

PRODUCTIVITY IN LONG-TERM REMOTE WORK DURING THE COVID-19 PANDEMIC

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Abstract

The COVID-19 pandemic forced companies and employees around the world to move to remote work regardless of their preferences and abilities. In Finland, the recommendation to work remotely, issued by the Government, was in force with varying extent in various parts of Finland from March 2020 until the end of February 2022.

Remote work is often considered more productive than office-based work. In this research, employees' perceptions of their productivity level in long-term remote work are researched. The research gained information on whether employees evaluated that the level of their productivity, meaning how efficiently they have accomplished tasks, had changed during the remote work period that had lasted for over a year in the midst of the COVID-19 pandemic. The other goal is to determine which means could be used to improve employees' productivity in long-term remote work.

Seven office workers were interviewed for this research. The interview recordings were analyzed by thematic analysis. Themes of the factors that have an influence on productivity were named social contacts; support, with sub-themes of choice, and trust; the ability to concentrate and tolerate, with a sub-theme of time management; and technical issues. The results are compared against two previous theories: the social capital theory, and the three basic psychological needs identified by self-determination theory. The results contribute to these theories by offering compatible viewpoints.

Upon the analysis, it was discovered that the long-term remote work during COVID-19 pandemic did not have a major impact on employees' productivity. Most interviewees evaluated that it had stayed on the same level than before the pandemic. The significance of the disadvantages of remote work did not particularly increase during the year.

In terms of ways to improve the employee productivity, various ways were found, such as focusing on team cohesion, the length of the working days, and ergonomics. In addition, it is beneficial to let employees themselves choose how often they work remotely.

Keywords remote work, COVID-19, productivity, efficiency, long-term

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COVID-19 pandemia pakotti yritykset ja työntekijät ympäri maailmaa siirtymään etätöihin heidän mieltymyksistään ja kyvyistään riippumatta. Suomen osalta, hallituksen asettama etätyösuositus oli voimassa vaihtelevin kestoin eri puolella Suomea maaliskuusta 2020 alkaen helmikuun 2022 loppuun asti.

Etätöitä pidetään yleensä tuottavampana kuin toimistolla suoritettavaa työtä. Tässä tutkimuksessa tutkittiin työntekijöiden käsityksiä heidän tuotteliaisuudestaan pitkäaikaisessa etätöissä. Tutkimus keräsi tietoa siitä, arvioivatko työntekijät, että heidän tuottavuutensa, eli se kuinka tehokkaasti he suorittavat työtehtäviään, oli muuttunut yli vuoden kestäväällä etätyöjaksolla COVID-19 pandemian aikana. Toinen päämäärä oli määrittellä millä keinoin työntekijöiden tuottavuutta pitkäaikaisessa etätöissä voisi parantaa.

Tutkimusta varten haastateltiin seitsemää toimistotyöntekijää. Haastattelutallenteet analysoitiin temaattisen analyysin avulla. Teemat, joilla on vaikutusta tuottavuuteen nimettiin seuraavasti: sosiaaliset kontaktit, tuki, alateemoinaan valinnanmahdollisuus sekä luottamus; kyky keskittyä ja kestää, alateemoinaan ajanhallinta; sekä tekniset asiat. Tuloksia verrataan kahteen aikaisempaan teoriaan: sosiaalisen pääoman teoriaan, sekä itseohjautuvuusteorian tunnistamiin kolmeen psykologiseen perustarpeeseen. Tulokset tukevat näitä teorioita tarjoamalla yhteensopivia näkökulmia.

Analyysin myötä huomattiin, että pitkäaikaisella etätöskentelyllä koronapandemian aikana ei ollut merkittävää vaikutusta työntekijöiden tuottavuuteen. Useimmat haastateltavat arvioivat, että se oli pysynyt samalla tasolla kuin ennen pandemiaa. Etätöiden huonojen puolien merkitys ei erityisesti kasvanut vuoden aikana.

Työntekijöiden tuotteliaisuuden parantamiseen löytyi useita keinoja, kuten keskittyminen tiimin yhtenäisyyteen, työpäivien pituuteen ja ergonomiaan. On myös hyödyllistä antaa työntekijöiden itse valita kuinka usein he työskentelevät etänä.

Avainsanat etätö, COVID-19, tuottavuus, tehokkuus, pitkäaikainen

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1 Introduction

Advantages of working remotely are said to include job satisfaction, improved productivity, and organizational loyalty (Bailey & Kurland, 2002). Companies were forced to move to remote work in a magnitude never experienced before, as novel strain of coronavirus started to spread in late 2019 and early 2020 all around the world (Smite et al., 2022). If before the COVID-19 pandemic remote working was mostly an employee's own choice and was practiced infrequently, the pandemic forced employees to remote work regardless of their preferences and abilities (George et al., 2021; Wang et al., 2021). Not all organizations and employees were prepared to shift to total remote work so rapidly. Some companies were even compelled to rethink their whole business model (Carroll & Conboy, 2020).

In this thesis employees' perceptions of their own productivity in remote work are researched. The focus is on the level and changes of employee productivity in long-term remote work covering a period of over a year during the COVID-19 pandemic. In literature review, the social aspects, and the role of technology in remote work are looked into as well. The theoretical framework of this thesis consists of two previous theories: the social capital theory, and the three basic psychological needs identified by self-determination theory (SDT). Social capital theory focuses on the relations between and among people, and since social capital is said to facilitate productive activity, it was considered interesting to study how this theory would comply with the results of this research (Coleman, 1988; McLure Wasko & Samer, 2005). According to SDT, when basic psychological needs – autonomy, competence, and relatedness – are satisfied, it may result in psychological well-being, improved performance, and positive work-related attitudes (Ackerman, 2021; Deci & Ryan, 2008; Gagné & Deci, 2005). This theory, too, was chosen for the theoretical framework to see how it relates to the analysis of perceived productivity in long-term remote work.

The current COVID-19 pandemic may be diminishing already but preparing for future pandemics that involve lockdowns is beneficial since the likelihood of pandemics have increased (Karesh et al., 2012 in Russo et al., 2021). That is why it is valuable to research multiple aspects of remote work now so that the insights could be utilized during possible similar situations in the future.

1.1 Motivation and Background

During COVID-19 pandemic, remote work has become common practice (Agostoni, 2020). In order to prevent the spreading of the disease, face-to-face meetings of people had to be minimized and movement restrictions were issued (Navickas et al., 2022; Russo et al., 2021). The recommendation to work remotely in Finland was in force with varying extent in various parts of the country, starting from March 2020 (Government Communications Department et al., 2020). The national recommendation was issued by the Government to end at the end of February 2022 (Ministry of Finance, Ministry of Social Affairs and Health, 2022).

There are many terms to describe the work arrangement of working outside of an office: telework, mobile work, flexible work, virtual work, distributed work, and remote work, among others (Allen et al., 2015; O'Neill et al., 2014). In this thesis, term remote work is used, since it is generally regarded a broad term that covers all forms of work conducted outside the central office (Allen et al., 2015). Remote working has often been considered more productive than office-based work (Agostoni, 2020; Grant et al., 2013). In this thesis it is examined whether the employees evaluate themselves more productive or less productive after a year of continuous remote work that has been mandatory. Droussiotis (2004, p. 40) defines productivity as ‘a performance measure including effectiveness and efficiency’. Effectiveness means achieving goals, and efficiency means achieving these goals with minimum resources and maximum output (Droussiotis, 2004). Similarly, Bosua et al. (2013, p. 11.2) define productivity as ‘a measure of how effectively and efficiently assigned tasks are completed’. Correspondingly, in this thesis, the definitions described by Droussiotis and Bosua et al. are followed, and productivity is used mainly in the meaning of describing how efficiently employees have accomplished tasks, in their opinion.

Earlier research about remote work has mostly been conducted at situations where remote work has been practiced infrequently and by some employees only, who were working remotely mostly by their own choice (George et al., 2021; Wang et al., 2021). When remote work is required and mandatory – such as during COVID-19 pandemic – the results might be very different. Moreover, the pandemic situation and restrictions might have caused additional stress to employees, which might have an influence on productivity as well. Ralph et al. (2020) acknowledge that working from home during COVID-19 pandemic is very different than ‘normal’ working from home due to unique conditions such as travel restrictions, business closures, and feelings of isolation and stress.

Multiple studies about remote work have been conducted both before and during the current COVID-19 pandemic. Before the pandemic, Allen et al. (2015) stated, that extensive amount of working remotely can lead to lower job performance because of isolation. According to Golden and Veiga (2005), remote work satisfaction increases the more an employee works remotely, but after a certain point the challenges of remote work seem to outweigh the benefits, and satisfaction starts to decrease. Once the pandemic begun, companies and employees were required to carry out significant and fast adjustments (George et al., 2021). Studies conducted during year 2020 have found that majority of employees felt that they were able to be productive while working remotely during the first months of the pandemic, and that the productivity of their work had either improved or maintained at the same level than before the pandemic (Auntie Solutions Oy, 2020; BCG, 2020; Blomqvist et al., 2020).

It seems that Finnish employees have been mostly contented of their work arrangements during the pandemic. According to research conducted by EVA in fall 2021, 96 % of Finns that had worked entirely remotely during the pandemic, wanted to continue working remotely – totally or part-time – also after the pandemic. On the other hand, of the Finns that worked at the office during the pandemic, 70 % wanted to continue working at the office (EVA, 2021). By further researching how the long period of continuous remote work has affected employees' perceptions of their work productivity, organizations can get insights on how to combine remote and office work in the future, when the pandemic is over. Determining the means companies could use to improve employees' productivity, can be beneficial for companies in the future as well.

1.2 Research Problem

To study the productivity of long-term remote work during the pandemic, the focus is on below research questions:

Research question 1: *How has long-term remote work affected employees' work productivity during the COVID-19 pandemic?*

Research question 2: *How could productivity in long-term remote work be enhanced?*

The views and opinions of seven office workers, who worked remotely from home for a long period of time during the COVID-19 pandemic, were researched by conducting semi-structured interviews. Employees from both private sector and public sector organizations were interviewed.

1.3 Aims of the Study

The goal of this thesis is to research employees' thoughts considering their remote work period during the pandemic and especially focusing on how they felt their productivity had changed during that time. Whether it had improved or decreased, and what were the main reasons for these possible changes. This research examines whether various factors, such as enforced use of remote communication technology, or the duration of working days, had an impact of perceived productivity. The results are hoped to offer valid standpoints for companies to consider in the future when evaluating their remote work policies.

The thesis gains information on whether employees themselves evaluate and feel that the level of their productivity has changed during the year of mandatory remote work. The other goal is to determine which means companies could use to improve their employees' productivity in remote work.

1.4 Structure of the Thesis

This thesis begins with introduction of the topic and the research problem. The theoretical part of this study consists of a literature review about remote work and productivity, social aspects, and the role of technology. In addition, the benefits and disadvantages of remote work are discussed. Literature published both before and during the current pandemic has been delved into. At the end of the literature review, the theoretical framework of this research is introduced. The social capital theory, and the basic psychological needs identified by self-determination theory are used as a framework for this research.

The empirical part of the thesis is a qualitative study of whether the duration and permanence of remote work has had an influence on employee productivity in their opinion. Interviews have been conducted and thematic map has been created based on the interview analysis. The findings of this research are discussed by different viewpoints. The results are compared against the theories mentioned above, as well as existing literature. At the end of the thesis, ideas for future research are proposed.

2 Literature Review

The COVID-19 pandemic has had an effect on the working lives of many employees, since many were forced to shift from office to working in personal home spaces (Lal, 2020). In this chapter, previous literature regarding various aspects of remote work is looked into.

The connection between remote work and productivity is discussed, as well as the roles of technology and social contacts in remote work setting. The various benefits and disadvantages concerning remote work are looked into. In addition, the theoretical framework of this thesis is introduced. The theoretical framework consists of social capital theory, as well as the three basic psychological needs identified by self-determination theory.

2.1 Remote Work and Productivity

Many employees have evaluated that remote working is more productive than office-based work, due to factors such as privacy, and small number of interruptions (Agostoni, 2020; Grant et al., 2013). However, opposite views exist as well, especially concerning the length of the remote work period. Some employees have stated they feel remote work is productive for a limited duration only, or that they feel more productive at the office overall (Grant et al., 2013). Before the pandemic era, Allen et al. (2015) stated, that the professional isolation caused by extensive amount of remote work can sometimes lead to lower job performance.

Ralph et al. (2020, p. 4931) define productivity as ‘the amount of work done per unit of time’, however they admit that in some cases it is not simple to quantify how much work has been done. As mentioned earlier in chapter 1.1, in this thesis productivity is mainly defined as a measure of how efficiently employees have accomplished tasks in their opinion, following the definitions described by Droussiotis (2004) and Bosua et al. (2013).

Findings in a study by Golden and Veiga (2005) indicate that there is a threshold in the amount of remote work, after which the challenges of remote work seem to outweigh the benefits. They discovered that remote work satisfaction increases the more a worker works remotely, but after a certain point satisfaction starts to decrease until it settles for a plateau (Golden & Veiga, 2005). According to the results of a study by Blomqvist et al. (2020), in the beginning of the pandemic, 44% of the respondents stated their productivity had increased in remote work, and six months later the percentage had increased to 52% (Blomqvist et al., 2020). Some long-term studies concerning remote work have been conducted during the pandemic. Smite et al. (2022) surveyed perceived changes in

productivity between office work before the pandemic and working remotely during the pandemic. They found that overall, there had not been significant changes in the perceived productivity, yet there were individual differences between respondents (Smite et al., 2022).

Ralph et al. (2020) recommend that companies should not expect normal productivity level from employees during pandemic. Pressuring employees might affect their wellbeing and cause lower productivity, hence supporting employees is a better approach (Ralph et al., 2020). Intense monitoring might not be the optimal choice to increase productivity either. Savolainen et al. (2021) say that closely monitoring employees' workdays might have a negative impact on their wellbeing while not improving their productivity. On average, granting a higher degree of autonomy is beneficial for employees, yet it might be stressful for those employees preferring structure (Russo et al., 2021).

Full-time remote work might not be the optimal choice. Diab-Bahman and Al-Enzi (2020) found out in their study that when given an option to work partly remotely and partly at-office – which is called a hybrid model – majority of employees felt they can perform most of their work expectation. Finding the right ratio between office and remote work might be challenging. According to Allen et al. (2015), it would be pivotal to find the right amount of time to work remotely since too little or too much time might not produce desired results. According to Grant et al. (2013), workers not motivated to work remotely may underperform and need external motivators, such as money, to reach the level of productivity they would at the office. It seems evident, that flexible options are valued, and employees prefer to alternate between home and office work (Singh & Kumar, 2020).

COVID-19 pandemic has had an effect on the functionality of many professions. Shoukat et al. (2021) studied productivity of researchers and whether the pandemic has had an influence on it. According to their results, in order for researchers to maintain their productivity, regular meetings with supervisors and colleagues are needed (Shoukat et al., 2021). COVID-19 pandemic has had an impact on researchers' productivity in that it has affected regular meetings, hampered data collection, and caused physical and mental health problems (Shoukat et al., 2021). Since the pandemic is an exceptional situation, anxiety may arise. According to a study by Toscano and Zappala (2020), concern about the coronavirus as well as social isolation may cause stress and lead to decreased productivity. Furthermore, Singh and Kumar (2020) say, that during the first months of the pandemic, most employees were able to maintain balance between work and personal life while remote working, but as the phase prolonged, many employees started to feel alienated from their work community in the absence of socialization and informal meetings. On the contrary, according to

Blomqvist et al. (2020), throughout the first six months of the COVID-19 pandemic, an average of 69% of the respondents considered themselves very productive. Overall, conflicting views exist concerning the relation of productivity and remote work.

2.2 The Role of Technology in Remote Work

Technology can be considered an essential component of remote work. Remote working as a working model was developed within the evolvement of information and communication technologies (Tanpipat et al., 2021). Bosua et al. (2013) point out that the availability and use of adequate technology is needed for productive remote work. Since remote workers often work alone at their homes, tools are needed for them to be able to communicate with their counterparts. Because of current technology, it is possible to arrange virtual meetings, share documents, and make video calls (Agostoni, 2020). Still, technology alone might not be enough to maintain well-being of remote employees. Even though technology eases communication between remote workers, it still does not equal face-to-face connection (Savolainen et al., 2021).

During the pandemic, remote work became an essential form of work, hence many companies have been compelled to bring new information technology to use, or even rethink their whole business model (Carroll & Conboy, 2020). Even employees had different starting points in terms of technology when COVID-19 pandemic began. In a study conducted at the early stages of the pandemic, it was found that the respondents considered technological issues as the biggest disadvantage of the unplanned shift to remote work (Ozimek, 2020). Employers could reduce the employees' feeling of isolation with means such as video conferences, and remote coffee breaks (Toscano & Zappala, 2020).

Technology poses various aspects that have an influence on remote work. According to Herath and Herath (2020), these include issues such as Internet accessibility and bandwidth availability, home devices and security issues, work-life balance, lack of engagement caused by feelings of disconnect, and information overload. Deficiency or malfunctions of technical equipment may lead to lower remote work productivity: a study conducted by Navickas et al. (2022) in Slovakia found that insufficient technical equipment had caused that, unlike in many other countries, there was no significance increase in labour productivity in Slovakia during the pandemic.

A substantial element describing remote work is that to get the job tasks done and to establish a connection to the office and colleagues from outside the office, information and

communication technologies (ICT) are used (Berling et al., 2022). It is unlikely that the use of technology would decrease in the future. According to Carroll and Conboy (2020), companies have to normalize technology-driven practices since they will be part of ‘the new normal’ from now on. Technical support is something that the organizations need to think about. Bayrak (2012) states that for a telecommuting company to be effective – and for its employees to remain productive – technical issues must be fixed urgently, and IT support and training needs to be available. According to Toscano and Zappala (2020), companies should offer training on the use of the technical equipment as well as to provide easy ways to contact technical support.

2.3 Social Contacts in Remote Work

The pandemic forced people to reduce the amount of their social contacts and gatherings, in working life and during free time as well. Working remotely at home might feel lonely, since at the office most employees have co-workers and colleagues to interact with during their working days. Toscano and Zappala (2020) found a connection between social isolation and stress, as well as confirmed that social isolation has an effect on remote work satisfaction and employees’ perceptions of productivity. Gigi and Sangeetha (2020) examined the impact of remote working in the IT industry and found that the biggest factor in job satisfaction among remote workers, is communication. Managers need good communication skills as well. Staples et al. (1999) state that a supportive remote manager has to be a good communicator, a good listener, and offer support for employees and team building.

When discussing about remote work, it is important to remember the significance of trust. Trust between manager and employee is pivotal for functional remote work (Bosua et al., 2013; Staples, 2001). When employees work remotely in their homes, out of sight, it might be challenging for some managers to be confident that the employees indeed do work and get tasks done. Managers’ unwillingness to allow employees to work remotely might be caused by their concerns of not being able to monitor remote employees’ work (Allen et al., 2015). According to Bosua et al. (2013), managers with more traditional management style are often more prone to experience distrust towards the productivity of remote work. Paying attention to this way of thinking is important, since according to Staples (2001), trust has a major impact on perceptions of performance, job satisfaction, and job stress.

Feeling of social isolation can increase when face-to-face interaction with colleagues is not possible (Lal, 2020). Full-time remote work can be lonely especially if there are a lot

of social contacts at the office normally. In remote work, it is important to maintain social relationships, since loneliness affects both perception of productivity and remote work satisfaction (Toscano & Zappala, 2020). According to study by Blomqvist et al. (2020), dispersion between colleagues affect the important social support and workplace friendships. It is important to try to maintain social contacts while working remotely. This can be achieved by scheduling regular formal and informal meetings with colleagues and designating time for family, friends, and hobbies (Russo et al., 2021). Anxiety may increase when trying to cope with the stressors caused by the pandemic, and this anxiety may be more intense if an employee does not receive enough social support (Savolainen et al., 2021).

According to research by Russo et al. (2021), introverted employees have experienced more negative feelings during the lockdown than the extroverts, due to the fact, that contacting colleagues has been more challenging than normally and has required more proactivity than at an office. Workplace-related stress can be reduced with workplace resources, such as social support (Berling et al., 2022). Naturally, in remote work environment the availability of such social support is usually more limited. Remote workers should not be left coping alone, though. Access to support should be arranged by companies also for the employees that work outside of the office (Berling et al., 2022).

2.4 Benefits and Disadvantages of Remote Work

Various studies have outlined benefits and disadvantages of remote work. Agostoni (2020) highlights that remote work can promote productivity and work-life balance, or cause inefficiency and demotivation. Flores (2019) lists the main benefits of remote work for employees' perspective as having more flexible hours, better work-life balance, and being responsible of their own schedules. For the main challenges of remote work, Flores (2019) includes communicating with others, technology-related issues, and finding information. Interestingly, some remote workers consider balancing the demands of work and personal life, and organizing their time as a challenge, even though for some employees they are the biggest advantages of remote work (Flores, 2019). Similarly, Gigi and Sangeetha (2020) say that the work-life balance can be seen either as an advantage, or a disadvantage. According to their research, the advantages of remote work include productivity, flexibility, and not having to commute, while the disadvantages include isolation, decreased employee visibility, and lack of relationship with colleagues (Gigi & Sangeetha, 2020).

There are ways organizations can use to maintain their employees' wellbeing. Banita Lal (2020) instructs, that managers should enable frequent online meetings as well as both formal and informal interaction between homeworkers and their colleagues. She underlines that companies should not 'forget' their homeworkers because they are less visible, but instead the managers need to be available for the homeworkers to contact them, especially if the homeworkers are new to the company (Lal, 2020). Wang et al. (2021) propose that if employees get social support from their employers during remote work, they will experience less procrastination, loneliness, and work-home disruption. Employers should enable effortless communication between managers and employees. Clear communication has a positive relation to job performance (Droussiotis, 2004).

Many researchers have recommendations on how to reduce the downsides of remote work. Agostoni's (2020) advice for remote work includes, among others, deciding a timetable and respecting it; creating deadlines; minimizing distractions; and maintaining contact with colleagues. On the other hand, Lopez-Leon et al. (2020) recommend creating routines, setting-up a functional home office, being responsible, and avoiding excessive multitasking. Russo et al.'s (2021) suggestions for minimizing distractions in remote work are creating a specific work area, and communicating about non-disturbing working hours with family members living in the same household. Naturally, not every employee handles the pressure of remote work similarly.

Rehberg et al. (2020) suggest, that the sense of normalcy during remote workdays can be maintained by arranging regular – weekly and daily – meetings to discuss progress, upcoming plans and emerging issues. In addition, they address the importance of chatting with colleagues via instant messaging, about both work-related and other issues (Rehberg et al., 2020). According to George et al. (2021), employees' stress might be reduced by giving them control of arranging their own working hours and tasks within them, which is not easy for all managers but can eventually lead to better work results.

Workplace culture can easily be damaged when teams are scattered physically (Rehberg et al., 2020). Managers have an important role in building a sense of culture in these occasions by, for example, assigning various roles to the team members to ensure the team's energy level and time management (Rehberg et al., 2020). Overall, the ability to work remotely promotes individual wellbeing and leads to more productive employees (Bosua et al., 2013). Many employees feel that remote work increases their life quality by enabling them to spend more time with their families (Gigi and Sangeetha, 2020). They feel that remote work offers them flexibility, yet there are disadvantages such as network issues

which can affect their productivity (Gigi and Sangeetha, 2020). The hybrid model provides the possibility to administer these disadvantages by alternating between on-site work and remote work. To ensure a good balance between remote and office working in the hybrid model, and to gain the benefits from both of these working styles, companies are advised to create guidelines with their employees (Appel-Meulenbroek et al., 2022).

Researchers expect, that after the COVID-19 pandemic finally does end, most office workers will continue to work remotely more often than before the pandemic (Appel-Meulenbroek et al., 2022). Appel-Meulenbroek et al. (2022) define, that employees' choices to work at the office or at home are affected by factors such as how crowded the office is expected to be, and the availability of quiet working spaces. The employees' personal attributes have an influence as well. According to Appel-Meulenbroek et al. (2022), highly educated males with a full-time, communication-related job and a short commute were more prone to prefer working at the office, while females working in a part-time, individually focused work and a long commute preferred remote working.

The connection between well-being and productivity means that the state of individual's well-being can impact productivity either positively or negatively (Russo, et al., 2021). Remote work has been valuable for companies during the pandemic to maintain employees' work ability (Berling et al., 2022). In the regards of the future, a major challenge for companies seems to be to create a workplace design specific to the company, personal competencies, and work-related stressors (Berling et al., 2022). To increase employees' individual productivity and well-being, as well as the overall performance of the company, optimal work environment is essential (Appel-Meulenbroek et al., 2022).

2.5 Theoretical Framework

In this chapter, the key points of two previous theories – the social capital theory and the self-determination theory (SDT) – are introduced. At the end of this thesis, on the theoretical implications chapter, the thematic map created based on the interviews is compared against these two theories. These particular theories were chosen for the theoretical framework since according to Gagné and Deci (2005), fulfilling the basic needs identified by SDT, would eventually lead to improved job performance. Social capital, too, is said to facilitate productive activity (Coleman, 1988). For those reasons it was considered particularly interesting to see how they would comply with the themes affecting productivity, which were found within this research.

Social capital theory pertains to social relations. Social interaction ties, trust, norms, reciprocity, identification, shared vision and shared language all are various aspects of social capital (Kankanhalli et al., 2005; Chiu et al., 2006). According to Coleman (1988), every social relation and structure facilitates social capital.

Social capital operates in social structures – the relations between and among people – which is what differentiates it from the other forms of capital (Coleman, 1988; McLure Wasko & Samer, 2005). However, just like the other forms of capital, social capital facilitates productive activity, since a group with comprehensive trust and trustworthiness is able to accomplish more than a group without them (Coleman, 1988).

Several standpoints for defining social capital exist. Coleman (1988) defines three forms in social capital: obligations and expectations that depend on trustworthiness, information-flow capability, as well as norms and sanctions. On the other hand (as presented in figure 1), Nahapiet and Ghoshal (1998) distinguish three dimensions in social capital: the structural, the relational, and the cognitive. Chiu et al. (2006) share the views of Nahapiet and Ghoshal (1998) by summarizing that the structural dimension includes social interaction, the relational dimension includes trust and reciprocity, and the cognitive dimension includes shared vision and language.

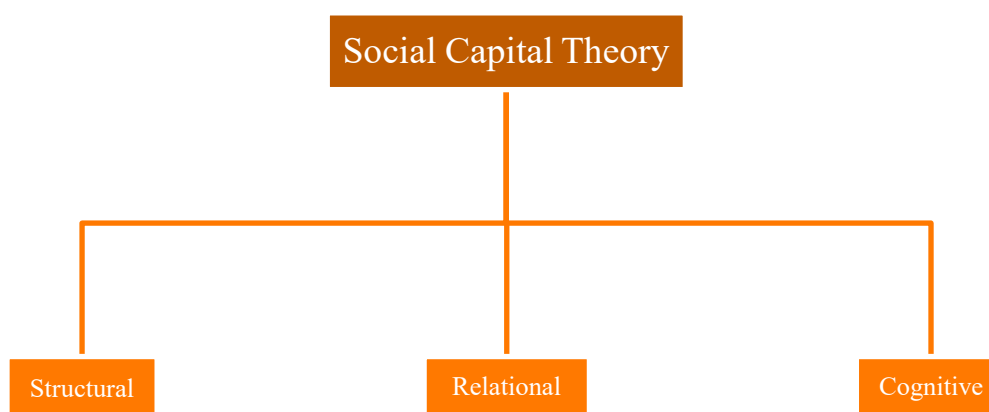


Figure 1. Three dimensions of social capital theory (Chiu et al., 2006; Nahapiet & Ghoshal, 1998)

Reciprocity is one of the key elements in social capital theory: when a person does something good for another person and trusts the other one to reciprocate it in the future, it creates expectation and obligation (Coleman, 1988). Furthermore, Preece (2002) sees social capital as the glue holding communities and social networks together, and its key ingredient is trust. In a workplace, it is not just the employees that can create social capital. Managers, too, have a meaningful role in promoting trust and cooperation (Preece, 2002).

Measuring social capital can be difficult. Widén-Wulff and Ginman (2004) state that it is challenging to measure and value social capital since even though measures do exist, it is not likely to attain one single measure. The results and benefits might be seen in the long run. Widén-Wulff and Ginman (2004) say that long-term benefits such as corporate well-being and innovativeness can result from investing in social values.

There are various views on whether Internet has an influence on social capital. According to Uslaner (2000), using the Internet does not produce trust nor dissipate it. Both online and offline communities can be strengthened by communication and collaboration (Preece, 2002).

Self-determination theory (SDT) concentrates on motivation, development, and wellness, with its focus on types of motivation, instead of merely the amount of motivation (Deci & Ryan, 2008). According to SDT, for a person's well-being, performance, and creative problem solving, the quality of motivation is more important than the total amount of it (Deci & Ryan, 2008). Ryan and Deci (2000) have created a self-determination continuum, which consists of amotivation – the state of no intention to act – on the other end, ranging through different stages of extrinsically motivated behavior, to intrinsic motivation – acting for inherent satisfactions – on the other end of the continuum. According to Ryan and Deci (2000), extrinsic motivation means performing to attain a separable outcome, while intrinsic motivation means performing for the inherent satisfaction of the activity. The distinction between autonomous motivation and controlled motivation is salient in self-determination theory (Gagné & Deci, 2005). With autonomy people have a sense of volition and choice, while when controlled, people feel pressure or compulsion (Gagné & Deci, 2005).

Deci and Ryan (2008) have found that psychological well-being requires satisfaction of **basic psychological needs**. The three basic needs of a human (presented in figure 2) are autonomy – the need to be in control of one's own behavior and destiny; competence – the need to master the tasks one feels important; and relatedness, which means the need to be connected to others (Ackerman, 2021).

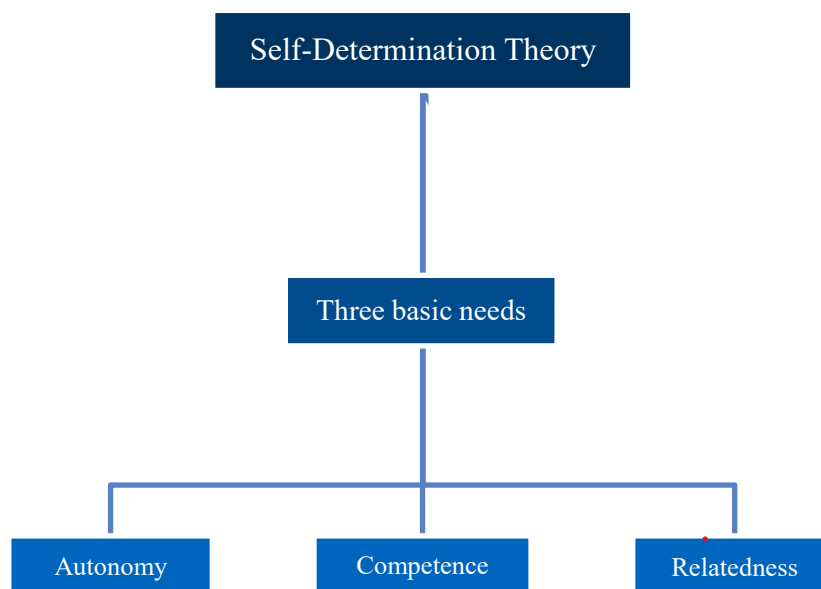


Figure 2. Three basic needs identified by self-determination theory (Ackerman, 2021; Deci & Ryan, 2008)

According to SDT, satisfaction of these basic psychological needs generates intrinsic motivation and internalization (Gagné & Deci, 2005). The three basic needs are valuable in working life as well. Gagné and Deci (2005) note that fostering the satisfaction of the three basic needs at a workplace will eventually result in valuable outcomes, such as effective performance, job satisfaction, and positive work-related attitudes.

3 Methodology

This chapter summarizes the methodology of this research. The empirical part of this research consists of semi-structured interviews of seven office workers who worked remotely from home for a long period of time during the COVID-19 pandemic. The chapter presents how the data was collected and analyzed.

3.1 Research Settings

To be able to thoroughly research employees' views regarding the research topic, interviews was chosen as the research method. For this research, seven persons were interviewed. Table 1 represents the interviewees and specifies whether they work for private sector or public sector organizations.

Table 1: The Interviewees and Their Roles in Organizations

Interviewee	Role	Organization
<i>Interviewee 1</i>	Assistant	Organization A (public sector)
<i>Interviewee 2</i>	Specialist	Organization B (public sector)
<i>Interviewee 3</i>	Specialist	Organization B (public sector)
<i>Interviewee 4</i>	Game Artist	Organization C (private sector)
<i>Interviewee 5</i>	Sales Director	Organization D (private sector)
<i>Interviewee 6</i>	Art Producer	Organization C (private sector)
<i>Interviewee 7</i>	Coordinator	Organization E (private sector)

The seven persons interviewed work in five distinct organizations. Two of these are public sector organizations, and three operate in the private sector. Since the number of interviewees is small, it was considered especially important to protect their identities. Because of that, it was decided to only specify if they work in private sector or public sector organizations. The fields of the organizations, or the departments the interviewees work for, were chosen to be mentioned in random order. The interviewees work at a game company, a manufacturing company, a government agency, in development of cleaning services, and in invoicing.

At the time the interviews took place – summer 2021 – the interviewees had worked remotely during the COVID-19 pandemic for roughly one year, ranging from 11 months to 15 months, approximately. All interviewees were still working fully remotely, except

Interviewee 6, who had returned to office work a couple of months before the interview took place, still working remotely one or two days a week, however. At least three interviewees were planning to return partially or entirely to office work during fall 2021 as per their employees' instructions, or their own desire, if the pandemic situation would not get worse.

Before the pandemic had begun, all interviewees had worked partly or entirely at an office. Four of the interviewees (1, 2, 5 and 7) had had regular remote workdays every week, approximately one to three days each week. One person (Interviewee 6) had worked remotely more rarely, less than one day a week. Two persons (Interviewees 3 and 4) had never worked remotely before the pandemic begun.

3.2 Methodology

The empirical part of this thesis consists of a qualitative case study with semi-structured interviews of seven office workers, who worked remotely for a long continuous period during the COVID-19 pandemic. A case study focuses on one unit, such as a group or an event (Saldana et al., 2011).

The criteria for interviewees were that they are office workers, who before the pandemic worked partly or entirely office-based, and during the pandemic they would have worked remotely for a long, continuous period, preferably for at least one year. Additionally, this research focuses on employees, not managers. Interviewees with subordinates were asked to answer the interview questions in the role of an employee of their organization, not as a manager.

To acquire interviewees, I contacted some friends and acquaintances that met the interviewee criteria. In addition of asking them to become an interviewee, I requested them to contact other potential interviewee candidates as well, such as their colleagues or friends. This technique is called snowball sampling, and it is a popular method in qualitative research (Parker et al., 2019). The researcher uses their social networks to reach initial contacts – seeds – to start sampling momentum which can capture an increasing chain of participants (Parker et al., 2019). As a result, seven people agreed to be interviewed, five of which I knew beforehand. Two interviewees were previously unfamiliar for me.

The interviews were conducted in June 2021. All interviews were conducted remotely, as a videoconference, using online communication platform Microsoft Teams. Interviewing remotely was chosen as the method mainly because of the pandemic situation, to comply with the recommendations of social distancing and avoiding unnecessary contacts with other

people during the pandemic. In addition, it was time-saving and convenient since no travelling time was required. The language of the interviews was Finnish except for one interview which was conducted in English. The interviews were recorded, transcribed, and analyzed.

Before the interviews, I sent information about the practicalities of the research and the research topic by email to every interviewee. At the beginning of each interview, I re-explained the topic and purpose of the thesis to the interviewee. Next, we discussed how the interviewee's title and employing organization would be addressed in this thesis to maintain their anonymity. After that, the recording was started, and the actual interview questions were asked. Average length of an interview (recording) was approximately 30 minutes while average total length of a Teams meeting was approximately 45 minutes.

The format of the interviews was semi-structured. In qualitative business research, semi-structured interviews are a commonly used method (Eriksson & Kovalainen, 2008). In a semi-structured interview, there is an outline of topics or themes, however in each interview it is possible to change the order of the questions and their wording (Eriksson & Kovalainen, 2008). This gives flexibility to the interview process and enables delving deeper into essential topics in each interview. Semi-structured interviews were chosen, since according to Eriksson and Kovalainen (2008), the main advantage of semi-structured interviews is that while the interviews are informal in nature, they still provide systematic and comprehensive material. The main frame of each interview was the same, however some questions varied between interviews. Some questions were modified, added, or deleted. Especially after the first interviews I added a couple of questions and altered the order of the questions slightly to improve the functionality of the upcoming interviews. The order of the questions was sometimes altered during the interviews in accordance with the topics emerging in the interviewees' replies.

In a few of the interviews, there were some minor technical problems, that is the sound did break every now and then. In most cases this was only a single word here and there, but in one interview there were longer and repetitive sound breaks due to unstable Internet connection. These breaks did not affect analyzing the results, however, since I was able to clarify the missing parts with the interviewee during the interview.

The interviewees were made anonymous by giving them codenames as Interviewees 1, 2, 3, 4, 5, 6 and 7. Recognizable information in the interview transcripts was anonymized to retain anonymity.

3.3 Data Analysis

After the interviews, the interview recordings were transcribed and analyzed. The method used was thematic analysis, which according to Braun and Clarke (2006, p. 79) is ‘a method for identifying, analysing and reporting patterns (themes) within data.’ The method is widely used in qualitative data analysis (King & Brooks, 2018). The method was chosen, because it is possible to use thematic analysis within various theoretical frameworks, since it is not affiliated to any (Braun & Clarke, 2006).

In thematic analysis, codes are generated from the transcribed data, and eventually the codes are sorted into themes (Braun & Clarke, 2006). The analysis was done manually in Microsoft Word. In the process, citations from the interview transcripts were sorted according to their topics, and were given preliminary titles, keeping in mind the topic of the thesis as well as the research questions. Several reassessments and refining were done to define the codes and to be able to sort them into themes. The codes were created inductively. This means that the approach was data-driven, and it was not attempted to fit the codes into a pre-existing frame (Braun & Clarke, 2006).

Based on the found themes, a thematic map was created. According to Braun and Clarke (2006, p. 82) ‘a theme captures something important about the data in relation to the research question, and represents some level of *patterned* response or meaning within the data set.’ King and Brooks (2018) define a theme as something recurrent and characteristic in an interview transcript or another research text.

The thematic analysis map generated from the interview transcripts is represented in figure 3, in chapter 4.

4 Findings

In this section, the results of the research are presented. Upon thematic analysis of the interview transcripts, themes were found of factors that have an influence on how productive remote workers perceive themselves. Themes were identified and named. Total of four themes and three sub-themes were found. They are presented below in figure 3. The themes were named, respectively, **social contacts**; **support**, with sub-themes of choice, and trust; the **ability to concentrate and tolerate**, with a sub-theme of time management; and **technical issues**.

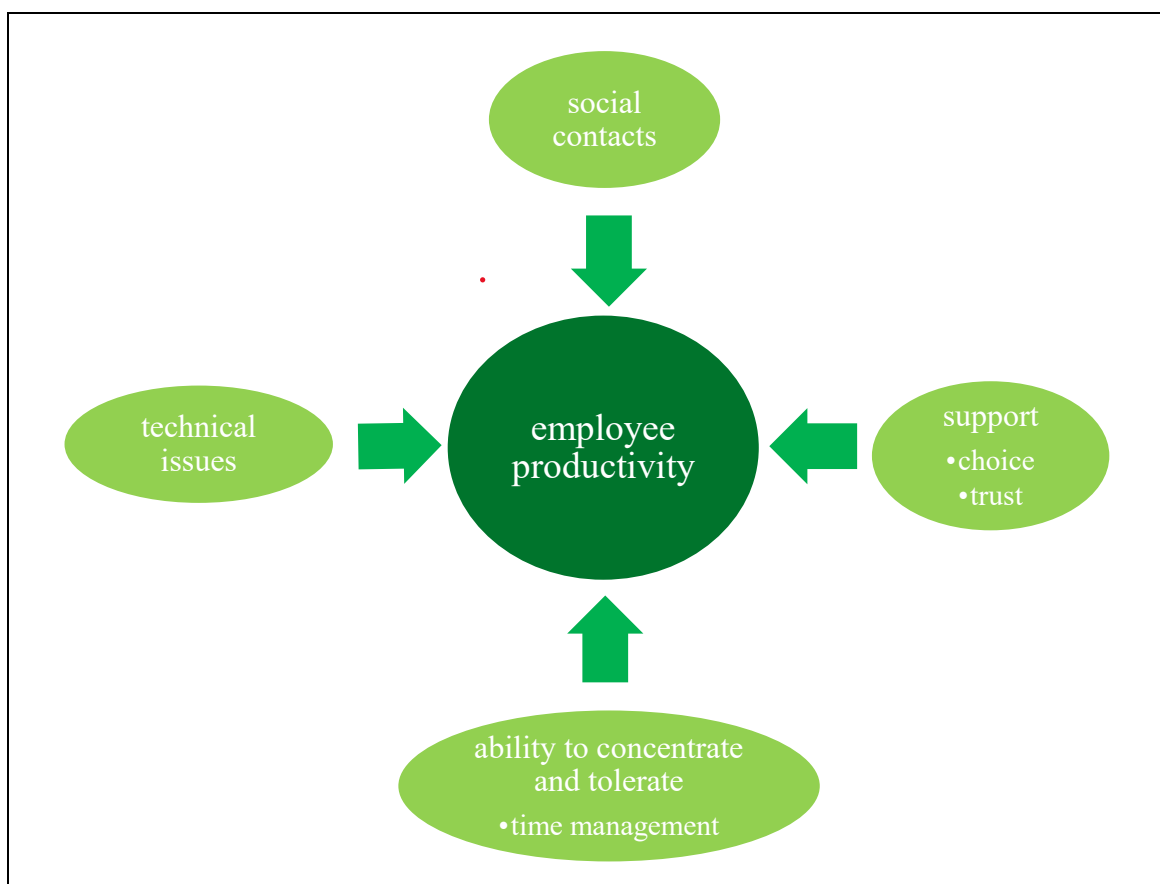


Figure 3. Thematic analysis map: Factors that have an influence on employee productivity.

In the following chapters, the results are discussed in accordance with the identified themes. In the **social contacts** chapter, it is discussed how the interviewees' need for social encounters and conversations with colleagues have impacted their work. In the **support** chapter, the focus is on the interviewees' need to get support from their managers and co-workers concerning their work tasks during their working days, as well as on trust between employees, managers, and co-workers. The chapter concerning the **ability to concentrate**

and tolerate deals with the disadvantages of remote work in the sense that for successful remote work, it is needed that employees are able to perform their work tasks despite of the disadvantages and are able to concentrate even if there are distractions at home. The **technical issues** chapter presents influences technology has on remote work. Lastly, impacts on productivity are discussed.

4.1 Social Contacts

One of the aspects mentioned frequently during the interviews is the need of social contacts. Even though some interviewees enjoyed working at home alone, it is still evident, that nearly every interviewee missed their colleagues and informal, spontaneous conversations with them. That was also one of the reasons for Interviewee 6 to return to working at the office. Conversations with colleagues were often considered being one of the main assets of office work.

"[...] when I started to work from home, I realized how important the colleagues actually are for working. It was actually quite an unexpected observation to realize that I miss these persons very much." - Interviewee 4

"[...] this [working remotely] is a bit boring. When the social aspect has kind of been left out, such as the informal and spontaneous conversations over a cup of coffee at the office, have been left out. And everything else as well, of course. There has not been any sales kickoffs nor Christmas parties [...]" - Interviewee 5

"[...] I miss being able to go to someone and ask how they are doing and what they are up to today [...]" - Interviewee 7

Working from home differs from working side-to-side with colleagues at an office. Some interviewees agree that it is more challenging to contact colleagues for advice and assistance while working remotely, comparing to working at the office. Asking for advice from colleagues was considered being much more challenging and time-consuming when working remotely, by four interviewees (1, 2, 3 and 7).

"[...] it is much easier to ask for help or advice at the office, [...] especially the longer the period that we haven't seen each other becomes, it somehow becomes harder to ask, and I have also noticed that I probably don't get as many questions from colleagues [...]" - Interviewee 2

"[...] I am not able to just walk and check who is present, and ask from someone who is present. I need to contact several persons, and they do not reply, and it takes a lot of time." - Interviewee 7

"[...] there has perhaps become some threshold, that I won't send messages to ask some minor thing, that would be easy to ask at the office when the others are near. But there are Skype calls and meetings, so it is possible to ask virtually similarly than when present at the office." - Interviewee 1

Three interviewees (4, 5 and 6) on the other hand said that there has been no difference in asking for advice from a colleague, since they had used remote methods to contact colleagues even before the pandemic had begun.

"I don't think there is any difference comparing to the so-called normal, [...] one way or another I have to use the remote access." - Interviewee 5

"I think for me, it's still the same, because everyone is on the same Messenger, [...] I would still ask them the same thing over the Messenger, even if I was at the office." - Interviewee 6

Even though the technology today enables having video conversations, it was mentioned a couple of times by the interviewees that they did not consider the video calls to equal face-to-face conversations. During their remote work period, interviewees 4, 6 and 7 had tried informal video conversations and remote coffee breaks with their colleagues but were not very excited about those.

"We did try virtual coffee breaks and something like that at the beginning, but it really was not, it is not equivalent [to face-to-face conversations]." - Interviewee 7

| *"[...] Teams is not equivalent, despite of using the video [...]" – Interviewee 5*

In addition, especially if a team needs to create new ideas or solve emerging issues together, that can be very challenging in the remote work setting. It was mentioned by Interviewees 5 and 6, that not being able to work face-to-face with colleagues causes difficulties for the creativity of teamwork.

| *"[...] I feel that creative problem solving is much more challenging in remote environment, comparing to being face-to-face at times." – Interviewee 5*

| *"Remote working is able to process projects that have already started, but remote working doesn't start new ideas." – Interviewee 6*

4.2 Support

Many interviewees expressed that they hope to get support from their manager or employer. They hoped to be contacted on regular basis and appreciated if their employer offered guidance and encouraged to seek for help if needed. Moreover, many interviewees mentioned that everything is fine and that they do not require any extra actions from their employer at the moment.

| *"[...] the company has been trying to help in every way [...] support to make you realize you are not alone in this situation, many others have the same struggles and challenges [...]" – Interviewee 4*

| *"[...] enabling open conversation so that it's easy to contact each other and encourage others. I don't know what else would be of concrete help. Just support, asking for help if struggling with work tasks [...]" – Interviewee 1*

| *"I am positive if I had anything I needed and asked for it, [the employer] would do their best to accommodate with the request. As long as I'm not asking for too much." – Interviewee 6*

“I haven’t felt a need for any actions from my manager or from elsewhere.” – Interviewee 2

One thing the interviewees valued was the freedom of choice, especially regarding the ratio between remote workdays and office workdays. Many interviewees wished, that after the pandemic their manager would allow the employees to work remotely more frequently than before the pandemic. Nearly every interviewee was planning on working partly remotely, partly at the office after the pandemic. Their preferences for optimal amount of remote work varied between one to four days per week, most of them preferring two or three remote workdays per week. Interviewee 2 was keen to continue working remotely full-time, if allowed by their employer. Only Interviewee 4 was planning on returning to full-time office work.

“[...] I really hope that the remote work policy would be eased, [...] I hope that in the future the employees could choose more freely. Now that we have seen during this year that everything goes smoothly even in total remote work, hopefully there will be more flexibility.” – Interviewee 1

“[...] I will definitely do hybrid work. Every now and then at the office, and a day or two remotely, according to the situation. [...] I won’t go back to working entirely at the office.” – Interviewee 3

“I think I will be flexible. Now I know that I can do stuff at home, so, I have more options, which feels nice.” – Interviewee 6

Almost every interviewee saw the hybrid model as solely a positive thing, that combines the good qualities of both remote and office work. They felt it provides flexibility and makes it easier to arrange work, such as to schedule tasks that require concentration for the remote working days. However, interviewee 7 brought forth the aspect, that when all employees of a company work remotely on regular basis and on various days, it might have an effect on the workplace dynamics between co-workers.

“[...] the work community is much more separated now that people are working remotely. Before, when we were all working at the office entirely [...] then the work

community, at a particular office for example, was very close. We were very communal and arranged many events together. During the remote work period these have decreased radically, and that is a negative thing. [...]” – **Interviewee 7**

The routine of working at an office may diminish over time when continuously working from home. Some interviewees (1, 2 and 7) felt that during the long period of remote work, they had become so accustomed to working alone at home, that they felt nervous and distressed about returning to office work.

”[...] now that I have been at home for so long, I sometimes even feel anxiety, or fear, or concern about going back to the office and about the readjustment.” – **Interviewee 2**

”I am so accustomed to this by now that I am a little nervous about going back to the office to a large extent [...]” – **Interviewee 1**

”I’m even a little nervous about going back to the office, and about all the practicalities, [...] I have already forgotten about all that, and I even feel a little distressed, but I believe it will be all right.” – **Interviewee 7**

Trust is needed in remote work since managers and employees are not able to see each other while they work. All interviewees said they feel there is trust between their employer and employees. In most cases trust had been on good level before the pandemic as well.

”[...] we were already accustomed to remote work, it wasn’t a completely new situation. We had already practiced it and found that it’s functional and work tasks get done by working remotely occasionally. I think this has gone very smoothly, and the employer and managers have noticed that work tasks get done even by working completely remotely.” - **Interviewee 1**

”[...] I think [the manager] is probably somehow monitoring the statistics of tasks being done, but I feel that trust exists as well. The days are different, there are different tasks. On some days you are able to get a lot done, but then some other, more

challenging tasks, you are maybe able to finish only one of those [...]” - **Interviewee 3**

Trust between co-workers is very important as well. Achieving that stage might require working face-to-face first, before shifting to remote work, as interviewee 6 noted:

”[...] on-site time with [new team members] is very valuable to learn and figure out what we can do together, or where we might disagree. [...] So, I think those times spent together, for trust building, will pay off when remote working with them.” - **Interviewee 6**

A positive and encouraging attitude of employers play a great role in employees’ satisfaction. Interviewees 4 and 7 said they appreciate that their employers had been understanding towards possible occasional decreases in productivity during the pandemic.

”[...] my employer has been very understanding and flexible on how this situation has caused complications for working. We have been able to work on peculiar times per day, and all, and it has not been an issue.” - **Interviewee 7**

”[...] from the employer the message has been that everyone’s own well-being is number one, and [work] should come after you are physically and mentally well. [The employer] has been very understanding in letting everyone take their time to adjust to the situation. The company has been offering various services, or anything you are willing to ask, if it helps you to work [...]” - **Interviewee 4**

4.3 Ability to Concentrate and Tolerate

While remote work has many advantages, one aspect stemming from the interviews is that remote work can have multiple downsides as well, such as distractions and loneliness. Ability to concentrate on the work tasks despite of these downsides, as well as tolerance of discontinuities and other distractions, is needed from the employees to overcome these challenges. The employees can stay productive if they are able and willing to tolerate the disadvantages. Many interviewees (1, 3, 5 and 6) said that at home it is easier to concentrate

since there are less distractions than at the office. They felt that at home it is easier to perform tasks that need focus and concentration to be completed.

"[...] our office [is] an open-plan office, so it's a little more restless and noisy environment comparing to being at home without the co-workers. It is much easier to concentrate in here." – Interviewee 3

"The work tasks that require total concentration are perhaps easier to do at home. But the tasks that require interacting with the co-workers are easier to do at the office." – Interviewee 1

On the contrary, Interviewees 4 and 7 mentioned that at home there can occasionally be some distractions that make it harder to concentrate comparing to working at an office. This was valid especially at the beginning of the remote work period, from March to May 2020, when school-age children had remote school at home, and it was also recommended by the Finnish Government, that young children should not go to day care but stay at home instead.

"[...] at the very beginning of the pandemic, the spring when the children were in remote school at this same small room [...] when I was at home, looking after the children's school tasks and trying to combine it with my own working day, it was really, really hard. It was very stressful, and we did talk a lot in our team and within the company, what we could do for the situation [...]" – Interviewee 4

"I think [the recommendation of working remotely] was a good decision, [...] and it doesn't bother me. But, it was the other things that did bother me. The recommendation of not taking children to day care complicated working enormously the first two months." – Interviewee 7

However, the distractions did not limit to the remote school period only. Household chores and family members could still cause occasional distractions when working at home.

“[...] I have school-age children and they get home from school relatively early which causes challenges, because their presence might make it a little harder to concentrate on my own work [...]” – Interviewee 4

“[...] sometimes, when working remotely at home, I stare at the pile of dishes, decide to take care of it, end up loading the dishes and then notice [...] it took my entire break, so yes, there are distractions.” – Interviewee 7

Ergonomics is one aspect that can have a major role when working at home. Not all employees were prepared for full-time remote work in terms of furniture and working spaces. Some interviewees had been persevering with the furniture they already had at home, while interviewees 5 and 6 mentioned having acquired or borrowed furniture or equipment to enhance ergonomics.

“[...] at first I thought that we are going to work from home for a short period only and that I could sit on the sofa or the armchair. After two weeks my neck was so sore that I had to go to Ikea to buy a desk. I also borrowed an office chair and a screen from the office to fix the ergonomics.” – Interviewee 5

“[...] during this pandemic, I’ve been looking for a small, suitable [electric desk], [...] [but] I’ve been coping with this – not ideal – arrangement.” – Interviewee 3

“[...] there have been situations that I have had to work while [my whole family has been at home] [...] Then I isolated myself upstairs, with my laptop being on the floor, and I was crouching on a yoga mat thinking that this does not work. Fortunately, these have only been occasional situations.” – Interviewee 7

Mainly, the interviewees felt that the amount or extent of the disadvantages had not changed during the long remote work period. Most of them felt that those had stayed the same during the whole period. Interviewee 7 even mentioned that some solutions to the hindrances of remote work had been found:

“Rather, I have learned to work around [the disadvantages] or found solutions to them. [...] in my opinion, at the beginning there were actual challenges with

collaboration and its fluency, but not anymore. I feel like the situation has become easier and normalized.” – Interviewee 7

The only hindrance that had been growing in significance for some interviewees during the remote work period seems to be the occasional feelings of tiredness towards remote work and the situation in general. Remote work had felt monotonous or caused feelings of frustration, since no one knew how long the pandemic situation would last.

”Now that we have worked remotely for over a year, I have started to feel occasional weariness, and hope that [remote work] would end already, [...] how long will this last, month after month we just keep going [...]” – Interviewee 3

According to the interviews, time management related issues in remote work can be considered either an advantage or a disadvantage. The possibility of working flexible hours at home can make it easier to combine work and personal life, as interviewee 6 noted:

“[...] it was easy to be a working mom, because I could take care of the e-mails, communications, and Zoom meetings, and be flexible with doing laundries, or for fixing food for my child.” – Interviewee 6

All seven interviewees brought up the great advantage that there is no need to commute when working at home. This saves a lot of time and enables having more time for work, leisure, or family.

“[...] I have enjoyed that since I don’t have to commute, I have been able to start my days in a slightly calmer way. I have had time to eat breakfast and there has not been a terrible rush to start the working day, [...]” – Interviewee 4

“[...] you are at your workstation – especially if you don’t have to groom yourself very much – within five minutes after waking up, or even faster, if necessary, versus having to commute to the office [...]” – Interviewee 5

“[...] no time needs to be allocated for commuting, which means that all that time can be used for working. It is much easier to combine work and free time when at home [...]” – Interviewee 1

In turn, working at home can sometimes have an influence on the length of the working days. Since there is no commuting needed, the additional time had resulted some interviewees (1, 2, 4 and 7) to occasionally work longer hours than they would have had they been at the office. However, because of flexible working hours and varying workload, the length of the working days varied from day to day for most interviewees.

“Yes, [working remotely] has perhaps made [working days] somewhat longer since it is more challenging to stop working at the afternoon when you are already at home [...]” – Interviewee 2

“[...] when you’re physically at home working, it sometimes blurs the line of when your working day ends and whether you are able to end your working day at a normal time. Before the pandemic, obviously your working day ended when you left the office, but now that you’re already at home, it’s pretty easy to stay in front of the computer and continue working [...]” – Interviewee 4

In addition to the length of the working days, working from home might disrupt the ratio between work and free time by blending them together. This is what happened to interviewee 5 at the beginning of the remote work period. Eventually, they were able to overcome this challenge. Interviewees 2, 3 and 7, however, had a clear separation, that when the working day eventually ended in the late afternoon, they would put their laptop away and not return to work tasks until the next morning.

“[...] [at the beginning of the remote work period] I almost drifted to a situation where there were no working hours nor free time, only a disorganized combination of both. That hasn’t happened anymore. I realized what was happening, I changed my thinking, and now the situation is in control and organized.” – Interviewee 5

“[...] when I finish working [...] I don’t think about work-related things anymore and I never open the laptop during the evenings [...]” – Interviewee 2

"[...] I have a custom that when I finish working for the day – at four thirty for example – I put the laptop away, [...] there is a clear boundary that now I have finished working [...]" – Interviewee 3

"If I had a workstation where I could leave my computer and keep it running, then I probably would keep on checking it all evening long. But now that I need to physically gather everything and put it away at the end of each working day, the working day really is over." – Interviewee 7

When working remotely, taking breaks may often be disregarded during the working days, since the social aspect of the breaks is absent. Many interviewees said that instead of taking a distinct break, they usually just drink their coffee while working simultaneously. However, lunch break was considered important. Six out of the seven interviewees said they take lunch break every day.

"[...] nowadays, I take a proper lunch break every day, [...] I go for a short walk with my dog, and then I eat, and don't work at the same time." – Interviewee 5

"Lunch break is the only break I take each day. Coffee breaks and such are left out. That is, I don't stop working and have a five-minute coffee break, I don't do that. Instead, I might eat a snack while working on my computer [...]" – Interviewee 2

"[...] coffee breaks and such, they might be a lot shorter now. At the office, having a coffee break usually means talking to people, socializing with colleagues. [In remote working] all that social aspect is missing during the breaks [...]" – Interviewee 4

4.4 Technical Issues

Technology had sometimes caused slight delays in the interviewees' work. Almost every interviewee had experienced some technical difficulties, such as problems with connections, while remote working. Problems with connections could potentially cause a lot of difficulties for remote working. Luckily, however, for the interviewees, these problems had often been insignificant and infrequent incidents, that did not have a significant impact on the work.

”Especially at the beginning, when [...] a large number of Finns were remote working all of a sudden, we did have problems with connections, or malfunctions of meetings [...] but after the beginning we have had a surprisingly low amount of those. Only some, sporadic occasions that some connection has not been working [...]” – Interviewee 1

”[...] occasionally there are small glitches with the connection of the application, which is a bit frustrating, [...], but I just try to take it easy and wait until it works again.” – Interviewee 3

”[...] everything has functioned really well, there has not been any issues out of the ordinary.” – Interviewee 5

”[...] from the company’s side everything has functioned very well, all the programs actually. [...] But the biggest factor has, surprisingly, been if there happens to be a power outage at home. [...] on those occasions I have had to make a call [...] that I’m unable to do this task, because I’m currently using my phone to join this Teams [meeting] and to access these files.” – Interviewee 7

The speed of Internet connection at home on the other hand can differ significantly from the office environment. Interviewee 4 mentioned that poor Internet connection at home had occasionally hampered working: it was more time-consuming to work with large files, and Zoom meetings were hindered.

”[...] via Zoom one of the challenges is if there is a poor Internet connection or something like that, since it can be time-consuming and a bit unpleasant occasionally to try to communicate with someone if the video has glitches, or the audio has glitches, or the audibility is poor [...]” – Interviewee 4

The communication technology used in remote working was previously familiar to the interviewees. Each of them had used some communication method – such as Microsoft Teams, Zoom or Slack – even before the pandemic. The only exception was Interviewee 3, who had not used any of these before starting to work remotely during the pandemic. Most

of the interviewees said they did not have to spend any time learning to use any systems because they had already used them frequently. Being familiar with the communication technology even before the pandemic, made it easy for the interviewees to adjust to full-time remote work.

“We already had been using Skype and Teams even before this year, so we haven’t really had to learn anything new. They were already in use daily, and we have kept using them during this time [...]” – Interviewee 1

“[...] we use Teams anyway so there is no change, except that now we use it very often [...]” – Interviewee 5

Interviewees 6 and 7 did spend little time learning to use some new features, which was beneficial since the new skills were useful while working remotely. Interviewee 3 had more learning to do, since they had to learn to use the programs from the beginning, without prior experience. They learned to use them sufficiently to successfully perform their work tasks.

“[...] we had some education sessions, but I was unable to attend, and self-learning has been a little scarce, [...] fortunately I haven’t needed to present a lot, or use any special features of Teams. I have been managing with the basic features, by practicing with a colleague, for example [...]” – Interviewee 3

“I was already acquainted with Zoom. I guess I learned little more, like changing backgrounds, [...] not super-high skills.” – Interviewee 6

“We have [...] always used Teams, and we have always handled everything smoothly with it. Of course, now during the corona pandemic, there has been a lot of new features that we have begun to utilize. And also, maybe some features that we didn’t fully utilize before, and we have now recognized the benefits of them. We have noticed the value of – for example – sharing a document via Teams and being able to edit it together, even at the same time [...]” – Interviewee 7

4.5 Impacts on Productivity in Long-Term Remote Work

The long continuous period of remote work had an impact on the interviewees' attitudes towards remote work. Even though they recognized that remote work has some downsides, they had a positive stance on remote work, overall. Interviewee 6 said that their attitude towards remote work had remained the same (as positive) as before the pandemic. All other interviewees said that their attitude is more positive now than before the pandemic started.

"It has become possibly more positive in the sense that I used to imagine that I would not be able to work from home, that I would need the specific work environment, that I would need to leave from home and physically go to the workplace [...]" – Interviewee 4

"[...] I had a slight fear at the beginning that remote working is not suitable for me, but my feelings have changed along the way. There are good aspects as well." – Interviewee 3

The improved positive attitudes towards remote work did change how interviewees 2 and 7 relate to remote work and its frequency. They said they now feel that it is not necessary to work at the office at all anymore. They said it would be completely feasible to continue working fully remotely.

"[...] in a way, I feel that working at the office is not necessary at all anymore, [...] back when I still went to the office I thought that it is beneficial to work there occasionally, but now I think that it is not necessary. It is okay to work fully remotely, it does not have an influence on working." – Interviewee 2

"[...] back then [before the pandemic] I thought, that we definitely need to work at the office regularly, that we need to work there several days a week – or, at least I do – so that I can have social encounters, and so on. And now I have noticed that I do not need those. [...] I am very contented to just talking to people on the screen [...]" – Interviewee 7

When asked whether they felt their productivity level had changed during the long-term remote work period, the interviewees' answers varied. One interviewee (6) evaluated that productivity had increased. This was due to being able to concentrate better at home. Two interviewees (1 and 7) estimated their productivity had mainly decreased. The reasons for this were the occasionally tedious nature of remote work, not knowing how long the remote work period would last, and the increased number of Teams meetings, which disturbed focusing on other work tasks.

"There has been [a change] in my opinion. And it is caused by the changes in the usage of time. When your time is spent on various Teams meetings that are filling your calendar, doing the actual work is a little more challenging, in my opinion. Not the small tasks [...], but large entities take much longer time now to get finished, in my opinion, because continuous time to concentrate on those just does not exist anymore."
– **Interviewee 7**

"[...] I notice my productivity decreasing occasionally, if working feels repetitive, but it is not low all the time. It varies weekly." – **Interviewee 1**

"[...] for me it was better. I was more productive [working remotely]." – **Interviewee 6**

Four of the interviewees (2, 3, 4 and 5) felt there had been no significant change comparing to the time before the pandemic. However, most interviewees evaluated that productivity had fluctuated and changed from time to time during the long-term remote work period.

"[...] there are good aspects and bad aspects in this situation, so I think there has not been a major difference in productivity, looking at the statistics." – **Interviewee 3**

"[...] I might work during the evenings [...], I have always worked quite a lot, and I still do. I arrange my work schedule [...], so I don't think that there have been any major changes, in this regard." – **Interviewee 5**

5 Discussion

In this chapter, the results of this research are discussed in accordance with the literature review and the theoretical framework. The research questions this thesis is aiming to answer are the following:

Research question 1: *How has long-term remote work affected employees' work productivity during the COVID-19 pandemic?*

Research question 2: *How could productivity in long-term remote work be enhanced?*

The overall result of this research is that the long-term remote work during COVID-19 pandemic has not had a major impact on employees' productivity. Although the interviewees had experienced occasional feelings of boredom, the significance of the disadvantages of remote work did not particularly increase during the year they had been working remotely. This means that the length of the remote work period did not have a major impact. These findings are supported by similar study of Smite et al. (2022), during which it was found that overall, the perceived productivity of employees had not changed significantly over a year of working remotely, although there were individual differences between respondents.

In terms of ways to improve the employee productivity, various ways were found, such as focusing on team cohesion, the length of the working days, and ergonomics. It is also beneficial to let employees themselves choose how often they will work remotely. Employees appreciate support provided by managers, and functional technical solutions.

5.1 Theoretical Implications

Based on the interviews conducted during this study, a thematic analysis map was created, and four themes, that have an influence on employee productivity, were identified. These themes are social contacts; technical issues; the ability to concentrate and tolerate, with a sub-theme of time management; and support, with sub-themes of choice, and trust. In this chapter, the thematic map is compared against the social capital theory, the three basic psychological needs identified by self-determination theory, as well as previous literature. Since both these theories mention improved productivity as one of the expected outcomes,

they were chosen for the theoretical framework to see how the results of this research would comply with them (Coleman, 1988; Gagné & Deci, 2005).

Following the definition by Nahapiet and Ghoshal (1998) as well as Chiu et al. (2006), social capital is divided to structural, relational, and cognitive dimensions. The structural dimension includes social interaction, the relational dimension includes trust and reciprocity, and the cognitive dimension includes shared vision and language (Chiu et al., 2006; Nahapiet & Ghoshal, 1998).

The basic psychological needs for psychological well-being are autonomy – the need to be in control of one’s own behavior and destiny; competence – the need to master the tasks one feels important; and relatedness, which means the need to be connected to others (Ackerman, 2021; Deci & Ryan, 2008). In a workplace, satisfying these basic needs will eventually result in improved performance, job satisfaction, and positive work-related attitudes (Gagné & Deci, 2005). In figure 4, the relations between the thematic analysis map, and the divisions of social capital theory and the basic psychological needs are presented.

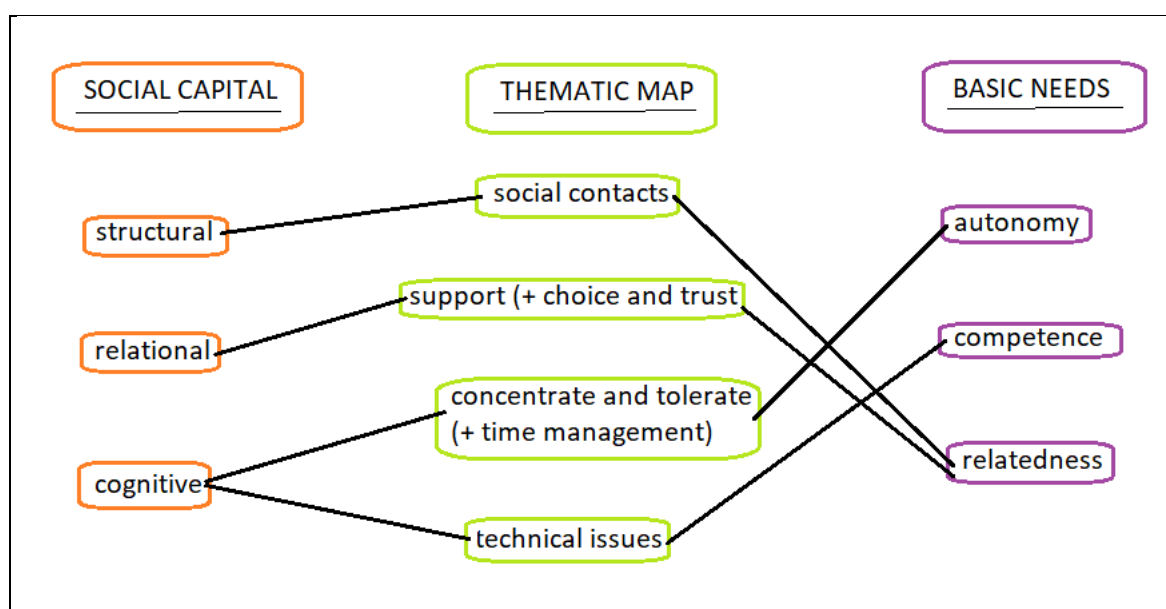


Figure 4. Evaluation of social capital theory (Chiu et al., 2006; Nahapiet & Ghoshal, 1998) and basic psychological needs (Ackerman, 2021; Deci & Ryan, 2008) against the thematic map.

The results of this research support the theoretical models of social capital theory and the basic psychological needs, being that in all of these, the elements are fairly compatible. In this research, it was found that an important factor in productive remote work are **social contacts**, which are in the core of social capital theory as well. Social capital is facilitated by every social relation and structure (Coleman, 1988). Furthermore, social contacts

correspond with one of the basic psychological needs, relatedness, meaning the need to be connected to others (Ackerman, 2021; Deci & Ryan, 2008).

Support, choice, and trust comprise another theme. Social capital's key ingredient is trust, and it holds communities and social networks together (Preece, 2002). According to Coleman (1988), a group with comprehensive trust and trustworthiness is able to accomplish more than a group without them. Moreover, trust and support comply with the basic need of relatedness.

The **ability to concentrate, and tolerate** the disadvantages of remote work, with a sub-theme of time management can slightly resonate with the cognitive dimension of social capital, which includes shared vision and language (Chiu et al., 2006; Nahapiet & Ghoshal, 1998). Shared vision and language could be comprehended as the mutual objectives and ways of working, which are needed for successful remote working. Also, this theme refers to the need of autonomy – the need to control one's own life (Ackerman, 2021).

Finally, **technical issues** are an essential part of remote work. That, too, could be integrated with the cognitive dimension of social capital theory, and the common procedures of shared vision and language (Chiu et al., 2006; Nahapiet & Ghoshal, 1998). On the basic psychological needs' side, technical issues can be coupled with competence, the need to master important tasks (Ackerman, 2021; Deci & Ryan, 2008).

Looking at the previous literature concerning remote work, it can be seen that the themes on the thematic analysis map, such as social contacts, trust, and support are frequently mentioned in literature as well. Work-personal life interaction is another aspect widely covered both in the interviews and in literature. Social contacts were a recurring theme in the interviews. In literature, it has been found that the biggest factor in creating job satisfaction among remote workers, is communication (Gigi & Sangeetha, 2020), and that social isolation has an effect on remote work satisfaction and employees' perceptions of productivity (Toscano & Zappala, 2020).

According to Wang et al. (2021), employees that receive support from their managers while remote working, will experience less procrastination, loneliness, and work-home disruption. Especially during the pandemic, employees have appreciated social support from their manager to relieve anxiety caused by the pandemic (Savolainen et al., 2021). It is also important that managers trust their employees who are working remotely (Bosua et al., 2013; Staples, 2001).

The influences technology causes to remote work, mentioned by the interviewees of this research, are quite similar to the ones listed by Herath and Herath (2020): Internet

accessibility and bandwidth availability, home devices, work-life balance, and lack of engagement caused by feelings of disconnect.

5.2 Practical Implications

The results of this research provide many viewpoints for companies to consider while determining and updating their remote work policies. In the light of the results of this research, it seems that full-time, longitudinal remote work does not diminish employee productivity substantially. In this regard, it is advisable employers would not limit their employees' options to work remotely, even full-time. The interviewees in this research valued freedom of choice in regards of how often and which days they would work remotely. It made it easier for them to combine work and free time. Besides, it provided them a chance to arrange their work tasks so that they could perform tasks that require concentration in their homes where there are less distractions than in an office setting. Ultimately, this kind of freedom of choice benefits organizations.

For an employee to get the most out of working remotely they should pay attention to their wellbeing, especially the length of their working days, since occasionally it might be challenging to finish the working day when working at home. Ergonomics is another factor to pay attention to. Proper equipment and furniture make remote working more pleasant. Employers should consider the possibility of providing remote workers equipment they need, such as office chairs.

In this research, it was brought forward by interviewees that support and trust provided by manager is very important. Interviewees value the possibility to contact their manager for support as well as managers contacting them regularly. However, contacting the employees too often is not appreciated.

In terms of technology, it is essential that companies provide proper equipment and connections for their employees. This will minimize hindrances and delays. Whenever new programs and applications are deployed in a company, proper training should be arranged for the employees to ensure smooth transition. If possible, there should be a possibility to participate in meetings both on the premises and via remote access. This would aid employees to plan their working schedule since they would not have to be present at the office to attend meetings.

Some interviewees had mixed feelings towards remote working. That is, they had enjoyed working alone yet they still missed their colleagues. If many employees of a

particular company work remotely regularly, it is advisable to pay extra attention to the cohesion and team spirit of the employees whenever they are at the office. This is something that employers and managers need to take into account in the future. It is important to keep the remote workers as an important part of the workplace community even though they may not be physically present.

5.3 Limitations

The main limitation in this research is that the number of interviewees is quite small. Because of this, the results cannot be generalized to include all remote workers that have been working remotely for a year or longer during the COVID-19 pandemic. Two of the interviewees were previously unfamiliar to me, and five interviewees I knew beforehand. I did not notice any significant differences between these interviews.

Even though the interviewees are kept anonymous in this research, the possibility still exists that they might not have wanted to admit if they would have felt unproductive while remote working. That being said, I have no reason to suspect the interviewees restrained their replies during the interviews. However, since the topic of this research can be considered somewhat sensitive and personal, a more anonymous research method instead of interviews – such as questionnaire over the Internet – possibly might have produced slightly different replies and results.

5.4 Suggestions for Future Research

Topics revolving around remote work and COVID-19 pandemic provide many interesting topics for future research both during and after pandemic. Many employees have been working long periods remotely during the pandemic. Some have already returned to their offices, while some might still be working remotely at home. My suggestion for future is to research how employees have adjusted back to office work. Some employees might have been eager to return to work at their offices, but others might not have been. Three of my seven interviewees said they feel tense and nervous about returning to the office after working remotely for so long. They mentioned they now feel that office-based work is not necessary anymore or hoped their employers would allow more remote work in the future than they did before the pandemic. It would be an interesting research topic to research

whether similar opinions are common, and what kind of influence they have on the adjusting process.

In this research, the interviewees had been working remotely continuously for slightly longer than a year, approximately. It would be intriguing to research whether the results would be different with other employees that have worked remotely for an even longer period, such as two years. Furthermore, a different research method, such as a quantitative research with a questionnaire over the Internet, would be an interesting approach.

After the pandemic has ended, another beneficial research topic could be to research employees who have continued to work fully remotely by their own choice. Is their productivity level the same than during the pandemic? Does it make a difference if remote working is mandatory or one's own choice? Overall, the 'new normal' which begins after the pandemic has ended, provides opportunities for research. It will be possible to research how people look back on the pandemic era, and how their ways of working might have changed since then.

6 Conclusions

The aim of this research was to study whether the long period of remote working during the COVID-19 pandemic had affected employee productivity. According to the research results, the long-term remote work did not have a major impact on the interviewed employees' productivity. The results of this research did not provide any major, new aspects on the benefits nor the disadvantages of remote work. Instead, they were mostly similar comparing to earlier research. Smite et al. (2022), for example, found that for most employees, the perceived productivity did not change significantly during long-term remote work.

It was found that many factors, such as social aspects, trust between manager and employee, and work-life combination, have an influence on employees' feelings towards remote work. Managers can assist their employees by contacting them regularly and by offering them guidance. In addition, employees appreciate being able to choose how often they have remote working days. Focusing on team cohesion, the length of the working days, and ergonomics is important as well.

Six out of the seven interviewees expressed that they would like to continue part-time – or even full-time – remote working also after the pandemic has ended. This is in line with the research conducted by EVA (2021), in which it was found that 96 % of Finns that had worked entirely remotely during the pandemic for over a year, wanted to continue to work remotely also after the pandemic.

Overall, all interviewees seemed to have the general feeling that there had not been any major differences in their overall work productivity during the length of the remote work period, even though it had lasted for over a year altogether. Their feelings concerning the remote work period were mainly positive.

"[...] there are so many positive aspects in remote working, in my opinion. This is tedious at times, but in my organization communication has been excellent from the beginning, and everyone has been kept up-to-date of the current situation and of the remote work instructions. Above all, I have positive thoughts concerning this period."

– Interviewee 1

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Appendix A: Outline of the Interview Questions

Below is a compilation of all the questions asked during the seven individual interviews. All questions have not been asked from every interviewee.

- Could you tell me about your remote work situation both before and during the pandemic, please? How often did you work remotely before the pandemic started? How much and how long have you worked remotely during the pandemic?
- How did you feel about remote work in general before the pandemic started?
- How did it feel when you had to begin to work fully remotely because of the pandemic?
- When working remotely, what is your typical day like in terms of schedule?
 - Is there a lot of flexibility?
 - Do you take breaks during the day?
- In your opinion, how do remote work and office work differ in terms of productivity?
- What has it felt like to work remotely during the pandemic? Has it been stressful, or have you adjusted well?
- What kind of trust has there been between the employer and the employees, or among the colleagues during remote work?
- How easy or challenging is it to ask and get help and advice in remote work? How does it differ from office work?
- How could your employer help or assist you to remain productive or to become more productive in remote work?
- Have you made any changes in your home to create a designated work area? For example, have you purchased a new chair or other furniture or equipment?

- How has the remote work period affected the length of your working days comparing to the situation before the pandemic?
- What about the ratio between work and free time? Is it more challenging now to separate them?
- How do you feel about remote work now, comparing to your thoughts before the pandemic?
- Have you noticed any changes in your productivity during this continuous remote work period?
 - When did that occur?
 - What factors have had the biggest influence on the possible changes?
- What are the biggest disadvantages of remote work in your opinion?
 - Do you feel they have changed or increased after being out of the office for so long time?
- What are you potentially longing for about working at the office and about the situation before the pandemic started?
 - Looking back, what were the biggest advantages of working at the office?
- What has it been like to use Teams, or other communication technology during remote work?
 - Did you have to learn to use them, or had you already used them before the pandemic?
- What kind of technical difficulties has there been, and have they affected your work?
- What about the future, when the pandemic will be over, and the recommendation to work remotely has ended, what are your thoughts regarding that period?
- What would be the ideal ratio of office work and remote work, for you, in the future?
- In your opinion, are there challenges if working in turns both remotely and at the office?
- That was my last question. Do you have something in mind you would like to add, or something you would like to say about remote work?