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Studying the Effect of COVID-19 on Perceived Organizational Culture

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Abstract

The global pandemic led to organizations struggling with communicating their organizational culture, one of the major parts of the management control system, to their employees. The question being studied in this paper is how the COVID-19 pandemic affected the way in which employees perceive organizational culture. I sent out a survey questionnaire among employees of the audit department at Deloitte Rotterdam that started prior to the pandemic and during the pandemic, to examine whether these groups experience the organizational culture differently. OLS regression models and a Wilcoxon rank sum test are used to analyse the collected data. Three dimensions of cultural dimensions are regressed on whether the individual started during the pandemic, and several control variables based on baseline characteristics such as nationality and age. This empirical analysis shows that employees that started during the pandemic perceive the culture at Deloitte as less job-oriented and less professional, compared to employees that started prior to the pandemic.

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1 Introduction

At the end of 2019, a novel coronavirus broke out in the Hubei province in China (Velavan & Meyer, 2020). Since then, this virus has spread over the world and the World Health Organization declared that the world faces a global pandemic (World Health Organization, 2020). This pandemic has affected everyone in the world, as people were forced to stay at home due to social distancing measures. Society appeared to be unprepared for outbreaks of this scale, as hospitals have been under enormous pressure and businesses were forced to close (Donthu & Gustafsson, 2020). Due to the closure of businesses, the pandemic led to people working from home, rather than at their offices. Although some studies found that working from home led to improved performance and greater work satisfaction, other studies found a deterioration of the quality of working life and the lack of social contact due to working remotely (Bloom, Liang, Roberts, & Ying, 2014; Shamir & Salomon, 1985). Furthermore, since employees were forced to work from home, people were no longer able to physically work together and meet each other at the office. Since the social contact and the office are two important drivers that communicate organizational culture which are affected by the pandemic, it is likely that other aspects have been affected as well, and the question remains how the pandemic has affected the overall perception of organizational culture (Parker, 2020). Organizational culture can be defined as the shared practices, signs, symbols, and underlying assumptions (Meyerson & Martin, 1987). We know from prior literature that shocks in the environment can force companies to adjust their culture to fit the new reality (Meyer, 1982). However, before managers can actively put efforts into changing the organizational culture, it is essential to study how the external shock has affected the perceived organizational culture. Since the pandemic led to less social contact and working from home, especially the service sector has been affected by the pandemic. Therefore, firms in the professional services industry can be used to investigate the effects of COVID-19 on perceived organizational culture. One kind of professional services firms are audit firms, which derive great value from working in teams, and therefore, are likely to be affected by the pandemic (Carpenter, 2007). Deloitte Netherlands is one of the many firms in the professional services industry that face difficulties in communicating the organizational culture in a setting of working remotely. More specifically, the organization lacks knowledge on how their new employees that started during the pandemic perceive the organizational culture. Hence, the main research objective of this paper is to examine how the COVID-19 pandemic has affected the way in which employees perceive the organizational culture at the audit department of Deloitte Netherlands. The central research question (CRQ) is as follows:

“How has the COVID-19 pandemic affected the way in which employees perceive the organizational culture at Deloitte Netherlands?”

To answer the research question, the paper divides the problem in multiple sub questions, which are briefly discussed below.

Since this study aims to measure the perceived organizational culture at Deloitte Netherlands, it is relevant to know how prior studies defined organizational culture. The organizational culture consists of various aspects, and to find out how these cultural aspects are affected by the pandemic, the paper must describe these aspects first (Meyerson & Martin, 1987). Therefore, the first sub question of this paper is:

(1) Which aspects does organizational culture consist of?

Secondly, the paper intends to study the effects of the COVID-19 pandemic on the perception of organizational culture in an audit firm. Hence, the study investigates prior literature written on how the cultural aspects found in sub question (1) are relevant for audit firms and similar firms in the service industry. Therefore, the second sub question of this paper is:

(2) To what extent are these cultural aspects relevant for audit firms?

Subsequently, the paper investigates which of these aspects are likely to be affected by the COVID-19 pandemic, based on prior studies conducted on the effect of external shocks on organizations. Therefore, the third sub question is:

(3) How are the aspects of organizational culture likely to be affected by the COVID-19 pandemic?

After obtaining answers to the first three sub questions, the paper investigates how these cultural aspects are affected by the pandemic through empirical research conducted among employees of Deloitte Netherlands. Hence, the fourth sub question is:

(4) How does the COVID-19 pandemic affect the perception of the organizational culture at Deloitte Netherlands?

1.1 Relevance of the research question

As mentioned before, everyone in the world is affected by the COVID-19 pandemic. Employees are forced to work from home, which according to prior studies can lead to negative consequences, such as physical isolation, a decrease in perceived respect, and a worsened quality of working life (Bartel, Wrzesniewski, & Wiesenfeld, 2012; Shamir & Salomon, 1985). As the environment has changed a lot due to the pandemic, managers are challenged by what measures they should implement to maintain their company culture when everyone is working from home (Spicer, 2020). However, before managers can implement changes to ensure the effectiveness company culture, they should first

understand how the external shock has affected the perception of the organizational culture. Only then, managers can take tailored initiatives to make sure the organizational culture is well understood by the employees. Hence, this study is practically relevant as it helps managers understand how the perception of organizational culture has been affected by the pandemic. The results of this study can be used by managers as input for tailored initiatives to maintain the organizational culture. More specifically, Deloitte Netherlands gains insights into the possible effects of COVID-19 on the perceived culture of Deloitte and can use this to possibly take more initiatives to ensure that the culture is perceived as desired.

As for the scientific relevance, many studies to date have studied organizational culture as part of the management control system (Hatch, 1993; Lee & Yu, 2004; Meyerson & Martin, 1987; Hofstede, 2011). Furthermore, there have been studies on how external shocks can affect the culture of companies, for instance by Meyer (1982). However, since the COVID-19 pandemic is a global issue and forced employees to work from home, organizations face new challenges which might be different from the external shocks that have been studied before. Therefore, this paper adds to current literature as it investigates how especially the COVID-19 pandemic affected the perception of organizational culture. Furthermore, Spicer (2020) acknowledged that the COVID-19 pandemic offers some fruitful opportunities for researchers. He recommended some interesting research questions which should be studied, which concern the effect of COVID-19 on organizational culture. This paper is an attempt to follow up on one of the questions posed in his literature. Hence, the paper not only adds to current literature as it studies the effects of a new pandemic on the perception of organizational culture, but it also follows up on recommended research by prior literature.

1.2 Structure of the paper

The remainder of this paper is structured as follows. The theoretical framework, which is the next section, investigates prior literature written on (the role of) organizational culture and how the perception of this culture is affected by an external shock. Through the analysis of existing literature, the paper sketches the framework for this study, and clarifies the relevant elements of organizational culture for audit firms. Therefore, the aim of this section is to provide the reader with a framework within which this study is conducted. Using the existing literature as a foundation, the paper constructs hypotheses about the effects of COVID-19 on the perception of the organizational culture. Following is the data and methodology section, which discusses the details of the survey which was conducted among employees of Deloitte Netherlands and the statistical analysis which the study uses to arrive at its results. Subsequently, the results part repeats the hypotheses and analyses whether the hypotheses are true. The section summarizes the results that followed from the survey and includes descriptive statistics as well as statistical analysis of the data. Finally, in the conclusion and discussion

section of the paper, the paper interprets the results and concludes what has been found in this study. Additionally, the section acknowledges the limitations of the study and comes up with recommendations for further research.

2 Theoretical Framework

This section of the paper draws the theoretical framework within which this study is conducted. The section starts by discussing and defining the relevant concepts of organizational culture, public accounting firms, and COVID-19. Subsequently, the section discusses the relationships between these concepts to construct a framework on which the study is based. Then, the section compares prior studies written about the relationships between these concepts with the objective framework. Lastly, the section concludes by drawing hypotheses about the effect of COVID-19 on perceived organizational culture at the audit department of Deloitte Netherlands.

2.1 Organizational Culture

Culture is a term which is used to distinguish groups of people, based on characteristics and knowledge. This can reach as far as language, social habits, and religion, among others. However, Jaques (1951) was one of the first to use culture in an organizational context. In his book *The Changing Culture of a Factory*, Jaques (1951) studied the development of group behaviours within a public British firm that sold metal bearings. According to Jaques (1951): *“the culture of the factory is its customary and traditional way of thinking and doing of things, which is shared to a greater or lesser degree by all its members, and which new members must learn, and at least partially accept, in order to be accepted into service in the firm”* (p. 251).

To date, much research has been conducted on defining organizational culture, building on the definition of Jaques (1951), and it has become an important topic in organizational research (Pettigrew, 1979; Smircich, 1983; Denison, 1996; Allaire, & Firsirotu, 1984; Schein, 1985; Hofstede, Neuijen, Ohayv, & Sanders, 1990; Meyerson & Martin, 1987). Because of its ambiguity, many different definitions of organizational culture exist. For instance, Pettigrew (1979) defines organizational culture as the system of collectively accepted meanings operating for a given group at a given time. Smircich (1983) extends this thought by defining organizational culture as the values, social ideas, and beliefs that members of the same organization share. Contrary to Pettigrew (1979) and Smircich (1983), another study of Allaire and Firsirotu (1984) constructs a conceptual framework for culture as a system of symbols mainly shaped by the organization’s history and leadership, which are differentially shared and used by the members of the organization. However, Allaire and Firsirotu (1983) acknowledge that thoughts on organizational culture and defining it comes with a commitment to certain conceptual assumptions and ways to examine culture. Therefore, defining the model which the study uses to examine organizational culture is of utmost importance. One model that has been frequently used in organizational research is the model of Hofstede et al. (1990).

This paper uses the framework for organizational culture by Hofstede et al. (1990), for the following reasons. Firstly, as the framework consists of six independent dimensions of organizational culture, it enables me to analyse the organizational culture through the different dimensions. In this way, a change in perception of the culture can be traced back to the dimension where the change comes from. Furthermore, Hofstede (1990) uses dimensions that are derived from his cultural dimensions of cross-national research (Hofstede, 1983c). Therefore, the initial dimensions used for the cross-national research have already been adjusted for research on organizations instead of national cultures. Also, the research of Hofstede et al. (1990) was conducted among twenty business units in Denmark and the Netherlands. Hence, the dimensions were constructed using interviews with members of Dutch and Danish firms and are likely to be more tailored to Dutch organizations compared to other models. Lastly, the framework has priorly been applied in cross-organizational studies by Hofstede et al. (1990) and Chow, Harrison, McKinnon, & Wu (2002), that both found the model effective in quantitatively assessing organizational culture. Furthermore, Pratt, Mohrweis, and Beaulieu (1993) acknowledge that research of organizational cultures within the same country can benefit from the framework of Hofstede et al. (1990) and recommend further organizational research using this framework.

2.1.1 Hofstede's dimensions of organizational culture

In their study on measuring organizational culture, Hofstede et al. (1990) find six independent dimensions along which the culture of an organization can be explained. The six dimensions are based on the six dimensions Hofstede found in his cross-national research (Hofstede, 1980, 1983a, 1983b, 1983c), which were adjusted for organizational culture following interviews with members of the organizations in their study on measuring organizational culture (1990). The six dimensions of the cross-national research (Hofstede, 1980, 1983a, 1983b, 1983c) should therefore not be confused with the six dimensions of organizational culture (Hofstede et al., 1990). The former is useful for research on (organizational) culture across different nationalities, whereas the latter is useful to examine organizational culture across organizations in the same country or across units in the same organization. The understanding of organizational culture of Hofstede et al. (1990) consists of six groups of practices, which are described below.

1 Process-oriented versus results-oriented

In a process-oriented organization, members perceive practices to reflect a concern with means. On the contrary, an organization that is results-oriented perceives organizational practices to reflect a concern with goal achievement (Hofstede et al., 1990). This dimension has also been recognized by Burns and Stalker (1961) as mechanistic management systems (process-oriented) and organistic management systems (results-oriented).

2 Employee-oriented versus job-oriented

This dimension demonstrates a concern for ensuring the job is done versus a concern for the people of the organization (Hofstede, 1998).

3 Parochial versus professional

In a professional organization, employees identify with their type of job, whereas in a parochial organization, the identity of the employees is largely derived from the organization (Hofstede, 1998). Therefore, in a professional organization, employees focus on the long term, whereas people in a parochial organization focus on the short term.

4 Open systems versus closed systems

This dimension is concerned with the way in which communication within the organization is perceived. Organizations with open systems are welcoming to new people and outsiders, and new employees quickly feel at home at these kinds of organizations. On the contrary, organizations with closed systems are perceived as “closed and secretive” and new employees can, therefore, not integrate easily (Hofstede, 1998, p. 4).

5 Tight versus loose control

This dimension investigates the amount of internal structuring in an organization. Organizations with tight control are cost-conscious and punctual, whereas organizations with loose control care less about costs and are less punctual (Hofstede, 1998).

6 Pragmatic versus normative

The last dimension focuses on the degree of customer orientation. In pragmatic organizations, the members are flexible in dealing with their environment. However, in normative organizations, the members are more rigid towards dealing with their customers (Hofstede, 2011).

2.2 Public Accounting Firms

Public accounting firms are active in the client-service industry. The main purpose of these firms is to prepare and/or audit the financial statements of their clients. In doing so, public accounting firms fulfil a protective role towards stakeholders of the organization, as the accountants ensure that the financial statements are not materially misstated (which means the financial statements do not contain major misstatements). However, most of the public accounting firms also offer financial advisory, tax services, and management consultancy, next to their audit services. This paper specifically regards the practices of the audit department of public accounting firms, as this has always been the core activity of the firms and cultural differences between the different departments have

been found in prior research (Hood & Koberg, 1991). This section elaborates on how the paper defines public accounting firms and highlights which aspects of these organizations are relevant in this study.

2.2.1 Job Grades

Public accounting firms use job grades to distinguish more experienced or higher performing employees from less experienced or lower performing employees. At the audit department of Deloitte Netherlands, job grades range from junior staff (staff in their first year at the organization) until partner, with many job grades in between. This paper studies the effect of COVID-19 on the perceived culture at the audit department of Deloitte, through comparing two groups. The first group consists of (Junior) staffers that started during the COVID-19 pandemic, whereas the second group consists of staffers that started before the pandemic. Since these groups are quite similar, but one of the groups started from home, this allows me to measure the effect of COVID-19 on the perception of the organizational culture. Therefore, this study mainly defines public accounting firms as the practices and perceptions of (Junior) Staff at the firms.

2.2.2 Auditor Independence and Ethical Decision-Making

Auditors review the financial accounts of companies to ensure that the accounts are valid and not majorly misstated. Since the auditor fulfils a role towards the public to provide a professional and honest opinion about the financial statements, it is essential that the auditor does not have any personal interest in the performance of the company that is audited. Therefore, auditor independence is of great importance for public accounting firms (Humphrey, Loft, & Woods, 2009). With the independence of auditors comes a requirement for high levels of moral reasoning. Therefore, auditors are expected to make ethical decisions and judge based on their experience and knowledge of the client (professional judgment). Furthermore, to assist auditors in auditing the financial statements of companies and in providing an independent opinion, there are certain frameworks with rules and principles that should be followed by the companies, such as US GAAP and IFRS (Barth, Landman, Lang, & Williams, 2012).

2.2.3 Attracting and retaining talent

As the turnover of professional staff tends to be higher in public accounting firms than in other professions, the attraction and retention of employees is essential for these firms (Rhode, Sorensen, & Lawler, 1977). Ketchand and Strawser (1998) study organizational commitment in a public accounting setting and find that auditors form an emotional connection to the organization early in their professional career, and that this connection does not differ between less or more experienced members. Therefore, staffers also form an emotional connection with the organization they work for already early in their career. Therefore, public accounting firms put much effort into recruiting and ensuring that the firm provides a pleasant environment to work in. However, compared to the more

experienced employees, staffers tend to get allocated the more repetitive and non-creative tasks, which might discourage the staffers to further pursue a career in (public) accounting (Hood & Koberg, 1991).

2.2.4 Learning environment

An audit team mostly consists of a couple of staffers, one or more managers, and a signing partner. Thus, knowledge and experience are unevenly distributed among the members of the engagement team (Vera-Muñoz, Ho, & Chow, 2006). To provide and enhance the quality of the (future) audit process, it is essential that all members on the engagement team gain skills and knowledge about the profession. Public accounting firms emphasize the importance of this learning environment, as knowledge sharing can create a competitive advantage, through leveraging skills, knowledge, and best practices of the organization (Vera-Muñoz, Ho, & Chow, 2006; Hood & Koberg, 1991). Furthermore, as the turnover of professional staff in public accounting is relatively high, it is essential that all members of the organization share knowledge with each other, to prevent knowledge flowing out of the organization (Rhode, Sorensen, & Lawler, 1977).

2.3 COVID-19

COVID-19 is the acronym of the novel coronavirus disease that broke out in 2019 and caused a global pandemic. Therefore, it caused a major health crisis, which to date caused around 3.5 million deaths globally (WHO, 2021). Apart from the major health crisis that COVID-19 caused, it also brought with it some serious implications for business. Arguably the biggest impact that the COVID-19 pandemic has had on organizations is the social distancing to prevent the virus from spreading. A study from Gartner (2020) surveyed 229 HR leaders and found that roughly 50% of the organizations reported that more than 80% of their staff was working remotely. To prevent the virus from spreading, offices and factories had to close, which disrupted global supply chains and day to day operations of most businesses (Song, Yeon, & Lee, 2021).

Since public accounting firms mainly audit financial statements of companies, the continuation of their core business has not been affected by COVID-19. However, the main impact that COVID-19 had on the business of public accounting firms is the closure of offices because of social distancing measures, which forced the employees to work remotely. Engagement teams were no longer able to visit the premises of the client and work in physical teams but had to work from home and meet in an online environment, such as Microsoft Teams or Zoom (Spicer, 2020). Inquiries with the client that normally take little time since the auditor is at the client's premises were replaced with mails and Teams or Zoom calls. As working from home has been the main disruptive change to the

daily operations of public accounting firms, this study mainly investigates the effects of working from home (caused by COVID-19) on the perception of the organizational culture.

2.4 An objective framework

Based on the concepts that the previous section discussed, a conceptual model can be constructed which shows the interrelationships between the concepts and the role of organizational culture within the management control system. My conceptual model is partly derived from the work of Herath (2006) and is shown below.

Organizational Management Control System

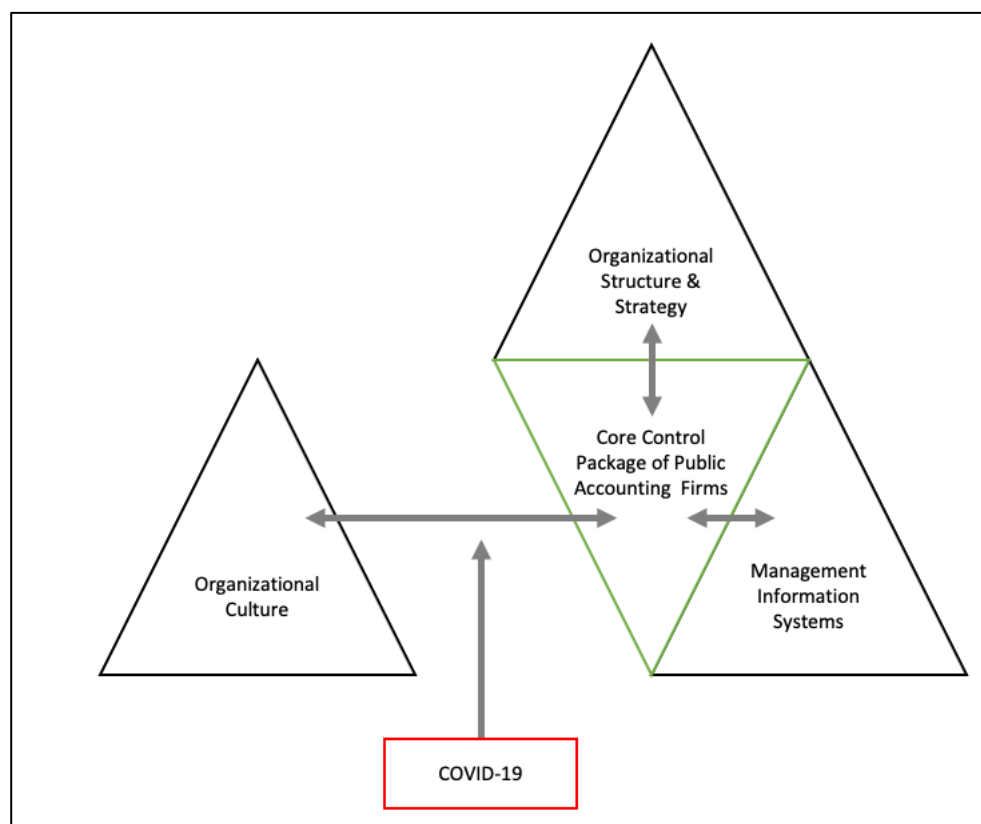


Figure 1 - Conceptual model of the Organizational Management Control System including the disruptive effect of COVID-19

Figure 1 shows the organizational environment as part of the organizational management. It shows the interrelationship between the different elements of a management control system. This study focuses on the relationship between the organizational culture and the control package and practices of public accounting firms and the disruptive effect of COVID-19. Organizational culture is an important part of the management control system, as it helps to align the interests of the individuals in different layers in the organization. However, COVID-19 disrupts this relationship as management

is challenged by communicating the organizational culture to the employees working from home (Spicer, 2020; Howard-Grenville, 2020). The next section compares prior research to the framework drawn in Figure 1, to examine what other studies found about these relationships.

2.5 The relationship between the concepts as per prior research

The previous sections introduced the relevant concepts of this study and constructed a framework for the relationships between them. This section aims to provide the reader with an overview of the relationships between the beforementioned concepts based on prior research. Firstly, the paper shows the relationship between public accounting firms and organizational culture. Subsequently, the section discusses the relationship between organizational culture and the perception thereof, and COVID-19.

2.5.1 Public Accounting Firms and Organizational Culture

To describe the relationship between public accounting firms and organizational culture, it is essential to once more draw attention to the definition of public accounting firms used in this paper. This study defines public accounting firms as the practices and perceptions of the staffers in the organization. Therefore, in analysing the relationship between public accounting firms and organizational culture, I focus on the relationship between organizational culture and the practices and perceptions of the staffers.

In short, the organizational culture at audit firms is set by upper management, to ensure that the culture aligns with the activities of the organization. This organizational culture should in turn ensure that the staffers share the values and assumptions of the public accounting firm (Ravasi & Schultz, 2006). The extent to which the culture which is set by upper management is understood and experienced by the employees determines the perceived organizational culture. This perceived organizational culture can, among others, be affected by the tone-at-the-top or external shocks such as COVID-19 (Windsor & Ashkanasy, 1996; Sweeney, Arnold, & Pierce, 2009). The study explains the probable effect of COVID-19 on this relationship in the next subsection. Firstly, this subsection discusses relationship between organizational culture and public accounting firms.

As auditors should be independent and make ethical decisions, there are certain rules and principles that should be followed during the audit process. Auditing involves various symbolic processes, as auditors are expected to decide on their professional judgment and make ethical decisions (Carpenter, Dirsmith, and Gupta, 1994). The organizational culture in a public accounting firm enforces this by focusing on a process-oriented and normative organization. Windsor and Ashkanasy (1996) indeed find that the organizational culture in public accounting firms can influence the ethical decision-making of the auditors. Sweeney, Arnold, and Pierce (2010) examine the impact

of perceived ethical culture on auditors' ethical evaluation and find that the organizational culture can significantly impact the ethical decision making. An unethical tone at the top and unethical pressure both significantly impact ethical evaluation (Sweeney, Arnold, & Pierce, 2010). Therefore, public accounting firms are characterized by a process-oriented and normative culture, to encourage auditors to follow procedures and rules, and be rigid and critical towards client management to guarantee the independence of the audit.

To retain talent, it is essential that public accounting organizations create a pleasant environment and bond the staffers with the organization. As Ketchand and Strawser (1998) find that auditors create an emotional connection to the organization early in their career, public accounting firms encourage this through a parochial culture. This parochial culture influences the identity that staffers derive from working at the organization, which is essential in retaining professional staff. However, as mentioned before, the staffers are allocated repetitive and less creative tasks, which is caused by a relatively more job-oriented culture (Hood & Koberg, 1991). Hood and Koberg (1991) also find that the job-oriented culture leads to staffers perceiving the culture as less innovativeness and supportive than partners, which could affect the motivation of the staffers.

Regarding the learning environment in public accounting firm, this is encouraged by an open culture within the organization. As mentioned before, knowledge and expertise are unevenly distributed, and organizations can benefit by sharing knowledge. Therefore, an open culture which allows for knowledge sharing stimulates the performance and motivation of staffers (Popper & Lipshitz, 1998; Vera-Muñoz, Ho, & Chow, 2006).

Summarizing, organizational culture at public accounting firms influences the practices and perceptions of staffers along the different dimensions of Hofstede. The process-oriented and normative culture positively influences the ethical decision making and critical attitude towards the client. The parochial culture positively influences the retention and motivation of staffers, whereas the job-oriented culture might negatively influence the motivation of staffers. Lastly, the open culture influences the learning environment and hence, the performance of staffers.

2.5.2 The moderating effect of COVID-19

As COVID-19 forced employees to work from home, the way in which some of the cultural dimensions are perceived might have been altered. Spicer (2020) already wrote on the possible effects that working remotely could have on organizational cultures, acknowledging that symbols and rituals of organizations might be less visible to employees during the pandemic. The office has always been considered as one of the most important drivers of organizational culture, as the people come together, and the artifacts that represent the culture are visible for everyone (Howard-Grenville, 2020;

Kniffin et al., 2021). The office is the place where teams come together, and employees chat at the water cooler. Studies also found that working from home lead to increased feelings of loneliness, especially caused by the lack of social contact at the office floor (Kniffin et al., 2021; Bloom, Liang, Roberts, & Ying, 2014; Shamir & Salomon, 1985). Ozcelik and Barsade (2018) find strong negative relationships between workplace loneliness and employees’ affective commitment, affective behaviours, and commitment. Furthermore, a study of Bartel, Wrzesniewski, and Wiesenfeld (2012) also finds that working remotely leads to greater feelings of physical isolation. Also, their study finds that working remotely decreases perceived respect from colleagues and decreases the organizational identification of employees. This implies that the staffers especially experience the culture as less people-oriented and professional (instead of parochial).

Furthermore, creating a learning environment is of great importance in a public accounting firm. Although working remotely creates feelings of loneliness due to a lack of social contact (Kniffin et al., 2021; Bloom, Liang, Roberts, & Ying, 2014; Shamir & Salomon, 1985), teams can still work together using the advanced online tools that exist nowadays (Spicer, 2020). However, working in virtual teams lacks the communication richness that is available to face-to-face teams (Martins, Gilson, & Maynard, 2004). Furthermore, a study of Mortensen and Hinds (2001) finds that conflicts are harder to solve, and teams are harder to coordinate in an online environment. Kniffin et al. (2021) also mention that the online environment reduces the helping behaviours of team members, which is crucial in creating a learning environment. People are found to get the feeling that it is awkward and uncomfortable to ask questions in the online environment (Kniffin et. al, 2021). As people are social creatures, humans make sense of the world and interactions through “body language, emotions, and embodied experiences”, which all lack as employees work remotely (Howard-Grenville, 2020, p. 1). Therefore, staffers might experience less of the learning culture that public accounting firms want to create, and hence, experience a relatively more closed culture.

2.5.3 Summary of prior literature

Table 1 below shows an overview of the prior literature, including the name of the author, the year the study was published in, the variables the author used, and the results the author found. Included are studies which examine the effect of an external shock (COVID-19) and working remotely on individuals working in teams.

Table 1 Summary of prior literature

Author(s)	Year of publication	Method	Results
Shamir and Salomon	1985	The effect of technology and working in an online	The authors draw up hypotheses about the effects on the different

		environment on the quality of working life (QWL) is studied by analysing prior literature. QWL is conceptualized by aspects like task characteristics, social relations, job-related stress, etc.	aspects of QWL, which they mainly leave as a framework for further research. The main findings included in their study are that working remotely decreases task characteristics such as feedback and task significance, harms social relations, increases role ambiguity, and worsens the work-nonwork relationship.
Mortensen and Hinds	2001	Through a survey, the authors collect data on proximity, cultural heterogeneity, socially shared identity, and level of mediated communication, to examine its effect on conflict in teams.	The study finds no significant difference in affective or task-based conflict between distributed and collocated teams. Furthermore, there was a negative relationship between shared identity and conflict in distributed teams. Also, the authors found that a higher percentage of face-to-face communication decreased task conflict.
Bloom et al.	2014	Data was collected on the performance of employees, categorized in 7 different fields. Then employee performance was regressed on treatment (whether the individual worked from home or at the office), experiment (whether it was in the timeframe of the experiment), a set of weekly time dummies to control for seasonal effects, and fixed effects.	The study finds that working from home led to a 13% increase in performance, compared to the individuals that worked at the office. The ones working from home were more able to take on more calls and work more flexible. The ones working from home also reported higher working satisfaction scores than the ones that worked from the office. However, the authors acknowledge that a call centre (in which the experiment was conducted) might be better for working remotely than other organizations.

Spicer	2020	Spicer mainly summarized prior literature in response to the COVID-19 pandemic, to come up with recommendations for research during and after the pandemic.	The paper draws attention to the effect of the pandemic on organizational culture. Spicer hypothesizes increases in workplace loneliness and weaker organizational cultures.
Kniffin et al.	2021	The authors take a broad approach to examine the effects that COVID-19 likely has on work practices and workers by analysing prior literature. As moderating factors, the authors include demographic characteristics, individual differences, and organizational norms.	The study finds that especially the transition from working at the office towards working from home impacts the work practices and workers. To save costs and office space, offices will most likely switch to more virtual work practices according to the study. Regarding workers, the authors expect many costs due to the retraining of the staff and negative health effects (as the study also finds negative effects on the workers' psychical health).

2.6 Hypotheses

Following from the identified relationships in the theoretical framework and the related prior research, I construct three hypotheses about the effect of COVID-19 on the perception of the organizational culture at Deloitte. The first two hypotheses of the study refer to the second and sixth dimension of organizational culture. Following the thoughts of Spicer (2020), the pandemic leads to employees being less exposed to the symbols and rituals of the company, as they cannot come to the office. This could be problematic, as studies of Kniffin et al. (2021) and Howard-Grenville (2020) find that the office is one of the most important places where the organizational culture can be translated to the employees. Furthermore, Shamir and Salomon (1985) find that working from home leads to increased feelings of loneliness. Bartel, Wrzesniewski, and Wiesenfeld (2012) find a similar result, as they conclude that working from home causes more feelings of physical isolation. Hence, as people are less exposed to the culture and cannot visit the office, and they suffer from loneliness due to working remotely, I hypothesize that the employees that started during the pandemic experience the culture as more job-oriented (and thus, less people-oriented) relative to employees that started prior

to the pandemic. Furthermore, the study of Bartel, Werzesniewski, and Wiesenfeld (2012) also finds that working from home decreases perceived respect from colleagues and also decreases the organizational identification of employees. Hence, the employees derive less of their identity from the organization and identify relatively more with the job and tasks they are concerned with. Therefore, I hypothesize that employees that started during the pandemic experience the culture as more professional (and thus, less parochial) relative to employees that started prior to the pandemic.

H₁: Employees started during the pandemic perceive the culture as more job-oriented relative to employees that started prior to the pandemic.

H₂: Employees started during the pandemic perceive the culture as more professional relative to employees that started prior to the pandemic.

The third hypothesis refers to the fourth dimension of organizational culture, which measures to what extent an organizational culture is open or closed. Martins, Gilson, & Maynard (2004) find that communication in online environments is very different from face-to-face communication, as people are not or less able to read each other's body language. As a result of this, conflicts can be harder to solve, which is also found in the study of Mortensen and Hinds (2001). Furthermore, Kniffin et al. (2021) write about employees being less helpful towards each other and employees feeling awkward and uncomfortable to ask questions when working in an online environment. Hence, the culture is perceived as more closed in an online environment, according to these studies. Therefore, I hypothesize that employees that started during the pandemic perceive the culture as more closed (and thus, less open) relative to employees that started prior to the pandemic.

H₃: Employees started during the pandemic perceive the culture as more closed relative to employees that started prior to the pandemic.

3 Methodology

This section of the paper informs the reader about the research, describing the collection of the data and the method used to analyse the data. It clarifies the steps that were taken during the research process to preserve the replicability of the study. The section starts by describing the models I use to investigate my hypotheses. Subsequently, it explains the measurement of the variables that are included in the models. Then, the section goes on to discuss the way in which the data for the study were obtained. Finally, the section concludes by elaborating on the data analysis and briefly describes what is included in the following section of the study.

3.1 Regression models

The previous section describes the theoretical framework for this study and concludes on three hypotheses for the paper. For the validation of each of the hypotheses I use a separate statistical model. Each of the models are briefly discussed below.

Firstly, I want to assess my first hypothesis, which states that employees that started during the pandemic perceive the culture as more professional relative to employees that started before the pandemic. To assess the first hypothesis, I use the following regression model:

$$\begin{aligned} JobOriented = & \beta_0 + \beta_1 * COVID_i + \beta_2 * Age_i + \beta_3 * Gender_i + \beta_4 * Australian_i + \beta_5 * French_i \\ & + \beta_6 * Indian_i + \beta_7 * Indonesian_i + \beta_8 * Italian_i + \beta_9 * Polish_i + \beta_{10} \\ & * CommunityB_i + \beta_{11} * CommunityC_i + \varepsilon_i \end{aligned}$$

The second hypothesis states that employees that started during the pandemic perceive the culture as more professional relative to employees that started before the pandemic. To assess this second hypothesis, I use the following regression model:

$$\begin{aligned} Professional = & \beta_0 + \beta_1 * COVID_i + \beta_2 * Age_i + \beta_3 * Gender_i + \beta_4 * Australian_i + \beta_5 \\ & * French_i + \beta_6 * Indian_i + \beta_7 * Indonesian_i + \beta_8 * Italian_i + \beta_9 * Polish_i \\ & + \beta_{10} * CommunityB_i + \beta_{11} * CommunityC_i + \varepsilon_i \end{aligned}$$

Finally, I want to assess the third hypothesis, which states that employees started during the pandemic perceive the culture as more closed relative to employees that started before the pandemic. The regression model I use to assess the last hypothesis is as follows:

$$\begin{aligned} Closed = & \beta_0 + \beta_1 * COVID_i + \beta_2 * Age_i + \beta_3 * Gender_i + \beta_4 * Australian_i + \beta_5 * French_i + \beta_6 \\ & * Indian_i + \beta_7 * Indonesian_i + \beta_8 * Italian_i + \beta_9 * Polish_i + \beta_{10} \\ & * CommunityB_i + \beta_{11} * CommunityC_i + \varepsilon_i \end{aligned}$$

3.2 Variable measurement

The variables that I use in the study can be observed in the regression models in the previous paragraph. This section elaborates on the variables in the model and how they are measured throughout the study.

JobOriented, *Professional*, and *Closed* are the dependent variables in the three models, respectively. All three of them are ordinary variables that measure the degree to which an individual perceives the organizational culture as job-oriented, professional, and closed, respectively. The variables can take values between 5 and 35, in which the value of 5 indicates an organizational culture that is not at all characterized by the specific cultural aspect, and the value of 35 indicates a culture which is very much characterized by the specific cultural aspect. For instance, a value of 5 for *JobOriented* indicates an organizational culture which is not at all job-oriented (and therefore, is very much people-oriented), and a value of 35 indicates a culture which is very much job-oriented.

The variable of interest in the study is *COVID*, which is a binary variable which measures whether an individual started during the pandemic or prior to the pandemic. The *COVID* variable takes the value 1 if the respondent started during the pandemic and takes the value 0 if the respondent started prior to the pandemic. Therefore, this variable distinguishes the control group (*COVID*=0) from the treatment group, that started during the pandemic (*COVID*=1). *Age* is a continuous variable that measures the age of individuals in full years. The *Gender* variable is a binary variable that can take the values 0 and 1 which measures the gender of the individual. The *Gender* variable takes the value 1 if the individual is a female and takes the value 0 if the individual is a male. The model also includes dummy variables for nationalities (the fourth to the ninth variable), which take the value 1 if the individual has the respective nationality. For instance, if the individual is from France, the variable *French* takes the value 1, whereas the other dummy variables for nationality take 0. The reference point for the nationality dummy variables is the Dutch nationality. Finally, the model includes dummy variables for the community which the individual belongs to within the audit department at Deloitte, which take the value 1 if the individual belongs to the respective community and take 0 otherwise. For instance, for an individual working at Community B, the variable *CommunityB* takes the value 1. For the community dummy variables, the reference point is Community A.

3.3 Data collection and sample selection

The data for the study were obtained by survey questionnaires sent to employees of the audit department at Deloitte Rotterdam with job grade Junior Staff and Staff. Only these two groups were included in the study, as the underlying differences between employees with these job grades are likely to be smaller compared to the situation in which I would include employees with job grade

Senior Staff or higher. As the aim of the study is to examine the effect of COVID-19 on the perception of organizational culture, comparing the (Junior) Staffers that started during the pandemic with the staffers that started before the pandemic would present the most representative results.

The survey questionnaire mainly included questions on the perception of the organizational culture at Deloitte (Appendix A: Survey Questionnaire). Participants were shown five statements for each of the cultural dimensions that are included in the study, being people- versus job-oriented, parochial versus professional, and open versus closed systems (Hofstede et al., 1990). The statements were derived from the Hofstede et al. (1990) model and were discussed with the audit department at Deloitte. Respondents could indicate to what extent they agreed with the statements, using a 7-point Likert scale ranging from *Totally Disagree* (1) to *Totally Agree* (7). As the study investigates the three dimensions of organizational culture separately, the survey led to a final score per dimension per respondent. The final score of a certain cultural dimension ranges, therefore, from a minimum score of 5 to a maximum score of 35.

Apart from the main questions about the perception of the cultural dimensions, the survey questionnaire contains questions on the baseline characteristics of the respondent, such as age, gender, months working at Deloitte, and nationality. These were collected to include in the model, as these characteristics might influence the perception of organizational culture (Hofstede, 1980; Hofstede et al., 1990; Chow et al., 2002). Therefore, omitting them from the model would create a bias in the estimator of the effect of COVID-19 (omitted variable bias). The data on the number of months working at Deloitte were only used to check whether the respondent correctly reported that he or she started during the pandemic or prior to the pandemic.

3.4 Data analysis

In order to analyse the data, I use Ordinary Least Squares regressions (OLS). Usually, Likert scale data cannot be analysed with OLS regression, as the dependent variable should be continuous. However, as the dependent variable is the sum of the scores that respondents reported for each statement within a cultural dimension, the dependent variable is more likely to be considered as continuous and normally distributed. For OLS regression, there are four assumptions that need to be fulfilled to draw insightful conclusions from the model. The assumptions are (1) a linear relationship between the independent variable and the dependent variable, (2) independent observations, (3) homoskedasticity, and (4) normality. The first assumption is fulfilled as I expect that employees who started during the pandemic report higher scores for the cultural dimensions. As the explanatory variable is binary, it can only take values 0 and 1 and therefore, the relationship is expected to be linear, rather than exponential. The second assumption is fulfilled as the data were collected randomly

from the employees at the audit department of Deloitte Rotterdam. To check the third assumption, homoskedasticity, I made scatterplots of the residuals (Appendix B: OLS assumptions figures). The scatterplots show that there is no clear pattern in the residuals, indicating homoskedasticity. For the fourth assumption, I made histograms showing the distribution of the data (Appendix B: OLS assumptions figures). The histograms show that the data distribution for the first two models (Job-oriented and Professional) is approximately normally distributed. However, for the third model, the data is not normally distributed. Therefore, the results of the third model are less reliable and representative compared to the first two models. As an addition to the third OLS model, I perform a Wilcoxon rank sum test, to examine whether there is a significant difference between the group that started during the pandemic and prior to the pandemic. Although this test has less explanatory power, it can be used to indicate whether there is a significant difference between the group that started during the pandemic and the group that started prior to the pandemic.

The next section shows a summary of the results of the survey questionnaire and includes tables with the results of the OLS regressions. It furthermore contains an objective description of the results obtained from the OLS regressions.

4 Results

4.1 Survey results

The survey questionnaire was sent out to 94 employees of the audit department at Deloitte Rotterdam, of which 64 responses were collected for a response rate of 68%. From the total number of responses, 27 individuals were from Community A, 19 from Community B, and 18 from Community C. Furthermore, most of the respondents was Dutch (49 respondents). Other nationalities of respondents included Italian (4), Australian (3), Indian (3), Polish (2), French (2), and Indonesian (1).

Table 2 shows the descriptive statistics of the remaining variables, as well as Cronbach alpha reliability measures. Before conducting a reliability test, a factor analysis should be conducted. However, in this study a factor analysis is not strictly necessary, as the factors have already been factor analysed in prior literature, for instance in the study of Hofstede et al. (1990). The Cronbach alpha depicts the internal consistency of a set of items in a group, showing how closely related the items are as a group (Cronbach, 1951). The mean scores of *Gender* and *COVID* show that the sample is well balanced in terms of gender, as well as in terms of belonging to the treatment group or not. Furthermore, the groups of statements for the dimensions Job-oriented and Closed are relatively high, whereas the alpha of Professional is relatively lower. However, all alphas are comparable to other studies using a similar model (Chow et al., 2002). Nevertheless, the generally accepted Cronbach alpha needed for reliable results is 0.7, according to Tavakol and Dennick (2011). Therefore, I tried to improve the reliability of the Job-oriented and Professional dimensions by removing some of the questions from the statistical analysis. However, this did not result in a higher Cronbach alpha. Therefore, it should be noted that the reliability of the Job-oriented and Professional dimensions is not sufficient for reliable results. Finally, one of the responses did not include data on the cultural dimensions Professional and Closed, resulting in one observation less for those two variables.

Table 2 Descriptive Statistics and Cronbach alpha

Variable	Obs.	Mean	Std. Dev.	Min	Max	Cronbach alpha
Age	64	24.672	2.000	21	28	n/a
Gender	64	.563	.500	0	1	n/a
Months	64	15.922	10.495	2	48	n/a
COVID	64	.453	.502	0	1	n/a
Job-oriented	64	15.281	5.150	5	28	.657
Professional	63	21.460	3.079	15	30	.313
Closed	63	14.444	6.679	5	31	.916

Note: Table 2 presents descriptive statistics of the data obtained from the survey among staffers at the audit department of Deloitte Rotterdam. The table shows the number of observations (Column 2), the means (Column 3), the standard deviation (Column 4), the minimum value (Column 5), the maximum value (Column 6), and if applicable, Cronbach's alpha (Column 7).

Table 3 presents the correlation between the variables in the model except for *Nationality* and *Community*. These two variables are not included in Table 3 to preserve the overview of the table. Including the dummy variables worsens the overview and is not intuitive, as their intercorrelation is expected to be significantly negative (if one nationality takes value 1, the other nationalities must take value 0, so there is a negative correlation).

The table shows a large negative correlation between *COVID* and the number of months that the respondent has been working at Deloitte (*Months*) (-.717, $p < 0.05$). This makes sense as someone who started during the pandemic has less months of working experience relative to someone who started prior to the pandemic. To avoid multicollinearity in the model, I excluded the *Months* variable from the model, and only used it to check whether the number of months is in line with whether the respondent reports that he or she started during or prior to the pandemic. Furthermore, there are significant negative correlations between *COVID* and the cultural dimensions of Job-oriented and Professional (-.357, $p < 0.05$; -.327, $p < 0.05$, respectively), indicating that starting during the pandemic is associated with lower scores for these two cultural dimensions.

Table 3 Correlation table

Variable	1	2	3	4	5	6	7
1 Age	1						
2 Gender	.028	1					
3 Months	.152	-.049	1				
4 COVID	-.118	-.020	-.717*	1			
5 Job-oriented	-.056	.061	.146	-.357*	1		
6 Professional	-.017	.047	-.004	-.327*	.358*	1	
7 Closed	.010	.242	.095	-.038	.294*	.018	1

Note: * $p < 0.05$

4.2 Hypothesis testing

To assess the hypotheses for the study, I use separate OLS regression models for each hypothesis. Table 4 shows the regression results for the relationship between COVID-19 and the respective dimensions of organizational culture.

Table 4 OLS regression results for the relationship between COVID-19 and the perception of organizational culture

Variable	Cultural Dimension Score		
	Job-oriented (1)	Professional (2)	Closed (3)
COVID	-4.164*** (1.243)	-2.216*** (.784)	-1.201 (1.840)
Age	-.542* (.311)	-.167 (.175)	-.269 (.504)
Gender	-.151 (1.284)	.183 (.785)	2.651 (1.837)
Country			
Australian	2.302 (1.715)	-1.050 (1.764)	4.874 (4.239)
French	-2.705** (1.091)	-1.223 (.777)	-.260 (3.963)
Indian	1.225 (2.021)	-2.445 (1.520)	5.746 (6.646)
Indonesian	8.456*** (1.454)	6.910*** (.709)	1.087 (2.916)
Italian	-3.142 (2.296)	-.093 (.709)	1.051 (4.586)
Polish	-4.518*** (1.326)	-.973 (1.550)	3.336 (5.887)
Community			
B	-1.327 (1.507)	-1.104 (.875)	-3.011 (1.953)
C	-3.166** (1.482)	.598 (1.007)	-2.437 (2.416)
Constant	32.026*** (7.729)	26.801*** (4.886)	21.007 (12.901)
Observations	64	63	63
R ²	.293	.274	.151

Note: Table 4 provides the regression results from three OLS regressions for the relationship between COVID-19 and the perception of organizational culture through the separate dimensions. The first regression was used to find the possible relationship between starting during the pandemic and the reported score for the cultural dimension people-oriented versus job-oriented (Column 2). The second and third regression were used to measure the same relationship for the cultural dimensions parochial versus professional and open versus closed systems, respectively (Column 3 and 4). The results illustrated in the table are the coefficients for the respective variable estimated in the first, second, and third model. The stars denote the significance of the coefficient, with: * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

4.2.1 Hypothesis 1

Hypothesis 1 predicted that employees that started during the COVID-19 pandemic would report higher scores for *JobOriented*, meaning that they perceive the organizational culture as more job-oriented compared to the employees that started prior to the pandemic. The regression results in Column 2 of Table 4 show that the variable *COVID* has a significant negative coefficient (-4.164, $p < 0.01$). This means that an employee that started during the pandemic reports a score for the Job-oriented dimension which is, on average, 4.164 points lower than the score of an employee that started prior to the pandemic. Hence, according to this result, employees that started during the pandemic experience the organizational culture as less job-oriented relative to the ones that started prior to the pandemic. Therefore, I reject my first hypothesis that employees that started during the pandemic perceive the organizational culture as more job-oriented than employees that started prior to the pandemic.

4.2.2 Hypothesis 2

The second hypothesis predicted that employees that started during the pandemic would report higher scores for *Professional*, meaning that they perceive the organizational culture as more professional compared to the employees that started prior to the pandemic. The regression results in Column 3 of Table 4 show that the variable *COVID* has a significant negative coefficient (-2.216, $p < 0.01$). This means that an employee that started during the pandemic reports a score for the Professional dimension which is, on average, 2.216 points lower than the score of an employee that started prior to the pandemic. Therefore, employees that started during the pandemic perceive the organizational culture as less professional compared to the ones that started prior to the pandemic. Hence, I also reject the second hypothesis which states that employees that started during the pandemic perceive the organizational culture as more professional than employees that started prior to the pandemic.

4.2.3 Hypothesis 3

The third and last hypothesis predicted that employees that started during the pandemic would report higher scores for *Closed*, meaning that they perceive the organizational culture as more closed compared to the employees that started prior to the pandemic. The regression results in Column 4 of Table 4 show that the variable *COVID* has a negative coefficient, which is insignificant ($-1.201, p > 0.10$). Therefore, the data is not sufficient to draw a conclusion for the third hypothesis. However, as mentioned previously in the methodology section, the data for the third model was not optimal for linear regression since it did not fulfil the normality assumption. As an addition to the linear regression model, I ran a Wilcoxon rank sum test, which is a non-parametric statistical hypothesis test that can be used to compare two related samples. As the Wilcoxon rank sum test does not require normally distributed data, I can use the test to assess whether the reported scores of the group that started during the pandemic differs from the group that started prior to the pandemic. The Wilcoxon rank sum test indicated that there was no statistically significant difference between the median ranks of the group that started during the pandemic and the median ranks of the group that started prior to the pandemic, $Z = 0.207, p > 0.10$. On that basis, I also reject the third hypothesis that employees that started during the pandemic perceive the organizational culture as more closed than employees that started prior to the pandemic.

5 Discussion and conclusion

5.1 Main findings

The main purpose of this study was to examine how the COVID-19 pandemic has affected the way in which employees at the audit department of Deloitte Netherlands perceive the organizational culture. The study used Hofstede et al.'s (1990) six dimensions to define organizational culture, which all focus on different aspects of the organizational culture (for instance, whether the culture is people-oriented or job-oriented). To assess my hypotheses, I used three separate OLS regressions which regress the reported score of the respective cultural dimension on whether the individual started during the pandemic and baseline characteristics such as age, nationality, and gender.

The study found that employees that started during the pandemic perceived the organizational culture as less job-oriented and less professional, relative to the employees that started prior to the pandemic. There was no significant difference between the groups regarding the extent to which the organizational culture is characterized by open or closed systems. This made me reject all the hypotheses I drew. Hence, as an answer to the CRQ, COVID-19 led to a less job-oriented and less professional organizational culture at the audit department of Deloitte Rotterdam, as perceived by the employees. Since I had to reject all of my hypotheses, I discuss the reasons why the results of this study differ from the hypothesized effects in the following section.

5.2 Discussion of the findings

As mentioned previously, the data I collected led me to reject all three of my hypotheses. For the first two dimensions of organizational culture, there were significant effects in the opposite direction than hypothesized. For the third dimension, there was no significant difference between the groups. However, lots of findings from prior studies found the hypothesized effects, and many recent news articles addressed the finding that the pandemic led to workplace loneliness and less open environments (Spicer, 2020; Howard-Grenville, 2020; Donthu & Gustafsson, 2020; Bloom et al, 2014; Shamir & Salomon, 1985; Kniffin et al., 2021). That the data from this study do not show these effects might be caused by the study design. I chose to send my survey questionnaire to staffers that started during the pandemic as well as those that started prior to the pandemic. However, both groups find themselves in a situation in which they must work from home at the time of responding and the exact effect of COVID-19 could, therefore, be hard to measure through a survey questionnaire. Hence, the effect of COVID-19 would be measured more accurately if the same group would fill out the survey before the pandemic hit and after the pandemic hit. Furthermore, staffers that started prior to the pandemic experienced the office, so for them the transition to the online environment might have impacted their perception of culture more strongly than the staffers that started during the pandemic.

Also, to solve this problem, it would be better to use data of the same group prior to and during the pandemic. Another reason that my results differ from those of Shamir and Salomon (1985) and Kniffin et. al (2021) is that those two studies were conducted qualitatively, just like many papers that examine the effects of an external shock on work practices and workers. This study attempted to quantitatively assess the company culture and isolate the possible effect of COVID-19 on the perceived culture, which has not been done before. Lastly, my results differ from those of Bloom et al. (2014) as their study was conducted in a call centre. As a call centre is a more suitable environment for working remotely, the effects of working from home are likely to differ in those organizations compared to organizations in the client-service industry, for instance.

The study is limited by the relatively small amount of data points and therefore, the generalizability of the study is limited. All data was collected from employees at the audit department of Deloitte Rotterdam, so the effects on the perception of organizational culture might differ in other organizations and/or countries. Furthermore, this limited amount of data points also leads to the data being not fully suitable for OLS regression, as in my third model. Expanding the dataset should lead to the data becoming increasingly more normally distributed. What is more, as the data were collected through survey questionnaires, the reliability of the data can also be questionable as errors in the answers of the respondents might exist. As can be seen in Table 2, the Cronbach alphas of the Job-oriented and Professional dimension are lower than the required level of 0.7, so the study is limited by the reliability of these two dimensions. Also, the relationship between the *COVID* variable and variables for the cultural dimensions might not be perfectly linear. This might lead to biased coefficients in the models. Another drawback of the model is the possible exclusion of relevant variables, which may also explain part of the variation (omitted variable bias). As it is infeasible to include all relevant variables, the coefficient of *COVID* might be biased. What is important to note as well is that it is beyond the scope of this study to invent ideas on how to change the organizational culture. This study solely aimed to isolate the effect of COVID-19 on organizational culture at the audit department of Deloitte Netherlands.

Regarding further research, I would firstly suggest further research to make use of (survey) data on organizational culture that was taken prior to the pandemic and compare that to data which is collected during post-pandemic times. More intuitive research can then be conducted on the effect of the pandemic on the perception of organizational culture. Furthermore, academics could conduct further research on how organizational culture can be effectively communicated to the employee that is working from home, as working from home is likely to (partly) stay (Gartner, 2020). Furthermore, this study tried to quantitatively measure organizational culture based on the six cultural dimensions

of Hofstede et al. (1990), but further research could be conducted on how to quantitatively assess an organizational culture.

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Appendix

Appendix A: Survey Questionnaire

<i>Baseline Characteristics</i>	
Q1	What is your age?
Q2	What is your gender?
Q3	How many months have you been working at the audit department at Deloitte?
Q4	What is your nationality?
Q5	What community do you belong to?

Q6		Please indicate to what extent you agree or disagree with the following statement. At Deloitte...						
Statement		Strongly Disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree
1	Very little attention is paid to the working environment							
2	There is little concern for personal problems of employees							
3	Newcomers are left to find their own way							
4	Managers keep the good people in their own teams							
5	Managers care only about the work you do							
Q7	Do you have any additional remarks regarding these statements?							

Q8	Please indicate to what extent you agree or disagree with the following statement. At Deloitte...
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Statement	Strongly Disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree
1	People's private life is their own business						
2	Job competence is the only criterion in hiring people						
3	The employees think three years ahead or more						
4	The employees are strongly aware of the competition						
5	You always get feedback from supervisors for your performance						
Q9	Do you have any additional remarks regarding these statements?						

Statement	Strongly Disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree
Q10	Please indicate to what extent you agree or disagree with the following statement. At Deloitte...						
1	The colleagues are closed and secretive						
2	New employees need more than a year to feel at home						
3	The employees are not open to new staff and jobseekers						
4	Only very special people fit into the organization						
5	Little efforts are put into making new						

	employees feel at home							
Q11	Do you have any additional remarks regarding these statements?							

Q12	Did you start at Deloitte during or prior to the pandemic?
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Appendix B: OLS assumptions figures

Assumption 3: Homoskedasticity

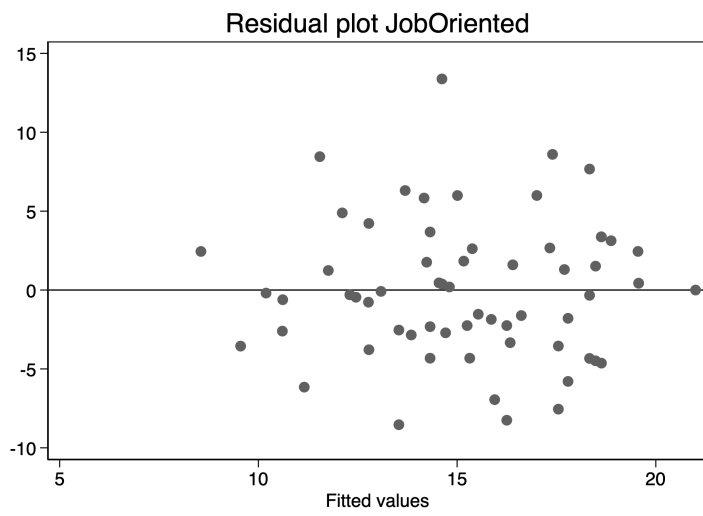


Figure 2 Residual plot of Job Oriented scores

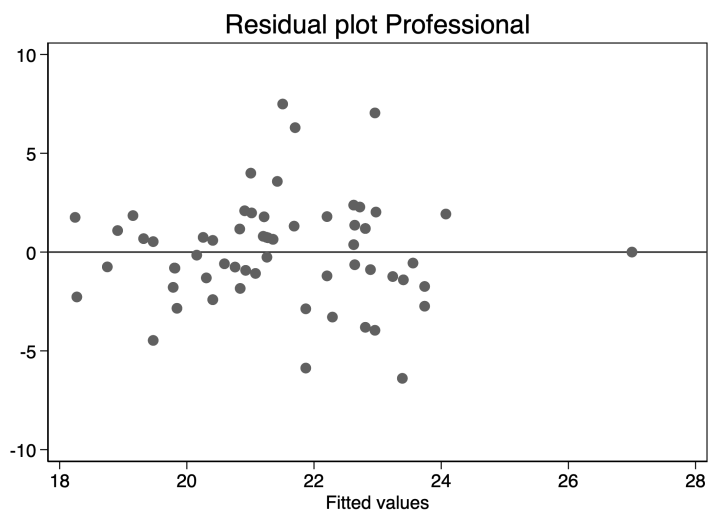


Figure 3 Residual plot of Professional scores

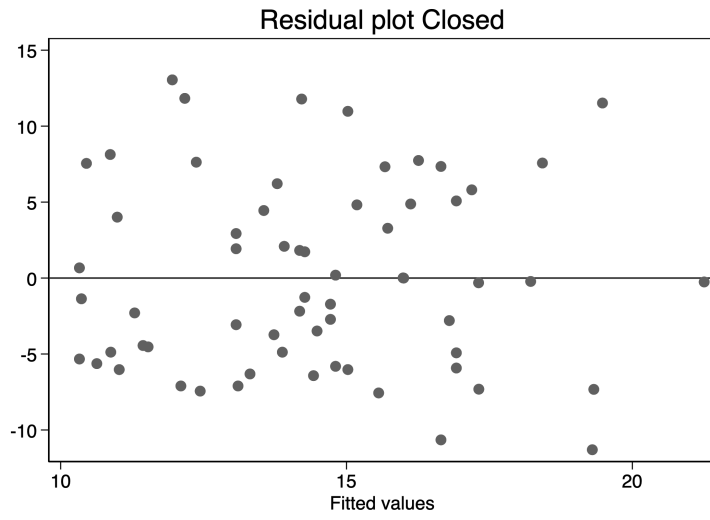


Figure 4 Residual plot of Closed scores

Assumption 4: Normality

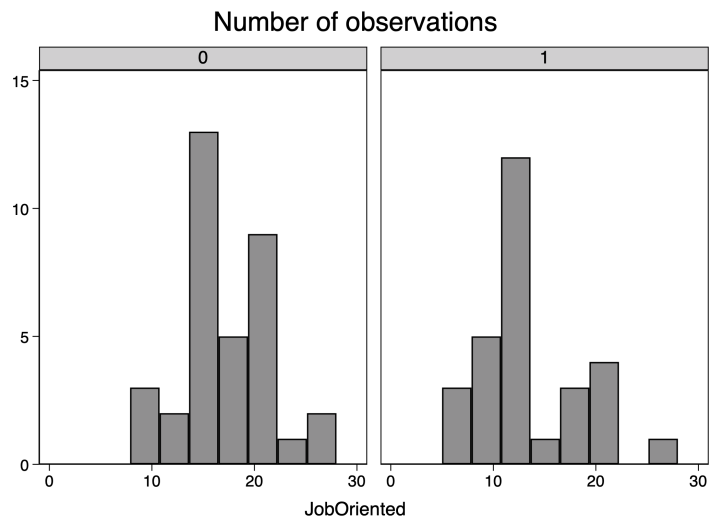


Figure 5 Distribution Job Oriented

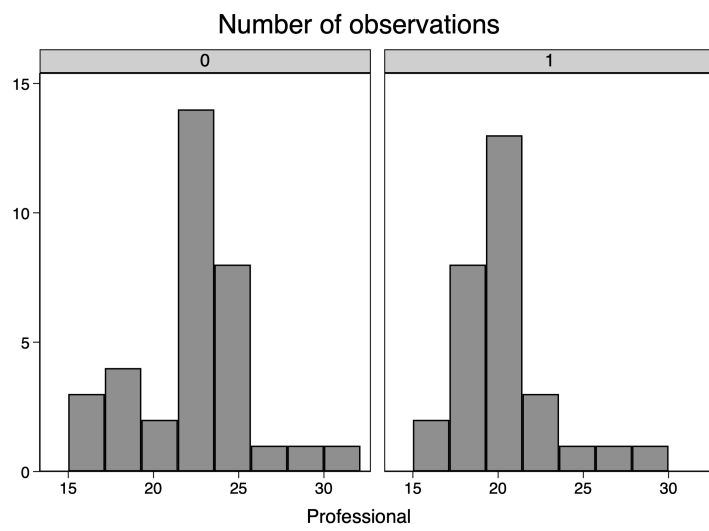


Figure 6 Distribution Professional

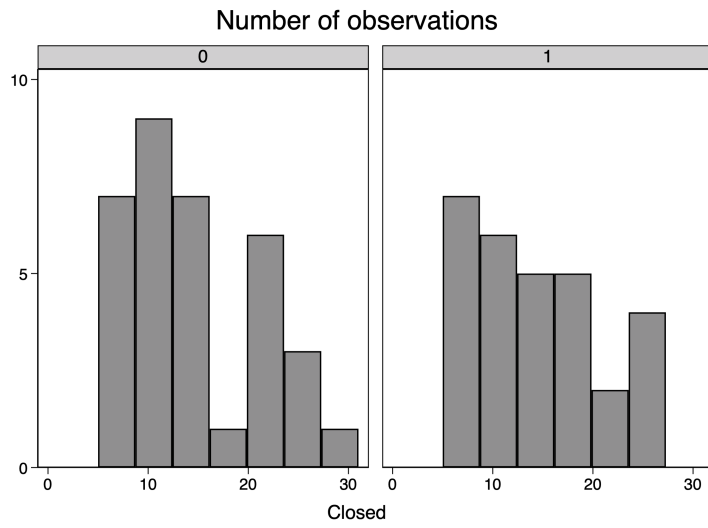


Figure 7 Distribution Closed