SV: Medarbetarengagemang vid arbete på distans

EN: Employee engagement and remote work

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Abstract

The purpose of this thesis was to investigate factors impacting employee engagement, with a focus on the recent increased trend of working remotely.

We raised the question: How is the individual employee engagement impacted by the degree of remote work? Are the mediating factors gender, age, commuting time, number of adults and children in household and home office satisfaction related to employee engagement?

We chose a quantitative research method to conduct an internet survey with a convenience sample (N = 138) where the survey was distributed to our connections on social media, primarily LinkedIn and Facebook, and two selected companies. To ensure reliability and validity the survey was performed with well-established tests based on the trait theorists McCrae & Costas' five factor theory, and the employee engagement was measured by using Gallup's Q'12 Employee Engagement Survey.

 The study shows *no clear relationship between the degree of work that is conducted remotely and the engagement level*. Neither are the mediating conditions such as home environment, commuting time and remote work. However, it does show that one trait, conscientiousness, does have a significant link to the level of engagement reported. This trait can be interpreted as beneficial in the context of working from home.

Keywords: Employee engagement, remote work, personality traits, pandemic.

Sammanfattning

Syftet med denna uppsats var att undersöka om och hur medarbetarengagemang påverkas vid arbete på distans.

Vi ställde följande frågor. Hur har det individuella medarbetarengagemanget blivit påverkat i relation till distansarbete? Är medierande faktorer så som kön, ålder, pendlingstid, antal vuxna och barn i hushållet samt trivsel av arbetsplats hemma relaterade till medarbetarengagemang? Är personlighetsdrag relaterade till medarbetarengagemang?

Vi använde oss av en kvantitativ forskningsmetod och genomförde en internetenkät med ett bekvämlighetsurval (N=138) där enkäten distribuerades till våra kontakter i sociala medier, primärt LinkedIn och Facebook samt två utvalda företag. För att genomföra undersökningen med hög reliabilitet och validitet använde vi oss av väletablerade tester i enkäten. Testerna var baserade på traitteoretikerna McCrae & Costas femfaktorsteori och medarbetarengagemang mättes med Gallups Q'12 Employee Engagement Survey.

Studien visar *inget samband mellan graden av distansarbete och engagemangsnivå.* Medierande faktorer påvisar inte heller något samband med engagemangsnivå. Emellertid påvisades ett statistiskt signifikant samband för personlighetsdraget conscientiousness (samvetsgrannhet) kopplat till rapporterat medarbetarengagemang. Ett signifikant samband hittades för personlighetsdraget conscientiousness Detta personlighetsdrag kan tolkas som en fördelaktig kvalitet i kontexten av hemarbete.

Nyckelord: medarbetarengagemang, distansarbete, personlighetsdrag, pandemi.

Employee engagement and remote work

Numerous research studies have shown that employee engagement is both a rare and powerful force. Engaged employees are important for company success as they present a better service to the clients (higher customer satisfaction-loyalty) and contribute positively to the organizations' employee turnover, productivity, and profitability (Harter et al., 2002). Also Martin and MacDonnell link the rise of distributed work in modern organizations to benefits, such as productivity, performance, retention, and commitment (Martin & MacDonnell, 2012). Employee engagement is also important for the individual's well-being. For example, burnout has been shown to be negatively related to work engagement (Barkhuizen, N. et. al., 2014), and The Gallup Organization reports a 66% higher employee well-being among companies in the top quartile of employee engagement (Gallup, 2017).

Many studies agree that the ability to successfully manage relationships with employees can contribute to a long-term market advantage (Motyka, 2018). Further, he argues that through the creation of a friendly, development-enabling environment that leads to employee engagement, employers can increase their chances of hiring and retaining valuable employees (Motyka, 2018). Yet in 2017, according to Gallup, the worldwide employee engagement was only 15% (Gallup, 2017). A low and well-cited number that has been questioned by academics due to the lack of transparency as of how the number has been calculated (Trost, 2017).

The findings of the Gallup organization paint a picture that a majority of all employees are either disengaged or actively disengaged. This indicates an impressive amount of wasted potential, given that this is a fair description of reality. Consequently, there should come as no surprise that increasing workplace engagement for long has been a focus in many organizations. In parallel, the interest has been rising among researchers. The number of peer reviewed research articles in English with "employee engagement" or "work engagement", and "performance" in the abstract has risen from 2 to 90 between 2002 and 2017 (Motyka, 2018).

The term 'engagement' in relation to employees and their workplace was coined by Professor William Kahn in 1990. He defined employee engagement as *the harnessing of organization members' selves to their work roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performances* (Kahn, 1990). Since then, many definitions have been suggested. Schaufeli et al. describes engaged employees as *having a sense of energetic and effective connection with their work activities* (Schaufeli et al. 2002). Harter et al. describes employee engagement as *the individual's*

involvement and satisfaction with as well as enthusiasm for work (Harter et al., 2002), and in 2006 as *being motivated to extend efforts beyond the formalized job descriptions to help the organization become successful* (Harter et al., 2006). The author of "Positive Psychology at Work: How Positive Leadership and Appreciative Inquiry Create Inspiring Organizations" defines it as *feeling responsible for, and committed to, superior job performance, so that job performance matters to the individual* (Lewis, 2011). Schutte et al. describes *an energetic state in which the employee is dedicated to render an excellent work performance and is confident in his or her effectiveness* (Schutte et al., 2000).

A more specific outline of work engagement characterizes it from three dimensions, vigor, dedication, and absorption. *Vigour* is characterized by high levels of energy, and mental resilience while working, and the willingness to invest effort in one's work and persistence, even in the face of difficulties. *Dedication* is characterized by a sense of significance, enthusiasm, inspiration, pride, and challenge. *Absorption* refers to a complete and happy immersion in one's work to the extent that it is difficult to detach oneself from it (Gonzalez-Roma et al., 2006).

As we see, there is no universally agreed definition of employee engagement. There are however many similarities, and while they differ in the specific details, most agree on two key things; *engagement resides with the person,* as opposed to the job; and *it is a state* rather than a trait (Lewis, 2011). This report will adopt the three aspects of vigor, dedication and absorption to define employee engagement.

A relatively new dimension has been added to the engagement equation, working from home. More than a year has passed since the Covid-19 pandemic forced offices to close, and a large share of employees started to use their homes as their everyday workplaces. This phenomenon is not entirely new. The share of employees with the opportunity to choose to work remotely has been increasing for many years. The pandemic has thus only fast-forwarded an already ongoing trend and more and more employers now dare to let go of the idea that physical presence is a precondition to being able to execute your job.

A prediction is that we will see a new way of working once the pandemic is over, a hybrid model where employees are in the office only a part of the week. The approach is thought to fulfill the needs of social interaction, while saving employees the grind of the daily commute (Coggan, 2021). This prediction is supported by a recent report by McKinsey, stating that 20-25% of workers in the rich world could work from home three to five days a week, a number that is four times higher than before the pandemic (Lund. et al, 2021). Therefore, it is anticipated that both supply and demand of remote work conditions is likely to

increase moving forward.

Employee engagement and remote work was recently investigated in a study by Palumbo (2020). The study found that those who worked from home reported more work-related efforts as compared to those who worked from the office. The home office workers also tended to work more hours per week and were more willing to work at night, twice as willing to work on Sundays and to work for over 10 h per day. With those facts in mind, it is maybe no surprise that the home office workers scored significantly lower on work-life-balance than its in-office colleagues. However, they did score higher on engagement, and it appeared as employee engagement positively mediated the negative effects of working from home on work-life balance. People who disclosed greater levels of work absorption, dedication and vigor were less likely to report work-to-life and life-to-work conflicts (Palumbo, 2020).

We chose Gallup's Q'12 Employee Engagement Survey to be able to measure the employee engagement among the respondents in our study. Gallup's Q'12 was selected due to being a widely used measure of employee engagement within several organizations as well as in several peer reviewed studies for more than thirty years (Harter et al, 2003; Motyka, 2018).

Despite a potential negative impact on work life balance, most people like to work from home. This is at least the results from a recent study by Westberg et. al. (2020) where 1500 randomly and nationally representative selected swedes were questioned about working at home. In the study, income, transport (i.e., distance/time to work) and family situation had no impact on the overall well-being and job satisfaction. What did have an impact however, was if other family members enjoyed working from home and personality. Looking at the latter it appeared as if extroverts manage the transition to working from home *better* than introverts (Westberg et al., 2020).

Even though there are indications that most people like to work from home, no support has been found that it translates into increased engagement, nor improves the experienced work life balance (Johansson, 2020). The results were observed in a study with 1500 employees and managers, conducted by Brilliant Future. In the study, 86% of the respondents have experienced that their engagement has remained stable, as they have been working from home. According to Johansson, the most important factor for this to be true appears to be *the experience of being able to contribute to the goals of the organization*. The study has not been published or researched within academia, and its resulting relationship will in this context only be considered a possibility.

In the study *Job Engagement, Job Satisfaction, and Contrasting Associations With*

Person–Job Fit, Inceoglu and Warr (2012) concludes that it is likely that the trait theorists McCrae & Costa's five factor theory of personality could play a role in predicting distributive work behaviors related to engagement (Inceoglu & Warr, 2012). The model is also called the big five or OCEAN (Cervone, D. Pervin, L., 2019). This is the model that will be used in this study, and its five factors are Openness (O), Conscientiousness (C), Extraversion (E), Agreeableness (A), and Neuroticism (N). In table 2 you can see trait adjectives, which describe and are associated with high or low scores within the different factors.

Table 1

Five factor theory trait adjectives

Big five factor traits	High score traits	Low score traits
Openness (O)	Curious, broad interests, creative, original, imaginative, untraditional	Conventional, unartistic, unimaginative, narrow interests, unanalytical
Conscientiousness (C)	Organized, reliable, punctual, neat, hard-working, ambitious, self-disciplined, scrupulous, persevering	Aimless, unreliable, lazy, careless, negligent, lax, unanalytical,
Extraversion (E)	Sociable, active, talkative, person-oriented, optimistic, fun-loving, affectionate	Reserved, distant, quiet, task-oriented, retiring, timid
Agreeableness (A)	Kind, cooperative, trusting, good-natured, helpful	Cynical, rude, irritable, suspicious, vengeful, uncooperative, ruthless, manipulative
Neuroticism (N)	Worrying, nervous, emotional, insecure, tense	Calm, relaxed, secure, unemotional, self-satisfied

Note. (Cervone, D. Pervin, L. 2019)

The following section motivates the selection of personality traits for the study.

Openness to experience was selected since high scorers tend to be creative, adventurous, and intellectual. They also enjoy playing with ideas and discovering novel experiences, which one could argue that getting the freedom to design your own workday is.

Conscientiousness describes a person's ability to exercise self-discipline and control to pursue their goals. High scorers tend to be organized and determined, and to be able to give up immediate gratification for the sake of long-term achievement. Inceoglu and Warr (2012) describe conscientiousness (along with extraversion) as a positive predictor of job engagement. Thus, the trait will be further studied in this report (Inceoglu & Warr, 2012).

Extraversion describes a person's tendency to seek stimulation from the outside world, especially in the form of attention from other people. Langelaan et. al. (2006) found that engagement and extraversion had a positive relation (Langelaan et. al., (2006). Extraversion has also been found to be a strong predictor of well-being, independent of affect and life events (Diener & Lucas, 1999). Also, relative to neurotic individuals, extraverted individuals are more likely to experience vigor (Brief & Weiss, 2002), which is one of the three dimensions of engagement outlined by Gonzalez-Roma et al., (2006). The trait is selected due to its close association with both engagement and well-being.

Agreeableness describes a person's tendency to put others' needs ahead of their own and to cooperate rather than compete with others. Agreeableness has been shown to increase conscious socialization efforts, which in turn predicted engagement. The trait is selected for its close component of collaborating and cooperating with others, and to further investigate its indirect yet positive relationship with engagement (Inceoglu & Warr, 2012).

Neuroticism describes a person's proneness to experience negative emotions like fear, sadness, anxiety, or guilt. The trait was deselected since it does not have any clear connections to the qualities required for thriving with remote work (Cervone & Pervin, 2019).

Remote work is not a new phenomenon. The pandemic however has put it in the spotlight. While there is research on the combination of remote work and employee engagement, there are still many areas yet to be studied. Palumbo (2020) researched the two concepts and found a relationship where employee engagement positively mediated the negative effects of working from home on work life balance. He also found a relationship between work-life conflicts and the terms absorption, dedication, and vigor that is used in the description of employee engagement by Gonzalez-Roma et al., 2006, as well as in this study.

Non-peer reviewed studies suggest that the relationship between factors outside the individual, such as time to work and family situation, had no impact on the individual's well-being. Personality however did matter, especially extroversion. Inceoglu and Warr (2012) also concludes that personality can play a role in predicting distributive work behaviors related to engagement, and points especially to Conscientiousness, Extraversion and Agreeableness in the OCEAN model.

Purpose

This study aims to further contribute to the research on the relationship between personality and employee engagement in the transition to remote work. On a general level, it is of interest to understand how employee engagement is impacted when transferring from onsite to remote working conditions, and if there is an ideal balance between remote and onsite work. It is likely not a black and white, either or situation, where some like to work from home and others do not. Rather, we will have to learn *when* working from home will have a positive impact on factors like productivity and engagement. For example, new employees might have a harder time to thrive in the organization, since they are not yet familiar with how the company runs, its systems and culture. Further, they do not know enough colleagues to be able to effectively navigate the organization. Working from home could then be a counterweight to well-being and productivity. Another example is task related. Many employees have tasks throughout the week that rely both on their network, and on their efficiency, to be completed. This means that some days simply are more productive when having colleagues around, while other days are more productive working with no disturbances.

On an individual level, it is of interest to understand how the approach to increase employee engagement can be tailored to meet personal needs based on outer factors such as commuting time, family situation and standard of living, and inner factors such as personality traits and preferences. Learning more about factors impacting employee engagement will make us better suited for a future with more flexibility with regards to work location.

So what impact, if any, does the current trend of increased workplace flexibility have on employee engagement? In addition, what do organizations and leaders need to know to tailor the employee experience when working remotely in a more targeted and dynamic way? Because while some employees are struggling with the new conditions, others are thriving. Moreover, there can be many underlying reasons, i.e. work tasks, home office environment, personality traits, at work colleagues, or leadership. Supporting interventions thus might need to be personalized to have the targeted impact. This assumption is supported by research performed by Gallup, and one striking finding is that successful managers do not treat everyone in the same way, instead they treat everyone as a unique individual (Lewis, 2011). One step towards creating a more personalized approach to benefit from the increased work-at-home employee engagement is knowing what kind of levers we can work with, which is what this study will dive into.

Research questions

Based on the purpose of the study, three research questions have been formulated.

1. How is the individual employee engagement impacted by the degree of remote work?
2. Are the mediating factors gender, age, commuting time, number of adults and children in household and home office satisfaction related to employee engagement?
3. Are personality traits related to employee engagement?

Hypotheses

Hypotheses have been constructed to be analyzed in the result. The hypothesis linked to the first research question (H1) reads: *Employee engagement is positively related to working remotely*. Previous research has found employee engagement positively mediates the negative effects of working from home on work life balance, however no research has been found on the direct relationship between the two variables.

The hypothesis for the second research question (H2) reads: *Employee engagement is related to the mediating factors gender, age, commuting time, size of household and home office satisfaction.* Previous non peer reviewed studies suggest that the relationship between factors outside the individual, such as time to work and family situation, had no impact on the individual's well-being. The published research on how remote work and employee engagement is mediated by factors outside each individual is scarce, yet expected to increase as a consequence of the increased volume of remote work. This study therefore aims to contribute to the knowledge about how these factors impact the level of employee engagement.

The sub-hypothesis reads:

- *Employee engagement is related to gender*
- *Employee engagement is related to age*
- *Employee engagement is related to commuting time*
- *Employee engagement is related to size of household*
- *Employee engagement is related to home office satisfaction*

The hypothesis for the third research question (H3) reads: *Employee engagement is related to personality traits.* Previous research, both published and non-published, has found that personality might play a role in predicting distributive work behaviors related to engagement, some traits more than others. The aim of this thesis is to contribute to the knowledge on how individual traits interact with employee engagement. The sub-hypothesis reads:

- *Employee engagement is related to Openness*
- *Employee engagement is related to Conscientiousness*
- *Employee engagement is related to Extraversion*
- *Employee engagement is related to Agreeableness*

Method

Research design

To be able to answer the research question and perform the analysis, we chose a quantitative research method and conducted an internet survey towards employees who in their profession have the possibility to work remotely. This also enables us to research a larger quantity of respondents and get a higher representability in our sample, to see clear patterns and draw statistically significant conclusions (Shaugnessy et al, 2015). The survey was designed to capture a person's work life situation and links both to the level of employee engagement and selected personality traits. The tests used are well established, recognized and frequently used in academic reports, which ensures a high construct validity that the questions measure what we intend to measure.

The level of employee engagement was measured using Gallup's Q'12 Employee Engagement Survey (listed below). Gallup's Q'12 was selected due to being a widely used measure of employee engagement within several organizations as well as in several peer reviewed studies for more than thirty years (Harter et al, 2003; Motyka, 2018). The survey is made up of 12 statements that, if fully embraced, indicates employee engagement. The main focus on the questions are engagement related topics that can be influenced by the manager.

Table 2:

Gallup Q'12 Employee engagement survey questions

No	Question
1.	I know what is expected of me at work
2.	I have the material and equipment I need to do my work right
3.	At work, I have the opportunity to do what I do best everyday
4.	In the last seven days, I have received recognition of praise for doing good work
5.	My supervisor, or someone at work, seem to care about me as a person
6.	There is someone at work who encourages my development
7.	At work, my opinion seem to count
8.	The mission or purpose of my company makes me feel my job is important
9.	My associates or fellow employees are committed to doing quality work
10.	I have a best friend at work
11.	In the last six months, someone has talked to me about my progress
12.	This last year, I have had opportunities at work to learn and grow

The engagement survey has been praised and widely used by companies as well as researchers. At the same time, Gallup has been criticized for presenting horror numbers out of marketing purposes to attract CEO and company leaders (Trost, 2020). The professor Armin Trost has also raised some concerns on the way Gallup has drawn the line between engaged employees and not engaged/actively disengaged employees. Despite that this specific critique has not been peer reviewed we believe it is an interesting question raised which we have taken in consideration. The survey has been selected due to being widely used and accepted as a measure of employee engagement. This study will not attempt to translate its resulting engagement scores into categorized levels of engagement, thus avoiding comparisons to the controversial and non-transparent methods used by Gallup to interpret its results. In figure 1.0 you can see an illustration on how Gallup has made the engagement cut in relation to their total population.

Figure 1.0:

Graphs to illustrate the engagement cut made by Gallup
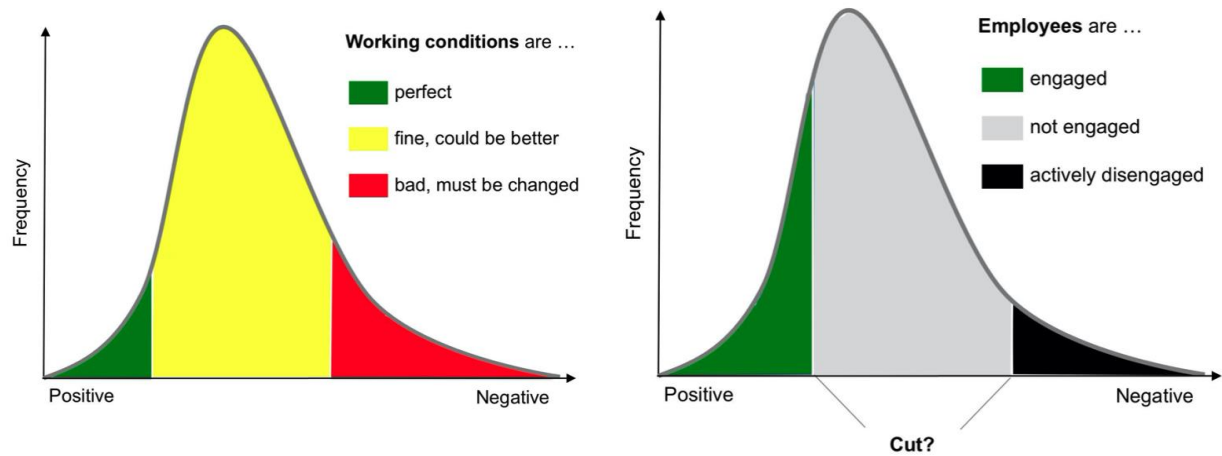
Since our survey aims to compare its own population mean with itself and not towards the Gallup database mean, we do not believe that the use of the Q'12 questions will cause any risks on the validity of our study. We merely use the Q'12 questions as a tool to assess the employee engagement among our respondents.

Our survey also included a personality assessment with the purpose of getting an OCEAN profile for each respondent (Cervone & Pervin, 2019). The assessment enabled us to see the mix of personality traits within the population and to put it in perspective with their engagement score and external factors such as amount of remote work, commuting time, and number of children and adults in the household.

To keep high validity and to make sure that we test and measure the personality traits correctly we used the established free of charge International Personality Item Pool, IPIP Measures (https://ipip.ori.org). This test uses the Big-Five Markers developed by Goldberg (Goldberg, 1992) and is a more optimized test with fewer questions compared to the other well-established personality questionnaire NEO-PI-R developed by Costa & McCrae (Cervone & Pervin, 2019). Since this test is well established and holds a high test-retest reliability, the main threat to the reliability that we see by using this test is that it is a self-report test, which means that the people being tested are answering the questions themselves. This could harm the reliability since the person might not answer the test the exact same way if they performed it again, and that the answers could be affected by the person's social desirability. For our research, we have however made the judgement that this will not be a significant threat to the reliability of the outcome of the analysis.

Participants

We performed a nonprobability sampling by making a convenience sample where we shared the survey to our connections on social media, primarily LinkedIn and Facebook, and two selected companies: one in the field of management consulting with approx. 900 employees, and the other a large global industrial organization with approximately 24 000 employees. It was a precondition that the respondents firstly had a job, and secondly *could* perform their work tasks remotely. Occupations like surgeons, hairdressers and production workers are thereby excluded from the study. Since the survey is voluntary, it is likely to expect a bias among the respondents. It might be that those who choose to respond display specific personality traits or have a higher energy level than those who choose not to respond. The fact that the survey was distributed to a few selected companies might mean that the pool of respondents is exposed to only a few different company cultures, colleagues, leadership and other factors that might limit how the findings of the report can be generalized.

Data collection

The survey was designed using Qualtrics XM online survey tool to collect and analyze the data. The link to the survey was later distributed and shared on the above-mentioned social media and emailed out to two companies.

Data analysis

The closed survey data was extracted from the Qualtrics online survey tool, to be analyzed with the statistical program Jamovi. Before the data could be imported to Jamovi, the data was prepared in Excel to fit the targeted parametrics and formats. Several different analyses such as ANOVA and regression analysis with correlations matrix was performed in Jamovi.

Ethics

The study conforms to the requirements as provided by the Swedish ethics reviewing authority (https://etikprovningsmyndigheten.se), see table 4.

Table 3:

Ethic requirements

No	Requirements
1.	Sensitive information regarding our respondents has been handled according to the privacy protection law, which means that now information about ethnicity, political views, religious beliefs, health, and sexual orientation can be connected to a specific person.
2.	The study will not use any methods consisting of physical procedures on our research participants.
3.	The study will not use any methods, which aim to influence the research participants physically or mentally.
1.	The study will not put the research participants into any physical or mental risk.
2.	The study will not research any biological material taken from a living human being that can be traced back to the same person.

Result

Response overview

177 respondents initiated, and 139 fully completed the survey. One respondent was excluded from the data due to providing inconsistent information and deviating substantially from the other participants. The person was the only one over 70 years of age, and the only participant choosing the gender category "Other". He or she lived with more than 4 other adults and more than 3 other children, had the very rare engagement score of 100% and also scored highest possible on all personality traits. In other words, it is very unlikely that the respondent provided truthful information.

The above filtering left 138 respondents that appeared to have truthfully and completely finished the survey, 54% women and 46% men. The most represented age span is 31-40 (44%), followed by 18-30 (23%) and 41-50 (19%). Only 14% of respondents were over 50 years of age. See Figure 2.0.

Figure 2.0:

Distribution of age and gender among respondents
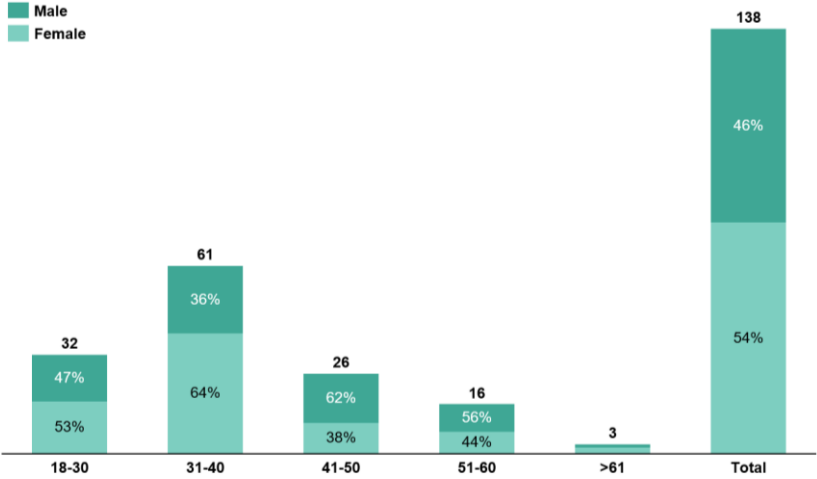
The most frequent living situation is sharing a household with one other adult (76%), and no children (46%). See Figure 2.1. This can be explained by the relatively young age of the majority of the respondents.

Figure 2.1:

Distribution of the respondents' number of adults and children in the household.
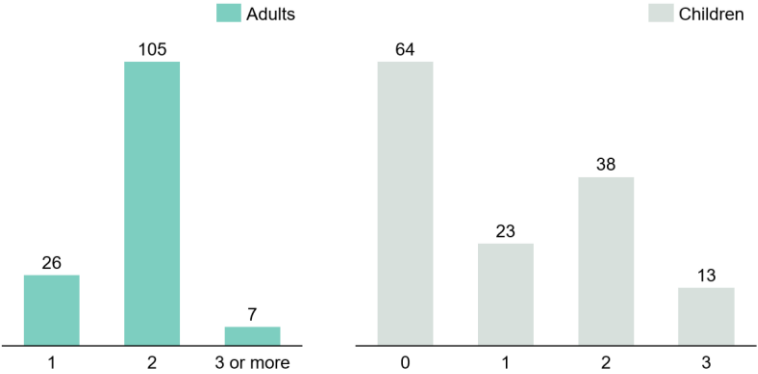
The rating of respondents' home office reveals a high satisfaction, 55% score 4 or higher. See figure 2.2.

Figure 2.2:

Home office satisfaction.
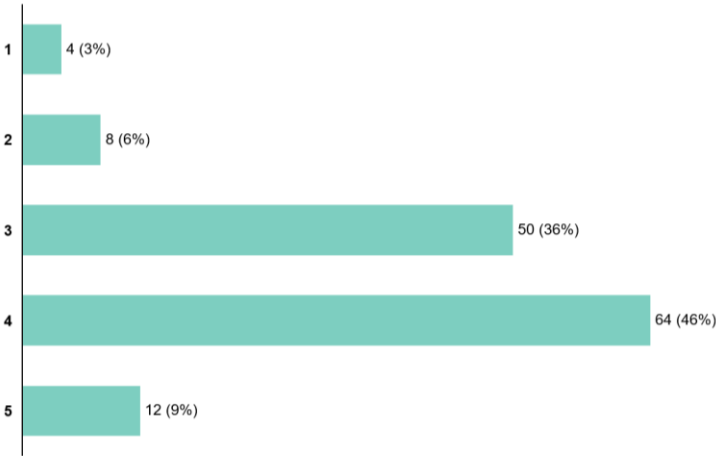
Note. 1= It is extremely challenging for me to work from home. 5= My home office provides the optimal work environment for me.

Figure 2.3 provides an overview of respondents commuting time. At a first glance it might look like the majority has a commuting time below 30 minutes daily traveling back and forth to work, but altogether, most of the respondents spend more than 30 minutes commuting daily.

Figure 2.3:

Distribution of commuting time
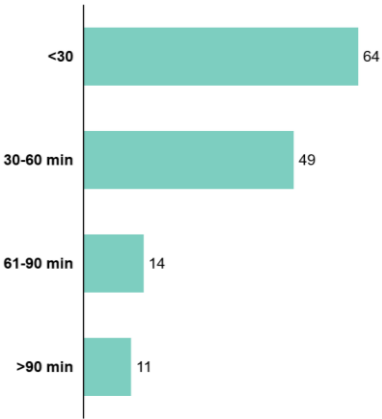
Looking at how many respondents had worked from home the last month at the time of filling out the survey, a majority (53%) had worked home full time. The group that had

worked 2-4 days per week at home represented 39%, while the group working 0-1 day per week only made up 8% of responses. See figure 2.4. Due to the skewed distribution of the degree of remote work, the analysis will compare the fully remote workers with the ones with a flexible working situation, i.e. 0-80% at home.

Figure 2.4:

Distribution of remote work, % based on last month at time of response.
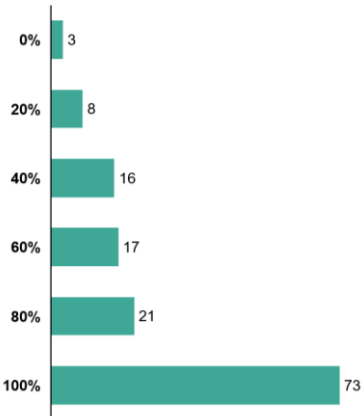
The level of self-rated company satisfaction among respondents was high. 91% scored one of the two highest options, while the remaining respondents were distributed among the less favorable options. See Figure 2.5.

Figure 2.5:

Company satisfaction
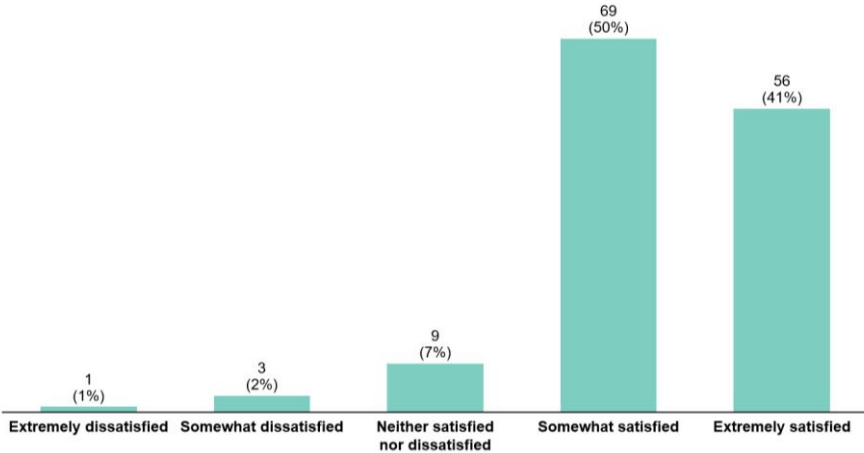
Engagement and remote work

In addition, the distribution of employee engagement is skewed towards the positive end. However this score is not directly self-scored, but rather a weighted value based on 12

self-score questions that are strong indicators of employee engagement. Figure 3.0 below shows that 92% score an employee engagement level over 50%.

Figure 3.0:

Distribution of employee engagement %
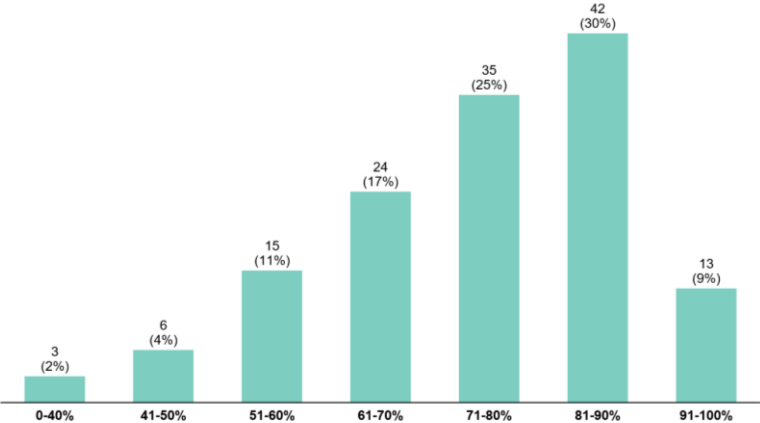
Note. The first category covers 0-40%, while the other categories cover only 10 percentage points.

The next table, table 4, looks at how the individual employee engagement relates to the degree of work being conducted at home. To investigate if the employee engagement is impacted by if the work is fully remote or being conducted in a flexible manner. The resulting Pearson's r of -0.014 indicates that no relationship can be seen, and the corresponding p-value of 0.869 means that it is not statistically assured. Our first hypothesis H1; *Employee engagement is positively related to working remotely* can thus not be supported.

Table 4:

Employee engagement and remote work in the last month (at time of response).

Correlation Matrix

		Engagement score	Remote work grouped
Engagement score	Pearson's r	—	
	p-value	—	
Remote work grouped	Pearson's r	-0.014	—
	p-value	0.869	—

Note: Remote work grouped is a binary variable, where 1 represents fully remote work in the last month, and 0 represents a flexible work situation.

Engagement and mediating factors

  The impact of the mediating factors on engagement is here focused on the number of children in the household, home office satisfaction and daily commuting time. Starting with children, the data suggests that for households with 3 children, the respondent engagement level is higher than average for women and lower than average for men, see figure 3.1. We can also see that for households with 0 children, the respondent engagement level is lower than average for women and higher than average for men. Table 5 more thoroughly investigates the impact children and gender has on the engagement score, and while children or gender alone does not have a significant impact, the factors combined do show a significance ($F_{(3,130)} = 2.7763$, $p = 0.044$).

Figure 3.1:

Engagement score versus number of children, split on men and women
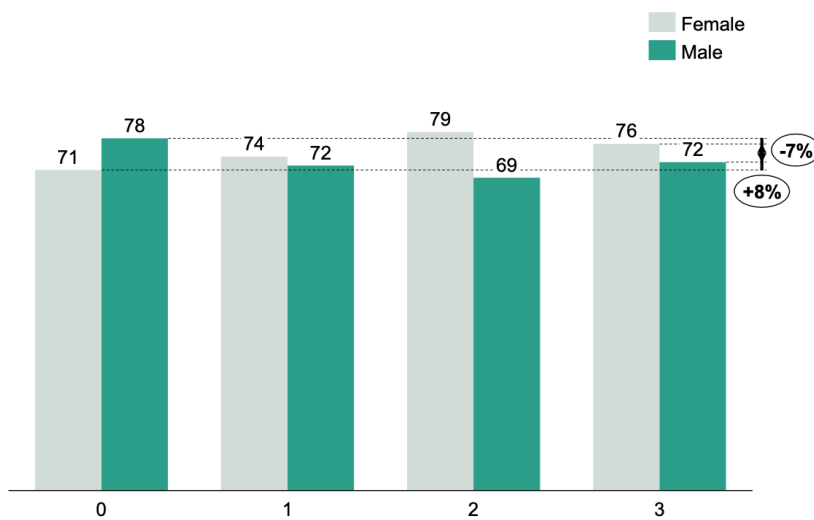
Table 5:

Engagement score in relation to number of children and gender

ANOVA - Engagement score

	Sum of Squares	df	Mean Square	F	p
# children	0.00417	3	0.00139	0.0648	0.978
Gender	0.01140	1	0.01140	0.5314	0.467
# children ✳ Gender	0.17867	3	0.05956	2.7763	0.044
Residuals	2.78874	130	0.02145		

There is no relationship between engagement level and satisfaction with home office nor daily commuting time, see Figure 3.2. As seen in Table 5, there are no significant findings for the relationship between engagement score and the mediating factors.

Figure 3.2:

Engagement score vs. home office satisfaction and daily commuting time
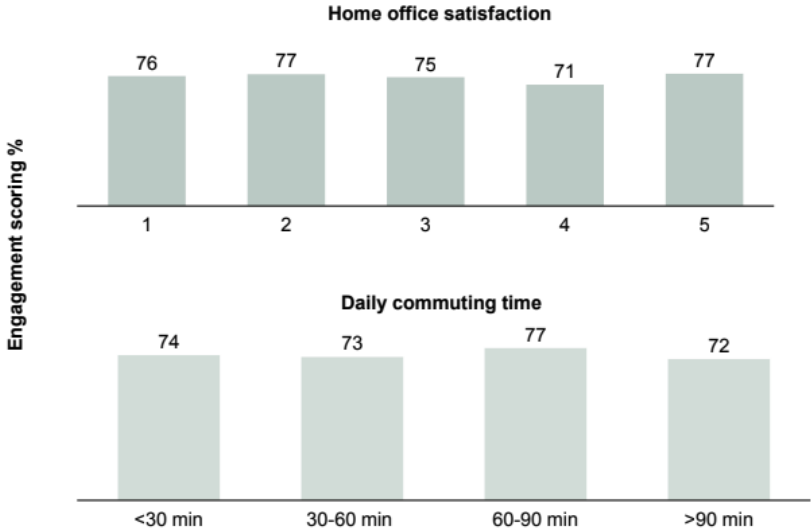
Note. 1= "It is extremely challenging for me to work from home" 5= "My home office provides the optimal work environment for me."

In the following Table 6 you can see the analysis and p-values of all the external factors performed in a correlation matrix.

Table 6:

Correlation matrix

Correlation Matrix

		# adults	# children	Daily commute	Home office satisfaction (1-5)	Engagement score
# adults	Pearson's r	—				
	p-value	—				
# children	Pearson's r	0.220	—			
	p-value	0.009	—			
Daily commute	Pearson's r	0.028	0.209	—		
	p-value	0.748	0.014	—		
Home office satisfaction (1-5)	Pearson's r	0.013	0.057	0.034	—	
	p-value	0.883	0.508	0.695	—	
Engagement score	Pearson's r	0.070	0.005	0.003	-0.072	—
	p-value	0.415	0.955	0.974	0.398	—

Engagement, age and gender

Figure 3.3 shows an average engagement level of 74% among both men and women. However, men in the youngest age group (18-30) report higher engagement levels than the women in the same age span (84% vs. 71%). Looking at the oldest age group (60+), the opposite holds true, i.e. the engagement level among the men is 54% while the women reports 79%, above average. An age dependent relationship is thus not supported in the ANOVA in Table 7, where there is no significant relationship between age and engagement level. The ANOVA does however also show a significance between age and gender combined on engagement level (F (4,128) = 2.8, p = 0.029).

Figure 3.3:

Engagement score split on gender and age
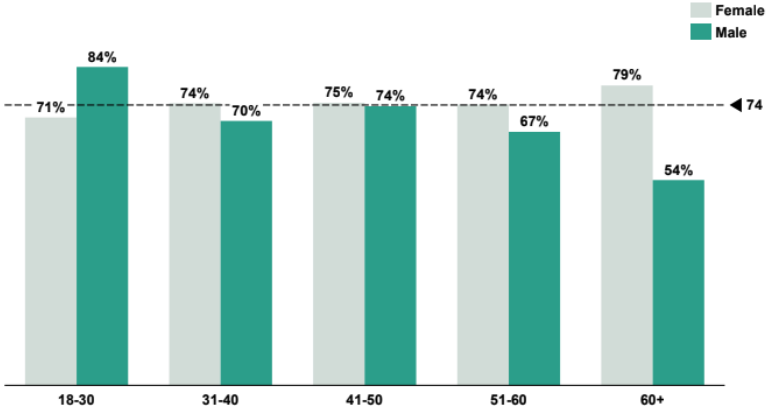
Table 7:

ANOVA analysis on engagement score in relation of gender and age group

ANOVA - Engagement score

	Sum of Squares	df	Mean Square	F	p
Gender	0.0283	1	0.0283	1.35	0.247
Age group	0.0859	4	0.0215	1.03	0.396
Gender ✶ Age group	0.2343	4	0.0586	2.80	0.029
Residuals	2.6750	128	0.0209		

Returning to the second hypothesis, H2; *Employee engagement is related to the mediating factors gender, age, commuting time, size of household and home office satisfaction;* it cannot be confirmed for any of the individual given factors. However, there is a gender difference in the engagement scoring within several age groups, in different directions for different age groups.

Engagement and personality traits

As displayed in figure 3.4 and 3.5 the engagement scoring related to strength in personality trait shows an uneven, varying relationship, depending on trait. First, comparing the top 10% on Openness with the bottom 10%, the difference in engagement level is 10 percentage points, where high scorers on Openness also score a higher engagement. Looking at the same comparison for conscientiousness, the same direction can be seen, i.e. high scorers on conscientiousness also score above average on engagement while low scorers score below average on engagement (difference 8 percentage points). The third trait, extraversion deviates from the other traits in the way that there is no observable difference in engagement scoring between the top and bottom 10% scorers in extraversion. Finally, the trait agreeableness displays a small difference between the top and bottom 20% of the trait. Here however the relationship is reversed, i.e. the bottom 20% score higher on engagement, while the top 20% score lower.

Figure 3.4:

Engagement score comparison between personality traits
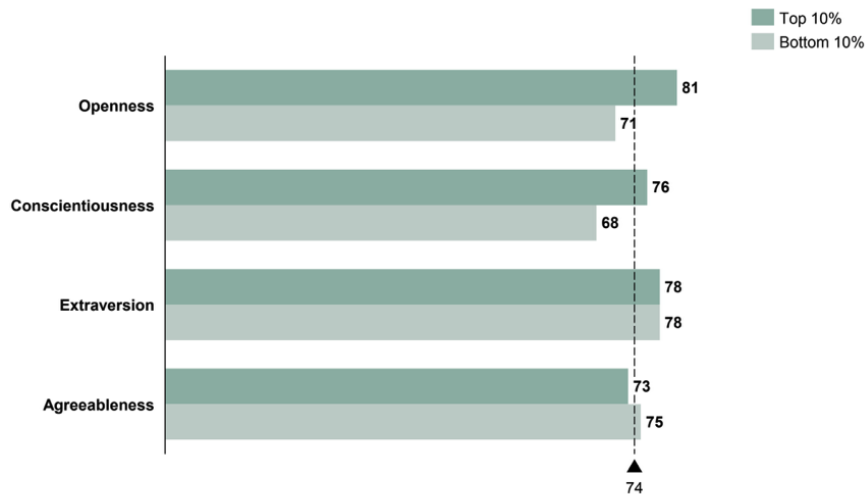
To dive deeper into the above graph, a correlation matrix for the personality traits, engagement score and remote work was done. As might be expected, a significant relationship is found between engagement score and the trait Conscientiousness, Pearson's r 0.190 and p = 0.025. This is the only significant relationship among personality traits.

The main hypothesis H3: *Employee engagement is related to personality traits* can thus only partly be confirmed, i.e. among the four sub-hypotheses, we can only confirm sub-hypothesis; *Employee engagement is related to Conscientiousness.*

Table 8:
Correlation matrix of personality traits and engagement.

Correlation Matrix

		Openness	Conscientiousness	Extraversion	Agreeableness	Engagement score
Openness	Pearson's r	—				
	p-value	—				
Conscientiousness	Pearson's r	-0.084	—			
	p-value	0.325	—			
Extraversion	Pearson's r	0.220	-0.048	—		
	p-value	0.009	0.572	—		
Agreeableness	Pearson's r	0.159	0.158	0.282	—	
	p-value	0.063	0.064	<.001	—	
Engagement score	Pearson's r	0.152	0.190	0.011	0.008	—
	p-value	0.075	0.025	0.896	0.929	—

25

Figure 3.5:
Engagement score and conscientiousness
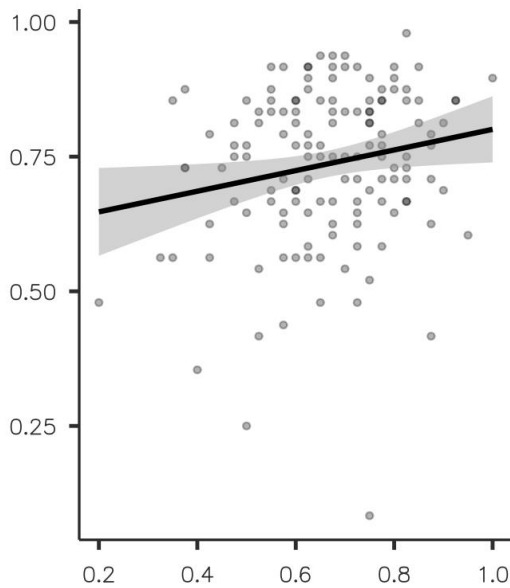
Note. The only traits with a relevant trend. Conscientiousness p=0,025 & r=0,190 (significant result).

Discussion

One purpose of this thesis was to investigate if and how employee engagement is impacted by working remotely, i.e. from home. The topic is more relevant than ever before when a full workforce has had to manage its work life during a pandemic. It can be argued that well-being increases alongside the work-from-home situation, due to a less complex life with no transportation, presumably more free time to spend on things enjoyed, and in the end lead to a positive impact on employee engagement. On the other hand, working from home is challenging with a less ergonomically favorable workstation, a potentially disturbing sound environment, a need for more communication with colleagues and a stronger leadership that may or may not be there. This study shows *no relationship between the degree of work that is being conducted remotely and the engagement level*. The absence of a relationship is weak, however it supports the finding in the 2020 study by Johansson, that the employee engagement had been *experienced* as stable, as employees transitioned into working from home. Experienced is a key word here since both *evaluating* and *remembering* your own engagement level is a difficult task. *The evaluation* might be influenced by how happy you feel in general on that specific day, the weather or if your highly likeable colleague just gave you a call. The *remembering* suffers from the same dilemma, with the addition of the flaws of our memory.

The absence of a relationship between the degree of work that is being conducted remotely and the engagement level in the study has several causes. First, *the distribution of degree of remote work is highly skewed*. More than half of the participant pool had worked full time at home the last month, and only three participants (2%) worked full time from an office. This provides a weak basis for drawing statistically relevant conclusions.

Secondly, t*he distribution of engagement is highly skewed*, as compared to the results generated in earlier, larger studies. The average engagement level in this study is 74%, which appears on the high side compared to the low number of engaged workers as presented by Gallup (2017). However, as previously pointed out, we do not actually know where and how Gallup draws the line for classifying its different engagement levels, and thus cannot compare our results to an expected level.

Thirdly, the participants were mainly recruited from a few selected resources, two companies and the authors' network on LinkedIn and Facebook, which might have skewed the result in several ways.

- Workplace engagement is not a *consistent trait* but rather a *contextual state that* is strengthened by the design of leaders and employers (Lewis, 2011). It can be assumed that the two selected companies have workforces with engagement levels beyond the average. The assumption is supported by the data of 91% reporting a company satisfaction of 4 or higher, on a scale from 1-5.

- LinkedIn is a forum for people that wish to network and strengthen their professional brand. It can be assumed that people with a low engagement are either not present in such a forum, or not active.

- For all respondents it should be pointed out that participation was voluntary, and it can be assumed that the characteristic of high engagement goes hand in hand with choosing to spend time to contribute to a voluntary survey with no compensation.

Another purpose with the study was, beyond observing the impact of working remotely, to identify factors that are impacting employee engagement. This, for supporting companies, leaders and individuals with what they can do to increase employee engagement in any context. We start by looking at mediating factors, such as the number of adults and children in the household, workstation satisfaction and commuting time. The data indicates that there is a gender difference in engagement level, and that age is an impacting factor. A relationship is however not found in this study. Both the gender and age dimensions of employee engagement are suggested as further topics of research. Similarly, the satisfaction

level with one's home office and the time spent every day on commuting, could not predict neither an increase nor decrease in engagement level.

Returning to the selected definition of *employee engagement*, i.e. '*Feeling responsible for, and committed to, superior job performance, so that job performance matters to the individual*'. It appears that mediating factors and traits studied do not interfere with these feelings of responsibility and commitment to superior job performance. Therefore, while long commutes and a chaotic home office might be disturbing, it does not seem to be mixed up with one's work engagement.

Regarding personality traits, we know that *'engagement resides with the person,* as opposed to the job; and that *it is a state* rather than a trait'*, but is this state impacted by a person's traits? The analysis shows that the trait conscientiousness does have a significant link to the level of engagement reported. The result is aligned with the study by Inceoglu and Warr (2012), where conscientiousness is found to be a positive predictor of job engagement. In other words, the ability to exercise self-discipline and control in order to pursue goals, being organized and determined, and having the tendency to give up immediate gratification for the sake of long-term achievement appears to be beneficial qualities in the context of working from home. The finding is in line with the hypothesis made in this study and suggests to employers that their effort might pay off better if supporting its low scorers on conscientiousness, rather than its high scorers.

Extroverted people, that intuitively could benefit from working surrounded by others, but which according to several studies on the contrary benefits from working from home, is in this study not predicting engagement level in either direction, as opposed to the study by Langelaan et. al. (2006) that found engagement and extraversion to have a positive relation (Langelaan et. al., (2006)). How could the degree of extraversion not relate to the degree of employee engagement? A theory could be that different aspects of working from home benefits introverts and extroverts in different ways, thus balancing out the effects. This would be interesting for future research, to dig deeper on which different aspects of the personality traits that benefit the different working conditions. For example, while extroverts might enjoy socializing with colleagues on a personal level, it might hinder them in contributing to the goals of the organization, which strongly links to employee engagement. Introverts however, might be good at contributing to the goals of the organization in a focused way no matter if working at home or with colleagues close by, always available for a coffee. However, might suffer from not being as good as extroverts themselves at ensuring they get the dose of socializing that they actually do need for them to thrive at work.

The preconceived notion that people are not settled in and satisfied with the forced situation of remote work due to the pandemic, which would affect employee engagement, may not be true. This however does not say that people are not experiencing physical, mental, or other challenges during the pandemic. The population we have researched does not display a compromised employee engagement. Respondents are on the contrary in general highly satisfied with their homework situation. This conclusion is also supported in the research on remote work (Westberg et. al., 2021). Duration is an aspect that has not been covered in this study. It is likely that duration, i.e. for how long you work fully remotely, will have an impact on your work engagement. The popular predictions of a future hybrid model where employees can choose to work 2-3 days per week remotely will need to be further investigated to find out how both work performance and engagement can be optimized by tuning the degree of remote work based on work tasks, personality and other impacting needs or factors.

To wrap up, it appears that employers, leaders and individuals all need to acknowledge the importance of the experience of being able to contribute to the goals of the organization in a good way as one of the most important factors for employee engagement. This study cannot find any indications that the predictions of a workforce slowly transitioning towards a hybrid model, where employees have the freedom to work a few days per week from home, would have any implications on the workforce engagement in either direction. While a slight link between employee engagement and personality traits can be seen, none is observed with mediating conditions such as home environment, commuting time and remote work.

Based on the findings in this study we believe it could be interesting for future research to deepen the knowledge on how the different degrees of personality traits manage a remote work situation, and how to support the more struggling employees. There are many definitions of engagement, and we suggest that researchers demand transparency in the data behind engagement studies done. And for future research to be clear in how engagement classification is done and the implications for each group, i.e. "*Those with an engagement scoring below 5.0 are classified as actively disengaged, which correlates with having less than one year left on the job*".

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Appendix

Survey

Introduction

Workplace engagement & remote work

Engaged employees are more productive and their workplaces more profitable than workplaces characterized by low engagement. However, the global employee engagement is only around 15%. Increasing employee engagement is thus one of the largest efficiency gains that an organization can invest in.

This study aims to contribute to the research on **how employee engagement can be unleashed through the lens of the current trend of increased remote work**. You may participate in this study if you have a job with tasks that can be performed remotely. It does not matter if you actually have been working remotely or not.

The survey takes approx. 5 min to answer, and you will remain fully anonymous. Participation is voluntary and you can exit the survey whenever you want, without stating any reason. No sensitive data is collected in this study. By continuing to the next page you consent to your participation, and confirm that you have been informed about the purpose of this study.

If you have any questions or feedback to the survey, please reach out to kandidatuppsats.vt21@gmail.com.

Thank you for your contribution!

Elina & Johanna

→

Basic information and external factors

Gender

Female ○

Male ○

Other ○

Age group

<18 ○

18-30 ○

31-40 ○

41-50 ○

51-60 ○

61-70 ○

>70 ○

What is your average daily commuting time to work? (back and forth with your most frequently used mode of transport)

<30 min ○

30-60 min ○

60-90 min ○

>90 min ○

How many adults live in your primary household, yourself included?

1	○
2	○
3	○
>4	○

How many children live in your primary household?

0	○
1	○
2	○
>3	○

What statement best describes your at home work environment?
Consider ergonomy of the work station, sound environment,
prescence of others etc.

My home office provides the optimal work environment for me	○
My home office works good for me	○
The quality of my home office varies (e.g. depending on the type of work to be done or if others in the household work/school/is sick at home)	○
It is challenging for me to work from home	○
It is extremely challenging for me to work from home	○

What option best describes how often you have been working remotely in the last month?

Never ○

1 days/week ○

2 days/week ○

3 days/week ○

4 days/week ○

Full time (5 days/week) ○

→

Employee engagement

How satisfied are you with your company as a place to work?

- Extremely satisfied ○
- Somewhat satisfied ○
- Neither satisfied nor dissatisfied ○
- Somewhat dissatisfied ○
- Extremely dissatisfied ○

Working conditions

	1. Strongly disagree	2	3	4	5. Strongly agree	Don't know/ Does not apply
1. I know what is expected of me at work	○	○	○	○	○	○
2. I have the materials and equipment I need to do my work right.	○	○	○	○	○	○
3. At work, I have the opportunity to do what I do best every day.	○	○	○	○	○	○
4. In the last seven days, I have received recognition or praise for doing good work.	○	○	○	○	○	○
5. My supervisor, or someone at work, seems to care about me as a person.	○	○	○	○	○	○
6. There is someone at work that encourages my development.	○	○	○	○	○	○
7. At work, my opinions seem to count.	○	○	○	○	○	○
8. The mission or purpose of my company makes me feel like my job is important.	○	○	○	○	○	○
9. My associates or fellow employees are committed to doing quality work.	○	○	○	○	○	○
10. I have a best friend at work.	○	○	○	○	○	○
11. In the last six months, someone at work has talked to me about my progress.	○	○	○	○	○	○
12. This last year, I had opportunities at work to learn and grow.	○	○	○	○	○	○
	1. Strongly disagree	2	3	4	5. Strongly agree	Don't know/ Does not apply

→

Personality assessment

Describe yourself as accurate as possible (as you honestly see yourself, in relation to other people you know of the same sex and same age as you. Not as you wish to be in the future)

	Very inaccurate	Moderately inaccurate	Neither accurate nor inaccurate	Moderately accurate	Very accurate
1. I am the life of the party	○	○	○	○	○
2. I feel little concern for others	○	○	○	○	○
3. I am always prepared	○	○	○	○	○
4. I have a rich vocabulary	○	○	○	○	○
5. I don't talk a lot	○	○	○	○	○
6. I am interested in people	○	○	○	○	○
7. I leave my belongings around	○	○	○	○	○
8. I have a difficulty understanding abstract ideas	○	○	○	○	○
9. I feel comfortable around people	○	○	○	○	○
10. I insult people	○	○	○	○	○
11. I pay attention to details	○	○	○	○	○
12. I have a vivid imagination	○	○	○	○	○
13. I keep in the background	○	○	○	○	○
14. I sympathize with others' feelings	○	○	○	○	○
15. I make a mess of things	○	○	○	○	○
16. I am not interested in abstract ideas	○	○	○	○	○
17. I start conversations	○	○	○	○	○
18. I am not interested in other people's problems	○	○	○	○	○
19. I get chores done right away	○	○	○	○	○
20. I have excellent ideas	○	○	○	○	○
21. I have little to say	○	○	○	○	○
22. I have a soft heart	○	○	○	○	○
23. I often forget to put things back in their proper place	○	○	○	○	○
24. I do not have a good imagination	○	○	○	○	○
25. I talk to a lot of different people at parties	○	○	○	○	○
26. I am not really interested in others	○	○	○	○	○

	Very inaccurate	Moderately inaccurate	Neither accurate nor inaccurate	Moderately accurate	Very accurate
27. I like order	○	○	○	○	○
28. I am quick to understand things	○	○	○	○	○
29. I don't like to draw attention to myself	○	○	○	○	○
30. I take time out for others	○	○	○	○	○
31. I avoid my duties	○	○	○	○	○
32. I use difficult words	○	○	○	○	○
33. I don't mind being the center of attention	○	○	○	○	○
34. I feel others' emotions	○	○	○	○	○
35. I follow a schedule	○	○	○	○	○
36. I spend time reflecting on things	○	○	○	○	○
37. I am quiet around strangers	○	○	○	○	○
38. I make people feel at ease	○	○	○	○	○
39. I am demanding in my work	○	○	○	○	○
40. I am full of ideas	○	○	○	○	○

If you have any comments or feedback, please share with us!

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