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“Adoption of home-based telework during the COVID-19 pandemic and its effect on the employees’ commitment to the company”

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## **List of Abbreviations**

AC	Affective commitment
ACC	Affective commitment to the company
ACE	Affective commitment to other employees
ACJ	Affective commitment to the job
CC	Continuance commitment
CCC	Continuance commitment regarding the company
CCE	Continuance commitment regarding other employees
COVID-19	Coronavirus disease 2019
ICTs	Information and communication technologies
ILO	International Labour Organization
KMO	Kaiser-Meyer-Olkin test
NC	Normative commitment
NCC	Normative commitment towards the company
NCE	Normative commitment towards the employees
OC	Organizational commitment
PCA	Principal component analysis
WFH	Work from home



## **1 Introduction**

People are the core of a business and human capital is one of the most important assets in an organization. Businesses need a clear definition of their main purpose and achieving that purpose does not only depend on offering unique, useful products and services that satisfy the needs of those acquiring them, but it first depends on what is within an organization: People with the right soft and hard skills to make that possible.

The generation of a sustainable competitive advantage connected to human capital builds upon companies' ability to hire and retain the right people, and in doing so they ought to develop the best feasible and appropriate structure to manage their workforce consisting of intangible and tangible instruments such as, channels and ways of internal communication, development tools and projects, road maps and guidelines, reskilling and upskilling possibilities, and favorable working conditions.

Throughout the last decades and with the resurgence of the fourth industrial revolution, businesses have been incorporating new work models that have led to a notorious organizational development. Companies adapt their workforce to their evolving business strategy and path to digital transformation by incorporating available information and communication technologies (ICTs) into their organization and finding a balance between physical and virtual settings; at the same time, they assess positive and negative effects of their approach and work model on their employees' well-being.

### **1.1 Conceptual Background and Literature**

#### **1.1.1 Home-based Telework**

To understand which are the different new work models, teleworking modalities as categorized in the research paper from Daniels et al. (2001) are considered: home-based telework, teleworking from remote offices, and mobile telework. Companies have been integrating these flexible work arrangements in their organizational strategy; accordingly, their human resource departments and staff perceive the existence of these work models as a benefit in which employees can do their job at the preferred, most optimal place, to be able to organize their daily routines and meet at the same time their professional and private needs.

Until the beginning of 2020, flexible-remote or all-remote companies were adopting these modern work models, consisting for instance of either part-time or full-time telework, and in general establishing ground rules, providing the needed equipment, understanding the

organizational implications, following the bounding regulations and policies, etc. Although, the global usage rate of remote work was steadily increasing (ILO, 2020), most of the companies adopting these work models were those in which being a knowledge-worker allowed for the job duties to be done at any possible setting. However, with the coronavirus outbreak, companies across different industries increased their scale of remote working as a response to the new challenges that the pandemic brought (Hay, 2020). In this unforeseen scenario, companies had to accept that it was necessary for their staff to work remotely, and so they had to embrace this new normal way of working. This included not only knowledge-based companies, but also any company in which the individual's task and/or function allowed for a remote work setting. Certainly, the companies in industries from knowledge-based economies were able to adopt remote work in a wider extend than companies in countries focused on other industries.

When going through the literature regarding teleworking modalities, many research papers that cover this topic can be found. For example, Baruch (2001) explains in his research that the terminology for remote work is very broad, he mentions this concept as being quite 'new' for research, and he includes some of the work that has been made and which has studied this topic focusing on its association with ICTs, the negative and positive implications for companies, the effect that it has on people's personal and professional lives, among other drivers and drawbacks.

The empirical study conducted by Doppel et al. (2003) targeted and surveyed 11.800 individuals in the European Union (EU), Switzerland, and the United States (US). It shows that a large percentage of the surveyed individuals was using teleworking modalities, and that almost two-thirds were interested in teleworking. The authors conducted a longitudinal study over a period of three years and presented results based on a representative sample indicating that the number of people in telework, with at least one day of work from home (WFH), had doubled throughout that period. The study also mentioned following figures about the Austrian workforce: 77% of the total population in employment in Austria doing telework were men, 50% of remote workers in Austria corresponded to salaried workforce, and 30% of the total population in employment corresponded to those doing telework for at least one day.

Likewise, the research from Milasi, Fernández-Macías, et al. (2020) states how during the last decade prior to the coronavirus disease 2019 (COVID-19) pandemic, a very small portion (5.4%) of the total's workforce in the EU-countries used to do home-based telework. More specific statistical reports indicate that the use of part-time or full-time remote work varied across the different EU-countries' total workforce substantially with 5-

10% in Croatia, Czech Republic, Greece, Italy, and Spain; 10-15% in Germany and Poland; 15-20% in Ireland and Portugal; 20-25% in Austria, France, and Belgium; almost 30% in Denmark; and above 30% in Finland, Luxembourg, Sweden, and the Netherlands doing remote work before the coronavirus pandemic (International Labour Organization [ILO], 2020; Milasi, Fernández-Macías, et al., 2020).

### **1.1.2 Home-based Telework during the COVID-19 Pandemic**

The literature and statistics described above correspond to the situation prior to the COVID-19 pandemic. Since the beginning of 2020 further literature has been released, though until the point of this research the content has focused mainly on explaining how companies were suddenly challenged to work remotely and how they have been coping with this. It is understandable that the current situation has made every business worldwide rethink and reorganize itself as it was forced to adopt home-based telework.

Before reviewing these challenges, the published statistics during the late summer and which refer to the impact of the coronavirus pandemic will be shortly described. The fraction of home-based teleworkers increased at a fast pace with almost 40% of the total's workforce in the EU-countries being forced to do home-based telework, and country-specific the statistics are as follows: Croatia, Czech Republic, and Spain having approximately 35% of the total workforce having to work from home; Austria, Ireland, Italy, and Poland almost 38%; Denmark, France, Finland, Germany, and Greece almost 40%; Belgium, Sweden, and the Netherlands above 40%; and Luxembourg with almost 55% (ILO, 2020; Milasi, Bisello, et al., 2020). The above statistics concerning Austria are almost comparable to the result delivered thru the research conducted in April on a sample of 2.200 respondents by the Institut für empirische Sozialforschung und Arbeiterkammer Wien (IFES and AK, 2020): 42% of the surveyed individuals in employment were working from home (with more than half on a daily basis), 48% could not work from home, and 10% could but did not do so for different reasons.

Indeed, new and very relevant tasks appeared to be on the organizational agenda, which led to companies creating a taskforce and implementing for instance the so-called "workforce analytics" as defined in an article from KPMG with the intention of guiding companies throughout a process that starts with internal assessment of their staff and practices, continues with the companies constant care of their staff, and finishes with the implementation of an action plan that improves the way of working both in a physical and virtual setting; the six core components encompassing the "workforce analytics" are: Workforce Strategy, Shaping, Planning & Monitoring, Sourcing, Employee Experience, and Capability & Agility (Abdullah, 2020). In the same manner, yet providing more specific

guidance, another article from KMPG that focuses on the insurance industry explains how companies need to analyze relevant issues concerning their employees' soft and hard skills, the tools and instruments made available to their employees for remote access, the business communication platforms that they can adopt, as well as the financial and legal risks and benefits (Hay, 2020). Moreover, the business reports from Deloitte (2020) and ILO (2020) identify requirements for a successful implementation of home-based telework: organizational preparedness that integrates the view from all shareholders and aims at creating a culture based on trust and development, the creation of a hybrid-work model that defines the activities and processes that do not require employees' physical presence at the office and those that do require employees to be at the office, the implementation of an optimal home-based digital workspace to create effective telework settings and communication channels, use of new practices and special time arrangements that allow employees to find balance between work and private errands without affecting their level of flexibility or efficiency, and other requirements.

The ongoing workforce transformation and vast adoption of home-based telework as a result of the coronavirus pandemic has not only been discussed to a great extent in papers elaborated by consulting professionals, but also throughout the current available academic research papers.

On one hand, academic researchers have covered issues that are being evaluated by the organizations, such as how to operate in a virtual environment, how to manage the staff on remote work and provide them with all the needed tools, how to facilitate a possible comeback and implement all needed measures to combine remote and on-site working, how to deal temporarily or permanently with empty premises and possible associated cuts, among others. The research paper from Costa Dias et al. (2020) summarizes some of these factors; the authors use statistical data from the United Kingdom (UK) collected during the beginning of the pandemic and state that the implementation of government and corporate policies is necessary to diminish the negative economic and social effects that the lockdowns have and continue to cause. Moreover, Shankar's (2020) research that concerns also the UK explains how once employees from the IT multinational corporation, Infosys Limited, had settled their workplace at home and had the equipment they required, then the company focused on revising the internal policies and programs in order to make sure not only that their staff had the needed tools, but also that they were aiming at factors concerning for instance employees' emotional health as well as learning and development.

On the other hand, the available literature assesses the worldwide work situation and focuses on describing the specific group of individuals that are subject to work from home.

This approach concerns those academics that base their results on data from different geographic regions to explain how depending on the income level, employment status, and characteristics of the occupation it is possible to demonstrate which specific employee as well as in which countries is and will be working from home. For instance, Saltiel (2020) analyzed within different developed countries the relationship between independent variables (e.g., level of education, job occupation and corresponding salary, household income, etc.) and the usage of home-based telework to find out that across these countries the results are similar with better paid and more educated employees working from home in a greater extent. Hatayama et al. (2020) examined a sample taken from different income level countries and concluded that the adoption of home-based telework is different across countries as this depends on the main industry activities of each country that allow or not for employees to do their tasks from home; additionally, they stated that employees are prone to work from home if they have a high level of education and hold a formal working agreement. Another research delivers the same results confirming that the main industry sector(s) of a country determine(s) the possibility that employees have to do their job physically or virtually; so, while developing countries can have only one-fifth of their employed population making use of work from home, developed countries can have two-fifth of their employed population doing so (Gottlieb et al., 2020).

### **1.1.3 Employees' Commitment to the Company**

Commitment will be discussed in depth based on insights gathered from the literature. One of the first journal papers that elaborates on commitment is from Becker (1960) in which the author uses the example of a side bet made by an individual prior to the actual bargaining situation to explain that people become committed to someone or something by following the initial decided path, be it intentionally or not; and this can be an analytical support to how commitment at the workplace comes to existence once an employee joins a new company, even though commitment can still develop over time.

The side bet theory of Becker was the foundation for academic work on commitment, and most specially for the authors Meyer and Allen (1984) who mention that Becker's theory is the description to one of the dimensions from commitment that will be discussed later on; the authors conducted a research that treated commitment as being divided into two independent dimensions, one referring to the continuance conception and the other to the affective conception, but with the results of their empirical research, they concluded that their theory needed to be re-worked since an interdependency between the two dimensions existed in their sample data. A decade later, Allen and Meyer (1996) included and discussed three dimensions in their work about the concept organizational

commitment (OC) in which they define it as the overall bond that exists between the employee and the company; and the stronger the bond is, the bigger the possibility it is that an employee will remain at the company; hence, this overall bond consists of three elements that are ultimately refer to as the OC's dimensions. This is the reason why the concept of OC has its origin in the literature with the authors Meyer and Allen, whose three-component model of commitment has been used as the literature core in several research papers. OC or employees' commitment to employers is consequently classified into three main dimensions: affective commitment (AC), normative commitment (NC), and continuance commitment (CC) (Meyer et. al, 2012).

AC refers to the emotional bonding that employees have and their need to be part of that institution. "Employees with a strong affective commitment remain with the organization because they want to..." affirmed Meyer et. al (1993). To define AC with this citation is proper because it explains briefly what AC embodies: the genuine feeling of an employee who wants to be a member of an organization.

NC is the dimension that represents how employees feel a need to remain in their company because it is an obligation for them to do so (Allen and Meyer, 1996). Employees built an ethical behavior towards their company that has the effect of making them stay in their company; thus, what they believe to be right or wrong from an ethical point of view influences their decision. Moreover, they consider what they have received or are receiving as some kind of debt that needs to be recompensed.

CC refers to the employees' appraisal when deciding to remain at the place of work because of not choosing to give up what they consider as a gain. Meyer and Allen (1984) explain that CC can generate from human's reasoning when it comes to economic matters, which is why an employee is believed to be remaining committed to his company depending on the material factors that he/she considers to be given him a benefit and those that are not. Allen and Meyer (1996) also explain that CC identifies if employees feel that they have to continue working for their company because they do not think it is possible to gain such an advantage somewhere else.

## **2 Research Topic**

### **2.1 Research Problem**

The conducted literature review about teleworking modalities allows the identification of an important issue. Before the coronavirus outbreak, not all the studies on remote work and/or telework put emphasis on establishing whether work was being done from home or from a location different to home and to the traditional office. The paper from Charalampous et al. (2019) explains how with the past of time the different teleworking modalities have been assessed by academics, but their main focus has depended on the modality that was being the most used by employees; initially home was the alternative workplace besides office and so authors could focus on this modality, but afterwards other settings apart from home and office were considered as workplaces making authors focus on all other available remote work options. More recent literature has had to take again a closer look at employees working from home, and this applies to the present situation characterized by a remarkable shift towards home-based telework.

Moreover, academics and professionals have provided descriptive research related to recent short-term challenges and actions. For example, they have explained which type of employees can work from home since this depends on the occupation and/or country of employment, and they have also explained what is being given to employees to allow them to fulfill their job duties while at the same time letting them combine private and work life as well as taking care of their well-being. The authors Bonacini et al. (2021) have gone deeper into the subject as they have used statistical data to show that an increase in home-based telework can lead to an increase in income inequality in which the gap will continue to grow within the different categories of age, gender, and level of education.

The existing literature allows to understand the macro effects that need to be considered worldwide by governments, countries, and companies, especially because we will continue to experience a broad workforce transformation. Nonetheless, the empirical evidence is not yet sufficient because there is still a need to provide explanatory research demonstrating how a mandatory adoption of home-based telework that causes employees to distance themselves from their traditional workplace affects essential organizational factors.

### **2.2 Research Gap**

Based on present knowledge, neither research issued prior to or since the COVID-19 pandemic has yet explored this specific matter: the effect that a mandatory home-based telework can have on employees' attachment to their traditional workplace, as consider to

be a main component of an organization. Currently, it is important not only for businesses, but also for academics to identify how the lack of possibilities to work in the office affects the workforce; though not only in aspects related to performance and technology, but mostly in aspects related to the emotional and social impact. Therefore, by identifying this research gap early enough, it is possible to contribute to literature with new insights.

This belief finds support on the research paper from Crowley et al. (2020) which argues that there is a lack of research on the interaction between employment, commuting alternatives, and resulted social distance while working from home. Hence, the author focused on finding how these three factors interact with each other and how the commuting alternative would play a role in the person's decision to work either from home or not. Leaving aside the factor commuting alternatives and focusing on analyzing how the other two factors, employment and resulted physical distance due to the adoption of home-based telework, interact is needed to be able to understand how under the present situation, in which employees are obliged to a different extent to avoid working in the office, employees' commitment to the organization is affected and what are those implications.

### **2.3 Research Question**

In order to understand the elementary purpose of this research, let's take a closer look at this case: An employee is not going anymore on a regular basis to the usual workplace where he/she used to spend most of the time interacting with co-workers; but rather he/she is now doing job-related tasks at home without being able to socialize in a physical setting. Although in the best-case scenario members and stakeholders are doing what is needed to develop an appropriate home-based work environment with a high-level of virtual interaction and participation, this practice can lead to two different outcomes: it can make employees distance themselves as they struggle to get involved and perhaps feel overwhelmed; or in contrast, it can enhance their sense of belonging as they incorporate themselves successfully and maybe even already manage to embrace the WFH mindset.

The above presented scenario is constructed based on real-life situations and on factors that are analyzed by academics. Charalampous et al. (2019) used a sample of 36 articles with the intention of understanding the association between telework and the different dimensions of well-being at work. The authors explained how on one hand a negative impact can be created once employees do not deal well when they distance themselves from co-workers affecting social and work relationships, and on the other hand how employees can have a positive acceptance because of what they are receiving from the company in order to help their remote work experience.

By considering these possible consequences and the current worldwide situation, the research question that ought to be addressed can be determined:

*How does reducing partially or totally employees' physical presence at the traditional workplace once home-based telework is implemented influence the three dimensions of employees' OC?*

## **2.4 Hypotheses**

With this in mind, the aim is to examine how the extraordinary situation that people worldwide have been experiencing at work since the beginning of the COVID-19 pandemic (which was not the first choice of employers nor employees, but instead an imposed measure) could have an effect on the bonding that employees have towards their organization, and which needed to be examined within each OC's dimension. Thus, having understood the concepts of research, home-based telework and employees' commitment, the hypotheses were defined.

### **2.4.1 Hypothesis 1: Relationship between Home-based Telework and AC**

Analyzing the interaction between a change in the workplace and AC is important because most of the elements covered by AC are made accessible on a regular basis to individuals as they spend most of their time within the physical office environment such as, meetings and events to which employees attend, work and room spaces containing material about the company or its products, supplies and equipment needed to perform the tasks, and others; thus it is important to understand if the relevance of these elements also remain once employees do not spend most of their time working in the office. Charalampous et al. (2019) explained how well-being has many dimensions being affective one of them, and so they found studies about telework in which employees' commitment was dependent on what they were receiving from their company as well as with whom they could interact, and how that woke an emotion on employees.

Distinct factors play a role in this dimension of employees' bonding, which is why academics have identified main foci that need to be distinguished when analyzing AC: the company itself and other members within the company. Vandenbergue et. al (2004) made this distinction as they found out through their longitudinal study on a sample of 710 graduates that AC towards the company, the supervisor, and the team colleagues need to be separated from one another. Even though it was not mentioned in the research that one of the focus within AC is an individual's job, it is possible to use the results from another research made by Vandenbergue and Panaccio (2012) in which the authors explained that

one of the focus from CC is related to the job scope. By taking into account an individual's job, we can enhance the study on the different foci from AC.

Considering these arguments, we can define three hypotheses that will help understand how home-based telework can have an impact on employees' AC.

H1a: There is a negative relationship between home-based telework and affective commitment to the company (ACC). This premise implies that employees working from home on a part-time basis have a higher level of ACC than those working from home on a full-time basis.

H1b: There is a negative relationship between home-based telework and affective commitment to other employees within the organization (ACE). This premise implies that employees working from home on a part-time basis have a higher level of ACE than those working from home on a full-time basis.

H1c: There is a negative relationship between home-based telework and affective commitment to the job (ACJ). This premise implies that employees working from home on a part-time basis have a higher level of ACJ than those working from home on a full-time basis.

#### **2.4.2 Hypothesis 2: Relationship between Home-based Telework and NC**

There are different factors influencing an individual's NC, thus past literature can be used as a guide to know how to measure it for the purpose of this research. For instance, the study made by Wasti & Can (2008) followed the same contributions from Vandenbergue et. al (2004) as they also distinguish between the different foci within AC. Nevertheless, Wasti & Can made a new contribution to literature as they incorporated NC into their research and similarly found out that these two foci, the company itself and other members within the company, needed to be distinguished when assessing NC.

We can think of a company as a family and as it happens within a nuclear family, values and morals are taught and upheld. Depending on an individual's ethical behavior, a certain degree of moral obligation towards the company and co-workers can arise. We can assess if employees still create and maintain a sense of moral obligation even if they do not spend every day within this nucleus, and this is where the following two outlined hypotheses become handy.

H2a: There is a negative relationship between home-based telework and the normative commitment towards the company (NCC). This premise implies that employees working from home on a full-time basis have a lower level of NCC than those working from home on a part-time basis.

H2b: There is a negative relationship between home-based telework and the normative commitment towards the employees e.g., co-workers (NCE). This premise implies that employees working from home on a full-time basis have a lower level of NCE than those working from home on a part-time basis.

### **2.4.3 Hypothesis 3: Relationship btw. Home-based Telework and CC**

CC is the dimension in which it is considered that employees assess to a great extent their situation at work, be it by taking a look at what they have achieved in the past, what they currently have, or what they can still have. CC is thus tied positively to the self-identity concept (Vandenberghe and Panaccio, 2012). By distancing ourselves from the physical office environment, we start to realize many elements that we are losing and leaving behind.

Within an organization, individuals do not only consider benefits based on material possessions e.g., remunerations and bonuses, but also see benefits coming from good connections with others; we are social beings and we also evaluate the benefits of having contacts and bonding positively with others in the company. This distinction can be made within the dimension of CC; hence it is possible to continue the path of the literature and assign one hypothesis to each focus: one being the company and the other co-workers.

H3a: There is a negative relationship between home-based telework and the dimension of continuance commitment regarding perceived costs of leaving the company (CCC). This premise implies that employees working from home on a full-time basis have a lower level of CCC than those working from home on a part-time basis when it comes to evaluating what they are losing by leaving the company.

H3b: There is a negative relationship between home-based telework and the dimension of continuance commitment regarding perceived costs of leaving their co-workers (CCE). This premise implies that employees working from home on a full-time basis have a lower level of CCE than those working from home on a part-time basis when it comes to evaluating what they are losing by leaving their co-workers.

## **2.5 Motivation**

### **2.5.1 Prior Knowledge Regarding the Research Question**

Many of us can identify ourselves with this research topic and for many it was possible to work from home before the coronavirus outbreak, though it did not have to be necessary every working weekday. With the restrictions imposed by the Austrian government earlier in 2020, in mid-March, people worldwide started to work from home every day. Actually,

even before the restrictions were announced, managers and leaders were making some employees aware of the possibility that in the next weeks we would have to work from home on a daily basis. Like in most of the companies, virtual meetings were the main part of the workday whereas daily tasks had to be done during whichever free time was left. Nevertheless, many employees were willing to organize themselves and adopt home-based telework in the most possible efficient way. Since March, many new employees, who have joined a new company, have had to experience an onboarding process that offers either flexible working possibilities, only work from home, or only work in the office. Certainly, under these circumstances, the integration into the company and job itself as well as with other members of the organization requires effort and time.

Over the last months, several information on this topic has been made publicly available in social media platforms, academic journals, newspapers, and management consulting firms' portals; and equally important, it has been possible to follow-up and gather appraisals from peers, who were and are also experiencing home-based telework in their companies. Looking back at almost the whole year 2020, it is possible to describe briefly what we have experienced: The development of home-based telework has been tied to seasonal effects and governmental responses to COVID-19. During the first lockdown that lasted from March until April, most of the employees were working from home on a daily basis. Afterwards, with a temporary transition to flexible movement and during the summer months, some employees were able to work in the office either for a specific number of days in the week or a specific number of weeks in the month. Meanwhile and since the end of the summer due to the request and/or enforcement of restrictive measures, employees have been working mostly from home.

### **2.5.2 Relevant about Tackling this Problem**

Considering that we find ourselves in an unprecedented global situation and that for almost everyone in an organization the working environment has changed, it is an important period to contribute to the existing literature with further and more specific research by gathering new information and conclusions concerning the effects of working from home and maintaining physical distance from the usual workplace, in case this is possible and as long as it is necessary. For this purpose, it is needed to provide insights about the consequences of home-based telework. It is helpful to give special attention to this work arrangement considering that this is the type of teleworking modality that is being mainly adopted by companies since the beginning of the COVID-19 pandemic.

As mentioned before, at first, companies across many industries and countries responded to the short-term challenges and obliged their staff to work from home, but once the

restrictions started to be lifted, many of them did not hesitate to maintain this new work model and occupied themselves creating a long-term plan. With the end of the summer and the gradual increase in new cases throughout many countries in Europe, companies from different industries, also encouraged by governments, started to intensify their WFH practices. Besides, several companies are considering implementing home-based telework on a permanent basis; this is the case of some of the largest technology companies that have announced their intention to allow their employees worldwide to work remotely even during the post-pandemic period and whose action plans will be confirmed with the past of time, “we suspect that the workforces of Twitter and Facebook will be less remote in 10 years than their leaders are predicting today, but much more remote than they could have imagined six months ago” (Johnson and Suskewicz, 2020, para. 7). The authors Bonacini et al. (2021) also elaborate on this subject as they mention that home-based telework is being considered a long-term work model, especially with the development of the coronavirus pandemic during the last months in 2020 that has made governments and companies take again actions and maintain employees working from home in order to reduce the risk of contagion at the workplace.

It is important to contribute with further evidence concerning the degree to which employees work from home and the consequences of doing this. Hence, the results of this research ought to have practical implications not only for Operations, Finance and Human Resources professionals, but also for all team members, leaders, and managers in charge of developing and shaping the home-based telework agenda, who need to be aware of the possible downsides and benefits of this new work model.

### 3 Research Methodology

#### 3.1 Variables and Level of Measurement

In order to test the hypotheses, the following variables and corresponding level of measurement have been defined.

In terms of the independent variable, the purpose was to find out the extent to which employees work from home, which is why this discrete variable is measured on a ratio scale and it shows the employees' average number of WFH days a week *1 day, 2 days, 3 days, 4 days, 5 days*. Consequently, this variable was recoded into the dichotomous variable WFH schedule measured on a nominal scale *1 = part-time WFH (0-4 days)* and *2 = full-time WFH (5 days)*.

In terms of the control variables, possible variables based on the meta-analysis from Meyer et al. (2002) were defined; the author found out that a person's own attributes were influencing factors of employees' commitment. Another source that was used as a guide is the research from Mas and Pallais (2020) who examined the effect that a person's level of education caused on the WFH frequency. Because of these literature contributions, following socio-demographic variables were defined: gender measured on a nominal scale with three categories *male, female, and other*; level of education measured on a nominal scale with four categories *basic education, bachelor or equivalent, master or equivalent, and PhD equivalent or higher*; job level measured on a nominal scale with three categories *intern, employee, and manager*; organizational tenure measured on an interval scale *less than a year, 1-3 years, 4-6 years, 7-9 years, 10-12 years, 13-15 years, 16-18 years, 19-21 years, 22-24 years, and 25+ years*; and age measured on an interval scale with six categories *under 20, 20-29, 30-39, 40-49, 50-59, and 60+*.

In terms of the dependent variable, it was needed to measure employees' OC which was classified in three dimensions and sub-classified into indicators depending on each focus. In order to measure each indicator, rating scales and multiple items were used as indicated in the existent literature about OC, more specifically the six-item scale used by Meyer et al (1993) and which was later modified by Vandenberghe et. al (2004) as well as by Vandenberghe and Panaccio (2012) to fulfill the aim of their different studies. Thus, the dependent variable was measured on an ordinal scale using the 5-point Likert-type scale *1 strongly disagree, 2 disagree, 3 neutral, 4 agree, 5 strongly agree*. For each indicator, items were included as recommended in the literature about OC, but also as needed for this research on home-based telework. *Table 1* illustrates the items used in the survey.

Initially, more items about NC and CC were included, which was also made by the different academics, but it was not possible to go through with this purpose because the designed items were viewed as being controversial and would not be accepted by the participant companies. NC could have been measured by identifying how employees assess for example, employment or career advance opportunities, remuneration offers, organizational support, and employee benefits. CC could have been measured in terms of employees' assessment of time invested in their role-related training, effort put into process improvement, and connections built with other employees. Some of the items depended on these statements: *I prefer to stay in my company because... there are no better job opportunities, I do not want to give up my position, I invested time and effort in my development, I need to be loyal after receiving rewards and incentives.* Consequently, these NC and CC items were removed from the survey.

Table 1: OC's indicators ACC, ACE, ACJ, NCC, NCE, CCC, CCE and their corresponding items

<b>Indicator for H1a: ACC</b>
ACC1 Employees' identification with the company's core values
ACC2 Employees' happiness with the company's culture
ACC3 Employees' sense of company's pride
ACC4 Employees' sense of belonging
ACC5 Employees' emotional attachment
ACC6 Employees' participation in company events
<b>Indicator for H1b: ACE</b>
ACE1 Working relationship between employee and superior
ACE2 Social connection between employee and superior
ACE3 Working relationship between employee and team co-workers
ACE4 Social connection between employee and team co-workers
ACE5 Working relationship between employee and co-workers from other areas
ACE6 Social connection between employee and co-workers from other areas
<b>Indicator for H1c: ACJ</b>
ACJ1 Meaningful job responsibilities
ACJ2 Satisfaction with the way of working
ACJ3 Degree of passion towards the job
ACJ4 Level of autonomy at work
ACJ5 Empowerment at work
ACJ6 Pride in work
<b>Indicator for H2a: NCC &amp; for H2b: NCE</b>
NCC Employees' moral obligation to the company
NCE Employees' moral duty to co-workers
<b>Indicator for H3a: CCC &amp; for H3b: CCE</b>
CCC Employee benefits
CCE Relations with co-workers

Abbreviations: ACC, affective commitment to the company; ACE, affective commitment to other employees; ACJ, affective commitment to the job; NCC, normative commitment towards the company; NCE, normative commitment towards the employees; CCC, continuance commitment regarding the company; CCE, continuance commitment regarding other employees.

## **3.2 Research Design and Method**

It was appropriate to choose conducting a cross-sectional study with the aim of collecting data using a self-completion questionnaire, which was distributed online via SoSci Survey and contained following parts: First, a proper introduction that briefly explained the purpose of the survey, asked the participants for their contribution, indicated that it would take them five minutes to complete it, let them know that they had to answer all the questions, and made it clear that the responses would be treated confidentially and anonymously. Second, questions about the participants' country location and industry as well as their current job employment situation, which were asked at the beginning. Third, sociodemographic questions that were asked at the end and had the intention to allow me to identify possible control variables. Furthermore, one of the most important research variables that were measured using questions about the extent to which employees currently work from home as well as their extent of doing so both, prior and during the COVID-19 pandemic. And last but not least, the most important questions that were about measuring employees' level of commitment based on each OC's dimension. Please refer to *Appendix C* to see the complete online self-completion questionnaire.

### **3.2.1 Sampling and Data Collection**

To make the needed analysis and be able to answer the research question, the population in the study consisted of employees from companies adopting home-based telework to a different extent during the COVID-19 pandemic and that are based in the DACH countries (Germany, Austria, and Switzerland) and other countries, such as Poland, Colombia, Mexico, Canada, and the US, which were coded in the analysis as "non-DACH countries". These groups of countries were chosen due to two reasons: because of the importance of collecting data from employees in the DACH countries, especially in Austria; and because of the convenience that own social and professional network from the non-DACH countries offered.

The guidance for defining the final data source came from the research conducted by Baruch (2020) who had the support from one person working in each company in which he conducted interviews. Consequently, the final sample was selected to be a sub-group of employees working for specific companies in the chosen geographic locations. The selected companies depended also on own social and professional network and so there was support from companies in the insurance, manufacturing, professional services, retail trade, telecommunications, and other industries. Within each selected company and with the support of a single contact working in the respective company, it was possible to put in practice the main sampling strategy: to distribute the online survey using a link that was

sent to each single company's contact. Likewise, during the final phase of the survey, the link to the survey was shared with social network contacts via LinkedIn and Facebook.

### 3.2.2 Data Limitations

It was not expected to encounter any problems with the data collection, yet it was necessary to consider following risks that could have hindered the research: a sample that was neither representative nor large enough, lack of sufficient participation from the targeted individuals (low response rate), and responses that might be misleading and thus not helpful for the statistical analysis. Considering these possible threats to the research, the objective was to get a large sample by having as many participants as possible, who would contribute to the research as needed, and that is also why collaboration not only coming from own professional contacts, but also from own social contacts was searched.

To begin with, an appealing layout was used. Furthermore, a survey containing questions that would provide accurate answers and not lead to possible bias was developed, so that is why closed-ended questions were made and complex questions that would make the participants think hard about past situations were avoided, even though it could have been optimal for the purpose of the research to find out how committed employees were prior to the COVID-19 pandemic. Moreover, affirmative statements measuring the dependent variable were used; initially reverse items were going to be used in order to follow the example in the research from Meyer et al. (1993), but this was avoided to not cause confusion to the participants making them choose the wrong scale option.

Once the online survey was created and designed, it was time to test it, which is why a pre-test was conducted and it took place from November 1<sup>st</sup> until 6<sup>th</sup> with the participation of 18 people who were not included in the final sample. Only 14 subjects completed the survey and provided their feedback mentioning for example: *"the test was pleasant to fill"*, *"it is a current and interesting subject"*, *"it had short and easy questions"*, *"the UX design is clean and intuitive"*, *"it got me to think about my current job situation"*, and more. After this pre-test, the reverse items were removed because the negative statements led to imprecise answers, this new sentence *"for every question, your answer is needed"* was added to the introduction page even though this rule was already pre-set in the survey, and the 5-minute length of the survey was kept as indeed people manage to complete it within this time frame.

The online survey was launched on November 7<sup>th</sup> and finalized on November 28<sup>th</sup> with responses from a total of 229 respondents. It was anticipated to have the participation from employees working from home on a part-time as well as on a full-time basis, with the hope to collect responses from many employees working from home, at least for only a

few days a week. However, the coronavirus situation that Austria was experiencing during November constrained the possibility of having many participants with fewer WFH days a week because most of the participants in Austria were asked or required not to go to the office with the implementation of the second lockdown on November 3<sup>rd</sup> and then its extension into the second “hard” lockdown on November 17<sup>th</sup>. Nonetheless, this research intends to explain how working from home during the COVID-19 pandemic affects organizational commitment, so experiencing a second lockdown when taking part of this survey should provide the answers my research needs.

## 4 Data Analysis and Results

The conducted survey provided empirical data about the extent to which employees (total number of respondents,  $N = 229$ ) work from home, how they appraise important factors encompassing their WFH experience, and their level of commitment to their company. Additionally, it was possible to collect sociodemographic data from the respondents.

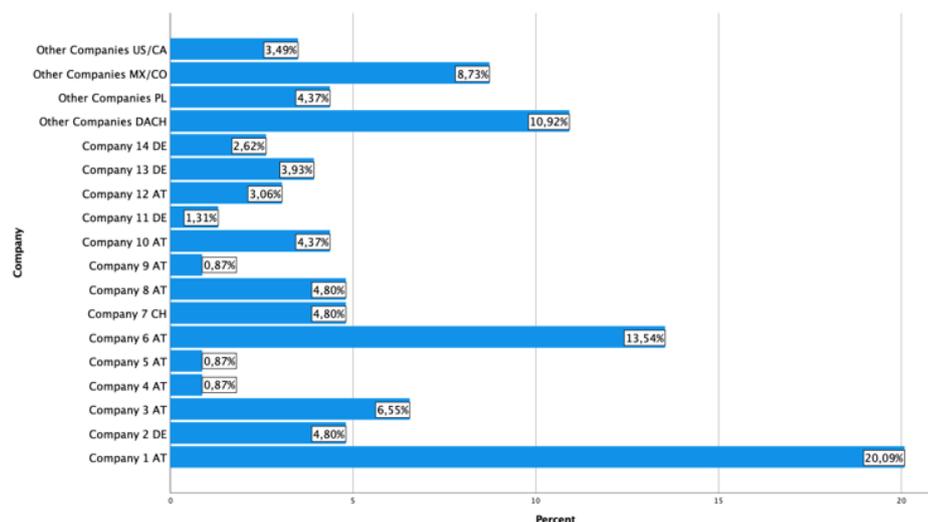
### 4.1 Description of the Sample

Due to the geographic location (Vienna, Austria) and own personal connections in other countries, the result on the geographic location of the surveyed employees consists of 60,3% of the 229 surveyed employees who work in Austria, 17,9% in Germany, 5,2% in Switzerland, 4,4% in Poland, 5,7% in Mexico, 3,1% in Colombia, 2,2% in Canada, and 1,3% in the US. This data indicates an almost equal split between employees working in Austria (60,3%) and in other countries different to Austria (39,7%).

The participation of employees depending on their company appears in *Figure 1*. Most of the respondents come from Company 1 AT (20,1%) and Company 6 AT (13,5%). Due to confidentiality reasons, the companies have been numbered, and neither their names nor in which sector they operate will be revealed. It was a satisfying participation rate, both in terms of the companies and the employees within each company that participated; the contacts and their team members did not hesitate to take the time to complete my survey.

In terms of the industry, we observe in *Table 2* a diversity in the sample with 62,9% coming from the telecommunications, insurance, and manufacturing industry, while the rest is distributed across the different industries.

*Figure 1: Percentage of survey respondents by their company*



Note.  $N = 229$ .

Abbreviations: AT, Austria; DE, Germany; CH, Switzerland; DACH, Germany, Austria, and Switzerland; PL, Poland; MX, Mexico; CO, Colombia; US, the United States; CA, Canada

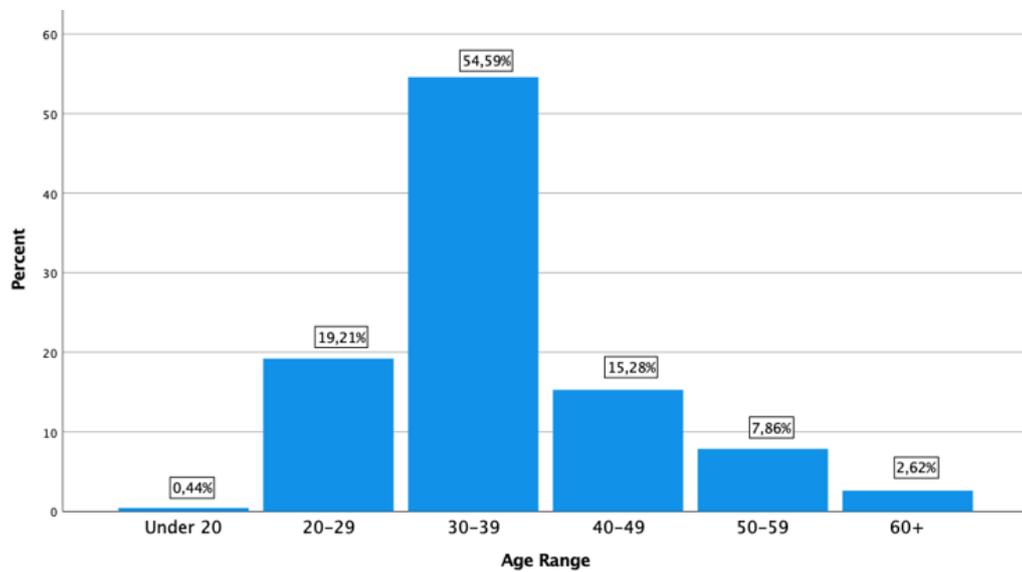
Table 2: Percentage of survey respondents by their industry

	N	%
Accounting, Banking and Finance	3	1,3%
Advertising and Public Relations	1	0,4%
Agricultural and Forestry	2	0,9%
Architecture and Construction	2	0,9%
Arts, Entertainment and Recreation	6	2,6%
Biotechnology and Chemicals	1	0,4%
Communications, Technology and Telecommunications	27	11,8%
Consulting and Management Services	11	4,8%
Education	5	2,2%
Electronics	2	0,9%
Energy and Utilities	1	0,4%
Environmental, Recycling and Waste Management	1	0,4%
Government and Public Services	3	1,3%
Health Care, Social Assistance and Hospitality	11	4,8%
Insurance and Investment	57	24,9%
Logistics, Shipping and Transportation	5	2,2%
Manufacturing, Industrial Goods and Machinery	60	26,2%
Media and Publishing	2	0,9%
Not for Profit	1	0,4%
Other	2	0,9%
Pharmaceuticals	2	0,9%
Real Estate, Rental and Leasing	1	0,4%
Restaurants, Hotels and Tourism	1	0,4%
Retail Trade and Wholesale	16	7,0%
Web Services	6	2,6%

Note. N = 229. Column N lists the count and column % the percentage for each category

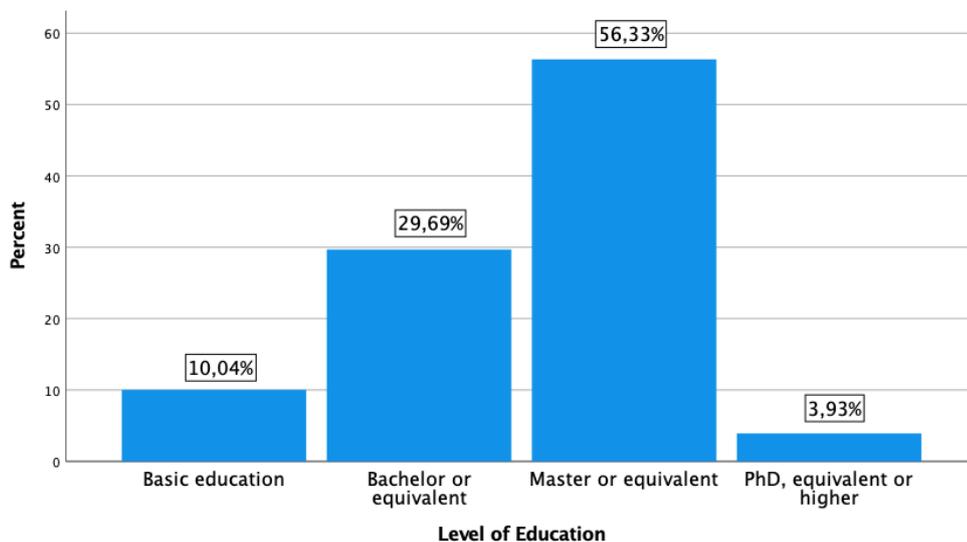
It can also be determined that the sample consists of 50,7% women, 48,9% men, and 0,4% different gender; the mean of age range corresponds to 30-39 years old with 54,6% of the total sample (Figure 2); in a same manner 56,3% of the total respondents have a master or equivalent degree (Figure 3). Focusing on employment features in the sample the following is found: 10,9% have a part-time job and 89,1% have a full-time job with a total of 91,3% working in average five days a week; almost 70% have employee-level while almost 29% manager-level; 35% have been working more than 4 but less than 10 years in the company while 45% have been for less than 4 years in the company (Figure 4).

Figure 2: Percentage of survey respondents by their age range



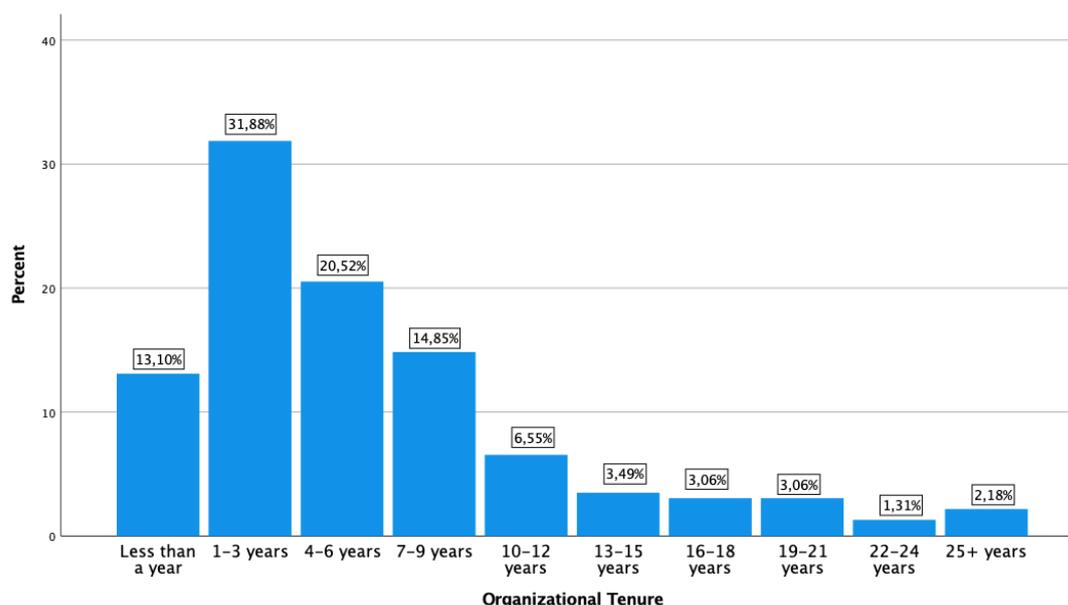
Note. N = 229.

Figure 3: Percentage of survey respondents by their level of education



Note. N = 229.

Figure 4: Percentage of survey respondents by their organizational tenure



Note. N = 229.

## 4.2 Employees' WFH Days a Week and WFH Experience

From the 229 surveyed employees, it was found that since the coronavirus outbreak the extent to which they work from home is as follows: 7,9% have 0 WFH days a week in average, thus they do not work from home; 12,6% have 1 to 2 WFH days a week in average; 26,2% have 3 to 4 WFH days a week in average; and 53,3% have 5 WFH days a week in average. Furthermore, the collected data allows to compare the use of home-based telework before and since the coronavirus outbreak. It was found that before the start of the pandemic, 70,7% of the employees in the sample had never or rarely worked from home, 23,2% had done so sometimes, and 6,1% had worked very often or always from home; whereas since the coronavirus outbreak, 83,4% of the employees in the sample have been working from home very often or always, 10% have been working from home sometimes, and 6,6% have not worked from home or have been doing so rarely.

The relationship between the independent variable WFH days a week and some of the sociodemographic variables can be illustrated: In the specific case of gender, there is no meaningful difference between the categories and the extent to which they work from home. Most of the participants at employee-level have five WFH days a week with 57,2% doing so while most of those at the manager-level have mostly 2-3 and maximum 4 WFH days a week with 55,4% doing so. In the case of organizational tenure, it is possible to observe that employees with a tenure of 1-6 years have rather 5 WFH days a week

whereas those with a tenure of 7-12 years have rather 3-4 WFH days a week. When comparing the extent to which employees work from home in the DACH countries, we can see a fair split between Austrian-based employees working from home maximum 4 days and those working from home 5 days a week, while in the case of Germany most of the employees work from home 5 days and the rest work from home 2-3 and maximum 4 days, and in the case of Switzerland half of the surveyed employees do not work from home and the rest do it 2-3 and also 5 days a week.

Furthermore, surveyed employees were asked about their level of agreement to different factors encompassing work from home, and their answers can lead to the assumption that employees are dealing well with having to work from home since most of them agree to be enjoying the benefits of working from home as defined in the survey. The results were the following: More than half (56,3%) “agree” or “strongly agree” to being more productive when working from home, 16,6% “strongly disagree” or “disagree”, while the rest (27,1%) remain “neutral”. Longer workdays seem to be a common feature when working from home because more than half (53,7%) “agree” or “strongly agree” to be having longer workdays while almost one-fifth (19,7%) “strongly disagree” or “disagree” and the other respondents (26,6%) remain “neutral”. Another common feature when working from home is skipping or shortening sometimes the lunchbreak and less than one-third (27,1%) “strongly disagree” or “disagree” to be doing it, 57,2% are doing it because they “agree” or “strongly agree”, and the remaining 15,7% answered “neutral”. When asked about having less work-related stress when working from home, the proportions are almost divided equally as 37,6% “strongly disagree” or “disagree”, 23,1% remain “neutral”, and 39,3% “agree” or “strongly agree”. In terms of work-life balance, only a small percentage of the participants (15,7%) answered “neutral”, less than one-third (27,1%) “strongly disagree” or “disagree” to be having a better work-life balance while more than half (57,3%) do “agree” or “strongly agree” to be having a better work-life balance. A positive characteristic of work from home during COVID-19 is that employees are maintaining remote contact with their co-workers: more than one-third (69,5%) “agree” or “strongly agree” to be doing this when working from home, 14,8% “strongly disagree” or “disagree” to be doing it when working from home, while only 15,7% answered “neutral”. Nevertheless, 61,6% “agree” or “strongly agree” that they need to see their co-workers at the office while 22,3% “strongly disagree” or “disagree”, and 16,2% of the survey respondents remain “neutral”. When asked about the level of agreement to this statement “when working from home, I wish I had a more suitable home workspace”, the answers were divided differently: with one-third answering that they “strongly disagree” or “disagree”, 20,5% answering “neutral”, and almost the half (46,3%) answering that they “agree” or “strongly agree”.

### **4.3 Employees' Commitment to the Organization**

When analyzing employees' level of agreement to the given statements about the six items assessing ACC, it is found that approximately two-thirds (65,5%) feel identified with their company's core values, 67,3% are happy with their company's culture, 63,3% feel that they belong to their company, and 64,6% enjoy participating in company events; 70,3% are proud to work for their company; and 50,2% feel emotionally attached to their company. In short, the data set provides good results for ACC in employees.

When doing the same analysis but with the six items corresponding to ACE, it is found that almost all the surveyed employees (89,1%) have good working relationship with their superior and (92,6%) the team co-workers; 75,5% have it with co-workers from other teams; in terms of social connection, almost the half (49,8%) have it with their superior, approximately two-thirds (66,8) have it with their team co-workers, and less than half (42,8%) have it with co-workers from other teams. ACE regarding work relationships is thus higher than ACE regarding social relationships.

When analyzing employees' level of agreement to the statements about the six items measuring ACJ, it is possible to say that almost every surveyed employee (84,7%) has meaningful job responsibilities, 83,4% of the employees are satisfied with the way they do the tasks, and 83% enjoys the level of autonomy at work; approximately 72% are passionate about their job and are proud of it; while almost 65% feel empowered at work. Hence, employees' ACJ in the sample is high.

The NC and CC indicators consisting of two items each were also measured based on employees' level of agreement. When it comes to NCC, almost half (45%) feel morally obliged to their company. When it comes to NCE, approximately two-thirds (66,4%) have moral duty to their colleagues. When it comes to CCC, almost half (45%) are happy to be working for their company because of employee benefits. When it comes to, more than two-thirds (69,4%) are happy to be working for their company because of the relations they have with their colleagues.

### **4.4 Reliability: Cronbach's Alpha**

In order to check the internal consistency of the 5-point Likert-type scale used to measure OC, a reliability test used and thus recommended in the literature was conducted: Cronbach's Alpha. The scales used in the different studies measuring commitment revealed reliability as their Cronbach's alpha coefficient ( $\alpha$ ) were more than acceptable. One example is the study from Vandenbergue and Panaccio (2012) with scales for each OC's dimension that delivered  $\alpha$  ranging from ,78 to ,92.

When making the reliability analysis for all 22 items from the survey, we get a  $\alpha$  of ,891. This result indicates that the scale is reliable. To increase  $\alpha$  up to ,897 it is possible to opt for removing items considered tricky for the analysis, which would be the last five items measuring the indicator ACJ as well as all items measuring the indicator NC. However, instead of removing items to increase the scale's reliability, this result shows the importance in the division of OC into dimensions, which indeed is more helpful for upcoming analyses. Furthermore, this analysis also helps us take a look at our descriptive statistics, more specifically at the measure of central tendency and dispersion: we can see comparable means and standard deviations and do not identify any outlier, which can also be explained since our sample is homogenous and the scale items intend to measure the same variable. *Table 3* presents the output of this analysis.

*Table 3: Result of the reliability test (Cronbach's alpha) and descriptive statistics (mean and standard deviation) of employees' commitment to the organization*

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,891	,893	22

	Cronbach's Alpha if Item Deleted	Mean	Std. Deviation
ACC1 - feel identified with the company's core values	,881	3,70	,853
ACC2 - happy with the company's culture	,882	3,72	,883
ACC3 - proud to work for the company	,881	3,89	,866
ACC4 - feel a sense of belonging to the company	,879	3,71	,901
ACC5 - emotionally attached to the company	,884	3,45	1,001
ACC6 - enjoy participating in company events	,887	3,76	,947
ACE1 - have good working relationship with superior	,888	4,24	,735
ACE2 - are socially connected to superior	,887	3,47	,989
ACE3 - have good working relationship with team co-workers	,888	4,27	,638
ACE4 - are socially connected to team co-workers	,889	3,77	,928
ACE5 - have good working relationship with co-workers from other teams	,890	3,82	,742
ACE6 - are socially connected to co-workers from other teams	,893	3,24	,991
ACJ1 - have meaningful job responsibilities	,886	4,03	,731
ACJ2 - are satisfied with the wov	,888	3,99	,642
ACJ3 - are passionate about job	,884	3,85	,840
ACJ4 - enjoy job autonomy	,887	4,16	,792
ACJ5 - feel job empowerment	,882	3,79	,880
ACJ6 - are proud of the job	,881	3,94	,801
NCC - feel moral obligation to the company	,889	3,31	1,028
NCE - have moral duty to co-workers	,890	3,71	,929
CCC - happy to work for company because of employee benefits	,887	3,24	1,020
CCE - happy to work for company because of working relationships	,886	3,76	,783

Note. N = 229.

Abbreviations: ACC, affective commitment to the company; ACE, affective commitment to other employees; ACJ, affective commitment to the job; NCC, normative commitment towards the company; NCE, normative commitment towards the employees; CCC, continuance commitment regarding the company; CCE, continuance commitment regarding other employees.

For Cronbach's alpha ,84 to ,9 = reliable scale.

For ACC, ACE, ACJ, NCC, NCE, CCC, CCE 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree.

The reliability test for each subscale was also conducted with the aim of getting  $\alpha$  for each OC dimension. In the case of AC,  $\alpha = ,882$  and can be increased up to ,895 if the five items measuring the indicator ACJ are removed, but excluding these items is not necessary as the reliability increase is not meaningful. In the case of NC,  $\alpha = ,725$  which delivers an acceptable reliability. In the case of CC,  $\alpha = ,464$  which implies a lack of reliability in the scores of this subset scale.

Conducting the reliability test in a further specific manner, so for each indicator, gives the following results. In the case of ACC,  $\alpha = ,876$  can be increased up to ,895 if the last two items are omitted; once more this exclusion does not provide a meaningful increase in the reliability, so it is not needed. In the case of ACE,  $\alpha = ,697$  can be increased up to ,730 if the first two items are omitted; thus, separating between items measuring ACE to superior and items measuring ACE to co-workers should be considered in order to get a suitable reliability on this indicator. In the case of ACJ  $\alpha = ,842$  has a good reliability of the indicator.

All in all, these results confirmed internal consistency on the chosen 5-point Likert-type scale that measures how committed surveyed employees are to their organization. This allows to continue with the needed statistical analysis.

#### **4.5 Construct Validity: Principal Component Analysis for Dependent Variable**

Allen & Meyer (1996) analyzed and summarized existent literature on OC elaborating further on how factor analyses were used by researchers, and in a similar way to the type of factor analysis that was conducted in SPSS for this study, they show us that each OC dimension and the corresponding foci load on different components. Thus, the initial decision to follow literature to know how to assess employees' connection to their organization using the three OC's dimensions and then assess the different foci within each dimension is supported by our empirical evidence.

Principal component analysis (PCA) has been carried out in SPSS with the purpose of summing up the scale items into factors or components. This method is used when the collected data measuring the variable has different inter-correlated items and needs to be reduced into either one or few factors, which is the case of our dependent variable. In a similar way as with the reliability test, PCA was conducted on all 22 items measuring OC. Afterwards, PCA was conducted focusing on each indicator.

When assessing the correlation matrix as shown in Table 4, it can be observed that most of the items are inter-correlated. However, the correlation is moderate between items from different OC's dimensions whilst it is weak, moderate, and strong among items

corresponding to the same OC's dimension or indicator. For example, the strongest correlation coefficient between two items assessing the indicator ACC is ,742, but between one of these items with an item assessing the indicator ACJ is ,483. It can be further seen that the correlation is strong between the first three items corresponding to the indicator ACC that measure employees' identification with the company's core values, their happiness with the company's culture, and their sense of company's pride. Further strong correlation exists between the items corresponding to ACJ.

Table 4: Inter-item correlation matrix of employees' commitment to the organization

	ACC1	ACC2	ACC3	ACC4	ACC5	ACC6	ACE1	ACE2	ACE3	ACE4	ACE5	ACE6	ACJ1	ACJ2	ACJ3	ACJ4	ACJ5	ACJ6	NCC	NCE	CCC	CCE	
ACC1	--																						
ACC2	,742**	--																					
ACC3	,679**	,647**	--																				
ACC4	,659**	,611**	,745**	--																			
ACC5	,489**	,412**	,519**	,624**	--																		
ACC6	,426**	,434**	,415**	,462**	,384**	--																	
ACE1	,301**	,371**	,249**	,282**	,250**	,291**	--																
ACE2	,271**	,260**	,181**	,301**	,292**	,246**	,474**	--															
ACE3	,259**	,271**	,182**	,211**	,088	,181**	,333**	,273**	--														
ACE4	,169**	,132**	,132**	,263**	,100	,151**	,111	,394**	,592**	--													
ACE5	,214**	,186**	,214**	,309**	,143**	,212**	,062	,086	,323**	,246**	--												
ACE6	,126	,106	,155**	,279**	,144**	,133**	-.14*	,193**	,197**	,475**	,625**	--											
ACJ1	,270**	,185**	,318**	,382**	,266**	,063	,254**	,183**	,215**	,193**	,181**	,164**	--										
ACJ2	,244**	,243**	,322**	,322**	,245**	,076	,172**	,138**	,156**	,129	,116	,127	,459**	--									
ACJ3	,391**	,382**	,405**	,395**	,418**	,186**	,213**	,232**	,115	,148**	,042	,117	,494**	,420**	--								
ACJ4	,312**	,334**	,257**	,305**	,213**	,205**	,243**	,121	,166**	,080	,146**	,062	,354**	,356**	,372**	--							
ACJ5	,470**	,443**	,423**	,464**	,457**	,248**	,370**	,278**	,219**	,155**	,143**	,059	,394**	,354**	,556**	,597**	--						
ACJ6	,483**	,455**	,579**	,549**	,458**	,340**	,351**	,261**	,236**	,183**	,101	,078	,483**	,451**	,698**	,402**	,624**	--					
NCC	,311**	,273**	,345**	,353**	,244**	,200**	,181**	,218**	,121	,148**	,050	-.013	,231**	,124	,221**	,132**	,272**	,261**	--				
NCE	,229**	,127	,117	,173**	,096	,069	,183**	,244**	,293**	,300**	,128	,061	,241**	,091	,097	,105	,225**	,202**	,571**	--			
CCC	,409**	,384**	,423**	,361**	,257**	,223**	,195**	,241**	,112	,108	,183**	,117	,277**	,251**	,297**	,235**	,291**	,317**	,223**	,132**	--		
CCE	,241**	,247**	,231**	,405**	,255**	,311**	,205**	,334**	,357**	,402**	,220**	,233**	,291**	,266**	,252**	,282**	,326**	,307**	,169**	,284**	,313**	--	

Abbreviations: ACC, affective commitment to the company; ACE, affective commitment to other employees; ACJ, affective commitment to the job; NCC, normative commitment towards the company; NCE, normative commitment towards the employees; CCC, continuance commitment regarding the company; CCE, continuance commitment regarding other employees.

\*indicates  $p < ,05$ ; \*\*indicates  $p < ,01$ .

More importantly, the conducted PCA gives the result of the Kaiser-Meyer-Olkin (KMO) test, which indicates that the data is suitable for the analysis we are conducting ( $r = ,817$ ), and also the result of the Bartlett's test of sphericity that gives statistically significant correlation ( $\chi^2(120) = 1425,530, p < 0,05$ ), thus our items as a set correlate and differ significantly from zero.

Furthermore, PCA provides a five-component solution that accounts for 67,3% of the variance, which is quite reasonable, and consists of component 1 = ACC, component 2 = ACJ, component 3 = ACE co-workers, component 4 = NC, and component 5 = ACE superior. This result indicates that following items would have to be extracted from our analysis as their correlation coefficients (also called factor loadings) are below the threshold and so they are considered as "tricky" for the analysis: ACC6 social connection to co-workers from other teams; ACJ3 to be passionate about the job, ACJ5 to feel job empowerment, and ACJ6 to be proud of the job; and the whole dimension CC.

PCA was then conducted for each OC dimension and its corresponding indicators. For the dimension AC with three indicators: In the case of ACC, the analysis shows a suited data set and statistically significant correlation ( $r = ,866$ ,  $\chi^2(15) = 732,949$ ,  $p < 0,05$ ), provides a one-component solution that explains the variance of 63,166%, and loads all the items with the lowest factor loading being ,627 and the highest ,872 indicating a strong correlation. In the case of ACE, there are weak to moderate inter-correlations for the items and a statistically significant correlation for the items as a set ( $r = ,396$ ,  $\chi^2(6) = 209,570$ ,  $p < 0,05$ ) with a two-component solution that explains the variance of 78,248% and loads items separating between those measuring the relationships with the superior and those with co-workers from other areas – their factor loadings are high ranging between 0,841 and ,916. In the case of ACJ, the inter-correlations for the items within this dimension are moderate, but the set has a strong statistically significant correlation ( $r = ,821$ ,  $\chi^2(15) = 534,900$ ,  $p < 0,05$ ) with a one-component solution that loads all items, explains a variance of 56,009%, and delivers high factor loadings being ,675 the lowest and ,833 the highest.

For the dimension NC and CC running a PCA is not recommendable as there are only two items measuring each indicator. Nevertheless, the analysis was made, and the following results can be explained. Within NC, there is a moderate statistically significant correlation ( $r = ,5$ ,  $\chi^2(1) = 89,474$ ,  $p < 0,05$ ) and the analysis provides a one-component solution that explains the variance of 78,563% and for which each item has a high factor loading of ,886. Within CC, there is a moderate statistically significant correlation ( $r = ,5$ ,  $\chi^2(1) = 23,324$ ,  $p < 0,05$ ) and the analysis provides in this case a one-component solution that explains the variance of 65,641% and in which each item has a high factor loading of ,810.

Ultimately, PCA delivers a regression factor score for each component solution that are standardized. This allows for the level of measurement of OC on a metric scale. Each regression factor score component is a latent variable that has recoded the observations from the data set or responses from the surveyed employees into scores that can be equal to a negative value or to a positive value having in the distribution a mean of 0 and a standard deviation of 1. If the recoded observation from an employee is close to 0, its answer is close to the mean; if it is below 0, it corresponds to an observation below the mean; and if it is above 0, it corresponds to an observation above the mean. *Table 5* presents the descriptive statistics of PCA's regression factor score components and its understanding will allow to conduct and interpret further statistical analysis throughout this research.

Table 5: Descriptive statistics (minimum, maximum, mean and standard deviation) of PCA's regression factor score components

	Minimum	Maximum	Mean	Std. Deviation
REGR factor score Component ACC	-3,76550	1,78264	,0000000	1,00000000
REGR factor score Component ACE superior	-3,26742	2,10665	,0000000	1,00000000
REGR factor score Component ACE team co-workers	-3,84955	2,63950	,0000000	1,00000000
REGR factor score Component ACE co-workers other areas	-4,11043	1,55515	,0000000	1,00000000
REGR factor score Component ACJ	-2,98777	1,77867	,0000000	1,00000000
REGR factor score Component NC	-2,91331	1,70909	,0000000	1,00000000
REGR factor score Component CC	-2,73961	2,04473	,0000000	1,00000000

REGR factor score Component ACC is the latent variable recoded by PCA for ACC; REGR factor score Component ACE superior is the latent variable recoded by PCA for ACE superior; REGR factor score Component ACE team co-workers is the latent variable recoded by PCA for ACE team co-workers; REGR factor score Component ACE co-workers other areas is the latent variable recoded by PCA for ACE co-workers other areas; REGR factor score Component ACJ is the latent variable recoded by PCA for ACJ; REGR factor score Component NC is the latent variable recoded by PCA for NC; REGR factor score Component CC is the latent variable recoded by PCA for CC.

Both, the conducted reliability test and PCA confirm that the selected constructs for the survey and which intended to assess employees' level of commitment to their organization on a 5-point Likert-type scale have internal consistency. They provide statistical data that confirms the inter-correlation of the different items, but most importantly the correlation within each OC's dimension and its corresponding foci. Hence, these results provide further empirical evidence to literature that supports the way in which OC is classified and consequently assessed.

#### 4.6 Hypotheses Testing: Home-based Telework and the three Dimensions of OC

The descriptive features of the sample have been discussed and the collected univariate data concerning the independent and dependent variable has proved to be reliable. The next steps consisted of assessing how these two variables are related to subsequently test if home-based telework influences employees' commitment to their organization during the situation that we are experiencing due to the Covid-19 pandemic, as the hypotheses suggest.

For that reason, bivariate and inferential statistics analyses were conducted. The bivariate analyses include descriptive statistics using compare means in order to understand employees' commitment across the different WFH days a week, and the creation of scatter plots to view how the data set between the two variables relate. The inferential statistics analyses include correlation tests to find out if a statistical relationship between the two variables exists and non-parametric tests to compare different groups in the sample and assess whether there are differences across them that find statistical support.

#### **4.6.1 Relationship between WFH Days a Week and OC**

PCA has provided component solutions for each OC's dimension, thus employees' commitment does not need to be measured based on the 22 items from the 5-point Likert-type scale, but rather using each of the components: REGR factor score Components for ACC, REGR factor score Component ACE superior, REGR factor score Component ACE team co-workers, REGR factor score Component ACE co-workers other areas, REGR factor score Component ACJ, REGR factor score Component NC, and REGR factor score Component CC.

Consequently, the data set can be analyzed as being able to compare the means of employees' commitment by their WFH days a week. Even though the dispersions of the given values and the differences in the means are not significant across the WFH days a week, employees with 2 WFH days a week show in almost all the OC's dimension to be the most committed, employees with 5 WFH days a week have an average commitment in almost all OC's dimension except when it comes to ACJ as they have one of the lowest level of commitment, and on the contrary employees who do not work home as well as employees with 1 or 3 WFH days a week show low commitment in many OC's dimension. In the case of ACC, employees working from home 2 days a week are the most committed whereas employees who do not work from home or have 1 WFH day a week are the least committed. In the case of ACE, employees working from home 2 days a week are the most committed towards their superior and co-workers from other areas, but the least committed towards their team members; in this same OC's dimension, employees who do not work from home are the least committed. In the case of ACJ, employees with 1 or 2 WFH days a week are the most committed whereas employees who do not work from home or do it 3 WFH days a week are the least committed, though they are followed by employees who work the most from home and are also less committed. In the case of NC, employees who do not work from home or have 3 or 4 WFH days a week are the least committed while employees who work from home 2 days a week are the most committed. In the case of CC, the most committed employees are those who work from home 2 days a week whereas employees without WFH days a week or 1, 3, or 4 WFH days a week have the lowest level of commitment.

*Table 6* presents the descriptive statistics of the dependent variable, which is measured using PCA' regression factor score components for each OC's dimension and its respective foci, with respect to each category of the independent variable, which is measured based on employees' WFH days a week.

Table 6: Descriptive statistics of employees' commitment to the organization with respect to employees' WFH days a week

WFH Days a Week	REGR factor score Component ACC	REGR factor score Component ACE superior	REGR factor score Component ACE team co-workers	REGR factor score Component ACE co-workers other areas	REGR factor score Component ACJ	REGR factor score Component NC	REGR factor score Component CC	
0	Mean	-.1821922	-.0899817	-.1342282	-.4752363	-.2275252	-.1462404	-.2934758
	N	18	18	18	18	18	18	18
	Std. Deviation	1,02559389	,93467917	,86260088	1,13696851	,95278483	1,06180929	,81390237
1	Mean	-.3843596	-.0654519	,0924930	,0537732	,3692204	,2043214	-.0583186
	N	11	11	11	11	11	11	11
	Std. Deviation	1,05341103	,84547294	,96391954	,73916075	,65593692	,78153612	,85887696
2	Mean	,5249870	,2584802	-.0906137	,5013393	,5885369	,0736088	,3725554
	N	18	18	18	18	18	18	18
	Std. Deviation	1,03834010	,99120071	1,27097247	,67264993	,88662977	1,04786094	,94492229
3	Mean	-.0283176	,0905137	,0257447	-.0410212	-.2224953	-.0281749	-.0373903
	N	29	29	29	29	29	29	29
	Std. Deviation	,86170081	,77343430	,87994066	,80923628	1,12314219	,82519592	,99645990
4	Mean	-.0255915	,0964391	,0158489	-.1215664	-.0375270	-.1360023	-.0846052
	N	31	31	31	31	31	31	31
	Std. Deviation	1,01472322	,90807657	,85508561	,97088208	1,11970658	1,01911581	,95032717
5	Mean	-.0026869	-.0649796	,0146871	,0319411	-.0241306	,0335490	,0239766
	N	122	122	122	122	122	122	122
	Std. Deviation	1,00323729	1,09610040	1,05377310	1,06406985	,96102424	1,04509655	1,05575377
Total	Mean	,0000000	,0000000	,0000000	,0000000	,0000000	,0000000	,0000000
	N	229	229	229	229	229	229	229
	Std. Deviation	1,00000000	1,00000000	1,00000000	1,00000000	1,00000000	1,00000000	1,00000000

Note. N = 229.

For REGR factor score Component ACC -3,76550 = minimum score, 0 = mean, 1,78264 = maximum score

For REGR factor score Component ACE superior -3,26742 = minimum score, 0 = mean, 2,10665 = maximum score

For REGR factor score Component ACE team co-workers -3,84955 = minimum score, 0 = mean, 2,63950 = maximum score

For REGR factor score Component ACE co-workers other areas -4,11043 = minimum score, 0 = mean, 1,55515 = maximum score

For REGR factor score Component ACJ -2,98777 = minimum score, 0 = mean, 1,77867 = maximum score

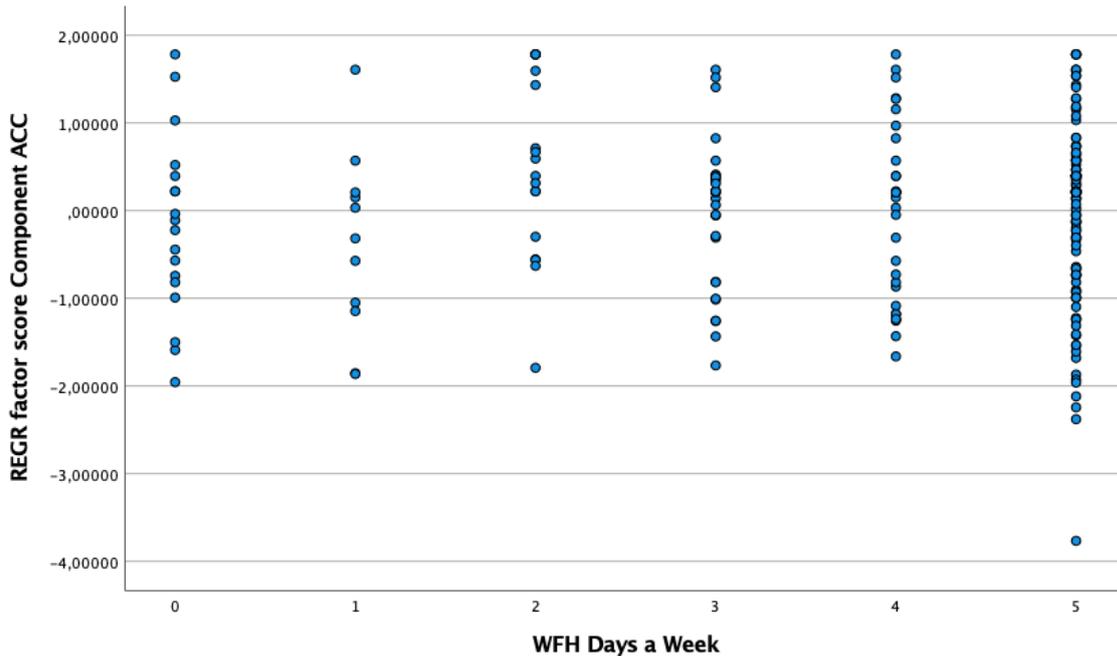
For REGR factor score Component NC -2,91331 = minimum score, 0 = mean, 1,70909 = maximum score

For REGR factor score Component CC -2,73961 = minimum score, 0 = mean, 2,04473 = maximum score

Before running the tests to find whether home-based telework is correlated with employees' commitment, a graphical representation of the two variables was made using scatter diagrams. The independent variable will continue to be measured using employees' WFH days a week and the dependent variable will also continue to be measured based on PCA's component solutions for each OC's dimension from.

The scatter plot presented in *Figure 5* shows no pattern in the data set and this allows to suggest at first that the two analyzed variables do not have a statistical relationship with one another. The data points are spread out in the same manner with no differences in employees' ACC across their WFH days a week; and as employees work more from home, their ACC does neither increase nor decrease.

Figure 5: Scatter plot of employees' ACC vs employees' WFH days a week



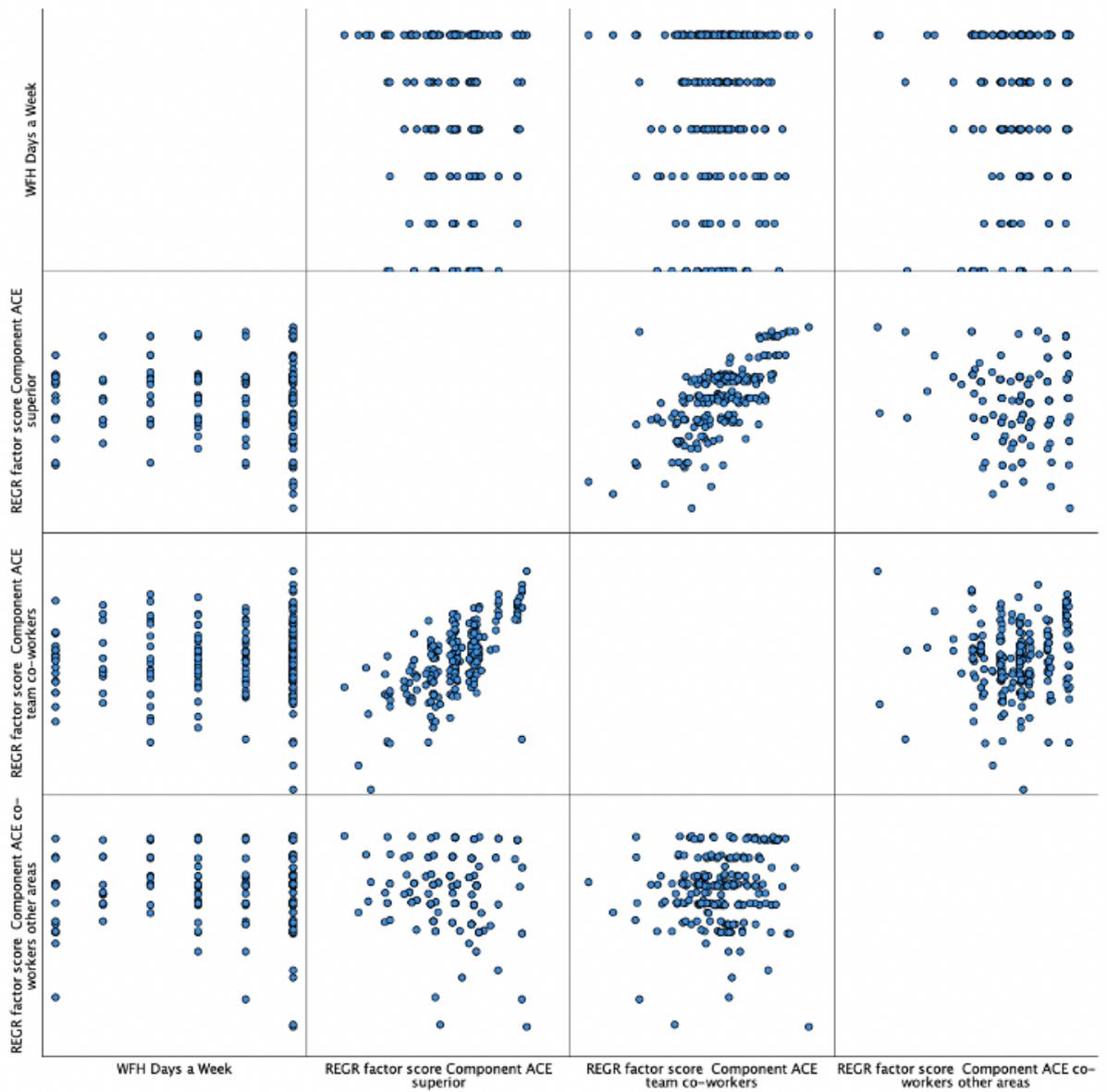
Note. REGR factor score Component ACC is the latent variable recoded by PCA for ACC  
 For REGR factor score Component ACC -3,76550 = minimum score, 0 = mean, 1,78264 = maximum score

In the case of ACE, the scatter plot matrix as shown below in *Figure 6* provided the same results as discussed previously for the other OC's dimension, and so it is not possible to interpret from the data set an association between employees' WFH and their ACE to either the superior, team co-workers, or co-workers from other areas.

For the assessment of a relationship between WFH days a week and ACJ, a scatter plot was also created and in the same manner no pattern could be identified in the data set. The result can be observed below in *Figure 7*, in which it is possible to suggest that there is no difference in the distribution of ACJ for employees who do not work from home, those that work from home for a few days, nor those that do it every working weekday.

When analyzing the relationship between employees' WFH days a week and the two OC's dimensions NC and CC, the result leads to the same interpretation in which due to a lack of a pattern and a difference in the distribution in the created scatter plots presented below in *Figure 8*, it was not possible to assume the existence of a relationship in the data set.

Figure 6: Scatter plot matrix of employees' WFH days a week, ACE superior, ACE team co-workers, ACE co-workers other areas



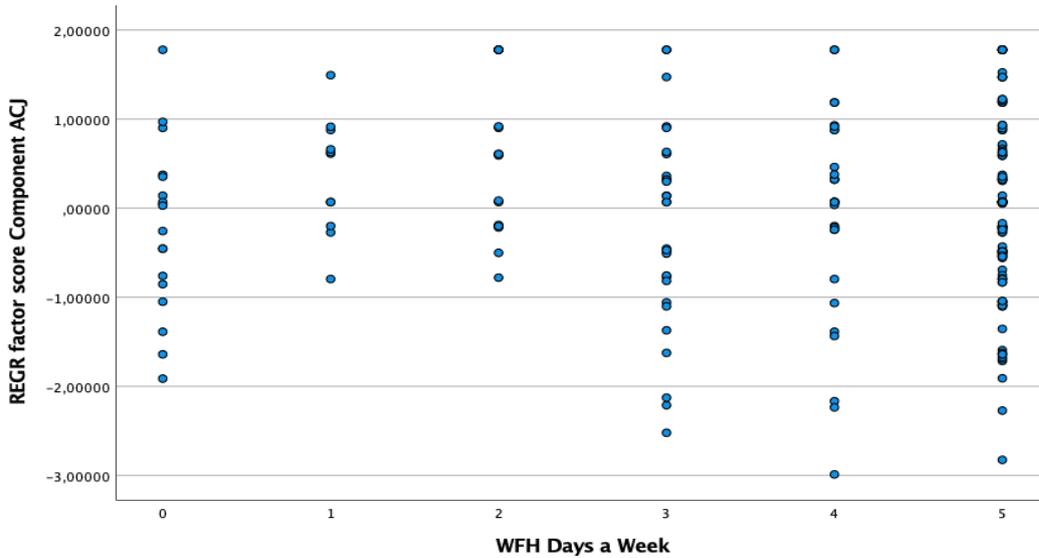
Note. For WFH Days a Week 0 days, 1 day, 2 days, 3 days, 4 days, 5 days

REGR factor score Component ACE superior is the latent variable recoded by PCA for ACE superior. For REGR factor score Component ACE superior -3,26742 = minimum score, 0 = mean, 2,10665 = maximum score

REGR factor score Component ACE team co-workers is the latent variable recoded by PCA for ACE team co-workers. For REGR factor score Component ACE team co-workers -3,84955 = minimum score, 0 = mean, 2,63950 = maximum score

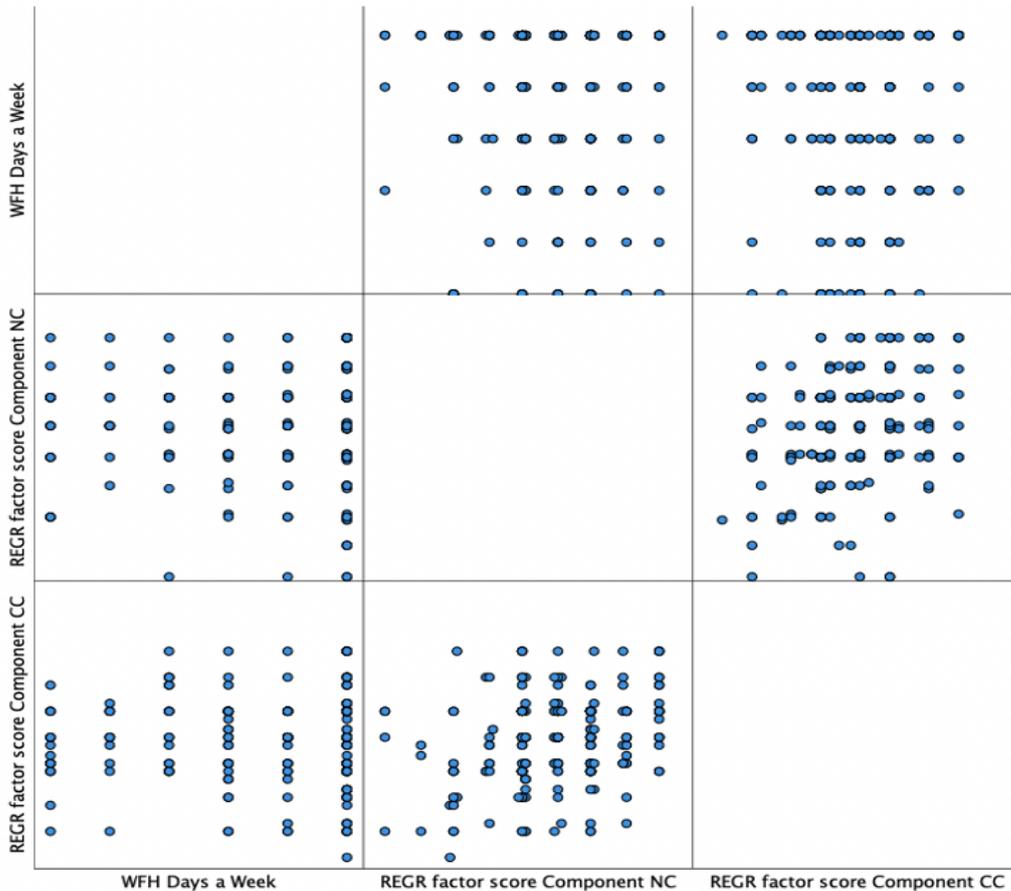
REGR factor score Component ACE co-workers other areas is the latent variable recoded by PCA for ACE co-workers other areas. For REGR factor score Component ACE co-workers other areas -4,11043 = minimum score, 0 = mean, 1,55515 = maximum score

Figure 7: Scatter plot of employees' ACJ vs employees' WFH days a week



Note. REGR factor score Component ACJ is the latent variable recoded by PCA for ACJ. For REGR factor score Component ACJ -2,98777= minimum score, 0 = mean, 1,77867 = maximum score

Figure 8: Scatter plot matrix of employees' WFH days a week, NC, CC



Note. For WFH Days a Week 0 days, 1 day, 2 days, 3 days, 4 days, 5 days

REGR factor score Component NC is the latent variable recoded by PCA for NC. For REGR factor score Component NC -2,91331 = minimum score, 0 = mean, 1,70909 = maximum score

REGR factor score Component CC is the latent variable recoded by PCA for CC. For REGR factor score Component CC -2,73961 = minimum score, 0 = mean, 2,04473 = maximum score

Even though there was absence of patterns in the above presented scatter plots that could suggest a relationship between the two studied variables, a correlation test was conducted. *Table 7* presents the results of the correlation test denoting that there is no significant linear relationship between the independent variable WFH days a week and the different OC's dimensions. Thus, the available sample data does not provide support to the hypotheses implying that employees' commitment decreases as employees spend more days working from home than in the office because a statistical correlation between the variables could not be found.

*Table 7: Results of Pearson's correlation coefficient measuring correlation between employees' WFH days a week and employees' commitment to the organization*

<b>Independent Variable WFH and Dependent Variable OC</b>	<b>r</b>
WFH Days a week and regression factor score component ACC	0,020
WFH Days a week and regression factor score component ACE superior	-0,03
WFH Days a week and regression factor score component ACE co-workers	0,030
WFH Days a week and regression factor score component ACE co-workers from other areas	0,053
WFH Days a week and regression factor score component ACJ	-0,036
WFH Days a week and regression factor score component NC	0,016
WFH Days a week and regression factor score component CC	0,037

*Note.* For Pearson's correlation coefficient  $r_{xy} = +1$  total positive linear correlation, 0 = no linear correlation, 1 = total negative linear correlation.

#### **4.6.2 Relationship between WFH Schedule and OC**

To begin with the analysis of the defined hypotheses based on the collected data, a descriptive analysis using compare means of employees' commitment by their WFH schedule was conducted. As mentioned in the research methodology, the variable WFH schedule distinguishes between employees working from home on a part-time basis and employees working from home on a full-time basis; hence, WFH schedule is measured using these categories: 1 = *part-time WFH (0-4 days)* and 2 = *full-time WFH (5 days)* . Employees' commitment needs to be measured with the REGR factor score components for each OC's dimension and its respective foci as given by PCA. Within the data set, we find that WFH full-time employees have lower ACC and ACJ than WFH part-time employees whereas the contrary is found when it comes to NC and CC because WFH full-time employees are more committed than WFH part-time employees. When it comes to ACE, the results are different across foci: ACE to superior is higher in WFH part-time employees and ACE to team co-workers and co-workers from other areas is higher in WFH full-time employees. Nevertheless, the means and standard deviations of each group are close to the mean or average of the sample, which already shows the possibility of not being able to confirm the analyzed hypotheses. These results are found in *Table 8*.

Table 8: Descriptive statistics of employees' commitment to the organization with respect to employees' WFH schedule

WFH Schedule		REGR factor score Component ACC	REGR factor score Component ACE superior	REGR factor score Component ACE team co-workers	REGR factor score Component ACE co-workers other areas	REGR factor score Component ACJ	REGR factor score Component NC	REGR factor score Component CC
Part-time WFH	Mean	,0030636	,0740889	-,0167460	-,0364188	,0275134	-,0382521	-,0273379
	N	107	107	107	107	107	107	107
	Std. Deviation	1,00100620	,87697898	,93959400	,92518234	1,04654096	,94941232	,93658028
Full-time WFH	Mean	-,0026869	-,0649796	,0146871	,0319411	-,0241306	,0335490	,0239766
	N	122	122	122	122	122	122	122
	Std. Deviation	1,00323729	1,09610040	1,05377310	1,06406985	,96102424	1,04509655	1,05575377
Total	Mean	,0000000	,0000000	,0000000	,0000000	,0000000	,0000000	,0000000
	N	229	229	229	229	229	229	229
	Std. Deviation	1,00000000	1,00000000	1,00000000	1,00000000	1,00000000	1,00000000	1,00000000

Note. N = 229.

For WFH Schedule Part-time WFH = 0 to 4 WFH days a week, Full-time WFH = 5 WFH days a week.

For REGR factor score Component ACC -3,76550 = minimum score, 0 = mean, 1,78264 = maximum score

For REGR factor score Component ACE superior -3,26742 = minimum score, 0 = mean, 2,10665 = maximum score

For REGR factor score Component ACE team co-workers -3,84955 = minimum score, 0 = mean, 2,63950 = maximum score

For REGR factor score Component ACE co-workers other areas -4,11043 = minimum score, 0 = mean, 1,55515 = maximum score

For REGR factor score Component ACJ -2,98777 = minimum score, 0 = mean, 1,77867 = maximum score

For REGR factor score Component NC -2,91331 = minimum score, 0 = mean, 1,70909 = maximum score

For REGR factor score Component CC -2,73961 = minimum score, 0 = mean, 2,04473 = maximum score

To further assess the level of commitment in each category of WFH schedule, it is also possible to make use of the 22 survey items corresponding to the 5-point Likert-type scale measuring OC instead of the components that PCA delivered, which is appropriate for the chosen statistical hypothesis testing. In order to test the defined hypotheses, the Mann-Whitney *U* Test was conducted; this test provides the null hypothesis stating that the distribution of each dependent variable measuring employees' commitment is the same across the two groups WFH part-time and WFH full-time.

In the case of ACC, the test showed that there is no difference in the average rank of each group and indicated that the null hypothesis needed to be retained since it cannot be statistically confirmed that the distribution of ACC is different across WFH part-time employees and WFH full-time employees. Consequently, *H1a* does not find statistical support and so it is not possible to determine if adopting or increasing the use of home-based telework reduces employees' commitment to their company concerning affective drivers behind this OC's dimension.

The same happened with the test conducted to analyze employees' ACE which could not confirm the hypothesis that the distribution of ACE is different across WFH part-time employees and WFH full-time employees. And similarly, *H1b* would have to be dismissed

as it cannot be statistically proved that an increase in home-based telework by a company has an effect on its employees' commitment to any of their colleagues, be it their superior, their team co-workers, or their co-workers from other areas.

After conducting the test to analyze the distribution of ACJ across the two categories from WFH schedule, H1c also cannot find statistical evidence and so it cannot be stated that employees become less committed to their job once they work more from home.

Furthermore, it was also not possible to find statistical support for H2a and H2b arguing that employees' NCC and NCE differs if employees work from home up to 4 days or if they do so all 5 days of the week. In this case, the test also requests to retain the null hypothesis and does not allow to confirm that increasing WFH leads to a reduction in NC.

Lastly, to analyze the distribution of CC among WFH part-time employees and WFH full-time employees, the same statistical test was conducted. The result was again same and because hypotheses H3a nor H3b can be statistically confirmed, it cannot be argued that employees working from home five days a week feel less committed than employees working from home up to 4 days when it comes to their perception of losing company's benefits or leaving their colleagues once they leave the company.

#### **4.7 Employees' Commitment to the Organization with Respect to Current WFH Days a Week and pre-COVID-19 WFH**

Although in the sample it has not been so far possible to observe a statistical relationship between employees' WFH and their level of commitment, a further descriptive analysis has been conducted with the intention of understanding the performance of the different OC's dimension among employees depending on their WFH days a week and their WFH experience prior to the COVID-19 pandemic.

*Table 9* presents the descriptive statistics of mean and number of cases for the respective OC's regression factor score components from PCA and across the two levels of the independent variable WFH: the first level distinguishes among employees' WFH days a week and the second among employees' pre-COVID-19 WFH experience. It is possible to observe at first that most of the cases correspond to employees who were not working from home before the coronavirus outbreak and are currently only working from home while the lowest number of cases corresponds to one employee who used to work from home before the coronavirus outbreak and is currently only working in the office. When comparing the mean of employees' commitment, the mean of this only one employee who has 0 WFH days a week and pre-COVID-19 WFH experience will not be considered as it is not robust with only one person within this WFH combination.

Table 9: Average in employees' commitment to the organization with respect to employees' WFH days a week and pre-COVID-19 WFH experience

WFH Days a Week	Pre-COVID-19 WFH experience		REGR factor score Component ACC	REGR factor score Component ACE superior	REGR factor score Component ACE team co-workers	REGR factor score Component ACE co-workers other areas	REGR factor score Component ACJ	REGR factor score Component NC	REGR factor score Component CC
0	no pre-COVID-19 WFH experience	Mean	-,1864449	-,0611344	-,0602388	-,4280360	-,1444276	-,1194247	-,2671204
		N	17	17	17	17	17	17	17
	pre-COVID-19 WFH experience	Mean	-,1098953	-,5803864	-1,3920474	-1,2776408	-1,6401836	-,6021074	-,7415174
		N	1	1	1	1	1	1	1
	Total	Mean	-,1821922	-,0899817	-,1342282	-,4752363	-,2275252	-,1462404	-,2934758
		N	18	18	18	18	18	18	18
1	no pre-COVID-19 WFH experience	Mean	-,7266651	-,0548751	-,0225327	,1497856	,1951335	,4717433	-,2466112
		N	6	6	6	6	6	6	6
	pre-COVID-19 WFH experience	Mean	,0264071	-,0781441	,2305238	-,0614416	,5781247	-,1165850	,1676325
		N	5	5	5	5	5	5	5
	Total	Mean	-,3843596	-,0654519	,0924930	,0537732	,3692204	,2043214	-,0583186
		N	11	11	11	11	11	11	11
2	no pre-COVID-19 WFH experience	Mean	,8813406	,4443025	-,0606664	,3861901	,6960550	,3772412	,3308044
		N	10	10	10	10	10	10	10
	pre-COVID-19 WFH experience	Mean	,0795450	,0262022	-,1280479	,6452758	,4541393	-,3059318	,4247442
		N	8	8	8	8	8	8	8
	Total	Mean	,5249870	,2584802	-,0906137	,5013393	,5885369	,0736088	,3725554
		N	18	18	18	18	18	18	18
3	no pre-COVID-19 WFH experience	Mean	-,0146373	,0186312	-,1346373	-,1272488	-,3613513	-,0313702	-,0174768
		N	20	20	20	20	20	20	20
	pre-COVID-19 WFH experience	Mean	-,0587184	,2502525	,3821490	,1505957	,0860735	-,0210743	-,0816425
		N	9	9	9	9	9	9	9
	Total	Mean	-,0283176	,0905137	,0257447	-,0410212	-,2224953	-,0281749	-,0373903
		N	29	29	29	29	29	29	29
4	no pre-COVID-19 WFH experience	Mean	,1103725	,1133995	-,0270192	-,0983758	-,0128793	-,1321640	,0080730
		N	19	19	19	19	19	19	19
	pre-COVID-19 WFH experience	Mean	-,2408679	,0695851	,0837234	-,1582849	-,0765524	-,1420795	-,2313456
		N	12	12	12	12	12	12	12
	Total	Mean	-,0255915	,0964391	,0158489	-,1215664	-,0375270	-,1360023	-,0846052
		N	31	31	31	31	31	31	31
5	no pre-COVID-19 WFH experience	Mean	-,1221915	-,1156110	,0356769	-,0366295	-,1670791	-,0646732	-,0814539
		N	90	90	90	90	90	90	90
	pre-COVID-19 WFH experience	Mean	,3334198	,0774214	-,0443470	,2247961	,3779121	,3097991	,3205001
		N	32	32	32	32	32	32	32
	Total	Mean	-,0026869	-,0649796	,0146871	,0319411	-,0241306	,0335490	,0239766
		N	122	122	122	122	122	122	122
Total	no pre-COVID-19 WFH experience	Mean	-,0488213	-,0296499	-,0108710	-,0631282	-,1039060	-,0270769	-,0632078
		N	162	162	162	162	162	162	162
	pre-COVID-19 WFH experience	Mean	,1180456	,0716909	,0262852	,1526384	,2512354	,0654696	,1528309
		N	67	67	67	67	67	67	67
	Total	Mean	,0000000	,0000000	,0000000	,0000000	,0000000	,0000000	,0000000
		N	229	229	229	229	229	229	229

Note. N = 229.

For Pre-COVID-19 WFH experience 0 = no pre-COVID-19 WFH experience refers to employees who prior to the coronavirus outbreak never or rarely WFH, 1 = pre-COVID-19 WFH experience refers to employees who prior to the coronavirus outbreak WFH sometimes, very often or always; ,29 = mean; ,456 = standard deviation.

For REGR factor score Component ACC -3,76550 = minimum score, 0 = mean, 1,78264 = maximum score

For REGR factor score Component ACE superior -3,26742 = minimum score, 0 = mean, 2,10665 = maximum score

For REGR factor score Component ACE team co-workers -3,84955 = minimum score, 0 = mean, 2,63950 = maximum score

For REGR factor score Component ACE co-workers other areas -4,11043 = minimum score, 0 = mean, 1,55515 = maximum score

For REGR factor score Component ACJ -2,98777 = minimum score, 0 = mean, 1,77867 = maximum score

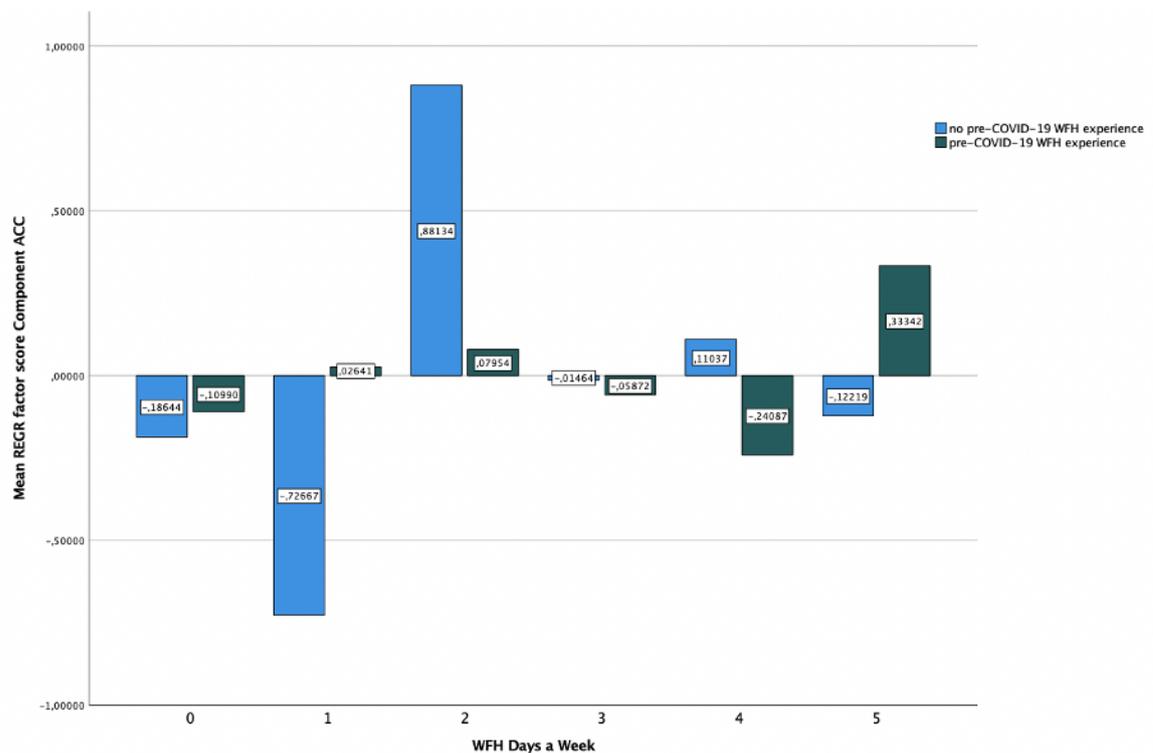
For REGR factor score Component NC -2,91331 = minimum score, 0 = mean, 1,70909 = maximum score

For REGR factor score Component CC -2,73961 = minimum score, 0 = mean, 2,04473 = maximum score

For a closer look into employees' commitment based on each AC dimension, clustered bar charts have been created and will be consequently reviewed.

In *Figure 9* it is possible to observe a difference in employees' ACC with respect to their WFH days a week and previous WFH experience, especially for those who are currently working either 1 or 2 days a week from home. Whereas the difference of ACC is noticeable but still not very large between employees with and without prior WFH experience who are working 4 or 5 days a week from home. ACC is greater for employees with prior WFH experience who are currently working 5 days a week from home, while it is smaller for employees with prior WFH experience and 4 WFH days a week. Moreover, it is possible to observe that employees with 2 WFH days a week and without pre-COVID-19 WFH experience are the most committed whereas employees with 1 WFH day a week and without pre-COVID-19 WFH experience are the least committed.

*Figure 9: Clustered Bar Chart – Average in employees' ACC with respect to employees' WFH days a week and pre-COVID-19 WFH experience*



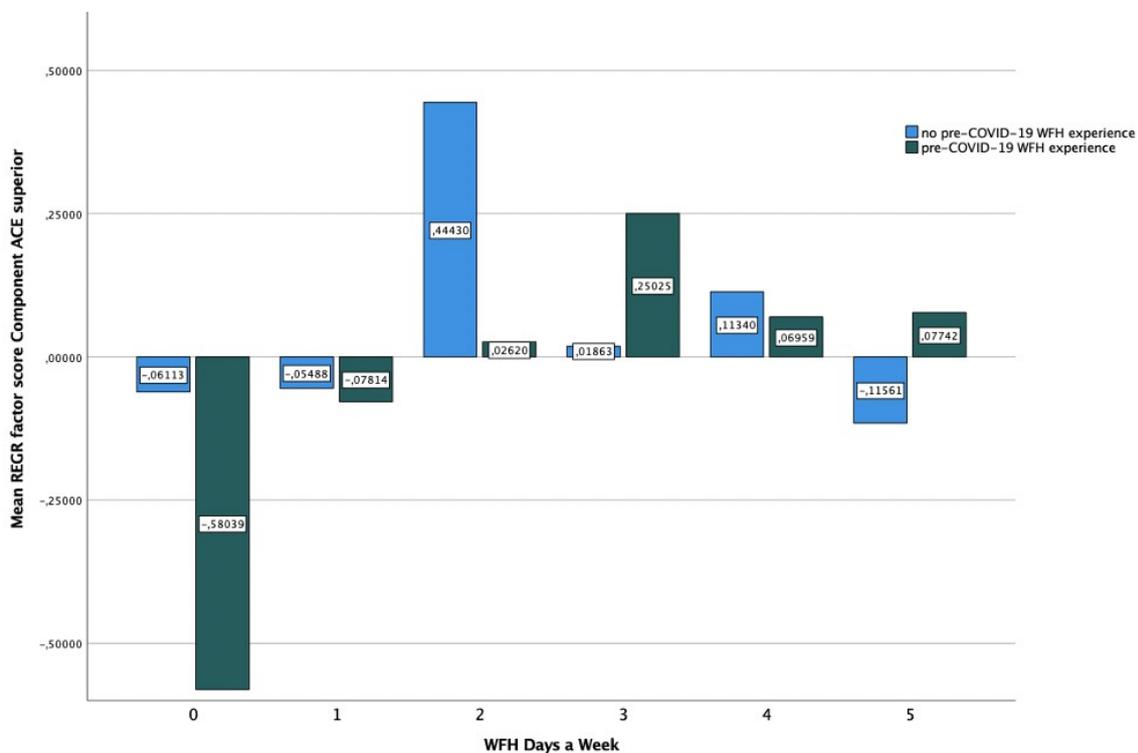
*Note.* Y-axis = Mean of the latent variable REGR factor score Component ACC by employees' WFH days a week and pre-COVID-19 WFH experience

For Pre-COVID-19 WFH experience 0 = no pre-COVID-19 WFH experience refers to employees who prior to the coronavirus outbreak never or rarely WFH, 1 = pre-COVID-19 WFH experience refers to employees who prior to the coronavirus outbreak WFH sometimes, very often or always; ,29 = mean; ,456 = standard deviation.

For REGR factor score Component ACC -3,76550 = minimum score, 0 = mean, 1,78264 = maximum score

In *Figure 10* it is possible to analyze employees' ACE to superior by their WFH days a week and pre-COVID-19 WFH experience. The least committed employees do not have pre-COVID-19 WFH experience and work currently 5 days from home whereas the most committed also do not have pre-COVID-19 WFH experience but are working currently 2 days from home. There are three WFH combinations in which there is a significant gap between employees who worked from home before the coronavirus outbreak and those who did not: employees with 3 or 5 WFH days a week as well as without WFH experience are less committed, and employees with 2 WFH days a week as well as without WFH experience are the most committed.

*Figure 10: Clustered Bar Chart – Average in employees' ACE superior with respect to employees' WFH days a week and pre-COVID-19 WFH experience*



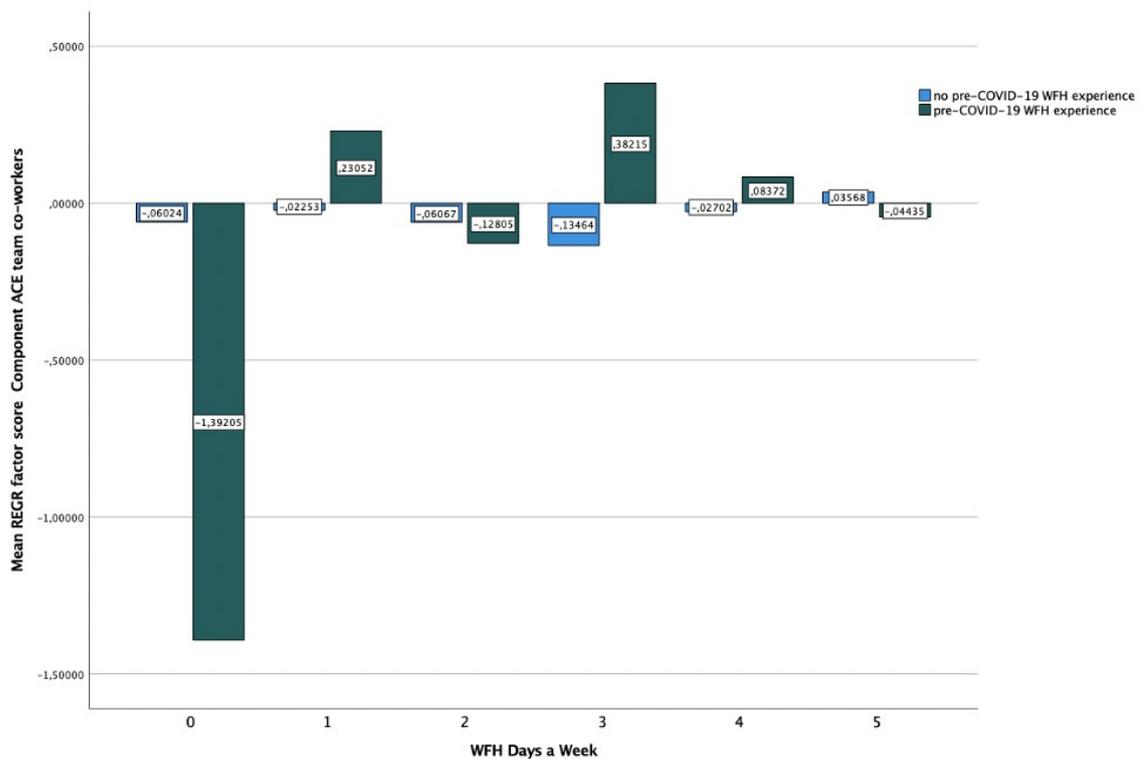
*Note.* Y-axis = Mean of the latent variable REGR factor score Component ACE superior by employees' WFH days a week and pre-COVID-19 WFH experience

For Pre-COVID-19 WFH experience 0 = no pre-COVID-19 WFH experience refers to employees who prior to the coronavirus outbreak never or rarely WFH, 1 = pre-COVID-19 WFH experience refers to employees who prior to the coronavirus outbreak WFH sometimes, very often or always; ,29 = mean; ,456 = standard deviation.

For REGR factor score Component ACE superior -3,26742 = minimum score, 0 = mean, 2,10665 = maximum score

In Figure 11, employees' ACE concerning team co-workers shows is different within almost all WFH combinations, especially for employees with 1 or 3 WFH days a week since those with WFH experience are more committed. Actually, it is found that across all WFH combinations, employees who used to work from home prior to the COVID-19 pandemic and have 3 WFH days a week are the most committed whereas employees without pre-COVID-19 WFH experience and 3 WFH days a week are the least committed. There is a gap between employees with and without WFH experience who work 2, 4, or 5 days from home, yet the difference in their commitment is not major.

Figure 11: Clustered Bar Chart – Average in employees' ACE team co-workers with respect to employees' WFH days a week and pre-COVID-19 WFH experience



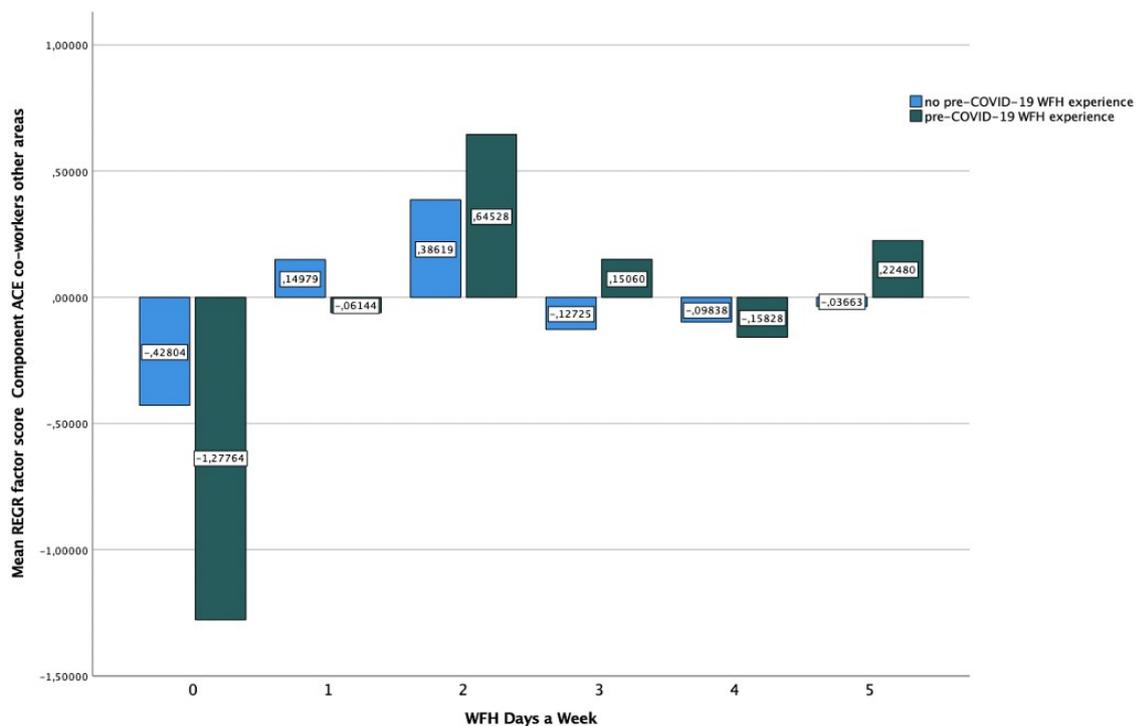
Note. Y-axis = Mean of the latent variable REGR factor score Component ACE team co-workers by employees' WFH days a week and pre-COVID-19 WFH experience

For Pre-COVID-19 WFH experience 0 = no pre-COVID-19 WFH experience refers to employees who prior to the coronavirus outbreak never or rarely WFH, 1 = pre-COVID-19 WFH experience refers to employees who prior to the coronavirus outbreak WFH sometimes, very often or always; ,29 = mean; ,456 = standard deviation.

For REGR factor score Component ACE team co-workers -3,84955 = minimum score, 0 = mean, 2,63950 = maximum score

In Figure 12, it is possible to see again differences of employees' ACE to co-workers from other areas within the categories WFH days a week depending on their WFH experience prior to the COVID-19 pandemic. The most committed employees are those that have 2 WFH days a week no matter if they have or not WFH experience. One of the least committed employees are those that have 4 WFH days a week, no matter if they have or not WFH experience. The least committed employees are those who do not have pre-COVID-19 WFH experience and who currently do not work from home. For employees who have 1 WFH day a week, the most committed are those that do not have pre-COVID-19 WFH experience. For employees who have 5 WFH days a week, the most committed are those that do have pre-COVID-19 WFH experience.

Figure 12: Clustered Bar Chart – Average in employees' ACE team co-workers other areas with respect to employees' WFH days a week and pre-COVID-19 WFH experience



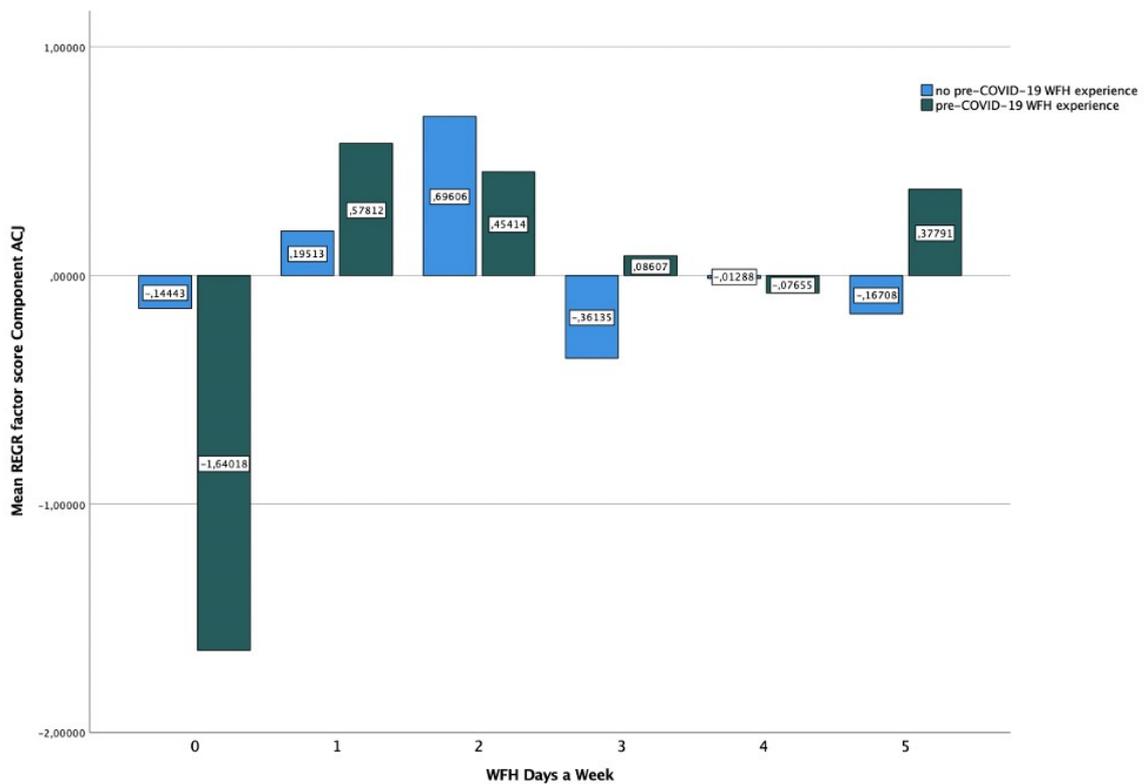
Note. Y-axis = Mean of the latent variable REGR factor score Component ACE team co-workers other areas by employees' WFH days a week and pre-COVID-19 WFH experience

For Pre-COVID-19 WFH experience 0 = no pre-COVID-19 WFH experience refers to employees who prior to the coronavirus outbreak never or rarely WFH, 1 = pre-COVID-19 WFH experience refers to employees who prior to the coronavirus outbreak WFH sometimes, very often or always; ,29 = mean; ,456 = standard deviation.

For REGR factor score Component ACE co-workers other areas -4,11043 = minimum score, 0 = mean, 1,55515 = maximum score

Figure 13 shows employees' ACJ for the different WFH combinations. The most committed employees have 2, 3, or 5 WFH days a week and pre-COVID-19 WFH experience while the least committed employees have 3 WFH days a week and no pre-COVID-19 WFH experience. The biggest gap is identified within employees with 5 WFH days a week and the smallest within employees with 4 WFH days a week. In the case of employees with currently 2 or 4 WFH days a week, ACJ is slightly smaller for employees with WFH experience than for those without; and ACJ is much greater for employees with 1, 3, or 5 WFH days a week as well as WFH experience.

Figure 13: Clustered Bar Chart – Average in employees' ACJ with respect to employees' WFH days a week and pre-COVID-19 WFH experience



Note. Y-axis = Mean of the latent variable REGR factor score Component ACJ by employees' WFH days a week and pre-COVID-19 WFH experience

For Pre-COVID-19 WFH experience 0 = no pre-COVID-19 WFH experience refers to employees who prior to the coronavirus outbreak never or rarely WFH, 1 = pre-COVID-19 WFH experience refers to employees who prior to the coronavirus outbreak WFH sometimes, very often or always; .29 = mean; .456 = standard deviation.

For REGR factor score Component ACJ -2,98777= minimum score, 0 = mean, 1,77867 = maximum score

When it comes to NC, employees with 1 WFH day a week and no prior WFH experience are the most committed while employees with 2 WFH days a week and prior WFH experience are the least committed. The biggest gap in commitment is within the category of employees with 2 or 5 WFH days a week; in the first case, the employees with prior WFH experience are less committed, but in the latter case employees without prior experience are the least committed. Prior WFH experience does not make any difference in the commitment of employees with 3 or 4 WFH days a week because the commitment from employees is still low whether they bring or not WFH experience.

When it comes to CC, the least committed employees belong to two WFH combinations: they bring no prior WFH experience and work currently 1 day a week from home, as well as employees who bring WFH experience and work currently 4 days a week from home. Whereas the most committed employees are those that have 2 WFH days a week and either bring or do not bring WFH experience, as well as those that have 5 WFH days a week and bring WFH experience. Moreover, it is possible to identify that within the data set, there is a difference in the commitment of employees who work from home 1 or 5 days a week because employees with pre-COVID-19 WFH experience are more committed; this is also the case within employees who work from home 4 days a week as employees with pre-COVID-19 WFH experience are less committed than those without prior WFH experience.

#### **4.8 Employees' Commitment to the Organization and WFH in Austria**

One last but important descriptive analysis will allow the comparison of employees' commitment depending on the extent to which they work from home as well as based on the location of the company in which they are working, whether it is in Austria or different to Austria e.g. in Germany, Switzerland, Poland, Colombia, Mexico, the United States, or Canada. *Table 10* presents the mean and number of cases of employees' commitment based on the different OC's dimension for each category combination of employees' WFH days a week and employees' company location.

All in all, within the data set it is found that there is a difference in the level of commitment for all OC's dimensions when comparing whether the respondents work in Austria or not, which means that once the commitment in Austrian-based employees is high, then in non-Austrian-based employees it is low, and vice versa. More specifically, employees in Austrian-based companies have in average a higher ACE to all employees except to their superiors and NC, whereas employees in non-Austrian-based companies have in average a higher ACC, ACE to their superiors, ACJ, and CC.

Table 10: Employees' commitment to the organization with respect to employees' WFH days a week and company location

WFH Days a Week	Company location		REGR factor score Component ACC	REGR factor score Component ACE superior	REGR factor score Component ACE team co-workers	REGR factor score Component ACE co- workers other areas	REGR factor score Component ACJ	REGR factor score Component NC	REGR factor score Component CC
0	Austria	Mean	-.3522339	-.3144526	.2248671	.0712901	-.4019501	-.1157573	-.0144237
		N	6	6	6	6	6	6	6
	Not Austria	Mean	-.0971713	.0222537	-.3137758	-.7484994	-.1403128	-.1614819	-.4330018
		N	12	12	12	12	12	12	12
	Total	Mean	-.1821922	-.0899817	-.1342282	-.4752363	-.2275252	-.1462404	-.2934758
		N	18	18	18	18	18	18	18
1	Austria	Mean	-.1463342	.0794088	.3088938	.0713953	.2802676	-.0016718	-.1285070
		N	9	9	9	9	9	9	9
	Not Austria	Mean	-1.4554738	-.7173251	-.8813109	-.0255264	.7695083	1.1312908	.2575293
		N	2	2	2	2	2	2	2
	Total	Mean	-.3843596	-.0654519	.0924930	.0537732	.3692204	.2043214	-.0583186
		N	11	11	11	11	11	11	11
2	Austria	Mean	.5168593	.2379706	-.4115246	.3305737	.5806811	.6083610	.2336700
		N	10	10	10	10	10	10	10
	Not Austria	Mean	.5351466	.2841170	.3105249	.7147962	.5983567	-.5948315	.5461622
		N	8	8	8	8	8	8	8
	Total	Mean	.5249870	.2584802	-.0906137	.5013393	.5885369	.0736088	.3725554
		N	18	18	18	18	18	18	18
3	Austria	Mean	-.1008851	.0157935	-.1314362	.2075656	-.4609106	.0625002	-.2778961
		N	17	17	17	17	17	17	17
	Not Austria	Mean	.0744863	.1963673	.2484176	-.3931859	.1152597	-.1566313	.3033262
		N	12	12	12	12	12	12	12
	Total	Mean	-.0283176	.0905137	.0257447	-.0410212	-.2224953	-.0281749	-.0373903
		N	29	29	29	29	29	29	29
4	Austria	Mean	.0266850	.1740701	.1233654	-.2278649	-.0291741	-.0930515	.0276328
		N	26	26	26	26	26	26	26
	Not Austria	Mean	-.2974296	-.3072420	-.5432369	.4311857	-.0809617	-.3593462	-.6682424
		N	5	5	5	5	5	5	5
	Total	Mean	-.0255915	.0964391	.0158489	-.1215664	-.0375270	-.1360023	-.0846052
		N	31	31	31	31	31	31	31
5	Austria	Mean	-.0810710	-.1248323	-.0052216	.0330771	-.1557600	-.0560168	-.1015585
		N	70	70	70	70	70	70	70
	Not Austria	Mean	.1028301	.0155914	.0414872	.0304119	.1530627	.1541183	.1929663
		N	52	52	52	52	52	52	52
	Total	Mean	-.0026869	-.0649796	.0146871	.0319411	-.0241306	.0335490	.0239766
		N	122	122	122	122	122	122	122
Total	Austria	Mean	-.0359277	-.0198281	.0045041	.0311272	-.0984035	.0006957	-.0726122
		N	138	138	138	138	138	138	138
	Not Austria	Mean	.0544838	.0300690	-.0068304	-.0472039	.1492273	-.0010550	.1101240
		N	91	91	91	91	91	91	91
	Total	Mean	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000	.0000000
		N	229	229	229	229	229	229	229

Note. N = 229.

For Company location 0 = Austria refers to employees whose company is located in Austria, 1 = Not Austria refers to employees whose company is located in either Germany, Switzerland, Poland, Colombia, Mexico, the United States, or Canada; ,40 = mean, ,49 = standard deviation

For REGR factor score Component ACC -3,76550 = minimum score, 0 = mean, 1,78264 = maximum score

For REGR factor score Component ACE superior -3,26742 = minimum score, 0 = mean, 2,10665 = maximum score

For REGR factor score Component ACE team co-workers -3,84955 = minimum score, 0 = mean, 2,63950 = maximum score

For REGR factor score Component ACE co-workers other areas -4,11043 = minimum score, 0 = mean, 1,55515 = maximum score

For REGR factor score Component ACJ -2,98777 = minimum score, 0 = mean, 1,77867 = maximum score

For REGR factor score Component NC -2,91331 = minimum score, 0 = mean, 1,70909 = maximum score

For REGR factor score Component CC -2,73961 = minimum score, 0 = mean, 2,04473 = maximum score

When assessing employees' ACC, it can be identified that the lowest commitment concerns employees with 1 WFH day a week and whose company is not based in Austria whereas the highest commitment concerns employees with 2 WFH days a week though there is no difference within this category when it comes to evaluating if the employees' company is based in Austria or not.

Regarding employees' ACE to superior, employees who are less committed work in Austria and have 1 WFH day a week, and similarly the most committed are employees with 2 WFH days a week and either work in Austria or not. Employees' ACE to team co-workers exists the most among employees in Austria who have 1 WFH day a week and employees outside of Austria who have 2 WFH days a week while it exists the least among employees who do not work in Austria and have 1 or 4 WFH days a week being. Employees' ACE to team co-workers from other areas is the highest for employees not working in Austria and with 2 WFH days a week, but it is the lowest for those working in the office in Austria.

When it comes to employees' ACJ, it is the highest for employees with 1 WFH day a week and whose company is not in Austria followed by employees with 2 WFH days a week disregarding whether they work or not in Austria as there is no difference across this category, and ACJ is the lowest for employees who do not work from home or do so 3 days from home and whose company is located in Austria.

In the case of employees' NC, it is possible to identify that it is the highest for employees with 1 WFH day a week and whose company is not located in Austria whereas it is the lowest for employees with 4 WFH days a week and similarly whose company is not located in Austria. In the case of CC, it is also the highest and lowest for employees who do not work in Austria, however it is the highest for those who have 2 WFH days a week and the lowest for those who have 4 WFH days a week.

## 5 Discussion and Conclusion

Understanding the importance that human capital has in every organization and how it is essential for every company to consider their workforce as the key to their success, the unexpected situation that the coronavirus pandemic brought must have put companies' focus on their employees; after all, most of their employees are now working from home, and so they need to know how to handle this. Throughout 2020 companies worldwide have had to allow employees to work from home, for some this was not new, but for most it was. As discussed in the literature review, the statistics show how the use of home-based telework increased significantly when comparing the percentage of the total workforce working from home prior to and since the COVID-19 pandemic: in the EU-countries, home-based telework increased from 5,4% to 40%, and in the specific case of Austria it doubled from 20% to 40%.

Consequently, this research has covered a current topic with the aim of identifying essential factors that can affect employees' commitment once they have to distance themselves from the office or what used to be their traditional workplace in order to work from home for almost one year or even an indefinite period. For the purpose of this research, employees' commitment has been analyzed based on the concept from Meyer and Allen who explained that OC consists of three dimensions: AC, NC, and CC. Each dimension has also a subdivision, thus within each dimension it is necessary to understand how an employee builds and sustains commitment to a specific focus, for example, to the company, to co-workers, and to the job.

In order to test the overall hypothesis stating a negative relationship between home-based telework and employees' commitment, a sample of 229 respondents who participated in an online survey was used. The collected data proved to be reliable and provided information about sociodemographic characteristics, but most importantly it provided insights about employees' WFH situation and commitment to their organization. From the 229 employees, it was found that 54,6% are between 30 and 39 years old, 56,3% have a master or equivalent degree, 60,3% are Austrian-based employees, 89,1% have a full-time employment, and 70% have employee-level. By asking survey participants about their extent of WFH before and since March 2020, it can be established that the coronavirus outbreak has caused the adoption of WFH to triple. Furthermore, it can be concluded that more than half of the survey participants consider to be more productive and to have a better work-life balance since they work from home, though they now have longer workdays and the desire to have a more suitable homework space. Equally important were the results regarding employees' commitment as it can be briefly mentioned that

employees' level of commitment is significantly high, especially when it comes to the OC's dimension of AC and each of its three foci: company, employees, and job; employees' commitment regarding the OC's dimension of NC and CC and each of its two foci, company and employees, is still positive yet not as much as in the case of AC.

Different statistical methods were carried out in order to interpret the available survey data, which included first the technique of PCA in order to reduce the chosen items based on the 5-point Likert-type scale into component solutions that would measure organizational commitment, and afterwards bivariate and inferential descriptive analysis to explain and determine the relationship between home-based telework and organizational commitment.

From the data analysis it can be concluded that among the most committed workforce to the organization are employees working 2 days a week from home while the least committed are employees who do not work from home at all. In the case of employees in the sample who work mostly from home, it was found that they also have one of the lowest levels of commitment; and in the case of employees in the sample who work only from home and not at all in the office, their commitment to their organization is neither above nor below average.

A more specific analysis taking into account other variables such as the extent to which employees used to work from home before March 2020 allows to determine that in average the most committed employees in the sample who currently work either a few days a week or all weekdays from home had already work from home prior to the coronavirus outbreak, while in average the least committed employees in the sample who currently work either once a week or the full week from home had not work from home before. It would be of relevance to find out how this scenario develops during the next months in which employees will continue to work from home, but also in latter months or years in which it is expected for employees to be able to return to their offices.

Similarly, considering another variable to measure the relationship between WFH and commitment provided interesting insights, which was the case when conducting the analysis that integrated the company location of survey respondents. Further academic research can try to explain why the level of employees' commitment is behaves inversely depending on the location of the employees' company. Some explanations can already be made and that is that the restrictions and lockdowns are being implemented differently in the different countries, thus employees depending on their country of work can or cannot work in the office. However, it would be helpful to assess within each dimension, for instance to know why employees have different ACE when it comes to either their co-workers or their superior, as well as why in Austria employees' ACJ is lower.

Moreover, the conducted inferential analysis to test the relationship between home-based telework and employees' commitment to the organization provided the following results: there is no correlation between the two examined variables and there is no difference in the distribution of employees' commitment with reference to their different WFH days a week. Therefore, the stated hypotheses arguing that employees' commitment in all three dimensions AC, NC, and CC decreases as employees work more from home and less in the office cannot be confirmed nor dismissed as there is no statistical support for these hypotheses. Nonetheless, with or without statistical support, important insights arise from the conducted research and these can contribute to both, academic literature and businesses.

The COVID-19 pandemic has brought many changes and challenges to mankind, and so it was necessary to gather empirical data in order to understand how individuals are handling their current work situation, thus having the above presented results of employees' commitment towards their company, employees, and job taking into account the different OC's dimensions gives a positive signal to companies. Employees show high level of commitment, embrace the new way of working, and accept well not being able to go to the office. This confident scenario cannot be only the result of a resilient workforce, but also from organizations with resources and tools dedicated to forming and maintaining a suitable work environment.

It seems like companies and employees will have to deal with mandatory home-based telework for many months to come, but even when it will not be anymore up to governments to recommend or enforce the adoption of home-based telework, then we all need to take with us what we learned and are still learning from this situation to continue adapting to the ongoing workforce transformation and overcome any challenge. An important suggestion from this research would be for companies to adopt a work model in which employees can work partially from home and partially in the office as it has been identified that the most committed employees in the sample have 2 WFH days a week whereas the commitment from employees who only work in the office is lower than from employees who work only from home and much lower from employee who have the opportunity to do both, work from home and in the office. A work model with flexible schedules and workspace ought to bring benefits to companies and their workforce. We have learned that employees feel that they are more productive, have less work-related stress, enjoy a better work-life balance, and have managed to communicate remotely with other employees while working from home, so if employees continue to deliver results and accomplish their tasks while reducing negative feelings and taking care of their well-being,

work from home seems to be an option that needs to be supported by employers. Even though employees are able to stay virtually connected to others, they still wish to be able to do so by returning to the office; this can be the case when employees feel the need to see their co-workers either because of job-related or social-related issues, thus this option should also be given by their employers; besides, for certain tasks and or meetings being in the office is of advantage. As a result, companies can find ways of assisting their employees in their daily routine knowing that in the long run it will contribute to creating a workforce that feels empowered and motivated as well as ready to dedicate time and effort to achieving the common goal in the organization. Similarly, companies can also benefit from this model and not only because they are supporting their employees and their way of working, but because they can also use their resources in a more efficient and cost-saving manner for example by reducing office workspace and office equipment to what is strictly needed.

It needs to be acknowledged that above discussed results are based on data collected from a survey that reflects the perspective of employees at one point in time, and since the same sample was not surveyed before, it was not possible to gather and interpret information neither on employees' workplace situation nor on employees' commitment prior to the coronavirus outbreak. Because of that, this research has not included any type of information disclosing employees' opinion about their previous physical office environment nor has this research analyzed if employees' commitment has gotten stronger or weakened over the past months. Questions referring to this topic could have been included in the survey, yet it was not the intention to make survey participants think about their past situation and have to provide responses based on their memory and perception of those moments. A suggestion to overcome the limitation of this research would be to conduct a longitudinal study based on data made previously available, data recently collected, and new data to be collected in the next years in order to understand how employees' commitment has developed over time and which are the drivers that lead to employees being the most committed. Furthermore, it is necessary to include in the sample companies from different industries and countries that were adopting home-based telework to a great extent before the coronavirus pandemic and companies that are currently not adopting home-based telework, and so it would be possible to analyze how employees' commitment to their company develops in the different categories before, during, and after the COVID-19 pandemic.

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## **7 Appendices**

### **Appendix A: Abstract**

The COVID-19 pandemic brought unexpected challenges worldwide; and with the first restrictions and lockdowns in place, companies adopted home-based telework. With a sudden rise in the number of employees working from home, companies have been experiencing a workforce transformation. The aim of this research is to find out how home-based telework influences employees' commitment taking into account the three dimensions of organizational commitment: affective, normative, and continuance commitment. It has been proposed to compare employees' commitment based on the extent to which they work from home arguing that home-based telework is negatively related to employees' commitment. Consequently, data on employees' work from home situation and commitment was collected and analyzed. It was found that home-based telework had tripled with the start of the pandemic, and that employees' commitment is high with the most committed employees having two work from home days. Based on these results, the adoption of a work model that combines work from home and work in the office is being recommended to companies. Since a correlation between the two analyzed variables was not found and the hypotheses could not find statistical support, it has been recommended for future research to examine this relationship taking into account employees' commitment before, since, and after the coronavirus pandemic.

## **Appendix B: Zusammenfassung**

Die COVID-19-Pandemie brachte weltweit unerwartete Herausforderungen mit sich; Unternehmen führten mit den ersten Einschränkungen und Ausgangssperren Homeoffice ein. Mit einem plötzlichen Anstieg der Zahl der Mitarbeiter, die im Homeoffice arbeiten, erleben Unternehmen eine Workforce Transformation. Ziel dieser Recherche ist es herauszufinden, wie Homeoffice die Mitarbeiterbindung beeinflusst, wobei die drei Dimensionen des organisationalen Commitments berücksichtigt werden: affektiv, normativ und kalkulatorisch. Es wurde vorgeschlagen die Mitarbeiterbindung anhand des Ausmaßes, in dem Homeoffice geleistet wird, zu vergleichen. Es wurde behauptet, dass Homeoffice einen negativen Zusammenhang zur Mitarbeiterbindung hat. Infolgedessen wurden Daten von Mitarbeiter zu ihrer Situation im Homeoffice und zu ihrer Bindung erhoben und ausgewertet. Es wurde festgestellt, dass mit Beginn der Pandemie das Homeoffice sich verdreifacht hatte, und dass die Mitarbeiterbindung hoch ist, wobei diese bei den Mitarbeitern mit 2 Tage Homeoffice am höchsten ist. Basierend auf diesen Ergebnissen werden Unternehmen die Einführung eines Arbeitsmodells vorgeschlagen, die Homeoffice und Arbeit im Büro kombiniert. Da keine Korrelation zwischen den beiden analysierten Variablen gefunden wurde und die Hypothesen keine statistische Unterstützung finden konnten, wurde für zukünftige Forschungen empfohlen, diese Beziehung unter Berücksichtigung der Mitarbeiterbindung vor, seit Beginn und nach der Coronavirus-Pandemie zu untersuchen.

## Appendix C: Online Self-Completion Questionnaire

1. Which country do you currently work in?

[Please choose] 

2. What industry do you currently work in?

[Please choose] 

3. What job level do you have in your current company?

- Intern
- Employee
- Manager

4. How long have you been working in your current company?

- Less than a year
- 1-3 years
- 4-6 years
- 7-9 years
- 10-12 years
- 13-15 years
- 16-18 years
- 19-21 years
- 22-24 years
- 25+ years

5. What is your current employment status?

- Part-time employment
- Full-time employment

6. What is your average number of working days a week?

- 1 day
- 2 days
- 3 days
- 4 days
- 5 days

7. What is your average number of working-from-home days a week?

- 0
- 1 day
- 2 days
- 3 days
- 4 days
- 5 days

**8. Please select what best applies to your work situation BEFORE the beginning of the COVID-19 pandemic in the country you work**

	never	rarely	sometimes	very often	always
I worked-from-home	<input type="radio"/>				
I worked in the office	<input type="radio"/>				

**9. Please select what best applies to your work situation SINCE the beginning of the COVID-19 pandemic in the country you work**

	never	rarely	sometimes	very often	always
I have been working-from-home	<input type="radio"/>				
I have been working in the office	<input type="radio"/>				

**10. When working-from-home:**

	strongly disagree	disagree	neutral	agree	strongly agree
I am more productive	<input type="radio"/>				
I have less work stress	<input type="radio"/>				
I have a better work-life balance	<input type="radio"/>				
I keep in touch with my colleagues remotely	<input type="radio"/>				
I do not feel that I need to see my colleagues at the office	<input type="radio"/>				
I have longer working days	<input type="radio"/>				
I sometimes skip or shorten my usual lunch break	<input type="radio"/>				
I wish I had a more suitable home workspace	<input type="radio"/>				

**11. Based on your current work experience, please indicate your level of agreement:**

	strongly disagree	disagree	neutral	agree	strongly agree
I feel identified with my company's core values	<input type="radio"/>				
I am happy with my company's culture	<input type="radio"/>				
I am proud to work for my company	<input type="radio"/>				
I feel a sense of belonging to my company	<input type="radio"/>				
I feel emotionally attached to my company	<input type="radio"/>				
I enjoy participating in company events	<input type="radio"/>				

12. Based on your current work experience, please indicate your level of agreement:					
	strongly disagree	disagree	neutral	agree	strongly agree
I have a good working relationship with my superior	<input type="radio"/>				
I am socially connected to my superior	<input type="radio"/>				
I have a good working relationship with my team colleagues	<input type="radio"/>				
I am socially connected to my team colleagues	<input type="radio"/>				
I have a good working relationship with colleagues from other teams/departments	<input type="radio"/>				
I am socially connected to colleagues from other teams/departments	<input type="radio"/>				

13. Based on your current work experience, please indicate your level of agreement:					
	strongly disagree	disagree	neutral	agree	strongly agree
I have meaningful job responsibilities	<input type="radio"/>				
I am satisfied with the way I do my tasks	<input type="radio"/>				
I am passionate about my job	<input type="radio"/>				
I enjoy the level of autonomy I have at work	<input type="radio"/>				
I feel empowered at my work	<input type="radio"/>				
I am proud of my job	<input type="radio"/>				

14. Based on your current work experience, please indicate your level of agreement:					
	strongly disagree	disagree	neutral	agree	strongly agree
I feel a moral obligation to my company because my company depends on me	<input type="radio"/>				
I have a moral duty to my colleagues because my colleagues depend on me	<input type="radio"/>				
I am happy to be working for my company because of the employee benefits	<input type="radio"/>				
I am happy to be working for my company because of the relations I established with my colleagues	<input type="radio"/>				

15. What is your age range?	
<input type="radio"/>	Under 20
<input type="radio"/>	20-29
<input type="radio"/>	30-39
<input type="radio"/>	40-49
<input type="radio"/>	50-59
<input type="radio"/>	60+

**16. What gender do you identify as?**

- Male
- Female
- Other

**17. What is the highest level of education you have completed?**

- Basic education
- Bachelor or equivalent
- Master or equivalent
- PhD, equivalent or higher

**18. What is your proficiency level in English?**

- Basic
- Low intermediate
- High intermediate
- Advanced
- Native or bilingual