli & Mutlu, 2018; Gault, 2018)

Perceptions of innovation, however, need to be measured differently as they are not concrete. An innovative company can be perceived as stagnant and vice versa. Considerably, the perception is highly personal. For an organization to be perceived as innovative, they typically must first be perceived to have a learning culture. This means that the employees should feel valued and trusted when raising their concerns regarding operations and processes and be encouraged to offer alternative solutions. While no concrete framework has been developed to measure perceived innovation, scales have typically been used. The scales have

a purpose of measuring the ability of the organization to foster and develop new ideas in the eyes of the employees. (Bates & Khasawneh, 2005)

1.5 Connection between innovation and job satisfaction

Over time, it has been considered whether innovation and job satisfaction are somehow connected to each other, as innovation changes working conditions, proving possibly significant for the employees. Niu (2014) discovered that job satisfaction has a significant, positive correlation with innovative behaviour. In the study, which also analyzed different personality types according to the “Big Five” of personality traits (extraversion, agreeableness, conscientiousness, emotional stability, and openness to experience), all employees displayed more innovative behaviours when their job satisfaction was higher. The only exception was the realization of innovative ideas, in which extraversion and conscientiousness were found to be more important to realization than agreeableness. There was no personality difference noted when observing innovative idea generation or promotion. Additionally, Lambert and Hogan (2010) discovered in their study that perceived innovation of the organization is also correlated to a higher level of job satisfaction among the people surveyed. The survey was conducted on the employees of an unnamed correctional facility in the American Midwest.

Mentioned previously as a possible innovation to come, the 4-day work week is considered to be a significant step towards increasing job satisfaction. In agile software development teams, implementing a 4-day work week was found to have a positive impact on the job satisfaction of the team’s members (Topp, Hille, Neumann, & Mötelfindt, 2022). In a meta-analysis of academic literature, Campbell (2023) also found that the majority of the available literature noted positive effects on job satisfaction. This is just an example of how innovation could be put to use to improve people’s happiness with their work.

As pointed out previously, the inverted U-relationship between workload and innovative behaviour is also noteworthy when discussing the 4-day work week (Montani, Vandenberghe, Khedhaouria, & Courcy, 2020). The relationship could mean that due to the reduction in total workload, people will be more inclined toward innovative behaviours, as they have more time for creative behaviours.

2. Methodology, findings, and discussion

2.1. Methodology

In order to find the answers, a modified version of the Minnesota Satisfaction Questionnaire short form was developed (see Appendix A). In that questionnaire, the original 20 questions were translated into Estonian for use on Estonian firms. Additionally, a question

regarding innovation perception and a question regarding work-life balance were added to measure how innovative the employer is perceived to be by the employee. All questions are scored on a 5-point Likert scale, ranging from very dissatisfied to very satisfied. As is expected with the use of the Minnesota Satisfaction Questionnaire, the mean score of every respondent's 20 job satisfaction questions was taken as their total job satisfaction score.

In order to draw further conclusions based on the respondents in regards to them belonging in various groups, questions about their sex, age, education level, tenure at the company, and organizational level were asked. Based on those questions, it will be possible to see whether these correlations are affected by demographic variables.

Despite the age of the questionnaire, the Minnesota Satisfaction Questionnaire is still considered to be a valid instrument in job satisfaction research. It has been used in research, with a significant body of research since 2022. While some newer measurements, such as the Employee Satisfaction Index, have been developed, they are not as good of a match for external research, as they are meant to be used more as internal measures for firms. Additionally, the Minnesota Satisfaction Questionnaire is in a 5-point Likert scale, which is better for comparison.

To find an answer to this question, the thesis in question must complete some steps in its process. The steps outlined by the author are the following:

1. Identify the firms to invite to participate in the research and contact them;
2. Acquire answers to the questionnaire used for the research;
3. Analyze the answers received to calculate scores of job satisfaction and perceived innovation, looking for a correlation between the two.

The completion of these tasks will make it possible to answer the research question set by the author, which is "Is job satisfaction correlated with perceived innovativeness of the firm?". The author set a hypothesis that job satisfaction has a strong positive correlation with how innovative the employer is perceived to be.

The author chose to analyze the data using SPSS. The questionnaire was sent out to human resources managers of various companies operating in Estonia. The firms were chosen from a list of companies with operations in Estonia that are considered to be innovative. Thus, the sample was purposive, as attaining responses was predicted to be the most reliable from innovative firms. However, during the completion of the study, the contacts chosen were hard to communicate with, as most did not indicate whether or not they would be willing to participate.

The questionnaire was compiled in two languages, Estonian and English. The Estonian questionnaire was tested on acquaintances unfamiliar with the questionnaire to get an estimate of time expenditure necessary for its completion and to verify that wordings are understandable. This testing gave evidence that five minutes is a reasonable time for the questionnaire to be filled out. Some minor changes were made to various wordings of the author's own translations in order to make them more easily understandable to the respondents.

When analyzing final results, the job satisfaction score of the employees must be calculated. The Minnesota Satisfaction Questionnaire determines that the score is to be calculated by finding the average value of all measures of job satisfaction. By calculating this score, it becomes possible to compare job satisfaction as a whole to the level of innovation that the employees perceive, as both inputs are measured on a 5-point Likert scale.

2.2. Results

The questionnaire designed for the thesis was sent out to multiple firms that are considered innovative, thus creating a purposive sample. By the time it was closed down to analyze the results, it had amassed 38 responses. In order to decide the approach to be used for the conducting of the empirical analysis of the questionnaire's responses, a linearity test was conducted. The goal of that was to see whether Pearson's or Spearman's correlation test should be used. The author concluded that the results of the mean score of the MSQ questions about job satisfaction (Mean_JS) and the perception of innovation were not linear and nonparametric (see Figure 1). Thus, the Spearman test was chosen as the measure of correlation to be used.

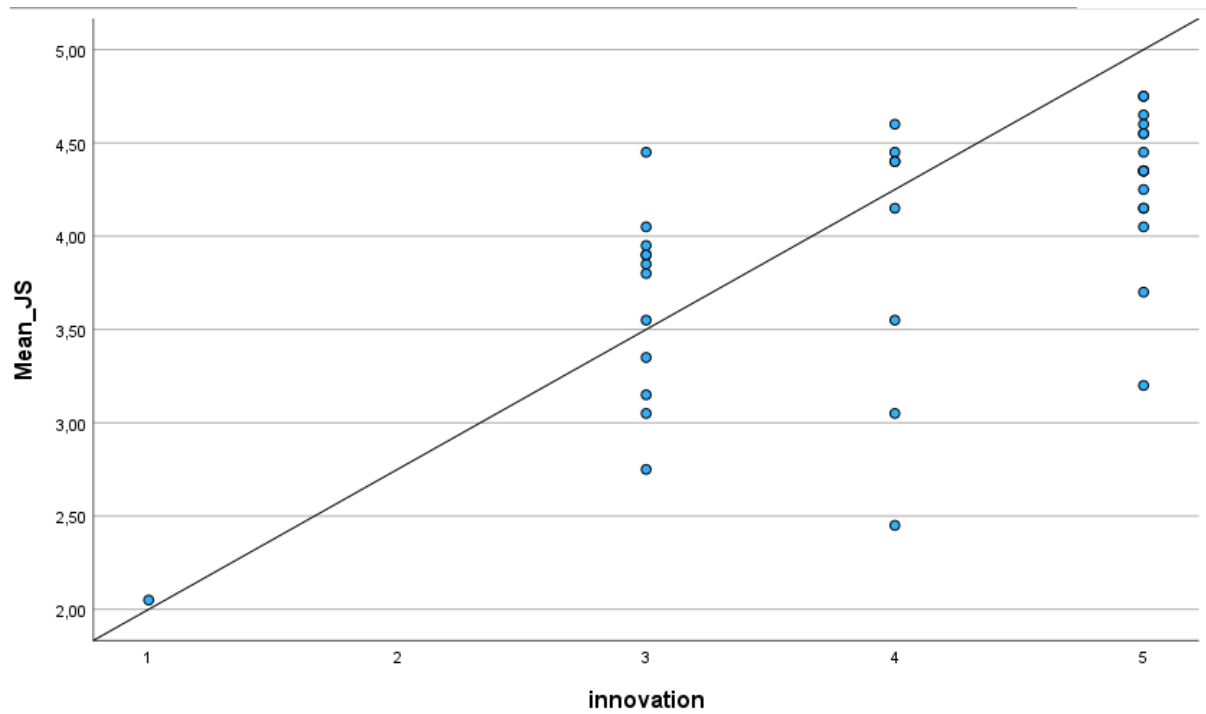


Figure 1. Linearity test between the mean job satisfaction and perception of innovation.

Source: Compiled by author

To assess the hypothesis set out for the research, a Spearman correlation test was done to test for correlation between the mean score of job satisfaction and the level of innovativeness the employee perceived in the firm. As illustrated in Table 1, the test found that there is a significant moderate correlation of 0.579 between the variables. This partially proves the hypothesis set for the study, as there is a positive correlation, however, it is not above 0.7 and is therefore not a strong correlation. These findings are consistent with the literature reviewed.

Table 1

Correlation between job satisfaction mean score and perceived innovation

	Job satisfaction mean	Perceived innovation
Job satisfaction mean	1.000	0.579**
Perceived innovation	0.579**	1.000

Note: "***" indicates statistical significance of correlation at 0.01 level

Source: compiled by author

To go more in-depth with the MSQ analysis, the author decided to analyze the aspects of job satisfaction observed in the questionnaire and their potential correlation with the

innovation perception that was reported. In doing so, the goal was to find out which scales of the MSQ have the most profound impact on the rating that the employee decided to give for their employer's innovation.

The satisfaction with workload reported by the employee was the first scale of the questionnaire to have a statistically significant correlation with reported level of innovation (see Table 2). The two variables had a correlation of 0.412, which was significant at the 0.05 level. This finding is partially explained by Montani, Vandenberghe, Khedhaouria, and Courcy (2020), indicating that people that do not feel overworked report the firm to be more innovative.

Table 2

Correlation between perceived innovation and satisfaction with workload

	Innovation	Workload
Innovation	1.000	0.412*
Workload	0.412*	1.000

Note: "*" indicates that the correlation is significant at 0.05 level.

Source: Compiled by author

The opportunity to work individually did not make a difference in this sample. From the responses, the correlation strength was 0.292, indicating a weak correlation. However, the correlation was statistically insignificant, according to the Spearman correlation test (see Table 3). Similar results occurred when testing for correlation between perceived innovation and the variety of job tasks, with the correlation being weak (0.260) and statistically insignificant (see Table 4). Therefore, it can be said that in the sample used, the opportunity of working individually was largely irrelevant to the perception of innovation.

Table 3

Correlation between satisfaction with opportunity of working individually and perceived innovation

	Innovation	Individual work
Innovation	1.000	0.292
Individual work	0.292	1.000

Source: Compiled by author

Table 4

Correlation between satisfaction with variety of tasks and perceived innovation

	Innovation	Variety of tasks
Innovation	1.000	0.260
Variety of tasks	0.260	1.000

Source: Compiled by author

The satisfaction reported with the prestige of the job was very important to the perception of innovation, according to the responses. The prestige satisfaction had a moderately strong correlation of 0.568 with the perceived level of innovation, with the correlation being significant at the 0.01 level (see Table 5). While this response was not mentioned in the literature used for the theoretical basis of this thesis, it sounds reasonable to assume. However, the author does not believe any significant conclusions can be drawn from this, based on these results alone. It is possible that a follow-up study could clarify the relationship between these two variables.

Table 5

Correlation between satisfaction with job's prestige and perception of innovation

	Innovation	Prestige
Innovation	1.000	0.568**
Prestige	0.568**	1.000

Note: “***” means statistical significance at the 0.01 level.

Source: Compiled by author

Supervisors turned out to be less important to the perception of innovation than would be rational to assume. When testing for correlation between innovation perceived and satisfaction with the supervisor's attitude towards subordinates, the correlation was weak, being at 0.242, and statistically insignificant (see table 6). The competence of the supervisor was slightly more correlated with the perceived innovation, having a correlation coefficient of 0.320, however, the correlation was deemed to be statistically significant, but only very narrowly, as the p-value indicating significance was exactly 0.050 (see Table 7). These results are surprising, as it could be assumed that the supervisor has more of an influence on the perception of the firm by their subordinate employees. However, as this was not the specific focus of the research and the literature analysed does not discuss the role of supervisors in such light, this finding must be confirmed or disproven in future research focusing specifically on the role of the supervisor.

Table 6

Correlation between satisfaction with supervisor's attitude towards subordinates and perceived innovation

	Innovation	Supervisor's attitude
Innovation	1.000	0.242
Supervisor's attitude	0.242	1.000

Source: Compiled by author

Table 7

Correlation between satisfaction with supervisor's competence and perceived innovation

	Innovation	Supervisor's competence
Innovation	1.000	0.320*
Supervisor's competence	0.320*	1.000

Note: "*" indicates statistical significance at the 0.01 level.

Source: Compiled by author

The job's match with the person's principles turned out to be a moderately important factor. When testing for its correlation with innovation perception, there was a moderate correlation at 0.331. It was also statistically significant (see Table 8). This finding is supported by Ferrell, Harrison, Ferrell, and Hair (2019), indicating that the importance of business ethics in the perception of firms is strong.

Table 8

Correlation between satisfaction with job's match with principles and perceived innovation

	Innovation	Supervisor's competence
Innovation	1.000	0.331*
Supervisor's competence	0.331*	1.000

Note: "*" indicates statistical significance at the 0.05 level.

Source: Compiled by author

Satisfaction with the stability of employment proved to be correlated with perceived innovation, with the correlation coefficient being a moderate 0.312 (see Table 9). However, the p-value of significance was slightly over 0.050, thus rendering the result statistically insignificant. Thus, in this sample, the correlation between these variables is incidental. As it was not the main aim of this study and the literature analysed provided no information on its

possible importance to innovation, further research should be conducted to find whether the aspects are related.

Table 9

Correlation between satisfaction with stability of employment and perception of innovation

	Innovation	Supervisor's competence
Innovation	1.000	0.312
Supervisor's competence	0.312	1.000

Source: Compiled by author

Perception of innovation turned out to not be significantly correlated with the satisfaction regarding the opportunity to help others (see Table 10). The correlation coefficient between the variables was 0.151, indicating a weak correlation. Additionally, the p-value was 0.365, being well over the significance level of 0.05. Thus, the author concludes that satisfaction with the opportunity to help other people has no importance when discussing the perception of innovation. The same applies for the correlation that perceived innovation has with the employees' satisfaction to manage other workers, which has a correlation coefficient of 0.128, while being even less statistically significant, at p-value of 0.443 (see Table 11).

Table 10

Correlation between satisfaction with opportunity to help others and perception of innovation

	Innovation	Opportunity to help
Innovation	1.000	0.151
Opportunity to help	0.151	1.000

Source: Compiled by author

Table 11

Correlation between satisfaction with opportunity to manage others and perception of innovation

	Innovation	Opportunity to manage
Innovation	1.000	0.128
Opportunity to manage	0.128	1.000

Source: Compiled by author

Similarly to the previous two, the job-skill match satisfaction of the employee had no bearing on their perception of innovation. According to the Spearman test of the results, the two had a very weak correlation of 0.045, while the p-value was 0.788, significantly higher than the required significance limit (see Table 12). As such, the author assumes that this scale has no importance when discussing individual job satisfaction aspects in the context of perceived innovation.

Table 12

Correlation between satisfaction with job-skill match and perceived innovation

	Innovation	Job-skill match
Innovation	1.000	0.045
Job-skill match	0.045	1.000

Source: Compiled by author

The satisfaction employees felt regarding coherence and application of internal rules turned out to have be significantly related with their perception of the employer's innovativeness. The Spearman test resulted in the variables having a correlation coefficient of 0.478, which turned out to be statistically significant at the 0.01 level (see Table 13). While the impact of some other undetermined variables was insignificant, the satisfaction with rules is moderately strong and statistically significant. Therefore, this result should be tested on a larger sample to find a more generalizable connection between the two. Additionally, establishing the causal relationship between the two would significantly help with interpreting the findings.

Table 13

Correlation between satisfaction with coherence and application of internal rules and perceived innovation

	Innovation	Coherence and application of internal rules
Innovation	1.000	0.478**
Coherence and application of internal rules	0.478**	1.000

Note: "***" indicates significance at the 0.01 level.

Source: Compiled by author

The effect of an employee's satisfaction with their salary and its accordance with the job done on their perception of the firm's innovativeness was noticeable. The survey responses revealed a moderately strong correlation between the two, which was significant at 0.01 level (see Table 14). While this is not backed by literature, the author assumes the correlation may be caused by higher needs and expectations typically present at more innovative firms. To confirm this assumption, further research is required.

Table 14

Correlation between satisfaction with salary and its accordance with the job and perceived innovation

	Innovation	Salary and its accordance
Innovation	1.000	0.487**
Salary and its accordance	0.487**	1.000

Note: "***" indicates significance at 0.01 level

Source: Compiled by author

Career development opportunities were important for innovation perception as well. In the author's analysis, the correlation coefficient was 0.434 and it was revealed to be statistically significant, with a p-value of 0.006 (see Table 15). As this issue was not covered in the literature used for the theoretical background, nor was it the focal point of this study, the establishment of a causal relationship is not possible. However, the author assumes that the result could be caused by the likely tendency of more innovative people to develop as far as possible in their professional careers. As such, an employee that is satisfied with the career development options, they ought to perceive their organization as more innovative.

Table 15

Correlation between satisfaction with career development possibilities and perceived innovation

	Innovation	Career development opportunities
Innovation	1.000	0.434**
Career development opportunities	0.434**	1.000

Note: "***" Indicates significance at 0.01 level.

Source: Compiled by author

The employees' satisfaction with their freedom to use their own judgement also had a moderate impact on the innovation perception reported in the survey. The variables had a correlation coefficient of 0.410, which indicates a moderately strong correlation, which was proven to be significant at the 0.05 level (see Table 16). The author's assumption for this phenomenon is that innovative performance requires ability to use one's judgement. Therefore, the more the employees can do that, the more innovative the organization should seem to them.

Table 16

Correlation between satisfaction with freedom to use judgement and perceived innovation

	Innovation	Freedom to use judgement
Innovation	1.000	0.410*
Freedom to use judgement	0.410*	1.000

Note: "*" indicates significance at the 0.05 level.

Source: Compiled by author

Employees' satisfaction with their independence at work did not, rather surprisingly, seem to have a noticeable effect on their sense of the firm's innovativeness. The correlation coefficient between the two was calculated to be 0.280, which would indicate a weak correlation (see Table 17). However, the p-value was too large at 0.089, which meant that the relationship was statistically insignificant.

Table 17

Correlation between satisfaction with independence at work and perceived innovation

	Innovation	Independence at work
Innovation	1.000	0.280
Independence at work	0.280	1.000

Source: Compiled by author

Work conditions appeared to contribute to the perception of innovation in the employees surveyed. In the responses, a correlation with the coefficient of 0.404 appeared (see Table 18). It also turned out to be statistically significant at the 0.05 level. Due to this aspect not being the focal point of the study, further research is needed to verify the connection and its importance in managerial situations.

Table 18

Correlation between work conditions and perceived innovation

	Innovation	Work conditions
Innovation	1.000	0.404*
Work conditions	0.404*	1.000

Note: “*” indicates significance at the 0.05 level.

Source: Compiled by author

A respondent’s relationships with their co-workers proved to be noteworthy when observing correlations with innovation perception. The two had a correlation coefficient of 0.409, which was significant at the 0.05 level (see Table 19). The author assumes that this correlation exists, as cooperation is often thought to enable creativity. However, it was not focused upon in depth in this study, which means that to affirm the relationship between the factors and their importance, further research is required.

Table 19

Correlation between relationships with co-workers and perceived innovation

	Innovation	Relationships with co-workers
Innovation	1.000	0.409*
Relationships with co-workers	0.409*	1.000

Note: “*” indicates significance at the 0.05 level.

Source: Compiled by author

The acknowledgement and appraisal for good work was also noticeably related to the employees’ attitudes regarding innovativeness in the firm. Statistical analysis revealed that the two variables were moderately correlated, with a coefficient of 0.489 being statistically significant at the 0.01 level (see Table 20).

Table 20

Correlation between satisfaction with acknowledgement and appraisal for good work and perceived innovation

	Innovation	Acknowledgment and appraisal for good work
Innovation	1.000	0.489**
Acknowledgment and appraisal for good work	0.489**	1.000

Note: “***” indicates significance at the 0.01 level.

Source: Compiled by author

The sense of achievement the respondents felt from their job also possessed a noticeable relationship with their judgement regarding the firm’s innovative behaviour. The variables were moderately correlated, with a coefficient of 0.426 which was shown to be statistically significant on the 0.01 level (see Table 21). This relationship is likely caused by a higher intrinsic satisfaction level, caused by feeling fulfilled by the job.

Table 21

Correlation between sense of achievement and perceived innovation

	Innovation	Work conditions
Innovation	1.000	0.426**
Sense of achievement	0.426**	1.000

Note: “***” indicates significance at the 0.01 level.

Source: Compiled by author

Lastly from the scale questions, work-life balance was added to find out whether that affects either the MSQ mean score or the perceived innovation score. However, it had no significant correlation with either, having a 0.233 coefficient with innovation and 0.221 with job satisfaction, both of which were statistically insignificant (see Table 22). This finding slightly conflicts the finding regarding workload, but as this study was not repeated after the findings, no definitive cause can be established.

Table 22

The correlations between work-life balance, job satisfaction, and perceived innovation

	Work-Life Balance	Job satisfaction	Innovation
Work-Life Balance	1.000	0.221	0.233
Job satisfaction	0.221	1.000	0.579**
Innovation	0.223	0.579**	1.000

Note: “***” indicates significance at the 0.01 level.

Source: Compiled by author

From analysing the demographic variables gathered from the questionnaire, no difference in innovation perception emerged based on sex. The mean score of 21 female respondents was 4.05 and the mean score of 17 male respondents was 4.06. However, women had a slightly higher standard deviation in innovation perception (see Table 23).

Table 23

Comparison of mean of innovation perception score by sex

Sex	Mean	N	Std. Deviation
Female	4.05	21	1.117
Male	4.06	17	0.889
Total	4.05	38	1.012

Source: Compiled by author

The organizational level also proved to be noticeable. There were no responses from senior management, thus, only responses from regular employees and middle managers could be analysed. The comparison of means between the two groups showed a difference in both the perceived level of innovation and the size of the standard deviation (see Table 24). Based on this finding, it can be assumed that, within this sample, a higher organizational position causes a higher perception of innovative behaviour. However, as the sample is quite small, it is likely not valid for generalization.

Table 24

Comparison of means of innovation perception score by organizational level

Sex	Mean	N	Std. Deviation
Regular employee	4.03	30	1.066
Middle management	4.13	8	0.835
Total	4.05	38	1.012

2.3. Discussion and ideas for further research

Based on the results, it can be concluded that, within the sample, the job satisfaction score of the employees had a moderately strong, statistically significant positive correlation with the perceived level of innovation. This partially proved the hypothesis set by the author, as the positive correlation was found, however, it was not strong enough to be called a strong correlation. This is also consistent with the findings of Lambert and Hogan (2010), who found the correlation in staff of a correctional facility. However, such research was not found by the author on the private sector. Thus, this study aided to fill the research gap of this correlation outside the public sector.

Previous research known to the author has used the complete score of job satisfaction to make its conclusions when connecting innovation and job satisfaction. However, in this study, the individual scales that make up job satisfaction were also studied. Thus, it is possible to see which particular elements of job satisfaction are correlated with the perception of innovation of the respondent. Due to the limitations of the study, mainly ones regarding sample size, further study is recommended to affirm or reject the findings and establish stronger causal relationships between the factors.

A limitation pointed out in the latter stages of the completion of this thesis was that the questionnaire used for the completion of the study is lopsided towards job satisfaction. In further research, the skewedness of the questionnaire could be eliminated by adding more questions focusing on various aspects of innovation and how they are perceived by the employees.

This thesis' empirical study is based on a fairly small, purposive sample. In the future, it would be beneficial for further development of scientific literature if a follow-up study could use a larger sample. Preferably, a probability sample could also be used. However, as organizations would need incentives for participation (which turned out to be a difficulty when completing this thesis), the study should be backed by a stronger academic presence,

such as the university or a public sector research entity. In further research, it is also possible to look deeper into studying the parts of job satisfaction that were shown to be correlated with the perception of innovation, as doing that on a probability sample would give generalizable results by scale of satisfaction.

The last suggestion that the author makes is that, in possible follow-up studies, the researchers could try to ascertain whether there is a causal relationship between job satisfaction and the perception of innovation, as this study was solely concerned with finding the correlation. The knowledge of the causal relationship can be important, as one way, the innovative image of a firm may improve the satisfaction that its employees feel while at work. In that case, the firm would benefit from making its image more innovative. If the causal relationship were to be the other way around, it would mean that the employees that are satisfied with their employer perceive them to be more innovative, thus not having the same potential for branding and perception design.

Conclusion

Job satisfaction is an important facet of successful organizations. Satisfied employees are more likely to stay committed to the organization, to go beyond their basic job duties, and to reduce costs via reducing the need for training costs and mistakes that would concur with the hiring of new employees (Bowling, 2009). As such, it is reasonable for a firm to be interested in keeping up the morale among its staff.

Another driving force behind entrepreneurial success is innovation. Via innovation, new products come to market, new ways of doing things are invented, and once expensive technological advancements will be made attainable for everyone (Kahn, 2018). Through innovating, items such as telephones have evolved from heavy boxes mounted to walls to small pieces of plastic, glass, and metals that fit in our pockets. Without such developments, life would be a lot less convenient and serious issues would go unfixed.

As both concepts are important to further a firm's goals, objectives, and performance, it is paramount to understand how they interact. Without understanding the concepts of job satisfaction and innovation, it could be easy to imagine them as mutually exclusive extremes that need to be balanced in the middle to make a successful company. However, research has found that innovation and job satisfaction are positively correlated, as people enjoy working more in innovative organizations (Niu, 2014).

However, innovation is a phenomenon that is hard to measure exactly, even for experts. Many different measurements are accepted and they are not identical. To add to the problem, employees of a firm will not be keeping up to date on the exact statistics of the

firm's measurable innovation performance. Therefore, the perception of innovation is more important than the actuality of innovation in the firm.

Due to these findings, supported by previous academic literature, the author decided to research whether the perception of innovation has any correlation with the job satisfaction reported. This led to the establishment of a hypothesis that assumed the existence of a strong, positive, and statistically significant correlation between job satisfaction and the perceived level of innovation. To test the hypothesis and conduct the empirical study, a questionnaire was created to measure the two concepts in question. The job satisfaction elements were taken from the Minnesota Satisfaction Questionnaire (MSQ) (Weiss, Dawis, England, & Lofquist, 1967).

In empirical research, the author analyzed the correlation of job satisfaction and perceived innovation. The aspects had a moderate, positive, and statistically significant correlation, partially proving the author's hypothesis. Additionally, the author analyzed the individual scales of job satisfaction in the MSQ to find whether some aspects had a more significant impact on innovation perception than others. From that sub-study, job prestige, salary, career development opportunities, acknowledgement/appraisal, and feeling a sense of achievement from the job were found to be the most significantly correlated to the perception of innovation in the firm.

This study was, to the best of the author's knowledge, the first of its kind in Estonia, aiming to connect innovation and job satisfaction. Additionally, the author did not manage to find any studies that measured the individual scales of job satisfaction, not the concept as a whole. Therefore, a research gap was filled. Nonetheless, the thesis had its limitations. It could be argued that the study was based on a lopsided questionnaire. Additionally, the sample used for the completion of the survey was purposive and too small for broad generalizations (38 people). These limitations have been accounted for by the author, with possibilities for future research laid out to eliminate possible errors caused by them.

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Appendices

Appendix A. Research questionnaire and grading system

In this group of questions, you are required to evaluate how satisfied you are with the named aspect of your job. The scale for answers ranges from 1 (very dissatisfied) to 5 (very satisfied).

1. Workload
Töökoormus
2. Opportunity to work individually
Individuaalse töötamise võimalus
3. Variety of job tasks
Töökohustuste varieeruvus
4. Prestige of the job
Ametikoha lugupeetavus
5. Supervisors' attitude towards subordinates
Ülemuste suhtumine oma alluvatesse
6. Competence of the supervisor
Ülemuse pädevus
7. The work does not go against my principles
Töö on kooskõlas mu põhimõtetega
8. Stability of employment
Töökoha stabiilsus
9. Opportunity to help others
Teiste aitamise võimalus
10. Opportunity to manage other employees
Teiste juhendamise võimalus
11. Job-skill match
Töökoha vastavus võimetele ja kvalifikatsioonidele
12. Coherence and application of internal rules
Töökoha sisekooraeeskirja mõistetavus ja rakendamine
13. Salary and its accordance with the job
Palk ning selle vastavus tehtud tööle
14. Career advancement opportunities
Karjäärilase arengu võimalused
15. Freedom to use judgment
Otsustamisvabadus
16. Independence at work
Iseseisvus tööl
17. Work conditions
Töötingimused

18. Work-life balance

Töö ja eraelu tasakaal

19. Relationships with co-workers

Läbisaamine kolleegidega

20. Acknowledgement and appraisal for good work

Tunnustus ja tasu hea töö eest

21. Feeling of accomplishment from the job

Tööst tulenev saavutustunne

Please rate how innovative the company you work for is. The scale for answers ranges from 1 (not at all innovative) to 5 (very innovative).

1. Innovativeness of the company

Ettevõtte innovatiivsus

Evaluation criteria:

- Very dissatisfied
-
-
-
- Very satisfied
- Ei ole üldse rahul
-
-
-
- Olen väga rahul

As a final part, I request you to give some additional information about yourself. That information will be used to draw further conclusions regarding job satisfaction in comparison of different demographic groups.

1. Sex:

- Male;
- Female.
 - a. Sugu:
 - Mees;
 - Naine.

2. Age:

- a. Vanus:

3. Highest educational level completed

- Primary education;
- Secondary education/Vocational education;
- Bachelor's degree/Polytechnic qualification;
- Master's degree;
- Doctorate degree;
 - a. Kõrgeim lõpetatud haridusaste:
 - Põhikool;
 - Keskkool/Kutsekool;

- Bakalaureus/Rakenduskõrgharidus;
 - Magister;
 - Doktorantuur.
4. Tenure at current company (in years)
- a. Tööstaaž praeguses ettevõttes (aastates):
5. Which organizational level are you on?
- Regular employee;
 - Middle manager;
 - Senior manager.
 - a. Millisel organisatsioonilisel tasandil Te töötate?
 - Tavatöötaja;
 - Keskastmejuht;
 - Tippjuht.

Resümee

Käesolev uurimus vaatles seost töörahulolu ning ettevõttes tajutud innovatiivsuse vahel. Autor viis uurimuse läbi küsitlusena, millele vastas 38 töötajat erinevatest Eestis tegutsevatest ettevõtetest. Küsimustik, mida autor kasutas, põhines Minnesota ülikoolis välja töötatud *Minnesota Satisfaction Questionnaire*'l (Minnesota töörahulolu küsimustik, mida tuntakse ka lühendi MSQ all).

Uurimuse esimeses osas analüüsis autor varasemat teaduskirjandust, mis puudutas innovatsiooni tajumist ja töörahulolu. Samuti analüüsis autor töid, mis on varasemalt sarnasel teemal tehtud. Kirjanduse analüüsimise eesmärk oli anda lugejale vajalik akadeemiline kontekst empiirilise uurimuse mõistmiseks.

Uurimuse teises osas selgitas autor täpsemalt meetodikat, mida empiirilise uurimise teostamiseks kasutati. Samuti on teises osas välja toodud empiirilised tulemused, mis autor oma küsitluste vastuste kujul sai. Nende tulemuste kohta on koostatud analüüs ning analüüsitud seoseid ja mõjusid on arutletud. Autor seadis hüpoteesi, et töörahulolu ja ettevõtte tajutava innovatiivsuse vahel on tugev, statistiliselt oluline seos.

Uurimuse tulemused näitasid, et töörahulolu ja töötajate poolt tajutud innovatiivsuse vahel oli mõõduka tugevusega, statistiliselt oluline seos. See tähendab, et autori hüpotees sai osaliselt kinnitust. Lisaks analüüsis autor MSQ erinevaid rahulolu aspekte, mille käigus selgus, et kõige tugevam seos tajutud innovatiivsusega oli hea töö eest antud kiitusel ja preemial, tööst tuleneval saavutustundel, ametikoha prestiižil ja palgal.

Lisana on autor välja toonud täpse küsimustiku, mida selle uurimuse raames kasutati. Küsimustik koosneb 22 töörahulolu ja innovatsiooniga seotud küsimusest ning viiest vabatahtlikust demograafilisest küsimusest, mis võimaldasid teha täpsemat analüüsi erinevate gruppide erinevustest nii töörahulolu kui tajutud innovatsiooni osas.

