



MASTER THESIS

Leadership in times of COVID-19

What is required by leaders to effectively
manage employees in a virtual work context?

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Preface

In front of you lies the master thesis ‘Leadership in times of COVID-19’, that represents the final phase of my master’s degree in Business Administration at the University of Twente. To finalize this one-year master with a specialization in Human Resource Management, I have been researching the topic of virtual work and its effect on leadership (outcomes) in theory and practice from November 2020 till August 2021.

During the beginning of my master study around September 2020, I noticed very soon that the consequences of the global COVID-19 pandemic, in terms of lockdowns and social distancing measures, could cause additional challenges to successfully complete my final study year. I experienced that it required more self-discipline and perseverance than ever before, to pass high-demanding courses. In this light, I wondered how organizations in the business field were coping with similar issues, rising a good starting point for my master thesis project. I got in contact with organization X, who gave me the opportunity to investigate how leadership should be arranged in the virtual work context that has become our ‘new normal’ over the past year. Together with my external supervisor from organization X and my first supervisor from the University of Twente, we formulated an interesting research question that can help to guide organizations, and leaders in specific, to manage their employees in this relatively unknown situation.

While the COVID-19 pandemic has created the opportunity (and need) to explore the effectiveness of leadership in an increasingly virtual business environment as explained above, it has also complicated the process of writing this final project. In this regard, I am super thankful for the valuable support of my first supervisor: Anna Bos-Nehles. Her feedback has guided and motivated me during this challenging period. Moreover, I also want to thank my second supervisor: Maarten Renkema, for his valuable input during the final phase of writing this thesis. His feedback has helped me to develop my research even more.

Last but not least, I want to thank my external supervisor for the facilitation, and all the interviewees for their welcoming and positive attitude to participate in the study. Without one of you, I would not have been able to answer the research question. I hope that you perceive the outcomes of the study to be valuable and that it can help the leaders to effectively manage their employees in a virtual work environment, during and after the COVID-19 pandemic.

Britt Wiefferink

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Abstract

Organizations over the entire world have been forced by the COVID-19 pandemic to cease operations in the physical office in order to contain the spread of the COVID-19virus. Despite the increasing popularity and promising features of virtual work in terms of flexible work location and flexible work hours, many organizations had not yet implemented such work arrangement in practice, neither were they ready to do so when the pandemic started. Considering that virtual work can no longer be considered as a voluntary option but rather a compulsory requirement, it is critical to expand knowledge in the field of virtual work. Instead of focusing on whether virtual work must be implemented or not, organizations must now focus on how to get the most out of virtual work.

It is known from existing literature that leaders who develop transformational-based high-quality relationships with their subordinates, are practicing more effective leadership than leaders who develop transactional-based low-quality relationships with their subordinates. Accordingly, this research aims to provide tools for leaders in order to effectively manage their subordinates for the purpose of creating high-quality leader-member relationships (LMX) in the virtual work environment. This is investigated by performing a qualitative case study in which semi-structured interviews were conducted with three leaders and nine members.

The analysis shows that the physical distance between leaders and members in combination with a lack of face-to-face interaction, has the potential to reduce the frequency and the quality of the exchange between leaders and members in a virtual work environment. But more importantly, the findings suggest that leaders can play an important role in optimizing this leader-member exchange in a virtual work context by performing specific virtual leadership practices that can serve as ‘tools’ to effectively perform transactional- and transformational leadership practices, which in turn lead to high-quality exchanges. Therefore, this study concludes that leaders should indeed develop new virtual leadership practices to optimize the ‘virtual LMX’, for the purpose of effectively managing employees in the virtual work context.

With these insights, the study can be valuable for leaders to guide them in the leadership process during the COVID-19 pandemic, but also after that, considering that the virtual work environment will probably play a big role in the post-COVID world. In this regard, it is also important for HR departments to reconsider their HR practices in terms of training for leaders, to facilitate effective management of employees in the virtual work environment.

Keywords

Virtual Work, Leader-Member Exchange, Leadership, Virtual Leadership, COVID-19

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1. Introduction

1.1 Situation and complication

As a result of the global COVID-19 pandemic, the following government-mandated lockdowns and other social distancing measures to contain the spread of the COVID-19 virus, many organizations ceased operations in the regular workplace (Bick et al., 2020). In order to ensure organizational survival and continuity, the employees within these organizations have shifted from working at the office to working from home (Jamal et al., 2021), by means of virtual work. Virtual work is used to differentiate work environments where individuals are physically or temporally dispersed (Watson-Manheim et al., 2002), and connect with organizations by means of communication and collaboration technologies. Due to the ongoing technological progress and organizational changes, the occurrence of virtual work has already increased over the last years (Raghuram et al., 2001; Meyers, 2020), and so did the academic interest in the topic. Consequently, it is already known from existing literature that virtual work provides great advantages in terms of employees' flexibility and productivity, which in turn seem to improve work-related outcomes as job-satisfaction, organizational commitment and performance (Allen et al., 2015). Moreover, virtual work enables employers to access geographically dispersed talent, and it reduces (office) costs. However, the nature of virtual work also creates a distance between employees and their organizations – their supervisors, coworkers, subordinates, and the tangible elements of the organization as a whole (Raghuram et al., 2001). Hence, the shift to online work environments can increase employees' feelings of loneliness and social exclusion (Carnevale & Hatak, 2020). In addition, virtual work could cause an inability to switch off entirely from work, resulting in over-work and ultimately poor well-being of employees, including stress and burnout (Grant et al., 2013).

Considering the recent emergence of COVID-19, it is more important than ever to overcome the challenges of virtual work and to leverage its benefits. Though, it must be taken into account that former research about virtual work, remote work, telework, and other variants, have taken place in a context where flexible work arrangements are offered on a voluntarily and temporarily basis, often by the choice of preference of either the employee or the employer. And now that virtual work is suddenly no longer a discretionary option but rather a compulsory requirement or a mandatory order, most employees and their organizations are not prepared to effectively make use of this practice (Wang et al., 2020). During the former situation, employees were able meet with organizational actors on occasion, but now regular face-to-face meetings are reduced to a minimum. As a result, the practicality of working virtually involuntarily and for a continued period has created a particularly challenging environment for Human Resource Management (HRM), with managers striving to adapt to and to cope with the new way of interaction between members of the organization (Carnavale & Hatak, 2020). Based on former research by Gajendran and Harrison (2007), it can be argued that the altered frequency, quality, and modality of interaction in the virtual work environment, has the potential to degrade the quality of the manager-subordinate relationship. Particularly, because face-to-face communication is considered the medium with the highest social presence and information richness.

The manager-subordinate relationship is also known as 'Leader-Member Exchange' (LMX). According to Graen and Uhl-Bien (1995), the idea is that effective leadership processes occur when leaders and followers are able to develop mature leadership relationships

(partnerships) and thus gain access to the many benefits these relationships bring. More specifically, existing literature found that high-quality LMX relationships correlate with desirable outcomes such as increased productivity, motivation, job satisfaction, and wellbeing on the part of the subordinate (e.g. Graen et al., 1982; Van Breukelen et al., 2006; Gerstner & Day, 1997; Graen & Uhl-Bien, 1995; Hooper & Martin, 2008). Especially with the sudden transition into virtual work environments that make employees experience heightened levels of work autonomy and thereby self-responsibility (Carnavale & Hatak, 2020), the outcomes of high-quality relationships are assumed to be very valuable for organizations. Nevertheless, it must be taken into account that the new work context required by COVID-19 has complicated leaders to maintain and build strong relationships. Mainly due to a lack of face-to-face interaction between leaders and their subordinates, in combination with a lack of control over the work settings as employees are no longer co-located within the physical organization (Nielsen et al., 2017). Accordingly, the transactional and transformational leadership techniques that used to support the creation of high-quality relationships between leaders and members in a traditional work context, might not be as effective in a virtual work context. Therefore, this study takes a situational approach by investigating how the shift from the traditional work context to the virtual work context influences the leadership practices of leaders for the purpose of managing the leader-member relationship.

1.2 Research question

Since the COVID-19 crises will continue to impact organizations in the next few years, it is crucial to understand what effective leadership practices are to optimize the LMX between leaders and members in a virtual work context, despite the fact that these actors are now physically dispersed. Accordingly, the research goal is to assess how, and in what way, existing leadership practices are applicable to build and maintain relationships between leaders and members under the exceptional demands of virtual work. This leads to the following research question:

What leadership practices can be used to effectively manage the relationship between leaders and members in a virtual work context?

1.3 Contributions

By answering the research question, this study offers several contributions to theory and practice. First of all, it adds to prior research about virtual work, telework and remote work by shifting the research focus from whether or not virtual work should be implemented, to understanding how to get the most out of virtual work (Wang et al., 2020). Second, this study adds to existing theories within the HRM domain. While much prior HRM research is applicable to solve pandemic-related distance challenges, Caligiuri and colleagues (2020) rightfully argue that the pandemic has also highlighted some research gaps. They suggest that future research could advance how leadership styles and behaviors might need to vary during situations of high uncertainty, of which the current COVID-19 crises is a great example. Therefore, this research contributes to existing literature by building on well-established leadership theories in combination with practical insights from the relatively new virtual work environment. Finally, this research adds to LMX theory. While the LMX concept is quite

historical and already widely researched in the traditional work context, this study can offer a new perspective by addressing a form of ‘virtual LMX.’

Besides these theoretical contributions, this study also provides multiple practical contributions. Generally, it offers the opportunity for organizations to explore the functionality of virtual work arrangements for the future, taking into account that virtual work will quite possibly become the ‘new normal’ of the post-COVID world (Caligiuri et al., 2020). Furthermore, implications can be made for HR departments, considering that HR practices as flexibility and job design will probably become more important in the virtual work context, as well as selection, training and employee support practices which will require some adaptations in the virtual work context. But, most importantly, the implications of this research will be helpful for leaders who experience difficulty with leadership in the virtual work context, by offering them the tools to guide them during such virtual leadership.

1.4 Reading guide

The remainder of this paper is structured as follows: existing theories about leadership, LMX, virtual work and virtual leadership will be discussed in chapter two, the ‘theoretical framework’. Next, chapter three will elaborate on the qualitative research method that has been used to retrieve data, where after the findings from these data will be presented in chapter four and discussed in chapter five. Finally, the conclusions from the study, including the answer to the research question, will be provided in chapter six.

2. Theoretical Framework

This chapter introduces several concepts from existing leadership literature (2.1), after which it elaborates specifically on the Leader-Member Exchange (LMX) theory (2.2) and how this relates to transactional and transformational leadership practices (2.3). Subsequently, the virtual work context is discussed (2.4), and how its implications can be reduced by means of virtual leadership (2.5). Finally, all components will be integrated by building a conceptual model that addresses the expectation of effective leadership in a virtual work context (2.6).

2.1 Leadership

After several decades of leadership research and thousands of studies, it is concluded that ‘‘there are almost as many definitions of leadership as there are persons who have attempted to define the concept’’ (Yukl, 1989; Stogdill, 1974, p.259). It can be argued that the concept has been, and still is, very popular due to the fact that effective leadership strongly contributes to the success of organizations. In its essence, leadership refers to the process of influencing individuals (or groups) to achieve goals (Hoyt & Blascovich, 2003). But what is the best approach to influence individuals or groups in order to achieve goals? In other words, what constitutes effective leadership?

To answer this question, many researchers have investigated the antecedents (e.g. individual traits, leader behavior) and consequences (e.g. organizational performance) of good leadership, but from different perspectives. The most popular perspective, and maybe the most obvious, is to assess leadership from **the leader perspective**. This type of research is mainly focused on the traits and behaviors that make leaders effective or ineffective in different situations (Graen & Uhl-Bien, 1995). Firstly, the trait approach aims to identify general traits which, if adopted, would enhance leadership potential and performance (Van Seters & Field, 1990). Examples of these traits according to Kirkpatrick and Locke (1991) are drive (a broad term which includes achievement, motivation, ambition, energy, tenacity, and initiative); leadership motivation (the desire to lead but not to seek power as an end in itself); honesty and integrity; self-confidence (which is associated with emotional stability); cognitive ability; and knowledge of the business. Secondly, the behavior research approach emphasizes what leaders and managers actually do on the job, and the relationship of behavior to managerial effectiveness (Yukl, 1989). Examples hereof are planning and coordinating, communicating information, obtaining/ allocating/ maintaining material resources, obtaining and allocating personnel resources, motivating personnel resources (Fleishman et al., 1991).

But leadership can also be addressed by **the follower perspective** and **the relationship perspective** (between the leader and the follower). A model that captures this perspective very well is the Leader-Member Exchange (LMX) model. The LMX model describes how effective leadership relationships develop between dyadic ‘partners’ in organizations (Graen & Uhl-Bien, 1995). The relationships are characterized by the physical or mental effort, material resources, information, and/ or emotional support exchanged between the two parties (leader and follower) (Liden et al., 1997). As an example, in exchange for positional resources (e.g. privileged information, challenging projects), the member/ follower commits himself/herself to higher degrees of involvement in the unit’s functioning, including greater time and energy expenditures than required by the formal contract, acceptance of greater responsibility, and a vested interest in the success of unit functioning (Graen, et al., 1982).

Finally, there are also studies that combine the leader-, follower-, and relationship perspective, for example by using the so-called situational approach (e.g. Graen & Uhl-Bien, 1995). The situational approach emphasizes the importance of contextual factors such as the nature of the external environment (Yukl, 1989). According to Van Seters and Field (1990), situational aspects then determine the kinds of leader traits, skills, influence and behaviors that are likely to cause effective leadership. In this research, we will take a situational approach by assessing how the virtual work context affects the relationship between the leader and the follower. In other words, what leadership practices are effective in a virtual work context to optimize the relationship between leaders and followers?

2.2 Leader Member Exchange (LMX)

The Leader Member Exchange (LMX) theory finds its roots in the Vertical Dyad Linkage (VDL) theory by Dansereau, Graen and Haga (1975). Traditionally, it was thought that leaders performed an ‘average leadership style’ for each subordinate in a work unit. However, research has shown that only about 10% of the time leaders do actually form the same type of relationship with all subordinates (Liden et al., 1997). This can be explained by the limited time and social resources of leaders that only allow managerial units to contain a few higher-quality exchange relationships (Graen & Uhl-Bien, 1995). By a longitudinal investigation of leadership behavior, Dansereau and colleagues (1975) discovered significant variation in follower response to questions about their leaders (Graen & Uhl-Bien, 1995). As a result, the VDL theory started to highlight that each of the vertical dyadic relationships contained within a work unit are radically different (Dansereau, Graen & Haga, 1975). In other words, the VDL theory assumes that leaders develop differentiated relationships with each follower. This has resulted in a classification of high- and low LMX relationships: high LMX relationships, originally labeled in-group exchanges, are thought to include the exchange of material and non-material goods that extend beyond what is specified in formal job descriptions (Liden et al., 1997; Dansereau et al., 1975; Liden & Graen, 1980). And low LMX relationships, originally labeled out-group exchanges, are defined as those that are limited to the exchanges that take place according to the employment contract (Liden et al., 1997; Dansereau et al., 1975).

The concept of the LMX theory is that high LMX leadership relationships gain access to many benefits (Graen & Uhl-Bien, 1995). It is suggested that the in-groups engage in behaviors that benefits the manager directly, and that the manager would feel obligated to provide these followers with rewards and privileges, based on the social exchange theory (Yu & Liang, 2004; Gouldner, 1960). As an example, the follower commits himself/herself to higher degrees of involvement in the unit’s functioning, including greater time and energy expenditures than required by the formal contract, acceptance of greater responsibility, and a vested interest in the success of unit functioning, in exchange for positional resources (Graen, et al., 1982). More specifically, these positional resources can be summarized into five categories: (1) privileged information, (2) influence in decision-making, (3) attractive and challenging tasks, (4) greater latitude and (5) support of superiors (Graen & Scandura, 1987). In exchange for these benefits, in-group members are found to reciprocate with higher levels of productivity, motivation and satisfaction (Graen et al., 1982; Van Breukelen et al., 2006), as well as higher wellbeing (Hooper & Martin, 2008). Moreover, the leaders of these followers experience an increase in status, esteem, loyalty, and potentially influence (Basu & Green,

1997), on top of increased leader satisfaction and higher well-being (Hooper & Martin, 2008; Van Breukelen et al., 2006). As a result of these benefits, it has been claimed by existing literature that there is a positive relationship between a high-quality LMX and the performance of leaders, followers, and the organization (Yu & Liang, 2004; Graen & Uhl-Bien, 1995).

It is for this reason that Graen and Uhl-Bien (1995) argue that leaders should provide all followers access to the process of LMX by making the initial offer to develop LMX partnerships: *“The potential for more high-quality relationship development would then increase the potential for more effective leadership and expanded organizational capability.”* (p.229) However, despite the efforts of leaders to offer all followers the opportunity to develop a high LMX relationship, some of them may not progress beyond the stranger phase. In that case, it is argued that the limited exchanges between leaders and followers that lead to low LMX relationships, are analogous to transactional leadership practices. But when dyads progress beyond the acquaintance phase to form partnership relationships, the leadership practices evolve to be analogous to transformational leadership practices (Graen & Uhl-Bien, 1995). In other words: the exchange relationships between leaders and followers are assumed to fall on a continuum from low-quality transactional-based relationships to more encompassing high-quality transformational-based relationships (Kuvaas et al., 2012).

2.3 Transactional and transformational leadership practices

According to Bass (1985), the transactional leadership process is focused on the exchange in which followers' needs are met (payment), if their performance measures up to their explicit or implicit contracts with the leader. The transactional focus makes that leaders motivate followers by appealing to their self-interest in terms of contingent reinforcement practices. In other words, 'the transaction' is crucial for followers to agree, accept, or comply with the leader (Bass et al., 2003). As transactional leaders define and communicate the work that must be done by followers, how it will be done, and the rewards followers will receive for successfully completing the stated objectives, employees are motivated and directed to achieve 'expected' standards of performance (Avolio et al., 1991). Accordingly, effective transactional leadership is involved with goal setting, clarification of desired outcomes, provision of feedback and rewards and recognition for accomplishments (Hoyt & Blascovich, 2003). Furthermore, it is argued that transactional leadership is reactive through management by exception, which comprises intervention only when deviations occur.

Burns theory of transforming leadership (1978) differentiated with transactional leadership in that transformational leaders are able to change followers' goals and beliefs for the achievement of higher levels of performance (Kuhnert & Lewis, 1987). In order to do so, Bass (1985) elaborated that transformational leaders make followers more aware of the importance and values of task outcomes, by activating their higher-order needs, and by inducing them to transcend self-interest for the sake of the organization (Yukl, 1989). Accordingly, effective transformational leadership includes proactively articulating goals, building an image, demonstrating confidence, and arousing motivation in the interest of the organization (Kuhnert & Lewis, 1987). In comparison with transactional leadership, this leadership style is much more proactive than reactive. By responding to individual followers' needs by empowering them and by aligning the objectives and goals of the individual followers, the leader, the group, and the larger organization, transformational leadership can move followers to exceed expected

performance, lead to higher levels of follower satisfaction and commitment to the organization (Bass & Riggio, 2006; Bass, 1985). Typically, transformational leaders perform one or more of the following behaviors to achieve superior results: (1) idealized influence (serving as role models for followers), (2) inspirational motivation (motivating and inspiring followers by providing meaningful and challenging work), (3) intellectual stimulation (stimulating followers to be innovative and creative), and (4) individualized consideration (paying special attention to each individual follower) (Bass & Riggio, 2006).

2.4 Virtual work

The increasing dominance of digital technologies has led to the current period being characterized as the ‘digital age’ (Parry & Strohmeier, 2014). New information and communication technologies interconnect people and organizations, forming virtual, as opposed to physical, workplaces (Hoyt & Blascovich, 2003). More practically, this enables new options in organizational structure and design (Watson-Manheim et al. 2002), offering the opportunity to move the work to workers rather than move workers to the work (Allen et al., 2015). Existing literature has used different concepts to address this new relatively new work mode: i.e. telework, remote work, distributed work, flexible work, e-work and so on. Although they are all involved with decentralized work arrangements, they differ in the amount of interaction as well as the nature of interaction between organizational actors.

According to Allen et al. (2015), the lack of a commonly accepted definition and conceptualization has significantly hindered our understanding of this work mode, since the results are often not comparable across studies. Therefore, in this research we will define virtual work as *physically or temporally dispersed work arrangements characterized by technology-enhanced communication and a dearth of face-to-face interaction* (Watson-Manheim et al., 2002; Allen et al., 2015). Consequently, the virtual work environment differentiates from the traditional work environment on numerous dimensions: (1) the location of workers, (2) where and how work is accomplished, and (3) the basis for relationships between workers and organizations (Watson-Manheim, 2002). These differences offer organizations several benefits but also drawbacks, that will be discussed in the remainder of this section.

As virtual work permits flexibility in the where of tasks, employers can reduce the amount of office space and therewith reduce real estate expenses (Gajendran & Harrison, 2007). Moreover, the flexibility to work from home also alleviates employees’ commuting time, thus leaving more time for e.g. leisure activities and household chores, which could be related to an improved work-life balance and higher levels of job satisfaction (Grant et al., 2013; Wheatly, 2012). Furthermore, research suggested that virtual work improves employees’ productivity, as well as it reduces their turnover intentions (Grant et al., 2013; Lewis & Cooper, 2005, Twentyman, 2010).

By way of contrast, evidence also suggest negative consequences related to virtual work arrangements. Most importantly, virtual work creates a distance between employees and their organizations – their supervisors, coworkers, subordinates, and the tangible elements of the organization as a whole (Raghuram et al., 2001). Hence, working virtually may lead to detrimental social consequences in the workplace, increasing employees’ feelings of loneliness and social exclusion (Gajendran & Harrison, 2007; Carnevale & Hatak, 2020). The reduction in face-to-face interactions, the lower frequency and richness of communication has

the potential to weaken the interpersonal relationships that virtual workers have with their supervisors (Gajendran & Harrison, 2007; Daft & Lengel, 1986; Golden, 2006, Nardi & Whittaker, 2002). Furthermore, the overlap between the work and home environments is blurring the lines between work and family spheres, leading to greater difficulties in ‘unplugging’ from work demands (Carnevale & Hatak, 2020). In turn, this could result in over-work and ultimately poor well-being of employees, including stress and burnout (Grant et al., 2013).

As summarized by Gajendran and Harrison (2007), this leads to a paradox in which outcomes in work domains (e.g. increased productivity, job satisfaction, work-life balance and reduced turnover intentions), come at the expense of outcomes in the relationship or social domain (e.g. social isolation, work-family conflict). This paradox has now become more visible than ever before as a result of the COVID-19 pandemic. Governments have imposed lockdowns, stay-at-home policies, and social distancing on their citizens, forcing many organizations and their employees to move from a traditional work context to a virtual work context overnight. Because this transition has been involuntary, continues over a lengthy period, and requires entire households to be house-bound (Caligiuri et al., 2020), the chances are even higher that the coin will flip to the wrong side of the paradox.

2.5 Virtual leadership

As mentioned before, effective leadership has the ability to influence individuals’ process to achieve goals (Hoyt & Blascovich, 2003). Accordingly, effective virtual leadership can help employees to find a balance in the paradox: optimizing positive outcomes in the work domains and the relational or social domains.

It is generally known that leading employees in virtual workplaces clearly differs from leading conventional employees (Parry & Strohmeier, 2014). As found by former research, core leadership tasks like direct and informal contact and face-to-face communication about work-related tasks, including facial expressions and body language, were nearly impossible (Kirchner et al, 2021). On top of that, many managers are now leading virtually for the first time, exacerbating challenges of collaborating and leading from a distance (Caligiuri et al., 2020).

Notwithstanding that digital technologies have become essential for economic and social functioning of organizations during the COVID-19 pandemic (Verma & Gustafsson, 2020), technology alone isn’t enough. According to Penny Pullan (2016), technology is only the foundation of virtual work, but new capabilities are needed to work together effectively when organizational actors are physically dispersed, in addition to existing leadership skills. This is what she calls virtual leadership: *‘It is about developing the sort of facilitative leadership that can connect, collaborate with and motivate others in ways that command-and-control cannot. It is about respecting others who are different from yourself, building trust, being fair to those who are far away, caring for people and showing empathy, while showing confidence in yourself and your team and commitment to your tasks.’* (Pullan, 2016, p.58). Because Pullan’s research has mainly focused on how leaders can get the best out of virtual work in terms of employees’ performance, leaders might have to perform additional or maybe even different leadership practices for the purpose of optimizing the virtual leader-member exchange relationship.

As argued by Shin et al. (2000), leaders who are unwilling to change their management and control styles would likely see deterioration in the depth and vitality of their connection with subordinates in the virtual work environment. Especially, because strong, positive and deep ties are easier to develop and maintain when working in physical proximity of dyadic partners (Monge et al., 1985). In this regard, it is important that leaders optimize the feeling of physical proximity with their followers. In order to do so, it is suggested by O’Leary, Wilson and Metiu (2014), that leaders should facilitate frequent communication and share personal information with remote colleagues, to help identify personal similarities and to develop stronger relationships (Caligiuri et al., 2020). In turn, this could improve the perceived proximity of employees in which they feel close to geographically distant colleagues (Wilson et al., 2008).

2.6 Conceptual model

As described in section 2.1, this research uses a situational approach to leadership by assessing how the virtual work context affects the relationship between leaders and members, in order to gain insight in the optimization of leadership practices in this relatively new work context.

To start with, it was learned from existing literature that in the traditional work context, LMX starts with transactional leadership and has the potential to evolve into transformational leadership. The dyadic exchange process begins with more limited material exchange (compensation for fulfillment of the employment contract), but for those who are able to generate the most effective LMX relationship that is focused on additional social exchange of psychological benefits or favors (e.g. approval, trust, esteem, support, consideration), the type of leadership that results is transformational (Graen & Uhl-Bien, 1995). This is illustrated by arrow A and B in figure 1. Furthermore, existing research discussed in this chapter has addressed that employees involved in high quality relationships experience higher levels of productivity, motivation, job satisfaction and wellbeing (e.g. Graen et al., 1982; Van Breukelen et al., 2006; Gerstner & Day, 1997; Graen & Uhl-Bien, 1995; Hooper & Martin, 2008), which is represented by arrow C in figure 1. Accordingly, LMX can be regarded as a moderator of the desired employee behaviors mentioned above.

In section 2.4 it was described which difficulties are encountered by employees as a result of the COVID-19 virus, that has suddenly pushed employees to move from a traditional work context to a virtual work context. Especially the reduction in (face-to-face) interaction and increased conflict in work-life balance can lead to poor performance and wellbeing of employees. Therefore, it is assumed that managing high quality relationships is particularly important – but also very difficult – during the current COVID-19 pandemic, notably because of the benefits that are involved with high LMX relationships.

However, it became apparent from the literature that traditional leadership techniques (transactional/ transformational) are not as effective in the virtual work context for the purpose of achieving high LMX relationships. Working and managing at a distance through virtual communication and collaboration has made it hard to maintain (and even more so to build) strong social ties and networks (Caligiuri et al., 2020; Hansen & Lovas, 2004). This means that leaders who are unwilling to change their management styles would likely see deterioration in the depth and vitality of their connection with subordinates in the virtual work environment (Shin et al., 2000). This indicates a need for additional leadership practices to guide the exchange between leaders and followers in a virtual work context.

Pullan (2016) has suggested a form of virtual leadership, which specifically focuses on facilitating connection, collaboration, and motivation, based on respect, trust, empathy, confidence, commitment, and understanding. Moreover, it is suggested that virtual leaders should put a great focus on communication to reduce the psychological distance between organizational actors (Wilson et al., 2008). So, based on the theory that has been discussed in this chapter, it is assumed that leaders will have to perform virtual leadership practices on top of transactional and transformational leadership practices to achieve low- or high-quality relationships in a virtual work context. This is illustrated by arrow X in figure 1.

To make a long story short, this research will examine what specific virtual leadership practices in combination with transactional and transformational leadership practices facilitate the LMX relationships in a virtual work context (arrow X) to answer the research question. While the dotted line (arrow C) in figure 1 represent an established theory with regards to LMX in a traditional work context, the assessment of the relationship between LMX and in-group benefits as productivity, motivation, satisfaction and well-being in a virtual work context is out of the scope of the study. This research mainly seeks to examine the solid lines (A, B, and X) for the purpose of creating new insights in leadership in a virtual work context.

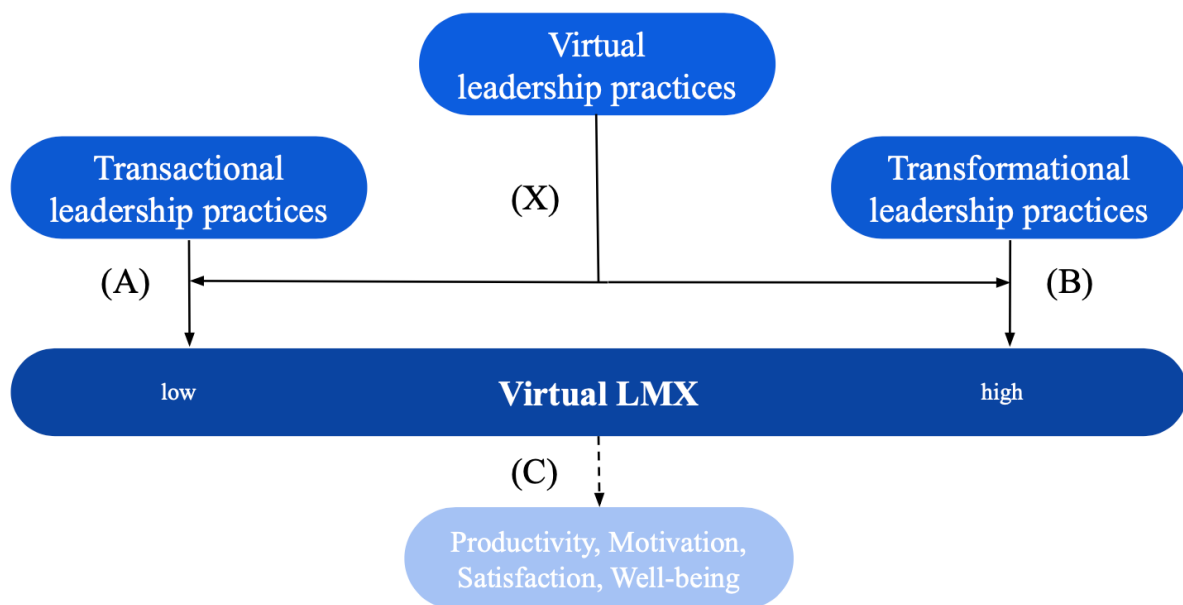


Figure 1. Conceptual model

3. Methodology

The goal of this research was to advance knowledge on leadership practices and LMX in the virtual work context. Therefore, this research has followed a qualitative research method, which is known to support new discoveries within the realm of existing theories (Stentz, Clark & Matkin, 2012). Moreover, a qualitative research method is known to be a useful means to understand what is important for people (Silverman, 2020), and was therefore applied with the purpose of identifying employees' perceptions about effective leadership practices in a virtual work context.

3.1 Exploratory case study with embedded units

More specifically, the qualitative research has been performed by means of an exploratory case study approach with embedded units. This means that in order to explore the situation in which the virtual work environment has no clear, single set of outcomes (Baxter & Jack, 2008; Yin, 2003), an intensive study of one single organization has been performed for the purpose of understanding a larger class of organizations (Gerring, 2004). The fact that the case study included embedded units means that it was chosen to collect data within one organization, but from several units of analysis (Yazan, 2015). This was regarded to be valuable, considering that the overall virtual work context for each unit would be equal and differences in perceptions about virtual LMX would be deductible to leader- or member specific behavior. For a visual explanation of the embedded, single case study, see appendix X.

Regarding the qualitative nature of the study, the relevance to the research topic has determined the way in which the case was selected (Khan, 2014). It was decided to use convenience sampling, which is a type of nonrandom sampling that proceeds by way of identifying convenient cases from the target population that meet practical criteria such as easy accessibility and willingness to participate (Robinson, 2014; Etikan, Musa & Alkassim, 2016). The target population in this research are organizations who have recently transitioned from working in a traditional work context where employees are located within the physical boundaries of the organization, to a virtual work context where employees are located outside the physical boundaries of the organizations and mainly work from home. To minimize the lack of generalizability that is often involved with convenience samples, it was ensured that the chosen organization had a perfect fit with the research subject.

To answer the research question of this study, the qualitative exploratory case study has been performed at an international logistics service provider on transport of dry and liquid bulk goods for producers and suppliers in the chemical and animal feed industry. The HR manager argued that the organization is experiencing challenges with managing their employees now that they are working from home and mainly connect with the organization by communication and collaboration technologies. The company has multiple branches in the Netherlands, Belgium, Germany, Poland and Hungary, but this research has been limited to their headquarter that is located in the Netherlands. This is for the reason that the focus of the research was on addressing new intra-firm distancing challenges imposed upon previously co-located employees (Caligiuri, 2020), meaning that the effect on previously non-co-located employees was out of scope.

The units of analysis were employees from three different functional teams within the headquarter of the organization. Considering that the LMX theory is based on dyadic relationships, both leaders and members of the functional teams were included to provide a multi-actor understanding of leadership in a virtual work context. The members were purposively selected because certain categories of individuals may have had unique, different or important perspectives on the research topic, and therefore their presence in the sample was ensured (Robinson, 2014). More specifically, it was ensured that employees with different values of gender, age, and tenure were included in the sample, to serve as a base of comparison.

3.2 Data collection

Interviews are among the most familiar strategies for collecting qualitative data (DiCicco-Bloom & Crabtree, 2006). Because it was aimed to delve deeply into the practices, beliefs and opinions of (a) virtual work, (b) virtual relationships and (c) virtual leadership, and to thoroughly understand the answers provided by the interviewees (Harrell & Bradley, 2009), semi-structured interviews have been conducted. Following this approach, a set of predetermined open-ended questions helped to define the above-mentioned areas to be explored, but also allowed the interviewer to diverge in order to pursue an idea or response in more detail (Gill, Stewart, Treasure & Chadwick, 2008).

More specifically, the study involved three different semi-structured interviews, with each serving a different purpose. Firstly, a background interview was conducted with the HR manager of the organization, to gather background information about the organization, as well as the COVID-19 measures and resulting virtual work policies that have been effectuated (Appendix A). Secondly, interviews were conducted with the three leaders of the functional teams to explore their experiences and perceptions about leadership in a virtual work context (Appendix B). And finally, interviews were conducted with three members of each functional team to gain insight in their perspective on leadership effectiveness in a virtual work context (Appendix C). This means that a total of 13 interviews (one background interview, three leader interviews, nine member interviews) were conducted as input to answer the research question. As the organization and interview participants preferred to stay anonymous, pseudonyms have been created. An overview of these pseudonyms with their individual characteristics (department, gender, age, tenure) can be found in Appendix D.

3.3 Data analysis

Qualitative data analysis usually relies on inductive reasoning processes by using data to generate ideas (Thorne, 2000). Also, in this research an inductive approach has been used, but it was combined with a deductive approach. This is for the reason that the limited literature available on virtual leadership was used to shape the research and give direction, while it was also aimed to generate new knowledge on the concept. In order to do so, the following steps have been taken in the data analysis process.

Firstly, after the interviews were conducted, transcriptions were created to transform the audiotaped data into text by using the program Amberscript. After the transcriptions were refined by the researcher to match the original data as close as possible, this resulted in a total of 145 pages of data to be analyzed. The transcripts have been sent to the interviewees for verification.

Secondly, thematic analysis (TA) was applied in order to identify, organize and gain insight into the collective or shared meanings and experiences (Braun & Clarke, 2012) about the three central topics of this study: (1) Virtual work; (2) Virtual relationships; and (3) Virtual leadership. This step in the analysis has been critical to gain an initial understanding of what is common to the way virtual work and virtual leadership is talked about, and making sense of those commonalities (Braun & Clarke, 2012).

Thirdly, derived from the idea that existing theory on virtual leadership would benefit from further description, directed qualitative content analysis was applied for further subjective interpretation of the content of the text data by means of open coding (Hsieh & Shannon, 2005). More practically, this means that key concepts from existing (virtual) leadership literature and LMX literature were identified as initial coding categories (deductive approach) while data that could not be coded were identified and analyzed later on, allowing codes and categories to flow from the data during the analysis (inductive approach) (Hsieh & Shannon, 2005).

Finally, axial coding was applied whereby the codes and categories were put back together in new ways after the open coding, by making connections between categories (Strauss & Corbin, 1990) to identify relationships for the purpose of further refining, extending, and enriching the theory on leadership in the virtual work context (Hsieh & Shannon, 2005; Weber, 1990). The resulting coding scheme can be found in table 1.

Besides an overall analysis of virtual work, virtual LMX, and virtual leadership within the case, the single case study with embedded units offered the powerful opportunity to analyze the data across the subunits separately (Baxter & Jack, 2008). In other words, a cross-case analysis was performed with the subunits of analysis, in addition to an overall analysis of the case. This facilitated the comparison of commonalities and differences across the subunits to come up with conditional generalizations (Khan & Van Wynsberghe, 2008).

Table 1. Coding scheme

Theme	Category	Codes
<i>A. Experiences</i>	Positive experiences	<u>Personal</u> Family time More sleep Flexibility More energy No commuting time Spare time Sport <u>Work</u> Concentration Efficiency Less disturbance Flexibility Productivity Short meetings Personal development Hybrid policy
	Negative experiences	Control Exhausting Extra costs remote workplace

		Guilt Having a hard time working from home Irritation slow interaction Insecurity Loss of connection Loss of information Misunderstanding Motivation declining Over-work Postponing tasks Planning Reduced contact Rough start Smaller circle Slow interaction Technical challenges Time-consuming Turn-over
<i>B. Differences Traditional VS Virtual Work Environment</i>	Location	Flexible work location Roster Working from home Workplace
	Contact	Informal contact virtually Meeting structurally More digital Planning Provision of information Reduced contact Short meetings Smaller circle Time-consuming Virtual tools
	Other	Loss of connection Loss of information Presence Turnover
<i>C. LMX</i>	Differentiated relationships	<u>Factors of differentiation</u> Age Background Dual effort Frequency of contact Function Interests Personality Relationship offering Seniority <u>Relationships characterized as</u> Equal Differentiated Friendly Personal Professional Good

	In-group benefits	Attractive and challenging tasks Developing the relationship Setting boundaries Support of superiors Privileged information Honesty: being able to say/share more Mutual reciprocation Sharing tasks
	In-group reciprocation	Motivation Productivity Performance Satisfaction Work-pleasure Well-being
	LMX in virtual work environment	Non-affected LMX Detoriated LMX Improved LMX
<i>D. Leadership</i>	Leadership traditional work environment	Autonomy Collaboration Communication Decision-making Humor Involvement Learning by doing Responsibility Support
	Leadership virtual work environment	<u>Transactional</u> Feedback Reactive/ management by exception Rewards Self-interest <u>Transformational</u> Confidence Motivation in organizational interest Value of outcomes Higher order needs Proactive leadership <u>Virtual</u> Caring Communication Empathy Facilitation Fairness Individual contact Personal attention Traditional managerial skills Technical skills Trust
<i>X. Company characteristics</i>		<u>Family Company</u> Joint lunch

		Loyalty Honesty Team bbq Friday afternoon drinks Birthday celebration Get well soon flowers Personal relationships <u>Traditional</u> No experience virtual work Working from 9 to 5 Working at the office Limited opportunity part-time Traditional leaders Traditional management <u>Other</u> 24/7 service
<i>Y. Respondents Characteristics</i>		Age Education Function Tenure Work experience

4. Findings

This chapter will start with presenting the positive and negative experiences from working in a virtual work context (4.1). Next, a closer look will be taken at the effects of virtual work on the relationship between a leader and its members, in other words: LMX (4.2). Subsequently, the findings about virtual leadership practices will become apparent (4.3). And finally, the cross-case analysis will be presented (4.4).

4.1 Experiences virtual work

As a result of the traditional nature of the organization at which the study is conducted, many of the respondents were exposed to virtual work practices for the first time during the COVID-19 pandemic. While some experience this situation to be a pleasure, others experience it to be a burden, because of several different reasons which will be highlighted in this section.

4.1.1 Positive experiences

A big learning from the COVID-19 pandemic is that working from home in a virtual work context is indeed possible. Even though not all respondents are enthusiastic to incorporate this new way of working as a standard in the future, every respondent has experienced something positive while working from home.

4.1.1.1 Personal positive experiences

A. Flexibility

When employees work virtually, they have the opportunity to fill in the working day by themselves. More specifically, employees can plan coffee- and lunch breaks at times that differ from those at the office, or even decide to take longer breaks and make up for those hours by starting an hour early or continue working for an hour longer. In consequence, respondents indicated that new rituals came up during the pandemic. While some took a walk to recharge for the rest of the working day, others went out for a coffee with a family member or a friend to maintain personal relationships. In other words, the increased flexibility in the virtual work environment seems to affect the well-being of employees. Moreover, flexibility allows people to optimize their work-life balance. Respondents pointed out that flexibility in terms of time is especially useful when having a family with (young) children. Not only for practical reasons as dentist and sport appointments, but also to spend more time together:

‘‘I see it with colleagues who have had a baby in the past year. Then I see it is very practical and beautiful.... to be working at home so that you have more time together. When I had a baby, I had one day off or maybe two, and the next day I was back to work again.’’ (M.Y3)

B. Spare time

Other positive experiences are a result of obvious gains in terms of non-existent commuting time. Accordingly, employees have more spare time that offers the opportunity to pursue hobbies like sporting, to enjoy more time with family and friends, or even to get some extra sleep. As a result, spare time is perceived to be beneficial for the well-being and the work-life balance of employees:

‘‘Normally I have to travel 45 minutes to work. But when I work at home, I wake up on my usual time so that I can do a morning run. Then you have won that already.’’ (L.Z.)

“We never had dinner together from Monday till Friday since we have a family. But last year we did, because I was done working at 17.30 or 18.00 and I did not have to travel home.” (L.X)

Though, the absence of commuting time may also instigate employees to add that time to the traditional working time, resulting in over-work and ultimately poor well-being:

“I have to drive an hour back and forth, so I crossed out two hours of travelling. I have been that crazy to even plus that to my working time.” (L.X)

4.1.1.2. Work-related positive experiences

In contrast to these personal gains, respondents also experience work-related gains when working from home.

C. Productivity

It was mentioned very often in the interviews that, when working from home, employees experience less disruption from their working activities which results in better focus and consequently higher productivity. At the office, there is a lot of movement and a lot of distraction which can hinder employees to complete difficult tasks, especially for employees who share offices with colleagues:

“When you work at home, you will be much less disturbed, because here... the doors are always open and everyone can walk into your office.” (M.Y2)

“We had a time that we shared an office with eight colleagues. Then you have to be able to shut it all out, because otherwise you hear others’ conversations, and you are easily getting involved.” (M.X3)

By way of contrast, people can also experience distraction from work at home, which is not work-related but more private-related. Especially in times of the COVID-19 pandemic, where children were restricted to go to school and parents were forced to start home schooling, the productivity of employees might drop. As mentioned before, the flexibility in time allows employees to make up for these distractions before or after ‘regular work-hours’ (09.00-17.00). But, in this case, employees must have the capability, discipline and motivation to actually do so, in order to indeed be more productive in the virtual work setting:

“If something not work-related interrupted during the working day, I would open my laptop for a while in the evening.” (M.Z1)

Moreover, the respondents pointed out that employees can only be more productive in a virtual work environment, when the remote workplace is well arranged. This means that in order to be productive, employees must be provided with sufficient resources as a laptop or computer, sometimes with multiple screens, a good desk and chair, and so on. While the company facilitated those kinds of resources during the pandemic, it requires even more from the organization to facilitate the remote workplace after the pandemic for an undetermined time, as you potentially create double workplaces (at home and at the office) which increases the organizations’ costs significantly:

‘My productivity will not drop because I have a home-office with a good desk and a computer with two screens, the same as I have it at the office. But I think that some people who have a laptop that is six or seven years old... their productivity will drop.’ (M.X2)

In this regard, not all working tasks and activities are suitable to perform in a virtual work environment because of tools and resources that are only available at the office. Therefore, employees must collect several activities (mostly administrative) throughout the week that can be easily done at home. This way of working is not always as productive as in the traditional work context:

‘I think that when you work at home, you are less productive because... you have no printer at home for example. Practically speaking that does not work. (...) And then, when you want to work at home, you have to save up tasks that can be done at home. But then, you should not be disturbed at home when doing those tasks, because then they are postponed again. This way, tasks are postponed way too long, and that does not work.’ (M.Y1)

D. Personal development

Another positive experience from virtual working is personal development in the work role. People who have been hired just before the COVID-19 pandemic were urged to explore the ‘unknown’ of their job, as the working environment does not allow questions to be answered directly. It can take a while before a colleague or a leader has time to answer a question either by email or by a virtual meeting, so newly hired employees were forced to find out things by themselves, and thereby accelerated their learning and development in their work role:

‘But I also think that COVID-19 made me develop a lot, because you do not hand over tasks so easily. Now you think more quickly: I will figure it out and do it by myself.’ (M.Z1)

‘I think it is remarkable that some people have taken on more responsibility, they have developed themselves and progressed into a good direction.’ (L.Y)

E. Efficiency

All in all, respondents have experienced that working from home and connecting with the organization by means of technology is indeed possible, and sometimes even more efficient. For example, in case of foreign branches that have to be visited regularly, appointments with suppliers or consultants, or in case of external events as seminars. Those kinds of activities used to take place physically and could take a lot of time, but in a virtual setting these activities can be done more efficiently:

‘I have learned things about my work activities that made me think... why did I always travel to [location]? Now when you think more about it, it can also be done differently. I think that is the lesson we have learned from COVID, that you can also do things much more efficiently.’ (L.Y)

F. Explore opportunities for virtual work in the future

As shown in the last quote, the organization has indeed experienced positive elements of virtual work and the majority of the respondents hope that the organization is willing to continue with virtual working, also after the COVID-19 restrictions are removed. While the organization and the management team still have a relatively traditional focus on working at the office within

office hours, the positive experiences mentioned above have raised the attention to explore the opportunities of virtual work. Also, because the organization is predicting difficulties with regards to the labor market and virtual work settings are quite attractive for new employees:

‘‘I think it is a good development that the organization now takes a close look at the opportunities, but we have to look very carefully at how we are going to fill that in.’’ (M.Y1)

4.1.2 Negative experiences

Besides these personal and work-related positive consequences of virtual work, employees also experience several negative consequences. While the positive consequences could be easily divided into personal- and work-related consequences, the negative consequences seemed to be more intertwined.

A. Insecurity

During the first few weeks of the COVID-19 pandemic, respondents felt a bit lost and insecure with the work mode. Especially because it was the first time for the traditional organization to apply virtual work at a large scale, meaning that most employees had no prior experience with working for the organization from a distance. This unfamiliarity with virtual work sometimes resulted in a feeling of guilt, and accordingly pressure to keep performing as usual. Employees may even experience so much guilt and pressure to start working overtime:

‘‘The first while I felt obligated to work and you feel some kind of pressure to do even more at home than that you would do at the office. Just because... I don’t know what it is, but it is a weird transition, and you feel a bit guilty when working at home.’’ (M.X2)

‘‘You have to be careful to not go too far into that. You have to find a balance for yourself and take sufficient rest.’’ (M.Z3)

On the other hand, there were also employees who experienced a lack of motivation as a result of the unfamiliarity of virtual work:

‘‘In the beginning I experienced it as a bit weird. Instantly you are at home and you think: and now? And then the motivation may be a bit... not gone but you are a bit searching. But I have to say it did not take a long time before everything was up and running at home.’’ (M.Z1)

The lack of experience with virtual work does not only affect employees emotionally, but also practically:

‘‘If I planned a meeting for my team and I invited them via Microsoft Teams, it took a lot of effort in the beginning to get them all on board. Because they have to download the application, and sometimes it did not work or the laptop refused the tool, sometimes the microphones were not working. So, there are many things that caused the meeting to start a lot later. But we have taken that bump a long while ago, and now it has become a part of our daily work.’’ (L.Z)

As already shown in the last quote, employees have generally been able to adjust to the virtual work environment very quickly. Especially employees who are technically skilled seem to have an advantage in adjusting to virtual work during the COVID-19 pandemic. It seems to be harder to adjust to virtual work for some relatively older employees with a more traditional perspective on working at the office from 09.00 till 17.00. This difficulty to adjust, or difficulty to make

effective use of virtual tools, may eventually restrict leaders and members in pursuing their relationships, on which will be further elaborated in section 4.2 and 4.3.

B. Slow interaction

Despite the fact that most respondents are now used to work with virtual tools to connect with the (people in the) organization, it is not always a pleasant experience. First of all, the interaction in an online meeting is not the same as in a physical meeting: it is not as spontaneous and not as fluent. One employee has to finish talking before the other can talk, because otherwise the information will not come through. As a result, employees cannot easily respond on each other, and therefore it is more difficult to have the fiery discussions from a physical room in a virtual room:

“Virtual discussions can be difficult. Everyone has to wait for his or her turn. So, when someone is addressing three topics and you wanted to react to the first topic, that doesn’t happen anymore because the discussion has already continued with another topic. So, it is different.” (M.Y1)

In this regard, leaders also argue that meeting via a virtual tool as Microsoft Teams is very well suitable to discuss daily activities and progress, however it is experienced to be more difficult to make changes or set new projects into motion. Especially because of technical issues that slow down the interaction: low-quality broadband or cameras which are not working. These situations reduce the effectiveness of online discussions even further, meaning that new projects are not as thoroughly discussed as usual. This is withholding leaders to start a new project.

Slow interaction does not only create issues during online meetings, but also outside meetings. In case that an employee has a question in the traditional work context, that employee has the ability to see whether the leader is available or unavailable. In case of the former, the employee can easily walk into the office to ask the question. However, in the virtual work context, the leader must answer the question by email or by a phone call, which is not as direct as in the traditional work context.

C. Planning

A major disadvantage of virtual communication is that a meeting should be planned for every minor issue. Respondents indicated that in the traditional work setting it was common to just walk into an office or ran into each other at the coffee desk or in the hallway, to ask a quick question or have a discussion. When working from home, every contact must be planned and therefore is more ‘formal’ because you have a meeting to discuss something work related:

“Before COVID hit, I had much more contact with colleagues at the floor, and I could hear their experiences and issues, but now that is much less. You are not going to plan a Microsoft Teams session to ask: ‘Hey, how are you?’ That is a pity actually.” (M.X2)

D. Limited informal contact

Online meetings are also different from traditional meetings in terms of content. Respondents experienced them to be much more to the point and they experienced less social or informal talks before, during, or after the meeting. While this is considered to be nice with regards to time, it is also considered to be a loss in terms of informal contact:

‘‘I notice that the meetings are a lot faster, it is just much more to the point, much more direct. And sometimes that is nice, but sometimes you also miss the small talk.’’ (M.XI)

In general, it is perceived to be more difficult to have informal contact in a virtual work situation. This is caused by the fact that online there are obviously less moments of contact which enable employees to talk about anything else than work. In the traditional work context employees could run into each other in the hallway or drink a cup of coffee together while the software is updating. These moments do not occur at home:

‘‘Those natural moments that you run into each other every day, that is much less when working from home.’’ (L.Y)

‘‘When you are together at the office, you can easily walk into each other’s offices. But when you are at home, that is more difficult. So, there is less communication in between.’’ (M.Z2)

E. Loss of connection

Interviewees state that as a result of the slow interaction, less frequent and more formal contact moments, it is difficult to keep in close contact with the team and other colleagues. More specifically, it does not only affect work-related outcomes in terms of less input from colleagues that could help foster creativity or that could inspire others to optimize their working methods, but also the atmosphere is affected in a negative way by virtual working:

‘‘When everyone is working from home or a lot of people are working from home, the organization gets a bit more fragmented. As an example, there are a lot of colleagues who I have not been talking to in a while.’’ (M.YI)

Another crucial factor in this regard is that the company originally is known as a family company, with a very social and open character. Accordingly, a lot of informal activities are included in the traditional work setting. Examples hereof are joint lunch breaks, where soup is provided by the organization so that everyone is encouraged to go to the canteen and socialize with colleagues. But also, team barbecues and after-work-drinks on Friday afternoon are rituals for the company to support employees in socializing with colleagues and to create that team spirit (BGI). When working from home, those rituals do not take place and respondents highlight that they miss these informal moments, and consequently the feeling or atmosphere that it used to bring. Multiple respondents think that, ultimately, this lack of connection with the company is resulting in lower work satisfaction and a higher turnover rate:

‘‘Most employees work here for a longer time already, and they think they have a nice job but also, they have a connection to the company. I think that that connection fades away when working from home. So, I think it is easier for people to say after half a year of COVID: I will go and work somewhere else.’’ (L.X)

There are some employees who indicate that the informal activities or rituals mentioned above can also take place in an online setting, while others indicate that it is not the same as in the traditional setting. It is notable that especially leaders do not like the idea of online informal activities or meetings, but that most other employees do:

‘‘Online there are also opportunities to do something fun. Something like a Friday afternoon drink, whether that is online or not.’’ (M.XI)

“You can plan a bingo via Microsoft Teams, but then you sit alone behind your screen... that is different.” (L.Y)

4.1.3. Summary

In table 2, the positive- (personal and work-related) and negative experiences of virtual work are summarized and ranked from most important to least important, according to the interviewees' responses.

Table 2. Summary of experiences

Positive Experiences		Negative Experiences	
<i>Personal</i>			
• Flexibility	++	• Limited contact	--
• Spare time	++	○ Less frequent	--
○ Family/ friends	++	○ Less social	--
○ Sport	+	○ Less personal	--
○ Sleep	+	• Slow interaction	--
<i>Work-related</i>		• Loss of connection	--
• Productivity	++	• Insecurity	-
• Personal development	+	• Children interrupting	-
• Efficiency	+	• Tiredness	-
• Explore potential of virtual work	+	• Overwork	-

4.2 Relationships in the virtual work environment

This section will show the findings about how virtual work has affected the relationships between leaders and members. First, general factors of virtual work that affect all relationships will be introduced in part 4.2.1. Second, there are also specific circumstances in which virtual work affects one leader-member relationship more than the other leader-member relationship, which will be presented in 4.2.2.

4.2.1 General factors affecting all relationships

It has become clear from the previous sections that the respondents work in a relatively traditional organization in which the employees were not provided with the opportunity to work virtually before the COVID-19 outbreak. Accordingly, the relationships between leaders and members are built on frequent face-to-face contact. This section will present the findings about how the lack of face-to-face contact in the virtual work environment has affected the relationships in the organization during the COVID-19 pandemic.

A. Reduced contact

As known from section 4.1.2, the communication between leaders and members in a virtual work context is facing several hurdles. Most importantly, there are less moments of contact because leaders and members cannot approach each other as easily online as they can at the office. This might affect the professional and personal relationship between leaders and members because there are less opportunities to connect with each other:

“Building a connection does not require complete conversations. But at the office you run into each other and have a quick conversation: ‘Hi [Name Employee], how are you?’ Then you have made a connection again. But you don’t have that online.” (L.X)

The online communication is not only reduced in terms of frequency but also in terms of informality. In comparison to traditional meetings at the office, online meetings are very formal and work-related. This difference in communication can potentially decrease the degree of connection between leaders and members:

“It is very distant, I think. You have more meetings to discuss things that you normally discuss shortly in the hallways. The meetings are always very formal. Sometimes before a meeting you quickly ask: how are you and what are you doing? But in general, you have a meeting to have a business meeting.” (M.Y2)

As a result of the reduced number of meetings and increased formality in a virtual work context, leaders and members experience a loss of information compared to the traditional work context. Leaders are less aware of what members are doing in terms of work activities and how they are feeling:

“I don’t know exactly what working activities my members are doing at home. When you are here [at the office], you know that more easily.” (L.X)

“Then you realize that you do not talk about the many things that have happened during the last half year, because you don’t do that via Microsoft Teams.” (L.Y)

More specifically, members experience it to be difficult to share personal circumstances in a virtual work context. Some things you just do not mention over the phone or in a video call, but require face-to-face interaction:

‘‘At one point during the COVID pandemic, the partner of one employee did not have a job anymore. And nobody knew that. That employee does not share so much in general, but when you are at the office you know much more.’’ (L.Z)

‘‘Looking each other in the eye, drinking a coffee, just that social contact is very important. That is what you miss. (...) For example, the social element during Friday afternoon drinks is very important, and now you miss that.’’ (L.Y)

All in all, it can be said that there are not so many opportunities for members to work on the personal relationship with their leader in a virtual work context. As a result, it is perceived to be more difficult for leaders to find out how their members are actually doing in terms of work, but also personally. It is easier for employees to show ‘normal’ (work) behavior for the short period of time when interacting with colleagues during a virtual meeting. In a traditional work setting in the office, it is easily noticeable when people are not feeling well, or something is bothering them by observing and stacking multiple moments a day:

‘‘You really lose the connection a bit with your members. So, what is really going on with them? Often when you call, you don’t get to hear it, also not via Microsoft Teams. And when you are at the office, you drink a coffee and talk a bit, then you build a lot more. Via Microsoft Teams you don’t build relationships.’’ (L.X)

‘‘When you see each other on a daily basis, there are many more opportunities or coincidences to pick up signals. And when everyone works at home, I only get to see fragmented pieces of someone’s mood or well-being. So, when you are at the office you know a lot more, you understand a person much better, and you empathize with them more.’’ (L.Z)

As can be seen from the quotes, the lack of work- and personal information exchange has the potential to deteriorate the relationship between leaders and members in a virtual work context.

B. Misunderstanding

Another disadvantage of virtual work is the fact that information can come across very differently than intended. Together with the fact that employees are restricted to the limited virtual contact moments that are planned to discuss work-related matters, respondents experience more misunderstandings than in a traditional work environment in which employees see each other multiple times a day, and therewith have multiple opportunities to ask for clarification. These misunderstandings may reduce the quality of the relationship between a leader and its members:

‘‘It is hard that sometimes you do not understand everything well via email, and you cannot meet quickly to discuss it because the person is not available.’’ (M.Z1)

‘‘During the COVID-19 pandemic there have been more conflicts as a result of working at home.’’ (M.XI)

4.2.2 Factors affecting individual relationships

Besides the above-mentioned complications of virtual work that affect all leader-member relationships in general, there are several circumstances under which the degree of change between the traditional and virtual leader-member relationship is strengthened or weakened.

C. Technical competencies

As already mentioned in section 4.1.2, the ability to make effective use of virtual tools is considered to be a prerequisite in a virtual work environment in order to maintain the relationship between a leader and a member that has been established in the traditional work environment. Deduced from the interviews, it can be said that there are two main reasons why employees face difficulties with the use of virtual tools. Firstly, in line with the traditional character of the organization, there are a number of employees with a relatively high focus on traditionality, meaning that they believe working should be done at the office during office hours. Accordingly, these employees have never worked with virtual tools as Microsoft Teams before the COVID-19 pandemic. On the contrary, there are some employees who's daily activities depend on virtual communication technologies. They feel that the relationship with their leader is not affected by the new working situation:

‘No, our relationship has not changed. But that is because we already did quite a lot digitally.’
(M.Y3)

Secondly, there are some relatively old employees who simply do not have the experience with virtual tools, or in general do not have so much experience with a computer or a laptop, which hinders them to keep in touch with their leader. Consequently, these issues can restrain leaders and members to build or maintain the relationship from a distance:

‘For some managers it is very difficult... for example, old-school managers see what happens around them at the office. But when at a distance, they face difficulties to keep an eye on what is happening among their members.’ (L.Y)

‘There are some people who only touch a computer when they need to for work. Yes, then it becomes very difficult to maintain good relationships in this time [the COVID-19 pandemic].’ (M.X2)

D. Dual effort

According to leaders, individual differences in terms of virtual relationships can be explained by dual effort that is required in dyadic relationships. Even if the leader reaches out regularly to build or maintain the relationship with its members, the members have to be open for that contact and put effort in the relationship as well. Especially in the virtual work context where spontaneous contact moments in the hallway, at the coffee corner or at the lunchroom are not possible, it is highly important that both leaders and members reach out to stay in touch:

‘What I said about having a good connection with someone... that requires regular contact from both sides.’ (L.X)

As shown in the quote, regular contact from both sides is required. From the interviews it appeared that ‘regular contact’ means every day for some employees, but for other employees it means every month. It can be seen in the quotes that there is a lot of variation in the frequency of contact per department, but also within departments. This indicates that the frequency of

contact may be dependent on projects which are running department-wide, and on the specific function that the employee is in:

‘‘In some periods we have a lot of daily contact because of a project that needs to be finished. But in general, it can also be so quiet that I do not speak to [leader] for two weeks.’’ (M.Y2)

‘‘We do not have a weekly meeting or something like that. We discuss all stuff once a month with a cup of coffee.’’ (M.Y1)

‘‘We have daily contact. Every morning we have a joint day start.’’ (M.X1)

‘‘Twice a week we have contact about the progress of projects, those are the fixed moments of contact. Besides that, we also have contact with [leader] when something does or does not work out as expected.’’ (M.X2)

It was mentioned in the interview with leader Y that there is always the intention and openness from the leaders’ side to reach out to each and every member. However, it appeared that leaders are even busier in a virtual work context than in the traditional work context because of the additional meetings and increased number of emails that have to be processed. Accordingly, leaders’ working days are fully booked in a virtual work context:

‘‘So, at home I was only doing Microsoft Teams the entire day. And then in the evening I still had to do emails.’’ (L.X)

For this reason, it is even more important that members are also putting effort in regular dyadic communication. However, the interviews showed that members are actually waiting for their leaders to reach out to them, because that is what they are used to from the traditional working environment. This misunderstanding or misalignment has the potential eventually deteriorate the relationship between leaders and members in a virtual work environment.

E. Introverted members vs. extraverted members

It seems from the interviews that for some members it might be more natural to reach out to their leader than for other members. More specifically, it appears that the introverted employees are at a disadvantage compared to more extraverted employees. The more introverted employees quietly perform their job at a distance without ever checking in with their leader or with colleagues. Moreover, when leaders do approach the introverted employees, the conversation is quickly finished:

‘‘The introverted people... calling is less easy with them because the conversation is finished within a few minutes, while you can also call people and talk about nothing for an hour. They also don’t call by themselves... ‘‘What I said about having a good connection with someone... that requires regular contact from both sides.’’ (L.X)

‘‘I notice that there are members that do approach me, and I approach them too. But there are also members... you don’t hear from them at all.’’ (L.Y)

Of course, introverted employees are also quite reserved in the traditional work setting, but specifically in the virtual work setting where leaders and members only have a limited amount

of face-to-face contact, the differences between introverted and extraverted people seem to be magnified:

‘‘That is a type of person who doesn’t talk so much. But when you are at the office, you know much more because of the things you notice during the day.’’ (L.Z)

At the office, the leader is relatively easily accessible for members by accidentally running into each other for example, while at home people have to take an extra step by calling or emailing. This extra effort might be a step too far for introverted people. Eventually, a lack of dual effort (because of an introverted personality) in a virtual work setting can cause the personal relationship, where leaders are aware of members’ personal circumstances that can possibly affect their work, that has been established in the traditional work setting to fade away.

F. Established relationships vs. new relationships

Some respondents have indicated that the relationship between leaders and members is not affected by the virtual work situation because of the use of virtual tools. They argue that virtual tools which allow for emailing and (video) calling are worthy substitutes for meetings in the traditional working environment:

‘‘I think that is not too bad actually, as you can always call or email, or even videocall.’’ (M.Z2)

‘‘No, when something is up, you still call. And instead of physical meetings we had online meetings in Microsoft Teams, so that was still happening.’’ (M.Y3)

In other words, these respondents believe that established relationships can easily be maintained in a virtual work setting by means of virtual tools. But, throughout the interviews, it appeared that developing new relationships during virtual work might be troublesome:

‘‘I don’t think my relationship changed so much. But it may be that... when you have not yet established a relationship with your leader, it is hard to create one from home. [...] For example, we had a colleague who started working here last year in March, just before COVID hit, and he does not work here anymore. He worked at the office for one week and then we went into lockdown. And then it is quite hard to build a relationship with your colleagues and your leader.’’ (M.X3)

‘‘I started working here two weeks before the first lockdown, and the way I settled in here was very lonely. (...) It takes a lot to figure everything out from home.’’ (M.Z3)

‘‘And when you are at the office, you drink a coffee and talk a bit, then you build a lot more. Via Microsoft Teams you don’t build relationships.’’ (L.X)

It can be deduced from the quotes that it is difficult to really get to know each other via virtual communication tools. Not only are the moments of contact limited in a virtual work environment compared to the traditional work environment, but contact is also less personal. This makes it harder to create a connection with a newly hired employee. In line with this, it can be argued that tenure plays an important role: employees with short tenure generally find it harder to build or maintain high-quality relationships in a virtual work context, compared to employees with longer tenure. This is presented in the quotes below.

The first quote from respondent M.Z1 shows that an employee with relatively short tenure desires to be close to the leader in terms of physical distance, for the purpose of further developing their relationship. And the second quote by respondent M.X3, who has a longer tenure, shows that a more mature relationship only requires some form of maintenance because leaders and members already know each other well:

“Because I am still in the learning phase of my career, it is nice to have your leader close by.”
(M.Z1)

“We all have quite some experience, so we know how things are done.” (M.X3)

G. Autonomous members vs. dependent members

Another circumstance which can affect the relationship between leaders and members is the degree of autonomy in the traditional work setting. This can be explained by the fact that autonomous employees also have limited moments of contact in the traditional work setting: leaders are not involved in the daily operational tasks of those employees, but only when certain uncommon issues arise, they step in. It appeared from the interviews that for members who receive a high degree of autonomy from their leader in the traditional work setting, the change to the virtual work setting is not as significant compared to employees who are relatively dependent on their leader:

“I don’t think our relationship changed a lot. We were already quite an autonomous department, so that stayed the same. I don’t know how it would have been if you were more dependent on your leader, then it might be difficult.” (M.X3)

This autonomy can also be a consequence of a higher tenure and more mature relationships that are mentioned above. On the one hand, member X3 has quite a mature relationship and also receives a relatively high autonomy within the working tasks, resulting in a minimal difference between the traditional and the virtual work context. On the other hand, member Z1 is still in the ‘learning’ phase of the career and still further developing the relationship with the leader, and following from the next quote, the degree of autonomy is also still growing:

“When [M.Z1] just came in, he/she did all tasks that were left over. Then, he/she comes in the next phase, understands what needs to be done, so he/she gets more autonomous tasks.” (L.Z)

So, following from this quote it can be argued that indeed people with a more mature relationship get more autonomy. And employees who perceive a high degree of autonomy are generally better maintaining the relationship in a virtual work environment because they are used to the limited contact. Or put differently: employees who are still learning (both in terms of tasks and in terms of the relationship with the leader) perceive less autonomy and generally have more difficulty with the leader-member relationship from a distance.

H. Trust vs. control

One issue that leaders face in the virtual work context is the lack of sight on their employees: their work, mood, well-being, and so on. While some leaders and members can actually cope well with this limitation in the virtual work context, others cannot. This has to do with the level of confidence that the leaders have in their members: do the leaders have the confidence that

their employees are performing their work outside the office of the organization as well as they do within the organization? It turned out that leaders who have a high confidence in their members are more easily coping with the lack of sight, than leaders who have a lower degree of confidence in their members.

Leaders generally have two opportunities in the traditional work context to gain this confidence. One, by regularly checking in or ‘controlling’ their members. And two, by trusting their members. In the first case, leaders can discretely control their members on the basis of their presence in the traditional work context. However, in the virtual work context there is one option for leaders to control their members, which is calling. This way of control may potentially give the employees a feeling of mistrust to eventually decrease the quality of the relationship between leaders and members:

“When the social aspect disappears, the leaders may start wondering: do we trust our members and does everyone do their job? I understand that it is difficult to trust your members from a distance, but I would like to experience a bit more trust.” (M.XI)

While in the second case, for members who consciously experience trust from the leader, the quality of the relationship may even increase in a virtual work context:

“Well, I think in a positive way, particularly because [leader] really sends out that trust to us. We haven’t grown apart during COVID, I think we actually grew a bit closer.” (M.ZI)

4.2.3 Summary

Table 3. Overview of factors affecting LMX

General factors affecting LMX	Individual factors affecting LMX
• Reduced contact	• Technical competencies
• Misunderstanding	• Dual effort
	• Introverted vs. extraverted members
	• Established vs. new relationships
	• Autonomous vs. dependent members
	• Trust vs. control

In table 3, an overview is provided of all general factors and individual factors that are found to affect the leader-member exchange in a virtual work context. Either directly, as described in the sections above, or indirectly by reducing the exchange of information, mutual support, empathy or consideration, between dyadic partners in the virtual work context:

“When employees are at home, in their own cocoon, doing their own thing, they actually repel from interaction, they only work for ‘Ltd. Me’.” (BGI)

“At one point during the COVID pandemic, the partner of one employee did not have a job anymore. [...] When you are at the office you know much more. And when you know such things, you understand some things better and you can more easily empathize.” (L.Z)

But on the other hand, it can be said that the degree of trust from the leader towards the members has increased in the virtual work context (voluntarily or not), as a result of the lack of control that leaders can pursue in the virtual environment:

‘‘I provided people already with a lot of latitude, so I haven’t changed that. [...] But personally, I am less aware of what members are doing. When you are here [at the office], you know that more easily. So now you have to trust them more.’’ (L.X)

4.3 Leadership practices in the virtual work environment

To come back to the research question, this section will focus on the leadership practices that can help to overcome the above-mentioned effects of virtual work on the relationship between leaders and members.

4.3.1 Virtual leadership practices

The interviews showed that in order to bridge the physical distance with members in a virtual work environment, leaders adjust their leadership style for the purpose of maintaining good relationships.

A. Communication: formal, informal and personal

One major consequence of virtual work that has been addressed multiple times already, is that contact in a virtual work context is reduced in terms of frequency and increased in terms of formality. To make up for this, it has become clear from the interviews that in the whole organization, leaders have planned more meetings during the COVID-19 pandemic than ever before, as a substitute for the spontaneous, unplanned moments of contact that traditionally occur at the office:

‘I planned more meetings to just speak to each other, so increasing the frequency of meetings as replacement for the unplanned meetings at the office. You have to be more structured with those meetings.’ (L.Y)

‘What changed is that I organized more meetings via Microsoft Teams than I normally do at the office. Employees want to have information and want to be updated. Also, with the pandemic you saw very clearly: how do you ensure that we stay connected with each other. So, sometimes those meetings were not work-related but just to catch up.’ (L.Z)

From the members’ point of view, it is considered to be important to structurally plan additional meetings for three reasons. Firstly, to stay up to date about the progress in terms of working activities. Because there are less ‘natural’ moments of contact in which work-related issues can be discussed, it is important for leaders, but also for members among each other, to be aware of the status of projects and activities by means of formal moments of contact:

‘I think that as a leader, you need to have some kind of structure in planning certain meetings, to keep an eye on the progress of your members.’ (M.Z2)

‘I think that you need to make appointments in a very structured and goal-oriented manner.’ (M.X2)

To arrange this, leader X is organizing a joint kick off several mornings a week. Here, leader X starts the day together with his team, to see how they are doing with work-related tasks and talk about team progress in a consistent way:

‘Some departments have a kick-off moment each morning. It is very practical like: What are you working on? Do you experience any issues? Does someone have to take over? And that works perfectly. In the past this was unnecessary because you met each other at the office nearly every day.’ (L.Z)

Secondly, additional meetings are also important to ensure informal contact between a leader and its members, as well as between members. It seemed to be very important for the maintenance of high-quality relationships that transcend a functional work relationship. It was found in section 4.1.2 that online meetings are in general more formal than in the traditional work context. Though, there are several opportunities to ensure informal contact. For example, leader Z started planning ‘coffee breaks’ with his team during the COVID-19 pandemic:

‘‘He often planned an online ‘coffee break’ in which we mainly spoke about other things than work. I think that is also good for the atmosphere, to talk about something else then work. It was really nice that he was looking for a bit more connection during that time.’’ (M.Z1)

And thirdly, besides these formal and informal moments of contact in team context, it is important for leaders and members to have individual contact. The focus on one member at a time provides the opportunity to build or maintain the relationship in a virtual work context:

‘‘I heard from one leader that every Friday afternoon, he planned time in his agenda to call colleagues that he had not been speaking to in the past week. Because some people call you for every minor thing, but others don’t.’’ (M.Y3)

B. Trust, responsibility, latitude

From the interviews it appeared that trust and responsibility are key values that describe the leadership style at this organization in the traditional working environment. Accordingly, members perceive to have significant latitude in terms of working activities:

‘‘He is leading... but he is giving me freedom. So, I can fill in projects and time by myself, so in that sense it is quite a relaxed style.’’ (M.X2)

‘‘When something bothers me, I go to him, but otherwise he leaves me with a lot of freedom. And when something bothers him, he comes to me. He doesn’t interfere with the daily activities, he is more working on the strategic level.’’ (M.Y2)

‘‘He gives quite a lot of freedom. He is not trying to steer us so much in our daily activities.’’ (M.Z1)

As noted by leader Y, who has previously worked for an organization in which he managed several different teams from a distance, the virtual work environment requires leaders to give members even more latitude and more responsibilities:

‘‘I was already used to manage things from a distance, so in that sense it didn’t change a lot. I do think that I have given members more responsibilities... maybe released them even more.’’ (L.Y)

While this form of leadership might come natural and easy to leader Y because of his experience with working from a distance, other (more traditional) leaders might perceive this kind of leadership as unpleasant, because they lose sight of their members:

‘‘I already gave members a lot of freedom, so I have not changed that. But maybe I have less feeling about what my members are doing. When they are here, you know that more easily.’’ (L.X)

In this regard, it can be said that leading from a distance requires a high degree of trust in members, as you cannot see and manage what they are doing on a daily basis. Consequently, it is logical to think that leaders and members who have developed a high-quality relationship and accordingly a high degree of trust, are operating more effectively in a virtual work context:

‘‘When you trust the members in your team, you can also give them more responsibilities: then you have organized things in a way in which you know what your members do and what they don’t do. Then, I think you are a good leader. When you get nervous once your members are working from home because you can’t control that, then you do something wrong as a leader, in my opinion.’’ (L.Y)

Members do acknowledge that it might be hard for leaders to trust their members from a distance, but they experience it to be a critical factor as well:

‘‘It might be hard for leaders, but it is very important to trust their members.’’ (M.Z1)

‘‘I notice that for the management here, it is sometimes difficult to trust us. (...) I notice that they think: ‘when employees are here, they do their work. And when they are at home, we don’t know if they do.’ So, I think the capacity to trust, that asks a lot, but it is important.’’ (M.X1)

C. Facilitation

For members to work effectively, productively and efficiently from home, leaders should proactively facilitate their members by enabling them to work from home. More specifically, leaders should ensure that their members have sufficient resources in terms of a laptop, multiple screens, a good desk and a good chair, and so on. Of course, it can be argued that the COVID-19 pandemic has been a particularly disruptive situation to which the organization needed to adapt within a very limited time frame. In this perspective, the members have a great amount of respect for the organization in terms of how quickly everyone was enabled to work from home from one day at the other.

‘‘Within a week, we could all work from home because our IT department had facilitated all kinds of tools as Microsoft Teams and other software that we normally use at the office. I really admire that.’’ (M.Z3)

But now that the situation has become the ‘new-normal’, and it is expected that virtual working will (partly) remain for an undetermined amount of time, it is important that leaders are proactively starting to facilitate additional resources:

‘‘I would like to see that leaders are pro-actively looking at their members: ‘Do they have sufficient resources to do their jobs?’’’ (M.X1)

‘‘As a leader you just give a call: ‘How are you doing? Are you facing any issues? Can I do something for you?’’’ (M.Y2)

This facilitation ensures that people are enabled to effectively perform their work and to effectively communicate with their leader and other colleagues, which is important to develop and maintain the relationships within the organization.

D. Technical competencies

Last but not least, it is important that leaders possess technical competencies. Not only for practical reasons as setting up an online meeting, but also to make effective use of virtual tools. Most importantly, because these virtual tools and applications are the main means to cultivate the relationships between leaders and members:

‘Leaders don’t need very different skills in terms of management, but more in terms of IT skills. There are some traditional leaders who face difficulties when setting up a virtual meeting... yes, then you might have a problem. But those are more the technical skills that you need extra.’
(M.X3)

4.3.2 Transactional and transformational leadership practices

Apart from the virtual leadership practices who were explicitly mentioned in the interviews, the insights in the positive and negative experiences of virtual work (4.1) together with the effect of virtual work on the relationships between leaders and members (4.2), can be translated into transactional and transformational leadership practices that seem to become more important when leaders and members are physically dispersed.

4.3.2.1 Transactional leadership practices

E. Clarify work tasks and requirements

It was indicated several times in the interviews that there is a high need for clear expectations in the virtual work environment, to guide employees during this new way of working:

‘When people work from home, there must be good agreements on the activities that you do from home. (...) I think you need very clear agreements on what you as a leader expect from your employees. For example: how do you plan your day, how about the availability of employees, and so on.’ (M.Y1)

‘The most important thing in my opinion, is that you provide clarity in terms of what is expected of employees. When you are very clear on expectations, it makes it easier for employees to act on that.’ (L.Y)

When leaders provide their members with clear expectations, the members have some indicators at which they can ‘measure’ their performance to indicate whether they are doing a good job. Accordingly, the clarification of work tasks and requirements can help employees to steer them in the right direction. Especially for employees who experience insecurity, guilt or a lack of motivation in the virtual work situation as came forward in section 4.2.1, clear expectations in terms of tasks and requirements can be very helpful:

‘Employees want to know where they are. For example, before you were much more focused on someone’s presence from 08.30 to 17.00. At home, that parameter does not work. So, employees want to have an anchor at which they can mirror: ‘How do I know that I am performing as expected?’ Employees are in need of that. Also, to have some kind of security: ‘When does it feel right and when can I feel guiltless?’ (L.Z)

F. Self-interest

As mentioned in section 4.1.1.1, there are several personal benefits to virtual work, among which spare time and flexibility. In this regard, the virtual work environment allows employees

to create a better work-life balance by creating more time for family, friends, hobbies, sport and other personal activities, than the traditional working environment. Leaders can make use of these personal benefits by ‘exchanging’ them for work-outcomes. In other words, by being responsive to employees’ self-interest, leaders can motivate members to get work done:

‘‘As a result of the COVID pandemic we have experienced that people can be flexible in planning their workday, so outside office hours from 08.00 to 17.00. When someone wants to start at 06.00 in the morning and be done at 15.00, fine. Or when some other employee rather wants to work in the evening, also fine. As long as the work gets done.’’ (L.Y)

‘‘The flexibility to plan your own day allows employees to take a break from 14.00 to 17.00 in the afternoon because the employee wants to run or bike or whatever, and then make up for it by working from 21.00 to 01.00 at night. And this flexibility and freedom can contribute to the employee putting in 200% effort.’’

4.3.2.2 Transformational leadership practices

G. Demonstrating confidence

In a virtual work context, it is important for leaders to show significant confidence in the capability of employees to effectively work in this relatively new working mode. By transmitting their confidence towards their members, the leaders can minimize members’ feeling of insecurity or anxiety, and transform these feelings into confidence. From the interviews it became clear that through the COVID-19 pandemic, leaders have learned that they can indeed be confident about the capabilities of their members to work virtually:

‘‘What we have learned is that we can be confident that employees are seriously doing their job at home. You can imagine that that has been a point of discussion in our traditional company.’’ (BGI)

However, as shown in the quote and as already learned from section 4.2.2, some traditional leaders might perceive more difficulty to grant their members with confidence in a virtual work environment, as a result of the lack of sight in the virtual work environment, compared to the traditional work environment. In this case, it is important that leaders (1) create sight on the virtual activities of members or (2) provide members with a higher degree of trust:

‘‘You have to be confident that your members will do their job. So, you need to create something through which you have a sight on the activities of your members.’’ (L.Y)

H. Individualized consideration

It is noticeable from the interviews that most online meetings are in team context, providing little room to raise of personal issues. Accordingly, it is important that leaders ensure frequent individual contact with each of their members in order to maintain or further develop their personal relationship:

‘‘I think that when you are working from a distance, it is even more important that when you have a conversation with your employee, that you are fully committed to that conversation. (...) So, the conversation must be less cursory and might have more depth. Leaders must listen actively and not only pay attention to what is said, but also how things are said. I think that skill is even more important from a distance.’’ (L.Z)

“Frequent contact is very important. Not only functional, but occasionally also a bit more informal. Because with Microsoft Teams, the conversation is often very to the point. But there really are opportunities to make it a bit more personal.” (M.Z3)

It is expected that through individualized consideration of the leader, that the members who might perceive additional difficulty to approach the leader for personal or work-related issues (e.g. introverted or newly hired employees), are also provided with the opportunity to maintain and develop their relationship within a virtual work context.

4.3.3 Summary

Based on the findings that have been discussed until now, the conceptual framework that was presented in the theoretical framework (2.6) can be filled in. As can be seen in figure 2, the conceptual framework now includes the leadership practices that seem to be valuable in a virtual work environment, as discussed in this chapter.

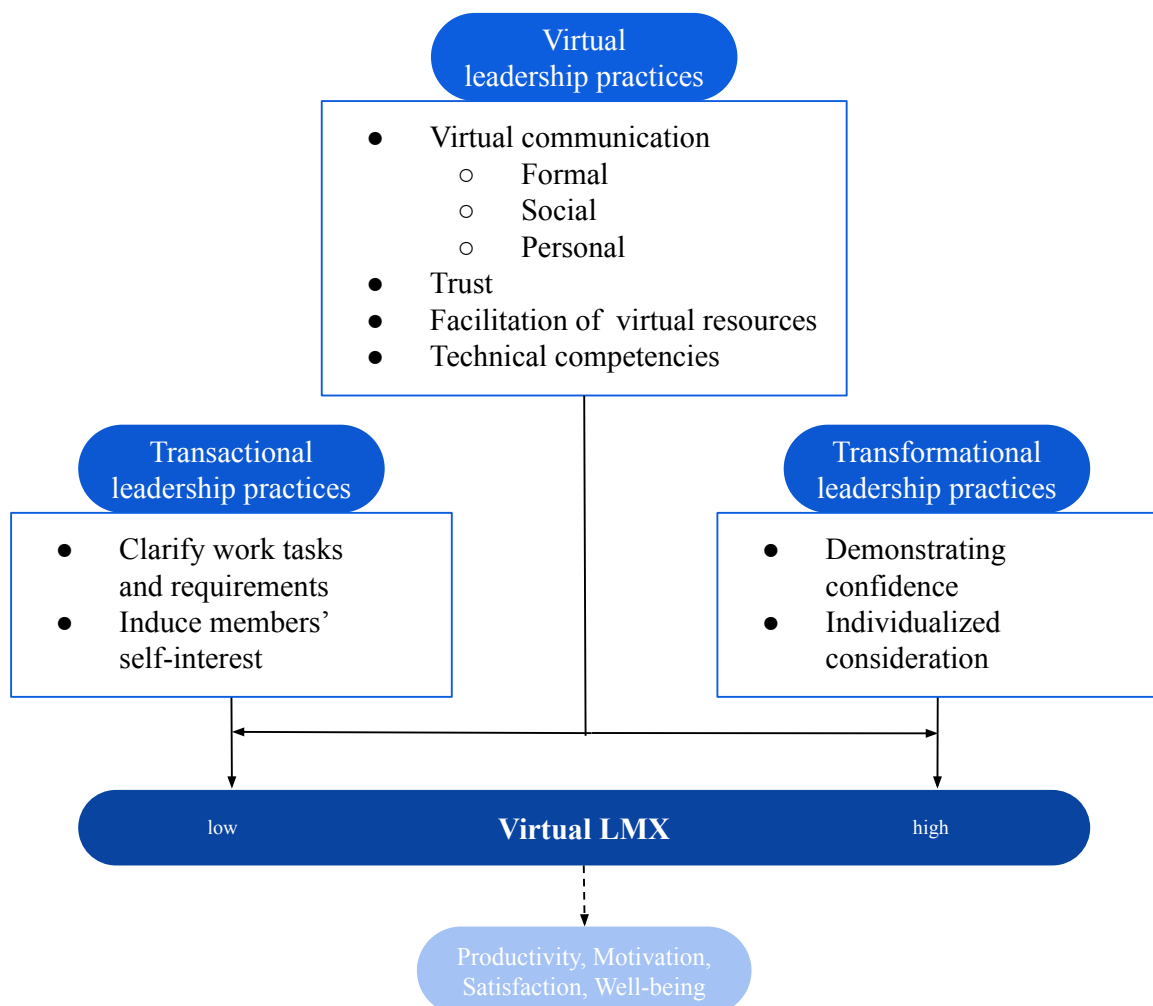


Figure 2. Summary of findings

4.4 Cross-case analysis

Now that the general findings of the interviews are presented and summarized in figure 2, it is useful to generate more specific findings by means of a cross-case analysis. Throughout the last sections, it has already become clear that the (virtual) leadership practices differ per leader and that the effect of virtual work on the relationship between leaders and members differ per team or even per individual. Comparing these differences in leadership practices and their outcomes by means of a cross-case analysis, will reveal more specific findings. The cases will first be presented from section 4.4.1 till 4.4.3, where after the analysis will be presented in section 4.4.4.

4.4.1. Case 1: Department X

The respondents who are employed in department X described themselves to be relatively independent. They experience the freedom to determine the priorities of their daily work tasks by themselves, while the leader only steps in to provide guidance and support for more strategic tasks. This can partly be explained by the fact that all respondents from department X have quite some experience (three years or more) in working for the organization, and the fact that the leader indicated to trust these members. The leader as well as the members acknowledge that the leader-member relationships are quite formally arranged.

In the traditional work environment, the department is used to start the day together by means of a daily stand-up, in which work progress is discussed. Also in the virtual work environment department X continued these ‘daystarts’, but then via Microsoft Teams. Before the COVID-19 pandemic broke out, employees were occasionally provided with the opportunity to work from home, because their activities allow to be off site. The employees from department X have indicated in the interviews that they generally prefer to work virtually occasionally. They feel that they can perform their tasks at home as well as they can at the office, and that the formal relationship does not change during virtual work. Moreover, they experienced that virtual tools are good substitutes for real-life contact. This can be explained by the fact that these employees are highly technically skilled.

4.4.2 Case 2: Department Y

Also department Y is considered to be an independent team as leader Y mostly leaves its members with their own tasks and responsibilities. The leader does not like to set out the exact paths that member should follow, but rather let the members learn and grow within their function. While he has a high level of trust in its members, leader Y also ensures that he is up to date about the things that are happening within his department by means of several information channels. Besides ‘official update’ moments which do not occur daily but rather weekly or monthly, there are limited formal moments of contact in between. On the contrary, there are more informal moments of contact in the traditional work environment, through which the relationship between leader Y and its members is typically characterized as personal. Moreover, the door of leader Y is always open for members to discuss work-related and personal issues.

Before the COVID-19 pandemic, the members of department Y generally did not work virtually. By way of contrast did leader Y work virtually in former jobs. Apart from increasing members’ responsibility, leader Y did not lead his team differently in the COVID-19 pandemic than before. Finally, it is noticeable that the members of department Y have a strong preference

for working at the office, compared to working virtually. This can partly be explained by the fact that the members have a relatively long tenure at the company (3,5 years or more), and that they are therefore used to the traditional way of working from 08.30 till 17.00 within the physical office.

4.4.3 Case 3: Department Z

It shows from the interviews that department Z is a bit more dependent on their leader than the other two departments. The leader is directly involved in the daily operations of the department, so the leaders and the members generally speak to each other on a daily basis. However, it is not for controlling reasons, as there appears to be mutual trust between the leader and its members, but more for alignment purposes within the department. The high involvement of the leader can also be partly explained by the fact that the majority of the member respondents from this department (two out of three) have a relatively short tenure (< three years). Apart from the daily work-related interaction, there is also a relatively high personal interaction between the leader and members from department Z.

Apart from one member, the leader and members of department Z did not have experience with working from home before the COVID-19 pandemic. During the COVID-19 pandemic, the leader arranged more meetings in the virtual work context than in the traditional work context. In addition, the degree of trust from the leader towards their members has also increased.

4.4.4 Analysis

From the interviews, it became clear that across the cases, leaders have chosen different approaches to deal with the virtual work environment. First of all, leader X has continued with the joint daystarts from the traditional work environment in the virtual work environment. These meetings have a very practical focus, as the members discuss with their leader and colleagues what they are working on, how they should progress and whether they need any support. This frequent online communication ensures frequent exchange of information and support in the virtual work environment. Apart from increased communication, it showed from the interviews that department X is the department with the highest technical competencies across all three departments, and that this helped the members as well as the leader to facilitate frequent exchange between the partners. It deserves to be mentioned that the members from department X seem to have very positive attitudes towards working virtually. They did not experience any deterioration in the leader-member relationship, neither in the exchange between leader and member. Logically, this can be caused by the fact that the online daystarts and high technical competencies are ensuring the effectiveness of traditional transactional and transformational leadership practices in the virtual work environment.

In contrast to department X, department Y has a rather neutral attitude towards working virtually. While they see the benefits of virtual work, they prefer to be at the office because, as said by the members, it optimizes the exchange between leaders and members and accordingly the relationship between these actors. It is noticeable that leader Y traditionally performs quite transformational leadership practices, by a high exchange of both material and social exchanges in terms of trust and support. In the virtual work environment, leader Y has not dramatically adapted his leadership style. From his experience with virtual work, he acknowledges the

importance of an increased degree of trust in order to demonstrate confidence towards its members. All in all, it can be said that department Y has experienced a loss in information exchange, but an increase in the exchange of trust.

Finally, the leader of department Z has changed its way of leading by increasing the number of meetings with his members significantly. Not only to discuss work-related matters, but also to ensure informal and personal contact. This way, frequent online communication ensures exchanges on both work and personal level, between leaders and members in the virtual work context. This is different from the more practical daystarts of department X, which are mainly focused on work. Moreover, it has become clear from the interviews that the relatively high degree of trust from leader Z towards its members has increased the perceived confidence of the leader towards their members, which ensured the maintenance or even improvement of the leader-member relationship in the virtual work environment.

5. Discussion and Implications

By means of semi-structured interviews with leaders and their subordinates within an organization that has employed virtual work practices during the COVID-19 pandemic, it was identified how leaders can effectively manage their members from a distance. In this chapter, the findings will be discussed and connected to existing theory about the central topics (5.1), where after the findings of this research will be translated into practical recommendations (5.2). Lastly, the limitations of the study will be discussed together with recommendations for future research (5.3).

5.1 Theoretical implications

5.1.1 Expected benefits and drawbacks

To start with, the findings indicate that the experiences with, and the opinions about, the virtual work mode are diverse. On the one hand, respondents indicated many positive points, among which personal and work-related benefits. In line with existing literature, examples of the former are found to be spare time and flexibility, that allow for a greater employee well-being and work-life balance (Grant et al., 2013). Examples of the latter are increased productivity, personal development and efficiency, which directly benefit the employer. However, the findings emphasize that these benefits of virtual work can only be gained within several boundary conditions. More specifically, it seemed that employees need to: have (a) sufficient (IT) resources, (b) capabilities in terms of self-discipline and motivation, and (c) suitable working activities that can effectively be performed from a distance, in order to perceive the positive effects of virtual work.

On the other hand, respondents experienced negative points of virtual work as limited contact, slow interaction, feelings of insecurity, overwork, tiredness, and a decreased connection with the leader and the organization in general. These negative consequences of virtual work might translate in a greater risk of loneliness, a lack of purpose, and even decreased well-being of employees (Carnevale & Hatak, 2020). As expected, the majority of the benefits and drawbacks found in this research are in line with, or comparable to, previous research on telecommuting and virtual work (Wang et al., 2020; Grant et al., 2013; Allen et al., 2015; Gajendran & Harrison, 2007). In addition, the drawbacks found by Wang et al. (2020) earlier in the COVID-19 pandemic, such as work-home interference, ineffective communication, procrastination and loneliness, also align with the drawback that were found in this study.

5.1.2 Reduced quality of the leader-member exchange

Furthermore, the findings provided valuable input to assess how and in what ways the relationships between leaders and members have been affected by virtual work during the COVID-19 pandemic. First of all, it shows that all leader-member relationships are affected by less frequent, less social and less personal contact, as well as potential misunderstandings which seem to deteriorate the quality of leader-member relationships directly. But, in line with existing research in the LMX domain which advocates differentiated relationships with individual members in the traditional context (Graen & Uhl-Bien, 1995; Dansereau et al., 1975), it was found that there is significant variation in the individual LMX relationships in the virtual work context as well. More specifically, it was found that members with individual characteristics as technical skills, extraversion, high tenure and autonomy, are less sensitive to a change in work

environment and the effect it has on LMX, than individuals with low technical skills, introversion, low tenure and dependency. In addition, the findings highlighted the importance of dual effort in a virtual work environment. As argued in existing LMX literature (Graen & Uhl-Bien, 1995; Graen et al., 1982; Scandura & Graen, 1984; Graen et al., 1986, 1989), the initial offer of effort is mainly provided by the leader. However, this study showed that specifically in the COVID-19 situation, in which the leaders experience an increased workload and accordingly less time and opportunity to reach out to members as often as in the traditional work context, it is critical that members acknowledge the importance of their effort. Moreover, a high degree of trust from the leader is also beneficial for the quality of LMX relationships in a virtual work context, in comparison to a high degree of control. However, this finding can be considered as controversial, considering the fact that a higher degree of trust comes gradually with a higher quality relationship (Graen & Uhl-Bien, 1995). At least, it can be argued that members who have a high-LMX relationship with their leader, and thus perceive a high degree of trust from their leader, can be more effective in a virtual work context.

Overall, the findings about virtual LMX show that the general and individual factors (see table 3 for an overview) affect LMX directly, but also indirectly. More specifically, these factors that play a significant role in the virtual work environment indirectly reduce the exchange of physical and mental effort, material resources, information, and/or emotional support from leaders to members and the other way around (Liden et al., 1997). But at the same time, the increased degree of trust results in additional exchanges between leaders and members. Also with regards to the exchange of positional resources that normally follow a high-quality leader-member exchange (Graen & Scandura, 1987), the findings were not univocal. Whereas it was found that positional resources as privileged information and attractive and challenging tasks are limited, it was also found that members indeed did perceive greater latitude from their superiors. So, to sum up, the exchanges between leaders and members in a virtual work context are mainly limited, through which the access to positional resources for employees are in turn also reduced. On the contrary, members and leaders experience increased exchange of trust, and therewith also latitude, in comparison to the traditional work context.

5.1.3.1 Virtual leadership practices to optimize virtual LMX

Next, this research has been able to identify leadership practices which are beneficial to optimize the quality of virtual leader-member relationships. These could be found in figure 2. Existing literature typically divides leadership practices into two categories, namely transactional and transformational (Burns, 1978; Bass, 1985). Until now, it has been widely accepted that LMX differentiation is caused by the leader engaging in different types of leadership whereby transactional leadership practices result in low exchange patterns and transformational leadership results in high exchange patterns (Henderson et al., 2009; Graen & Uhl-Bien, 1995). Accordingly, transformational leadership has always been regarded as the ‘better leadership style’ for the creation of high-quality relationships. However, the findings of this study show that this might not particularly hold true in a virtual work situation.

First of all, the interviews show that in order to bridge the physical distance with members in a virtual work environment, leaders complement their traditional leadership style with virtual leadership practices for the purpose of maintaining good relationships. To start

with, virtual communication seems to become more important because of the reduced number of – scheduled or non-scheduled, work-related or non-work-related – meetings in comparison to the traditional work environment. More specifically, respondents advocated additional meetings to monitor work progress (formal meetings), to connect with the leader and the team (social meetings), and to share personal issues (personal meetings). This finding can be linked to the idea that the frequency and depth of communication increase perceptions of proximity, so physically distant colleagues will seem more proximal, as found by Wilson et al. (2008). Consequently, frequent formal, social and personal communication can ensure that even though leader and member are physically dispersed in the virtual work environment, they can still feel as proximal to each other as in the traditional work context. As a result, communication can enable leaders to continue with the transactional- and/ or transformational leadership practices in the virtual work environment that are traditionally performed in the traditional work environment. In turn, it must be possible for leaders to maintain, but also to build, LMX relationships in the virtual work environment as how it is done in the traditional work environment. This is in line with earlier findings by Camacho et al. (2018), who suggested that poor communication can impair professional relationships (Wang et al., 2020).

Furthermore, the findings indicate that trust is another crucial component of leadership in a virtual work context. The majority of the members argue that an increased degree of trust is necessary as a result of the lack of sight that leaders have over their members. It even appeared that members who experienced an increase in the degree of trust, also feel that their leader-member relationship has further developed during the COVID-19 pandemic, in contrast to members who did not experience an increase in trust. Therewith, this research fully supports the finding of Gillespie and Mann (2004), who found that trust is an important predictor of the general effectiveness of the leader-member relationship. Though, it must be added that in the virtual work context it requires more effort from both the leader to give trust and from the member to gain trust, because the lack of sight in a virtual work context.

Besides communication and trust, it was found to be important that leaders proactively facilitate their members with resources in a virtual work context, as these resources are the enablers for leaders and members to perform the transactional and transformational leadership practices that are used to build or maintain virtual relationships. In the same way, it is crucial that leaders possess sufficient IT skills, to stay connected with their members. While these components might not seem that valuable, they serve as the foundation of virtual work and virtual relationships, or in other words: as enablers (Pullan, 2016).

5.1.3.2 Transactional leadership practices to optimize virtual LMX

Findings also indicated that employees in a virtual work environment are in need of transactional leadership practices. Firstly, they desire a higher degree of task and requirement clarification than in the traditional work environment. Especially when they are not familiar with virtual work, clarification of tasks and requirements ensures that employees understand their job roles and the expectations set for them by the leader (Avolio, Waldman & Yammarino, 1991). This way, members know what is expected by their leader and accordingly they can live up to these expectations and even exceed them.

Secondly, it was found that leaders can motivate members in a virtual work environment by exchanging the benefits of virtual work (e.g. spare time and flexibility) for work

performance. Clarifying performance criteria and what employees receive in return are perfect examples of transactional leadership practices, which can guide members during a period of change and uncertainty such as the COVID-19 pandemic. More specifically, leaders can motivate and direct members to achieve certain tasks by clarifying what benefits the members will receive for the specific level of performance that is required of them (Avolio et al., 1991).

But, to come back to the point that transactional leadership practices are beneficial to cultivate leader-member relationships in a virtual work context, it must be mentioned that clarification of task outcomes and requirements together with the responsiveness to employee's self-interest, ensure a series of exchanges and implicit bargains that serve as a base for leader-member relationships as found by Den Hartog et al. (1997). Moreover, when the job and environment of the follower fail to provide the necessary motivation and direction, the leader will be effective by compensating for these deficiencies (Den Hartog, Van Muijen & Koopman, 1997). In other words, as the virtual work environment is known to lack the necessary motivation and direction, the clarification of expectations and implicit bargains can make up for these deficiencies, and simultaneously serve as a solid base for a good virtual relationship, as opposed to what was expected beforehand.

5.1.3.3 Transformational leadership practices to optimize virtual LMX

Apart from these virtual and transactional leadership practices which seem to become more important in the virtual work context, there are also several transformational leadership practices which can optimize the leader-member relationships in the virtual work environment. One of such practices is the demonstration of confidence. The findings showed that the leadership practices in the traditional work environment were already characterized by a great degree of confidence in the members, but that the virtual work environment requires even more confidence from the leaders. Particularly, because leaders are not able to monitor and assess members' daily (work) progress and well-being when working from a distance. This lack of sight requires leaders to trust their members even more as mentioned earlier in the discussion. While this increased trust comes natural to some leaders, it does not to all. In the latter case, it was found that leaders are performing more monitoring and control activities. As an example, while leader Y was already familiar with managing members from a distance, leader X and Z were not. And while leader Y indicated to not act differently in the virtual work situation, leader X and Z indicated to plan more meetings on a regular (almost daily) basis. In this case, leaders have to be careful that they do not send out signals of mistrust to their members, because it can directly deteriorate the quality of the relationship between leaders and members. Nevertheless, this study found that such extra meetings are mostly experienced to be pleasant in a virtual work environment. These results further support the idea from Wang, Liu, Qian and Parker (2021) who found that the majority of the remote workers in the pandemic believed that monitoring activities by the leader where necessary for coping with issues as procrastination. This research can contribute to that notion by proposing that monitoring practices and the gained confidence is especially useful for specific groups, namely: introverted-, newly hired- and dependent employees.

Another practice which is very common for transformational leaders, is to pay attention to the individual employee and his or her needs, rather than treating all followers alike (Avolio et al., 1991). It is noticeable that respondents highlight the importance of individualized

consideration by leaders towards their members in a virtual work context, because meetings are often taking place in group context and, on top of that, are less personal through virtual tools. Accordingly, leaders have to consciously provide each individual member with regular special attention (Bass & Riggio, 2010) in order to maintain or build the personal relationship.

Finally, taking all these leadership practices together, it can be said that virtual leadership practices enable leaders to more easily perform the transactional and transformational leadership practices presented, to together optimize the relationships between leaders and members in a virtual work context, which can be seen in figure 3.

5.1.4 Situational findings

From the cross-case analysis that has been performed, additional insights were created. Most importantly, the insights emphasize even more that frequent virtual communication for formal-, social-, and personal purposes are very important in the virtual work context. Even for autonomous departments (department X) it seemed that daily interaction ensures high-quality exchange between leaders and members, in comparison to autonomous departments who did not involve in frequent interaction (department Y). Moreover, the cross-case analysis confirmed that increased trust is important to maintain (or even increase) the quality of LMX relationships, even when relationships are not very well developed yet (department Z). Lastly, the comparison of similarities and differences across cases revealed that leaders who ensured a high exchange of information through virtual communication have a more positive attitude towards virtual work than departments who do not frequently exchange information virtually.

5.2 Managerial implications

The insights generated during this research can help organizations over the entire world who employ virtual work practices, in the exploration of how to manage virtual employees. Not only during the COVID-19 pandemic, but also in the future. More specifically, the findings of this research can be helpful in the response of HR leaders to the COVID-19 pandemic, by providing guidance on the required modification of HR practices such as flexibility and job design (Collings, McMackin, Nyberg & Wright, 2021), as well as training and development. This study encourages HR departments around the world to reconsider the training and development of their leaders. It is necessary that (traditional) leaders stay updated about the requirements of virtual work and the related leadership practices that have been identified in this research. Practically, this means that leaders should be trained to advance virtual leadership practices, in order to successfully perform a combination of transactional and transformational leadership, for the purpose of maintaining or even building leader-member relationships in a (temporarily) virtual work environment.

Furthermore, the findings showed that the employees do indeed enjoy the benefits that virtual work has to offer. However, these employees also indicated that such benefits only last until a certain point, at which the drawbacks begin to take over the benefits. As found by Allen et al. (2015), the effects of virtual work take on a curvilinear effect where the benefits are dominant until a level of 15.1 hours a week, where after drawbacks as isolation and a lack of social interaction offset these benefits. Accordingly, it is recommended for organizations to consider a hybrid policy in which employees are partly working in the traditional work environment and partly in the virtual work environment. In this situation, employees can enjoy

the benefits as flexibility, productivity, and efficiency when working from a distance, and simultaneously minimize drawbacks as slow interaction, limited informal contact, and loss of connection. But above all, in this situation leaders and members can continue to develop their relationship in the traditional work context, while maintaining it in the virtual work context.

5.3 Limitations and future research

Throughout the study, several limitations have been encountered which can be addressed by future research. The first limitation is a result of the qualitative and exploratory nature of the study. Because the topic of the study, i.e. virtual LMX and virtual leadership, has not been extensively researched before, the goal was to gain more insight in these concept for the purpose of understanding and leveraging its impact in the workplace of the future. Accordingly, the in-depth qualitative findings from one organization do not suffice to make direct solid claims about virtual LMX and virtual leadership in other organizations. It deserves to be noted that this originally has not been the purpose of the qualitative exploratory study. Still, the findings of this research can serve as valuable input for future studies who can reassess the findings by a quantitative research approach. For example, by means of surveys, data from a bigger sample can be collected, and more specific findings can be generated about the importance of certain factors in the virtual leadership process. In other words, method triangulation can help to develop a more comprehensive understanding of the phenomena (Carter, 2014; Patton, 1999).

The second limitation is a methodological limitation involved with the convenience sample. With the broad target population, i.e. all organizations that have transitioned from the traditional work environment to the virtual work environment as a result of COVID-19 measures, unwarranted generalizations can result from the convenience sample (Robinson, 2014). Particularly, when taking into account that all countries and even several provinces have posed different measures to contain the spread of the COVID-19 virus, meaning that the degree of virtual work from one organization does not necessary align with the degree of virtual work from the other. Accordingly, the degree of strictness of COVID-19 measures could affect the positive or negative attitudes towards virtual work, virtual LMX and virtual leadership. As a result, it must be acknowledged that the convenience sample does not provide a scientific base for global generalizations. In this regard, it can be useful for scholars abroad to perform similar research to see whether the degree of strictness in terms of COVID-19 regulation, and probably additional other factors, affect the outcomes of the study.

Finally, the findings about virtual LMX deserve to be better investigated. While our study has only focused on the first part of the LMX theory, namely the effect of virtual leadership on the virtual leader-member exchange, the second part about the advantages of (virtual) LMX has remained underexplored. It has been a noteworthy finding that the virtual work environment seems to reduce the positive effect of high-quality relationships. So, even for ‘in-group’ members who are known to perceive several benefits in the traditional work context as higher productivity, motivation, satisfaction and increased well-being, it seems more difficult to achieve such benefits in the virtual work context that are inherent to high-quality relationships in the traditional work context. While the focus of the study has not been on these benefits (arrow C in figure 1), it can serve as a valuable starting point for future studies.

6. Conclusion

With the COVID-19 crises that continues to impact the operations of all organizations globally, it is inevitable that virtual work policies will remain in place for an undetermined time. It is therefore of high importance that organizations find ways to effectively manage their employees in the virtual workplace, in order to leverage the many benefits that virtual work has to offer and simultaneously minimize the potential drawbacks.

As a result of the physical distance and the lack of face-to-face communication between leaders and members in the virtual work environment, the relatively new work mode can have disastrous social consequences in the workplace. This means that leaders who are unwilling to change their leading practices would likely see a deterioration in the relationship with their members. In other words, it has been critical to find out which leadership practices are required in times of virtual work, to effectively manage the leader-member relationship and in turn, to make effective use of virtual work arrangements. Especially, taking into account the many benefits that high-quality leader-member relationships can bring. Such as productivity, motivation, satisfaction and well-being, which are very valuable in the unfamiliar and uncertain work mode in times of a crisis.

To serve this purpose, the following research question was set up: *What leadership practices can be used to effectively manage the relationship between leaders and members in a virtual work context?*

By means of an exploratory case study with embedded units, factors affecting the LMX relationship in the virtual work context were identified (table 3), as well as leadership practices that could minimize these factors (figure 2) and therewith optimize the virtual leader-member relationship. More specifically, reduced contact and misunderstanding generally degrade the quality of LMX relationships directly, whereas individual factors such as technical competencies; dual effort; degree of introversion; degree of maturity of the leader-member relationship; degree of autonomy; and degree of trust, were identified as contingencies that can either strengthen or minimize the effect of virtual work on LMX. Eventually, it became clear that these factors together limit the exchange of information, resources and/ or support, between leaders and members.

To answer the research question, leadership practices were identified that could help leaders to make up for these limited exchanges, and therewith maintain the relationships with their members in a virtual work context. It can be concluded that virtual leadership practices can serve as tools to deliver the transactional and transformational leadership practices that are usually performed in the traditional work context. These virtual tools respectively include: virtual formal-, social-, and personal communication; an increased degree of trust from the leader towards their member; facilitation of virtual resources; and technical competencies. Apart from these virtual leadership practices, several transactional and transformational leadership practices were identified that seem to become even more important in the virtual work context in comparison to the traditional work context. These are: clarification of work tasks and requirements; inducing members' self-interest (transactional); demonstrating confidence; and individualized consideration (transformational).

All in all, it is recommended for leaders to reassess the effectiveness of their current leadership practices and thereby consider the fact that new or adapted leadership skills are necessary in the virtual workplace to optimize the virtual leader-member relationships.

Appendix

A. Background Interview

1. Could you tell me something about the daily activities here at [Company]?
2. To what extent has the COVID-19 pandemic affected these activities?
3. Did [company] work out a policy in response to the COVID-19 pandemic? If yes, what are the main points?
 - a. Are there any rules about video calling?
 - b. Is it expected that employees work on the same times as at the office, or are they free to fill in their working day by themselves?
4. Did [company] take extra measures to guide and support employees with potential work issues that arise from virtual working? If yes, which measures?
5. What did [company] learn from the COVID-19 pandemic?

B. Interview Leaders

Introduction

1. Could you introduce yourself please?
Who are you and what is your function within [Company]?

Leadership

2. How would you describe your way of leading?
3. What is the philosophy on which your way of leading is based? /
What values are important to you as a leader?

LMX pre-COVID

4. How would you describe the work relationship with the employees within your team?
5. To what extent do the work relationships vary between different employees within your team?
6. Where are these differences in work relationship based on?

COVID-19

7. What changes have been made to the way of working for your team as a result of the COVID-19 pandemic?
 - a. Do you and your members work from home?
 - i. If yes, how often?
 - ii. If yes, how do you meet and communicate with your employees from a distance?
8. How do you experience working virtually?
9. Did your way of leading within the team change during the COVID-19 pandemic in comparison with your way of leading before the COVID-19 pandemic?
 - a. If yes, how? What did exactly change?
10. How do you experience leading virtually?
11. What skills are, in your point of view, needed to lead effectively in a virtual work environment?

LMX post-COVID

12. Have there been any changes in the working relationship with the employees within your team?
 - a. If yes, to what extent?
13. Can you describe how you maintain the working relationship with the members within your team during a period of a lack of face-to-face contact?

It is expected that working virtual work, and therewith virtual leadership, will become more common in the future, as a result of the COVID-19 pandemic and ever-improving technologies.

14. What changes must take place within [Company] in order to organize the remote/virtual work environment as effectively as possible?
 - a. Think about working hours, workplace, resources, etc.
15. What are, in your point of view, points of attention for virtual leadership within [Company]?

C. Interview Members

Introduction

1. Could you introduce yourself please?
 - a. Who are you and what is your function within [Company]?

LMX pre-COVID

2. How would you describe the work relationship with your leader?
3. Do you feel that the work relationships between your leader and different employees within the team vary?
 - a. If yes, in what way?
 - b. If yes, could you give examples?
4. Do you feel that there are benefits for employees who have a relatively good work relationship with the leader?
 - a. If yes, to what extent?
 - b. If yes, could you give examples?

Leadership

5. How would you describe the way of leading of your leader?
 - a. Could you mention some characteristics?

COVID-19

6. Have there been any changes with regards to your way of working as a result of the COVID-19 pandemic?
 - a. If yes, to what extent?/ what changed?
7. How do you experience working virtually?
8. Did you experience changes in the way of leading of your leader?
9. What skills are, in your point of view, needed to lead effectively in a virtual work environment?

LMX post-COVID

10. Did you experience changes in the work relationship with your leader as a result of virtual work during the COVID-19 pandemic?
 - a. If yes, to what extent?
 - b. If yes, do these changes affect your productivity, motivation, satisfaction or well-being?
 - i. If yes, to what extent?
 - ii. If yes, could you explain why?

It is expected that working virtual work, and therewith virtual leadership, will become more common in the future, as a result of the COVID-19 pandemic and ever-improving technologies.

11. What changes must take place within [Company] in order to organize the remote/virtual work environment as effectively as possible?
 - a. Think about working hours, workplace, resources, etc.
12. What are, in your point of view, points of attention for virtual leadership within [Company]?

D. Overview of Respondents

Code	Department	Nr.	Gender	Age	Tenure
BGI (Background Interview)	-	-	-	-	-
L.X	X	-	M	39	16
L.Y	Y	-	M	53	5,5
L.Z	Z	-	M	53	14
M.X1	X	1	F	21	3
M.X2	X	2	M	38	16
M.X3	X	3	M	39	4,5
M.Y1	Y	1	M	42	3,5
M.Y2	Y	2	M	36	6,5
M.Y3	Y	3	M	42	13
M.Z1	Z	1	F	25	3
M.Z2	Z	2	F	47	12,5
M.Z3	Z	3	F	50	1

X. Overview of case study with embedded units

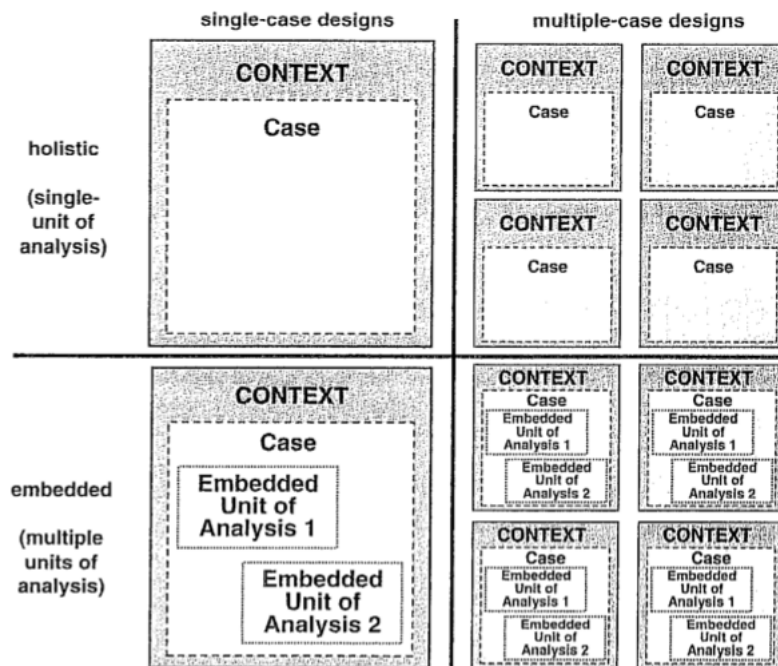


Figure X. Basic Types of Designs for Case Studies (Yin, 2003, p. 40)

References

- Allen, T. D., Golden, T. D., & Shockley, K. M. (2015). How effective is telecommuting? Assessing the status of our scientific findings. *Psychological Science in the Public Interest*, 16(2), 40-68.
- Avolio, B. J., Waldman, D. A., & Yammarino, F. J. (1991). Leading in the 1990s: The four I's of transformational leadership. *Journal of European industrial training*.
- Bass, B. M. (1985). Leadership: Good, better, best. *Organizational dynamics*, 13(3), 26-40.
- Bass, B. M., & Riggio, R. E. (2010). The transformational model of leadership. *Leading organizations: Perspectives for a new era*, 2, 76-86.
- Bass, B. M., Avolio, B. J., Jung, D. I., & Berson, Y. (2003). Predicting unit performance by assessing transformational and transactional leadership. *Journal of applied psychology*, 88(2), 207.
- Basu, R., & Green, S. G. (1997). Leader-member exchange and transformational leadership: an empirical examination of innovative behaviors in leader-member dyads. *Journal of applied social psychology*, 27(6), 477-499.
- Baxter, P., & Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *The Qualitative Report*, 13(4), 544-559. Retrieved from <http://www.nova.edu/ssss/QR/QR13-4/baxter.pdf>
- Braun, V., & Clarke, V. (2012). Thematic analysis.
- Burns, J. M. (1978) *Leadership*. New York: Harper & Row
- Caligiuri, P., De Cieri, H., Minbaeva, D., Verbeke, A., & Zimmermann, A. (2020). International HRM insights for navigating the COVID-19 pandemic: Implications for future research and practice.
- Carnevale, J. B., & Hatak, I. (2020). Employee adjustment and well-being in the era of COVID-19: Implications for human resource management. *Journal of Business Research*, 116, 183-187.
- Carter, N., Bryant-Lukosius, D., DiCenso, A., Blythe, J., Neville, A. J. (2014). The use of triangulation in qualitative research. In *Oncol Nurs Forum* (Vol. 41, No. 5, pp. 545-7).
- Collings, D. G., McMackin, J., Nyberg, A. J., & Wright, P. M. (2021). Strategic human resource management and COVID-19: Emerging challenges and research opportunities. *Journal of Management Studies*.

Daft, R. L., & Lengel, R. H. (1986). Organizational information requirements, media richness and structural design. *Management Science*, 32, 554–571.

Dansereau Jr, F., Graen, G., & Haga, W. J. (1975). A vertical dyad linkage approach to leadership within formal organizations: A longitudinal investigation of the role making process. *Organizational behavior and human performance*, 13(1), 46-78.

Den Hartog, D. N., Van Muijen, J. J., & Koopman, P. L. (1997). Transactional versus transformational leadership: An analysis of the MLQ. *Journal of occupational and organizational psychology*, 70(1), 19-34.

DiCicco-Bloom, B., & Crabtree, B. F. (2006). The qualitative research interview. *Medical education*, 40(4), 314-321.

Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American journal of theoretical and applied statistics*, 5(1), 1-4.

Gajendran, R. S., & Harrison, D. A. (2007). The good, the bad, and the unknown about telecommuting: meta-analysis of psychological mediators and individual consequences. *Journal of applied psychology*, 92(6), 1524.

Gerstner, C. R., & Day, D. V. (1997). Meta-Analytic review of leader–member exchange theory: Correlates and construct issues. *Journal of applied psychology*, 82(6), 827.

Gill, P., Stewart, K., Treasure, E., & Chadwick, B. (2008). Methods of data collection in qualitative research: interviews and focus groups. *British dental journal*, 204(6), 291-295.

Gillespie, N. A., & Mann, L. (2004). Transformational leadership and shared values: The building blocks of trust. *Journal of managerial psychology*.

Golden, T. D. (2006b). The role of relationships in understanding telecommuter satisfaction. *Journal of Organizational Behavior*, 27, 319–340.

Gouldner, A. W. (1960) ‘The norm of reciprocity: a preliminary statement’, *American Sociological Review* 25: 161 – 78.

Graen, G. B., & Uhl-Bien, M. (1995). Relationship-based approach to leadership: Development of leader-member exchange (LMX) theory of leadership over 25 years: Applying a multi-level multi-domain perspective. *The leadership quarterly*, 6(2), 219-247.

Graen, G., Novak, M. A., & Sommerkamp, P. (1982). The effects of leader—member exchange and job design on productivity and satisfaction: Testing a dual attachment model. *Organizational behavior and human performance*, 30(1), 109-131.

Grant, C. A., Wallace, L. M., & Spurgeon, P. C. (2013). An exploration of the psychological factors affecting remote e-worker's job effectiveness, well-being and work-life balance. *Employee Relations*.

Hansen, M. T., & Lovas, B. 2004. How do multinational companies leverage technological competencies? Moving from single to interdependent explanations. *Strategic Management Journal*, 25 (8/9): 801–822.

Harrell, M. C., & Bradley, M. A. (2009). *Data collection methods. Semi-structured interviews and focus groups*. Rand National Defense Research Inst santa monica ca.

Henderson, D. J., Liden, R. C., Glibkowski, B. C., & Chaudhry, A. (2009). LMX differentiation: A multilevel review and examination of its antecedents and outcomes. *The leadership quarterly*, 20(4), 517-534.

Hooper, D. T., & Martin, R. (2008). Beyond personal leader–member exchange (LMX) quality: The effects of perceived LMX variability on employee reactions. *The Leadership Quarterly*, 19(1), 20-30.

Hoyt, C. L., & Blascovich, J. (2003). Transformational and transactional leadership in virtual and physical environments. *Small group research*, 34(6), 678-715.

Hsieh, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative health research*, 15(9), 1277-1288.

Keller, T., & Dansereau, F. (2001). The effect of adding items to scales: An illustrative case of LMX. *Organizational Research Methods*, 4(2), 131-143.

Khan, S. N. (2014). Qualitative research method: Grounded theory. *International Journal of Business and Management*, 9(11), 224-233.

Kirchner, K., Ipsen, C., & Hansen, J. P. (2021). COVID-19 leadership challenges in knowledge work. *Knowledge Management Research & Practice*, 1-8.

Kirkpatrick, S. A., & Locke, E. A. (1991). Do traits matter. *Academy of Management Executive*, 5(2), 48-60.

Kotter, J.P. (1990) A Force for Change: How Leadership Differs From Management. The Free Press, New York.

Kuhnert, K. W., & Lewis, P. (1987). Transactional and transformational leadership: A constructive/developmental analysis. *Academy of Management review*, 12(4), 648-657.

Kuvaas, B., Buch, R., Dysvik, A., & Haerem, T. (2012). Economic and social leader–member exchange relationships and follower performance. *The Leadership Quarterly*, 23(5), 756-765.

- Lewis, S. and Cooper, C.L. (2005), *Work-Life Integration*, Wiley, Chichester.
- Liden, R. C., & Graen, G. (1980). Generalizability of the vertical dyad linkage model of leadership. *Academy of Management journal*, 23(3), 451-465.
- Liden, R. C., Sparrowe, R. T., & Wayne, S. J. (1997). Leader-member exchange theory: The past and potential for the future. *Research in personnel and human resources management*, 15, 47-120.
- Meyers, M. C. (2020). The neglected role of talent proactivity: Integrating proactive behavior into talent-management theorizing. *Human Resource Management Review*, 30(2), 100703.
- Monge, P., Rothman, L. W., Eisenberg, E. M., Miller, K. I., & Kirstie, K. K. (1985). The dynamics of organizational proximity. *Management Science*, 31, 1129–1142.
- Nardi, B., & Whittaker, S. (2002). The role of face-to-face communication in distributed work. In P. Hinds & S. Kiesler (Eds.), *Distributed work: New ways of working across distance using technology* (pp. 83–110). Cambridge, MA: MIT Press.
- Nielsen, K., Daniels, K., Nayani, R., Donaldson-Feilder, E., & Lewis, R. (2017). Out of sight, out of mind? Research into the occupational safety and health of distributed workers.
- O’Leary, M.B., Wilson, J.M., & Metiu, A. 2014. Beyond being there: The symbolic role of communication and identification in perceptions of proximity to geographically dispersed colleagues, *MIS Quarterly*, 38(4): 1219–1243.
- Patton, M.Q. (1999). Enhancing the quality and credibility of qualitative analysis. *Health Sciences Research*, 34, 1189–1208.
- Parry, E., & Strohmeier, S. (2014). HRM in the digital age—digital changes and challenges of the HR profession. *Employee Relations*.
- Pullan, P. (2016). Virtual leadership. *ITnow*, 58(3), 58-59.
- Raghuram, S., Garud, R., Wiesenfeld, B., & Gupta, V. (2001). Factors contributing to virtual work adjustment. *Journal of Management*, 27(3), 383-405.
- Robinson, O. C. (2014). Sampling in interview-based qualitative research: A theoretical and practical guide. *Qualitative research in psychology*, 11(1), 25-41.
- Shin, B., El Sawy, O. A., Sheng, O. R. L., & Higa, K. (2000). Telework: Existing research and future directions. *Journal of Organizational Computing and Electronic Commerce*, 10(2), 85–101.
- Silverman, D. (Ed.). (2020). *Qualitative research*. Sage Publications Limited.

- Stentz, J. E., Clark, V. L. P., & Matkin, G. S. (2012). Applying mixed methods to leadership research: A review of current practices. *The leadership quarterly*, 23(6), 1173-1183.
- Stogdill, R.M. (1974). *Handbook of leadership: A survey of the literature*. New York: Free Press.
- Strauss, A., & Corbin, J. (1990). *Basics of qualitative research*. Sage publications.
- Thorne, S. (2000). Data analysis in qualitative research. *Evidence-based nursing*, 3(3), 68-70.
- Twentyman, J. (2010), "The flexible workforce", *The Times*, 21 September, pp. 1-16.
- Van Breukelen, W., Schyns, B., & Le Blanc, P. (2006). Leader-member exchange theory and research: Accomplishments and future challenges. *Leadership*, 2(3), 295-316.
- Van Seters, D. A., & Field, R. H. (1990). The evolution of leadership theory. *Journal of organizational change management*.
- Verma, S., & Gustafsson, A. (2020). Investigating the emerging COVID-19 research trends in the field of business and management: A bibliometric analysis approach. *Journal of Business Research*, 118, 253-261.
- Wang, B., Liu, Y., Qian, J., & Parker, S. K. (2021). Achieving effective remote working during the COVID-19 pandemic: A work design perspective. *Applied psychology*, 70(1), 16-59.
- Watson-Manheim, M. B., Chudoba, K. M., & Crowston, K. (2002). Discontinuities and continuities: A new way to understand virtual work. *Information Technology & People*.
- Weber, R. P. (1990). *Basic content analysis*. Beverly Hills, CA: Sage.
- Wheatley, D. (2012), "Good to be home? Time use and satisfaction levels among home-based teleworkers", *New Technology, Work & Employment*, Vol. 27 No. 3, pp. 224-241.
- Wilson, J. M., Boyer O'Leary, M., Metiu, A., & Jett, Q. R. (2008). Perceived proximity in virtual work: Explaining the paradox of far-but-close. *Organization studies*, 29(7), 979-1002.
- Yu, D., & Liang, J. (2004). A new model for examining the leader-member exchange (LMX) theory. *Human Resource Development International*, 7(2), 251-264.
- Yukl, G. (1989). Managerial leadership: A review of theory and research. *Journal of management*, 15(2), 251-289.