Degree Programme and Code of the degree programme:
European Economy & Business Management - 0389

Bachelor Thesis

To obtain the academic degree:
Bachelor of Arts in Business (BA)

Challenges in virtual leadership in small and medium-sized enterprises in times of the COVID-19 pandemic

Subject:	Business Administration
Submitted by:	Daniela SCHUSTER
Student ID:	1910389201
Supervisor:	Prof.in (FH) Mag.ª (FH) Barbara Waldhauser, BSc (Hons), MRes, MA

Providing body:	University of Applied Sciences BFI Vienna Wohlmutstraße 22 1020 Vienna

Vienna, 06.03.2022

University of Applied Sciences BFI Vienna
Economics
Management
Finance

Statutory Declaration

I hereby declare

that I have abided by the rules of academic work, in particular that I have authored the bachelor thesis independently and have not availed myself of any sources other than the ones specified in the appended bibliography. All passages taken from other publications word for word or in substance are identified as such. I further declare that I have not yet submitted this bachelor thesis as academic work in any form, neither in Austria nor abroad.

I am aware that also after positive assessment of the bachelor thesis, discovery of a violation of the rules of academic work (especially in case of plagiarism) will result in the initiation of proceedings to declare both the assessment as well as the academic degree granted null and void.

Vienna, 06.03.2022
Place, Date

Author's signature

Declaration of Consent

With my signature I grant UAS BFI Vienna the campus-wide (UAS locations) right of use, in line with Copyright Act Sec. 18a, to make my bachelor thesis available on an intranet platform and to reproduce it for teaching and research purposes.

The author's copyright and all other rights of use related to it shall of course remain with the author of the thesis (see § 10 Abs 1 UrhG).

I also consent to the UAS' right to submit the thesis to an award event, e.g. the "Best Paper Award", after they have consulted me and any co-authors of the thesis.

Vienna, 06.03.2022
Place, Date

Author's signature

Table of Contents

List of Appendices

List of Figures

List of Tables

List of Abbreviations

COVID-19	Coronavirus Disease 2019
ERP	Enterprise Resource Planning
EU	European Union
ICT	Information and Communication Technology
LPP	Linked Personnel Panel
OGM	Österreichische Gesellschaft für Marketing
SME	Small and Medium-Sized Enterprises

Abstract

Purpose – The aim of this bachelor thesis is to identify the challenges and changes in virtual leadership in small and medium-sized enterprises in Austria, which arose due to the COVID-19 pandemic.

Design / methodology / approach – A literature-based research via analysing high quality published scientific papers and other studies concerning challenges of this topic was conducted. Comparing the conducted survey in the empirical part with the literature-based research demonstrates the perceived challenges and changes in the virtual leadership in SMEs in times of the COVID-19 pandemic.

Findings – The aim of this bachelor paper is to eventually answer the following question: "What challenges in the virtual leadership in small and medium enterprises occurred due to the COVID-19 pandemic?" It examines the perceived challenges of both leaders and employees on the influence of COVID-19.

Practical implications / value – The conducted survey contributes to the identification of challenges of virtual leadership arising as a result of the COVID-19 pandemic in SMEs in Austria.

1   Introduction: Problem outline and significance

In the introduction, the research topic and its relevance are addressed, as well as the research questions with its objectives. Furthermore, the theoretical research including the literature review, the methodical approach and lastly, the empirical part of this bachelor thesis are introduced.

1.1   Research topic and its relevance

Having a good leadership style is one of the cornerstones of running a successful business. This is a challenge, even under normal circumstances. It is made even more difficult with the current condition - the COVID-19 pandemic - as many companies have had to switch to a virtual leadership style. Initially, it was about bridging just lockdown periods, but by now, it is much more about finding the new normal and integrating it well into the company. It is essential to find out how this implementation will be possible for the employees and leaders, what challenges and changes have occurred, and how those will influence leadership. "At a time when we are connected all the time, the workforce has never felt more disconnected. Leaders hold the key to reconnecting employees and re-inventing culture."[1]

Looking at the results of a survey on leadership in times of COVID-19, it is evident that there is a split in perception of leadership between employees and managers. 80% of managers say they are satisfied with their lead, whereas only 43% of employees feel the same way.[2] "Leaders don't see the issue – there is a big disconnect between management views of their performance and the opinion of their employees."[3] If this one statement alone is considered, it is evident that these two different perspectives can lead to numerous problems in the execution of virtual leadership.

---

[1] The Adecco Group (2021) p. 7.

[2] The Adecco Group (2021) p. 71

[3] The Adecco Group (2021) p. 7.

Finding out where digital leadership fails and where both employees and managers are satisfied. More precisely since the trend is moving towards hybrid working and virtual leadership will thus be a fixed component of the work of the future.[4]

This thesis will focus exclusively on small and medium-sized enterprises. Such companies form the most significant part of the global market, both in terms of the number of employees and the economic aspect. Many academic articles, books, papers do not differentiate between company sizes when writing about matters such as the virtual leadership style in times of the COVID-19 pandemic. However, since SMEs are of such great importance, it was considered essential to deal with them in this thesis.

The importance of leadership is due to the fact that it is essential in response to challenges arising in the business world. Leaders must be able to react quickly and correctly in various situations, which may occur very sudden and are unpredictable – like the COVID-19 pandemic.[5]

1.2   Research question

Considering that 60-70% of the world's employees work in small or medium-sized companies[6], it is of enormous importance to take a closer look at the changes in virtual leadership in precisely these companies. In Austria, the percentage is even more significant: in 2019, 99.6% of all registered businesses were accounted for by SMEs.[7]

---

[4] The Adecco Group (2021) p. 12.

[5] University of Cambridge Institute for Sustainability Leadership (2017) p. 3.

[6] Arnold (2019) online.

[7] Bundesministerium für Wirtschaft und Klimaschutz (2022) p. 9.

Change accompanies us through every aspect of our lives and can most of the time not be avoided. However, the pandemic has brought much more extensive and heavier changes, and small and medium-sized enterprises, in particular, were greatly affected.[8]

For this reason, the question arises, "What challenges in the virtual leadership in small and medium enterprises occurred due to the COVID-19 pandemic?"

The goal is to outline the challenges that occur due to the switch to a virtual leadership style due to the Corona Virus.

To answer this research question, it is first necessary to outline the differences between traditional and virtual leadership and the importance of small and medium enterprises in today's business world. The research question is answered in the empirical part by conducting a survey in SMEs. In this survey, the perspectives of leaders and their employees will be opposed.

1.3   Methodical approach

This bachelor thesis used qualitative research, conducting an extensive literature search initially. The focus here lied on other surveys and scientific papers which have been published since 2020 and thus already deal with the effects of the global pandemic. Other sources published earlier than 2020 were also taken into consideration, to compare and elaborate the changes of leadership over the years.

For the empirical part of the bachelor thesis, a survey was conducted which is limited exclusively to leaders and employees of small and medium enterprises in Austria. Based on the results, it helped to identify the perceptions of leaders versus employees on the virtual leadership.

---

[8] Bundesministerium für Wirtschaft und Klimaschutz (2022) p. 7.

With the help of that survey, the differences between literature-based theory and current reality were demonstrated. Using graphs, the most frequently perceived changes will be shown, as well as how and if the COVID-19 pandemic had an influence on virtual leadership. A significant aspect of the survey was the importance of communication and which technical tools were used the most – both before the pandemic and now. The analysis of both topics in correlation with virtual leadership is very significant for the elaboration of the bachelor thesis.

The outline of this bachelor thesis is as follows:

Chapter one gives a short introduction to the topic and its relevance.

In chapter two, the leadership in general and the differences between traditional leadership and virtual leadership are discussed. Furthermore, the challenges in e-leadership and the influence of the COVID-19 pandemic are examined. Lastly, a theoretical outlook on a successful implementation of the virtual leadership style into a company is reviewed.

Chapter three deals with small and medium enterprises, both in the European Union and Austria. Additionally, the challenges, especially for SMEs in the times of this pandemic, are be presented and how the government of Austria is supporting those enterprises.

What follows is the empirical part, where the results of the conducted survey are discussed. The goal of the poll was to detect the personal perspectives of employees and leaders and whether they correlate or show differences regarding virtual leadership in the COVID-19 pandemic.

In the last chapter, the conclusion and the main findings are discussed.

2   Leadership in general

Leadership has many perspectives, it exists in many aspects of life and can be interpreted in many ways by many people. John Maxwell, for example, said the following: "Leadership is influence, nothing more, nothing less.".[9] While Warren Bennis stated, "Leadership is the capacity to translate vision into reality."[10] "Communication" is a word, which seems to be recurring in the context of "leadership".[11] [12] [13]

Communication is the key to the success of any business. Good communication was already difficult before the pandemic, new challenges have been added since the beginning of 2020. Initially, it was about bridging the lockdown period, but nowadays, it is much more about finding the new normal and integrating it well into the business. It is important to find out how this will be possible for the employees, what changes have been there and how these will influence communication at all. The current trend goes towards being connected to work almost every hour of the day. "At a time when we are connected all the time, the workforce has never felt more disconnected. Leaders hold the key to reconnecting employees and re-inventing culture."[14]

2.1   Definition leadership

There are a variety of definitions for leadership. Most sources include the phrases "communication", "guiding", "feedback", "management", "trust" or "influence".[15] [16] [17] Over the decades, the meaning of "leadership" has changed and developed, being shaped due to humanity´s history. From the early 1900s on, it was described as "the

---

[9] Maxwell (2015) p. 167.

[10] Booher (1992) p. 34.

[11] van Wart (2003).

[12] University of Cambridge Institute for Sustainability Leadership (2017).

[13] Sowcik et al. (2015).

[14] The Adecco Group (2021) p. 7.

[15] Earley (2015) online.

[16] Prossack (2018) online.

[17] Association of Executive Search and Leadership Consultants (n.d.) online.

ability to impress the will of the leader on those led and [to] induce obedience, respect, loyalty and cooperation"[18]. Starting in the 1930s, the perspective shifted towards the importance of characteristics of both employees and leaders. During the 1940s and the 1950s, the team itself and the team spirit became more significant. The team spirit grew to mutual objectives of employees and leaders in the 1960s. The process of having shared values and goals, developed further during the following decades, having gained a certain amount of popularity in the scientific world by the 1980s. It was then when the phrases "influence", "traits", or "transformation" fell while putting the power of leaders into focus. A decade later, the perspective on leadership shifted towards a more follower-oriented view, giving employees´ needs a voice. This movement set off a trend, which developed even more during the 21st century, creating various new leadership methods. Scientists started describing leadership with "trust", "authenticity", "guiding", or "including". The components of leadership nowadays include a team – which consists of followers, shared values and objectives, a leader, and power.[19]

Van Wart (2003) separated leadership into five components. He was defining objectives and their importance, obtaining appropriate traits of a leader, understanding, adequately executing of what is in the capacity of a leader's role, evaluating a team´s demands and finally operating with the correct method of leadership.[20] Despite the indecisiveness on how significant the features of a leader should essentially be, they are decisive and crucial to a team´s success. Characteristics include the ability to lead a team through difficult times, innovation, creativity, accurate execution of tasks, responsibility and trust within the company. It is necessary to be able to engage with employees personally and simultaneously not

---

[18] Moore (1927) p. 124.

[19] Northouse (2021) pp. 2–4.

[20] van Wart (2003) p. 175 ff.

to lose sight of the big picture. It is essential to find the middle path between professionalism, deep trust and the ability to empathise with employees.[21]

The cohesiveness, as well as the continuous motivation of a team, is one of the tasks of a manager. It is part of the leadership's duty to verify the actions of their employees and to represent them to the external parties. It is also necessary to give guidelines and correct instructions for the execution of work. A managerial position aims to create a workplace in which employees can smoothly carry out their tasks.[22]

The numerous definitions of leadership each describe different important components for successful execution. In traditional, common leadership, can be defined as an influencing process that helps an organisation achieve its objectives. In this form, power is exercised not only by leaders but also by individuals with no formal authority, while the effect of leaders is more visible in e-leadership. To achieve organisational goals, they must exert influence in order to create successful and functional virtual teams. A study shows that it is not possible to be a leader without followers[23], you are only a leader if people recognise you as such. Leadership can be seen as an interactive process that is based on various relationships and effective leadership motivates employees to achieve organisational goals.[24]

---

[21] van Wart (2003) p. 184 ff.

[22] Sugandha (2022) p. 1271−1272.

[23] Drucker (2013) p. 103.

[24] Contreras et al. (2020) p. 4

2.2   Definition virtual leadership

"E-leadership is an irreversible trend that is here to stay."[25]

Van Wart et. al. (2019) describe e-leadership as "the effective way and blending of electronic and traditional methods of communication. It implies awareness of current Information and Communication Technologies (ICTs), selective adoption of new ICTs for oneself, and the organization and technical competence in using those ICTs selected."[26]

Intensifying the knowledge and experience in virtual leadership is crucial in current times, especially as more businesses have transitioned to remote working due to the COVID-19 pandemic. The shift from an industrial to a digitalised corporate environment resulted in a change from a mechanistic to an organic perspective, in which businesses embrace flexible structures. At the beginning of the new century, work has become increasingly decentralised in order to facilitate labour and give better services to clients. As a result, a new mode of work – teleworking – became increasingly more critical and spread around the globe, with the service industry having the highest number of employees working from home.[27]

Before the outbreak of the pandemic, 75.5% of all employed people in Austria (3.69 million)[28] have never worked from home. Triggered by the pandemic, this number decreased to 66.9% in March and October 2020. In the same periods, 7.9% worked remotely daily, 12% multiple times per week, 6.3% various times per month, and 6.9% rarely.[29] This shows that the number of people who work from home is increasing slowly, but steadily.

---

[25] Contreras et al. (2020) p. 6.

[26] van Wart et al. (2019) p. 83.

[27] Contreras et al. (2020) p. 3

[28] Statistik Austria (2021a) p. 1.

[29] Statistik Austria (2021b) p. 1.

The switch to virtual leadership often happens without preparation and usually without retraining. Sometimes it is a gradual process that simply transpires over time and results in changes at micro and macro level. The reason why this shift happens without much attention is that it is mostly only minimal changes in the daily work process that are being modified.[30] Scientists therefore also refer to it as the "quiet revolution".[31]

In order to successfully lead a company with its involved parties, a leader must engage with new methods and approaches. These new approaches are aimed to help the people involved to shape, organize and effectively manage virtual teams. With the switch to teleworking, the opportunity for employees arose to work anytime, anywhere. This change would probably have happened even without the pandemic, but due to COVID-19 it became a reality from one day to the next. This new way of working will probably outlast the current pandemic and will become the new normal. E-leadership is by no means simply a continuation or another version of the "traditional" leadership. The difference between these two forms of leadership is a fundamental shift in the way leaders, their employees, and stakeholders interact within a company.[32] The skills required in e-leadership are usually referred to as e-skills, e-communication, e-management, e-learning or e-innovation. A leader operating in a virtual space should obtain competencies in communication, support, taking responsibility, change management, technology and trustworthiness.[33] Trust, also known as e-trustworthiness in e-leadership[34], is non arguably a consistent part of leadership, whether in person or the virtual space. The trust between leaders and their employees can be established through gaining various other skills, like a good communication basis, a support system and a good administration process.[35] While a high level of oral communication is a necessity for a good leadership, it might be challenging to comply with this requirement in e-leadership. Furthermore, the need to be able to engage with employees personally, as outlined by van Wart (2003), also presents a corresponding

---

[30] Contreras et al. (2020) p. 5.

[31] Avolio/Kahai (2003) p. 325.

[32] Contreras et al. (2020) p. 5.

[33] van Wart et al. (2019) p. 81.

[34] van Wart et al. (2019) p. 81.

[35] Contreras et al. (2020) p. 6.

challenge in virtual age.[36] On the other hand, the range of new communication models and tools is constantly growing. This growth, however, might not by all means make it easier to find the right communication tool. In addition, the expectation towards those new communication models and tools are permanently increasing.[37] Due to this continuously developing area, an e-leader should possess e-technological skills regarding relevant ICTs used in an enterprise. It is crucial to stay up to date with the latest technology and employee requirements and potentially making alterations in the ICTs being used for work processes if the demand changes.[38]

2.3   Challenges in virtual leadership

Finding out where digital leadership fails, where both employees and managers are satisfied, is an insurmountable challenge. Even more so since the trend is moving towards hybrid working and virtual leadership will thus be a fixed component of the work of tomorrow.[39]

There are numerous challenges, especially regarding a person's gestures and body language, which are partially or entirely missing. Another obstacle in e-leadership is developing a new form of leadership, in which employees and leaders can express themselves without misinterpretations arising concerning their needs and demands.[40] In order to communicate with employees well, leaders must be able to read facial expressions properly. Furthermore, the general interaction between human beings is very limited. There is no possibility to touch a person or influence the physical space between each other, and the non-verbal part of communication is entirely missing. The opportunity to connect with colleagues on a psychological basis has also vanished.[41]

---

[36] van Wart (2003) p. 184.

[37] van Wart et al. (2019) p. 81.

[38] van Wart et al. (2019) p. 92.

[39] The Adecco Group (2021) p. 12.

[40] van Wart et al. (2019) p. 85

[41] Sugandha (2022) p. 1275.

One of the main problems of e-leadership are online meetings. Nick Morgan, an American author and speaking coach, identifies various factors impairing the quality of virtual meetings and telephone calls in a Forbes article:

First, the social interaction with other people is entirely missing. The possibility of connecting with employees is limited or even impossible altogether. The usual way of talking to someone is no longer available because physical contact is non-existent. In many cases, online meetings are entirely held over the telephone without seeing each other, which eventually also eliminates facial expressions and gestures. Due to this absence and the unfamiliar way of communication, misunderstandings are frequently occurring. This also contributes to the attention span, which is minimised during an online meeting or phone call. Usually, online meetings have a duration of one hour, but within the first ten minutes, the attention span has faded already. Furthermore, this also greatly impairs memory and the ability to recall the meeting content well.[42]

Due to the pandemic, people have shifted from working at their office to working from home. This change of their work setting has confronted employees with even more advanced problems. In this context, other challenges may arise regarding technology. Difficulties resulting from a bad WIFI connection, possible interruption by constantly receiving e-mails or disturbance by different family members or roommates when working from home, may complicate the daily work routine. In case of troubles occurring with electronic devices, it is much harder to get proper support. If help is needed, it is not possible for an IT employee to be present in person. The distraction by other things at home is also much higher and more likely. Additionally, employees often struggle to separate their private life from the professional world and find it difficult to establish a suitable working environment. These distractions worsen the possibility of a leader being able to lead and communicate well with their employees. Being in touch and checking up on each of one's employees on a regular basis might be challenging if the options to contact each other are limited. Often it is impossible to

---

[42] Morgan (2012) online.

have a stable and consistent exchange with one's employees. A key figure, in that case, is trust, which is complicated to establish over the internet.[43]

Nick Morgan discusses the importance and the difficulties of establishing trust over the virtual space. Trust is an essential part of every relationship, whether it is between employees or between employees and their manager – their leader. Creating a trust may be complex itself, but preserving it if something endangers it, is even more essential. Morgan describes that impaired trust can be solved much quicker and easier in a face-to-face relationship, whereas this is not possible to do over the phone or via an online meeting. Employees are not being personally confronted by each other as a lack of human interaction. If the trust has once vanished, its chance being re-established lies very low.[44]

Trust between leaders and employees extends into various aspects of work. For example, it is particularly important to be able to trust employees, to assess and handle the information received correctly.

In the book "Leadership 2050" Sowcik et al. defined the overload of information as one of the biggest problems people living and working in the 21st century will have to combat. With everyone connected, no matter time, or location, it may cause complications in identifying the priority and importance of information.[45] Information overload increases the sensitivity of communication related to e-leadership. While communication is a crucial module of leadership, van Wart et al. (2019) defined fifteen problems which occurred in e-leadership:

1. "Insufficient and poor communication": Troubles with communication typically arise if there is a lack of communication, communication tools, or scarce instructions by leaders.[46]

---

[43] Sugandha (2022) p. 1275.

[44] Morgan (2012) online.

[45] Sowcik et al. (2015) p. 10.

[46] van Wart et al. (2019) p. 85.

2. "Miscommunication" occurs primarily because conversations in e-leadership have an absence of physical presence and are therefore missing human contact. Due to the lack of facial expressions and gestures, conversations can be perceived and interpreted quite differently.[47]

3. "Communication chaos" can happen during discussions, especially in more extensive meetings with a high number of participants. Due to the missing physical room, it is harder to communicate with other at the same time.[48]

4. "Lack of instructor support": The transition from "traditional" leadership requires changes in the method of leading, which some leaders are not willing, or cannot spend time on. Therefore, leaders are not able to support their employees in recurring problems.[49]

5. "Poor motivation of small groups": Motivating your employees is an effort itself but having to do this over a virtual space is even more difficult.[50]

6. "Insufficient accountability and use of accountability incentives" in regard to the active participation of the participants of an online meeting.[51]

7. "Insufficient instructor attention" is problematic, as it results in shortening the employees' attention span.[52]

8. "Poor management of change": The switch from "traditional" to e-leadership includes switching to working with more technological tools. Employees are usually not prepared for this change, and there is no time planned for

---

[47] van Wart et al. (2019) p. 85.

[48] van Wart et al. (2019) p. 85.

[49] van Wart et al. (2019) p. 86.

[50] van Wart et al. (2019) p. 86.

[51] van Wart et al. (2019) p. 86.

[52] van Wart et al. (2019) p. 86.

modification, which needs to be done in order to continue with the usual workday.[53]

9. "Poor understanding of ICTs" results from not introducing employees to the new tools used in e-leadership.[54]

10. "Underutilization of appropriate ICTs": As many companies have limited knowledge about ICTs in general, it is of no big surprise that they cannot use the correct ICTs for their needs. Additionally, the growing range of different applications and platforms is complicating the process of selecting the fitting ICT.[55]

11. "Weak management of the basic and auxiliary technology": Not every accruing problem needs the support of a qualified IT employee but can be solved by the employees themselves. Due to the absence of knowledge concerning technology in general, people have difficulties knowing what they can do themselves to solve a problem.[56]

12. "Weak security management" becomes an issue when employees work remotely and use their own technological devices, which have limited or no security systems to protect the company´s data.[57]

13. "Insufficient trust in the instructor": As the communication does not happen face-to-face, the confidence in leaders is impaired. Creating and maintaining trust is one of the more extensive problems occurring in e-leadership.[58]

---

[53] van Wart et al. (2019) p. 86.

[54] van Wart et al. (2019) p. 87.

[55] van Wart et al. (2019) p. 87.

[56] van Wart et al. (2019) p. 87.

[57] van Wart et al. (2019) p. 87.

[58] van Wart et al. (2019) p. 88.

14. "Constant contact issues for the instructor" might end up in expectations set by the leaders, which can be highly unrealistic and not achievable.[59]

15. "Poor oversight of diversity" includes not only race, gender or religion, but more precisely, different cultures or ages. Older employees, who might not have the same knowledge about technology as their younger colleagues suffer from its consequences. Combined with the lack of support from their leaders, a typical workday gets interrupted more frequently by recurring problems.[60]

2.3.1 The influence of the COVID-19 pandemic

In 2021, the Austrian Federal Ministry of Labour commissioned the opinion research institute OGM (Österreichische Gesellschaft für Marketing) to conduct a study on the influence of COVID-19 on work behaviour between leaders and employees. It was important to determine the extent to which the pandemic affected the behaviour of people working remotely. The results of the conducted survey were published in March 2021. The title of the survey was "Homeoffice: Verbreitung, Gestaltung, Meinungsbild und Zukunft", its goal was to understand how the remote work affected both employees and employers in various parts of their work. The survey was answered by a total of more than 1400 employed persons and more than 1600 companies, respectively services. In addition to surveying the acceptance of working from home, data was also collected on the general use, the design, future and perceived impact from leaders and employees of this mode of work. The perspectives of the employees and the leaders were published separately. The following points are of particular interest for this bachelor thesis: Internal company meetings, organisation of work, cooperation and teamwork, support in case of problems, control and feedback, the introduction of new employees, and social interaction.[61]

---

[59] van Wart et al. (2019) p. 88.

[60] van Wart et al. (2019) p. 88.

[61] Bundesministerium für Arbeit (2021) online.

The assessment gives a good insight into leadership performance and the communication between leadership and employees during remote working. These aspects were rated as "favourable" and "unfavourable" impact by employees and leaders. The missing percentage to 100% was rated as no impact, does not apply, do not know or not specified.

	Employees "unfavourable"	Employees "favourable"	Leaders "unfavourable"	Leaders "favourable"
Internal meetings	44%	26%	45%	20%
Cooperation, teamwork	43%	27%	60%	11%
Control and feedback	26%	20%	37%	5%
Social interaction	68%	13%	90%	2%
Organization of work	28%	48%	50%	17%

	Employees "unfavourable"	Employees "favourable"	Leaders "unfavourable"	Leaders "favourable"
Support in case of problems	40%	21%	45%	10%
Introduction of new employees	50%	12%	79%	2%

Table 1: Effects on leaders and employees in home office[62]

Both employers and employees tended to rate the above topics similarly. In general, it is noticeable that all bullet points of the entire survey are seen, in connection with remote work, from both sides as predominantly or majority as "unfavourable", except organisation of work. Here a diametral assessment was made with regard to it. The clear divergence between leaders and employers in relation to this topic is very striking. 48% of the employees thought of it as being "favourable", while only 17% of the leaders agreed upon that. Astonishing 50% of the questioned people in a leadership position, marked the organization of work as not being favourable in context of remote working versus just 28% of workers were the same opinion like the leaders.[63]

Regarding internal meetings, 44% (versus 26% "favourable") of the employees stated that it is "unfavourable", as well as 45% (vs 20%) of the leaders. On cooperation and teamwork, also clearly, the predominance of employees (43%, versus 27%) and the majority of leaders (60%, versus 11%) think it was disadvantageous. Taking a closer look on the distribution of the opinions regarding control and feedback, reveals a clear

---

[62] Bachmayer/Klotz (2021) p. 31-32.

[63] Bachmayer/Klotz (2021) p. 31-32.

imbalance between leaders and employees in terms of their approval. While 26% of employees saw it as "unfavourable" with regard to teleworking and 20% as "favourable", the opinions of the supervisors are much more divided. Even though 37% saw it as being "unfavourable", just 5% are convinced that control and feedback can be exercised well in home office. What is probably one of the most crucial aspects, is the social interaction: 68% (versus 13%) of employees' stated that remote working is unfavourable, and for managers, this figure is as high as 90% (versus 2%).[64]

All in all, based on the survey of the above-mentioned aspects, it can be stated that home office is predominantly regarded as "unfavourable" by both – employees and leaders, with the exception of the question organization of work.

In addition to identifying the opinions on the effects on virtual leadership due to working from home, the survey showed that the majority of employees and leaders indicated that work performance and productivity in home office is "favourable".[65]

2.4   Successful implementation

Besides challenges which must be managed to achieve successful leadership, there is also a wide range of benefits and new opportunities. With the possibility to work from almost any location, but also with having more freedom to decide more freely when to work, there is a positive effect on the work-life balance of employees. The employees experience a qualitative improvement in their lives, which increases happiness and satisfaction both privately and professionally. The positive effects of teleworking range from better compatibility of work and private life, improved work performance and lower stress levels in general.[66]

---

[64] Bachmayer/Klotz (2021) p. 31-32.

[65] Bachmayer/Klotz (2021) p. 31-32.

[66] Bachmayer/Klotz (2021) p. 34-35.

Executing e-leadership effectively provides businesses with significant competitive benefits. The opportunity to form efficient teams of people with unique experiences, cultures and knowledge of various industries is excellent. Although scattered workers are diverse, it is found that they have standard work features.[67]

It is of high importance for the employees to be able to work without constant observation and guidance from their leader. In a workplace where the e-leadership style is performed, it will mostly be expected to work alone and therefore being more responsible for their own work, which would usually be a leader´s obligation.[68]

The successful transition from traditional to virtual leadership is not only encouraged in today's world, but has become essential. Especially mastering online meetings has its value, as it carries one of the most essential components of leadership: communication in a team. As mentioned earlier (chapter 2.3), it is extremely difficult to choose the right technical tools that match the needs of a company. However, if one is able to find such a suitable programme, good communication can be guaranteed. Some important aspects to keep in mind when choosing programmes is that a certain regularity in the exchange between employees and managers must be possible. Furthermore, it should be a medium that ensures as few misunderstandings as possible in instructions, feedback and information exchange. It is mentioned repeatedly that, in addition to formal instructions, there should also be a certain bonding and group dynamic that binds employees to their company. In this context, e-social skills must not be neglected.[69]

Having expertise and experience may be necessary, but those abilities are worthless without constant innovation and keeping up to date with the newest developments. On the one hand, it is crucial to be aware of the changes in the virtual world and to be able

---

[67] Contreras et al. (2020) p. 5.

[68] Contreras et al. (2020) p. 6.

[69] Contreras et al. (2020) p. 6.

to apply them at any time, but on the other hand, it is also important to choose the right time to enable an uninterrupted work process.[70]

To ensure a successful online meeting, it is recommended to include the following points during the meeting: a clearly defined agenda of the meeting, with the respective assignments, time for questions from staff, as well as ensuring that every person present has the same information and can understand and implement it, approaching people personally and responding to staff suggestions.[71]

---

[70] Contreras et al. (2020) p. 6
[71] Morgan (2012) online.

3   Virtual Leadership in SMEs

Before focusing on virtual leadership in small and medium enterprises, it is necessary to define them. Furthermore, an insight into the importance of SMEs in the European Union and Austria is given. Finally, the challenges due to COVID-19 are analysed.

The definition of small and medium enterprises by the European Union is as follows.

Microenterprises

- can employ up to 9 employees,
- have a turnover of maximum of 2 Mio Euro, or
- have a balance sheet total of max 2 Mio Euro.[72]

A small enterprise can

- employ a maximum of 49 employees,
- have a turnover of up to 10 Mio Euro,
- or a balance sheet total of up to 10 Mio Euro.[73]

Medium enterprises can respectively have

- up to 249 employees,
- a maximum turnover of 50 Mio Euro or
- a maximum balance sheet total of 43 Mio Euro.[74]

---

[72] European Commission (2003) online.

[73] European Commission (2003) online.

[74] European Commission (2003) online.

Additionally, to these three limitations, the companies are only allowed to have less than 25% of capital shares or voting rights held by third parties.[75] In a best-case scenario, all three of the components as mentioned above would be fulfilled.[76]

Analysing how small and medium enterprises survive and combat challenges is of essence in the current times of this pandemic, which have been facing for the last two years.

It is particularly valuable and beneficial to leaders to be capable of understanding by what means the businesses have and will change. According to a study carried out by Bartik et al. (2020), SMEs often tend not to be fully financially stable, which could mean the end of an enterprise or even extinction of whole economies.[77] What therefore differentiates big from smaller companies is that larger enterprises often have the ability to provide their employees with the technology needed for working remotely from home.[78] Furthermore, it is important to successfully manage the obstacles of leadership and be in a stable financial state during COVID-19.[79]

3.1   SMEs in the European Union

2018 the European Union (EU-27, excluding the United Kingdom) reached a total amount of 23 millions small and medium enterprises. They account for 99.8% of all European companies and employ 65% of European citizens in employment, 84 million people in total. In all countries of EU-27, the percentage of SMEs is above 99%. The proportion of citizens employed by SMEs varies from 53% (France) up to 84% (Greece).

---

[75] European Commission (2003) online.

[76] Wirtschaftskammer Österreich (Viennab) online.

[77] Bartik et al. (2020) p. 17656-17666.

[78] Bekirogullari/Thambusamy (2020) p. 3216.

[79] Bekirogullari/Thambusamy (2020) p. 3216.

51% of total sales (€13,000 billion) are accounted for by SMEs, as well as 53% of gross value added (€3,500 billion).[80]

Without small and medium enterprises, growth, innovation, competition, and jobs would be inconceivable.[81] "SMEs therefore do not just significantly contribute to the economy – they ARE the economy."[82]

3.2   SMEs in Austria

Although SMEs might not individually employ many people, one should not underestimate the total number of SMEs' employees. In Austria, for example, 99.6% of all companies are small and medium enterprises.[83] This corresponds to 67% of the total workforce and 63% of all trainees. In absolute numbers, this is equivalent to 2.1 million employees and 53,200 trainees in Austria. Small and medium-sized enterprises generated a turnover of €514 billion in 2019. The gross value-added amounts to €135 billion the same year, which appoints to 60% of the total value-added.[84]

In the years before the COVID-19 disease hit the world, there was already a significant increase in the number of SMEs in Austria. Between 2008 and 2019, a 16% growth of new founded SMEs has been recorded; in the same period, the businesses were also able to take notice of a 15% increase in overall employment. With the number and the sizes of those enterprises growing, an increase of 36% for turnover and 27% for gross value added were also documented.[85]

Key figures which are the most significant in case of a crisis like this pandemic are the equity ratio, more precisely, the economic crisis resistance and the resilience of SMEs.

---

[80] Bundesministerium für Digitalisierung und Wirtschaftsstandort (2021a) p. 17.

[81] Bundesministerium für Wirtschaft und Klimaschutz (2022) online

[82] Arnold (2019) online.

[83] Bundesministerium für Digitalisierung und Wirtschaftsstandort (2021a) p. 9.

[84] Bundesministerium für Digitalisierung und Wirtschaftsstandort (2021a) p. 9.

[85] Bundesministerium für Digitalisierung und Wirtschaftsstandort (2021a) p. 9.

Fortunately, the equity ratio has progressed further and reached 33% in the financial year 2018/19, exceeding the minimum value of 30%, which a business should aim for.[86]

The COVID-19 pandemic took many businesses off guard and confronted them with unexpected obstacles and devastating consequences. According to a survey performed in October 2020, two-thirds of SMEs in Austria would see a decline in the yearly revenues for that business year. The initial projections for the first year of the economic crisis foresaw a 3% decline in employees in SMEs; turnover was predicted to decline by 10%, while the gross value added was expected to decrease by 6%.[87]

Although declining numbers were projected in the forecast for the business year 2020, small and medium enterprises were able to take action against sudden difficulties and obstacles positively and actively. The businesses changed and adapted their business models approached to digitalisation and were able to ensure their business´s liquidity regarding other suppliers and customers. However, since companies are not in a position to survive entirely on their own, the Austrian government has set up several projects. The purpose of these projects is to help SMEs in these situations of change and reorientation,[88] in order to also enable a successful implementation of virtual personnel management. Which projects and how they are supposed to help the companies will be examined in more detail in the subchapter 3.4.1.

---

[86] Bundesministerium für Digitalisierung und Wirtschaftsstandort (2021a) p. 9.

[87] Bundesministerium für Digitalisierung und Wirtschaftsstandort (2021a) p. 9.

[88] Bundesministerium für Digitalisierung und Wirtschaftsstandort (2021a) p. 10.

3.3 Virtual leadership skills in SMEs

The skills needed for e-leadership can be divided into three parts, creating the e-leadership triangles: strategic leadership, digital savvy and business savvy. In association with those three segments of e-leadership skills, the EU Commission conducted qualitative research to specify further competencies.[89]

For strategic leadership, the SMEs need expertise in understanding different cultures, communicating, interpreting customer needs, correctly operating with arising problems, autonomous learning, team leadership, predicting demands and innovation. Digital savvy demands, among other things, knowledge of various digital tools, apps, ERP (Enterprise Resource Planning) and IT systems, as well as being able to design and develop new applications. In regard to business savvy SMEs are among others required to successfully operate with project management, marketing and sales, finance, customers and changes in the organisational hierarchy.[90]

While strengthening skills related to e-leadership should be of high interest for not only businesses, but countries themselves, merely seven states from the European Union have arranged strong policies. Those countries are Spain, Belgium, Ireland, Denmark, the Netherlands, Italy and Malta.[91]

3.4 Challenges due to COVID-19

An important remark that needs to be addressed at this point is that despite the enormous importance of SMEs in the business world, as well as virtual leadership and the COVID-19 pandemic, relatively little literature exists in this very context. Most academic papers, when writing about companies, do not differentiate in the sizes of the companies.

---

[89] Hüsing et al. (2015) p. 11.

[90] Hüsing et al. (2015) p. 12

[91] Hüsing et al. (2015) p. 21.

With the COVID-19 pandemic, starting in early 2020, companies began to rely more on virtual resources, as normal operations with face-to-face contact were no longer possible. However, a study conducted as early as 2001 shows that virtual leadership has been a major issue for much longer, as already the majority of small and medium-sized enterprises already had virtual communication programmes in use.[92]

It is argued, that while bigger companies are better prepared for events like this pandemic, small and medium enterprises do often not have the resources to act accordingly and to keep their business successfully going. A key aspect to manage challenges is the knowledge and expertise from leaders to know how to lead their team through this time, which are often missing. To keep their enterprises afloat, leaders must learn to maximize the rare resources they possess.[93]

No matter how big a company is, they all have one common challenge: the loss of physical, personal contact with customers as well as with colleagues and superiors. With the loss of face-to-face communication, many non-verbal signals are also lost. A hurdle that has to be fought is the selection of the appropriate virtual communication programs to guarantee that the general contact and the bonding with the team are not lost. These programs must make it possible for the employees to communicate with their superiors as usual and the exchange of information as well as the work process are not disturbed. People who are not up to date with the latest programs may have problems communicating via virtual space and receiving instructions in a new format. This lack of knowledge leads to problems with trust, communication and productivity. In smaller companies, the lack of both human and technical resources often means that if someone is not familiar with the system, they have to react and provide support.[94]

---

[92] Bekirogullari/Thambusamy (2020) p. 3216

[93] Bekirogullari/Thambusamy (2020) p. 3218.

[94] Bekirogullari/Thambusamy (2020) p. 3218-3223.

The Linked Personnel Panel (LPP) conducted a survey in 2020 where they researched working from home in times of the COVID-19 pandemic. The survey concentrated on companies with a minimum of 50 employees,[95] this means that the survey cannot be completely applied to small and medium-sized enterprises. However, it serves as a basis for the survey, which is handled in the next chapter. It is clear from the survey that many respondents identified the transition to technical tools as one of the main problems.[96] Nevertheless, the resulting problems were often not addressed, as it was not possible to introduce all staff to the new programmes due to the rapid changeover caused by the pandemic. Short-term solutions were mainly sought, but long-term solutions were not available. The lack of long-term solutions, however, seems to have already existed in remote work before the outbreak of the pandemic. One of these long-term problems is that it is more difficult to work together with colleagues/employees.[97] It is important to note that the general satisfaction of the employees is relatively acceptable and the virtual leadership is not too much of a burden, despite the problems that regularly occur. Some participants even described working from home as "helpful" due to the covid-19 pandemic.[98] An interesting point of the survey is the work efficiency. In this aspect people working from home and in a normal office were compared. People who worked from home noted a clear increase in efficiency since COVID-19, while people who continued to work in the office actually experienced a reduction in efficiency.[99] This statement can also be applied to small and medium enterprises. In addition, the reduced exchange of information and the fear that employees have different and insufficient information led to problems in a virtual leadership style. It turns out that the rapid shift to virtual leadership due to the COVID-19 pandemic makes informal communication, as well as maintaining a bond with the team and the adequate responses to unpredictable changes, more difficult.[100]

---

[95] Frodermann et al. (2021) p. 2.

[96] Frodermann et al. (2021) p. 5.

[97] Frodermann et al. (2021) p. 5

[98] Frodermann et al. (2021) p. 6

[99] Frodermann et al. (2021) p. 8

[100] Bundesministerium für Digitalisierung und Wirtschaftsstandort (2021b) p. 43

A further, very significant challenge related to COVID-19 is the increased need for digitisation. The necessity for a strong digitalisation strategy has become clear through a survey: 73% stated that it has enabled them to maintain flexibility in the work process.[101] Companies that had not implemented virtual leadership at the time of the pandemic's arrival in Austria stated that they could no longer continue their business processes as usual. The transition from the "traditional" personal leadership to the virtual basis was hindered.[102]

Due to those arising obstacles, there have been many changes that have developed as a result of the COVID-19 pandemic. In the following aspects there was a significant increase:

Trust between employees and superiors increased by almost 42%, along with the feedback culture (34.5%). In addition, managers were now also increasingly being considered as mentors. It was evident that contact between people has been increased, especially on a qualitative level. With regard to the place of work, there were also noticeable changes: due to the pandemic, people have been forced to reduce face-to-face contacts and increasingly resort to virtual collaboration (here 75% growth is shown), which in a broader sense also implied that remote working has registered an increase of over 55%. Finally, the use of technical programs has also shown an intensification: both software and hardware were increasingly used for virtual collaboration - with an elevated use of up to 58%.[103]

In order to identify and overcome these obstacles, as well as changes, mentioned above, there are various tips to manage a successful virtual leadership:

1. Regular face-to-face video calls with employees to clarify possible problems and ambiguities.

---

[101] Bundesministerium für Digitalisierung und Wirtschaftsstandort (2021b) p. 11.

[102] Bundesministerium für Digitalisierung und Wirtschaftsstandort (2021b) p. 10.

[103] Bundesministerium für Digitalisierung und Wirtschaftsstandort (2021b) p. 37.

2. Use of different communication programs in order not to communicate only over one-way communication. By alternating e-mail instructions, telephone conferences and video chats, the personal contact can be increased, which in the case of virtual management somewhat falls into the background and loses importance.

3. The implementation of limits regarding accessibility. Working from home often means having the feeling to be constantly available, which can be stressful.

4. Virtual, personal exchange between employees and supervisors, so personal concerns can be addressed and employees, as well as leaders, have a chance to bond with their team.[104]

It is of importance for small and medium-sized enterprises to consider recommendations like these besides various other adaptations, in their virtual leadership culture, which require a significantly increased need for investment by SMEs. In this context, there are some projects financed by the state to Austria, to further support those enterprises.

3.4.1 Supporting projects by the Austrian government

Since small and medium-sized enterprises often have financial problems and do not have the same financial backing and possibilities as large companies, there are some support programs by the Austrian government. These programs are gaining importance to counteract the effects of the Corona pandemic. The financial resources of the following programs support, among other things, with the switch to virtual management and consequently also with the successful management of the challenges related to virtual leadership.

---

[104] Bundesministerium für Digitalisierung und Wirtschaftsstandort (2021b) p. 44.

KMU.DIGITAL

KMU.DIGITAL focuses on the IT security of businesses. KMU.DIGITAL was founded as a project for small and medium-sized enterprises by the Federal Ministry for Digitization and Economic Development (BMDW) and the Austrian Federal Economic Chamber. The goal of this initiative is to digitise SMEs with the help of new virtual strategies and thus strengthen their competitiveness against other, potentially larger companies. The program was launched in 2017. From 2021 to 2023, the initiative will provide 15 million euros in support.[105]

Digital Skill Scheks

This program also focuses on the support of small and medium enterprises and their competitiveness in the global market. It financially supports the businesses for the employees to get further education in digital competencies. Through the increased experience and knowledge that is to be achieved with this project, it is intended to enable SMEs to have the same opportunities as large companies, as they often lack the financial resources to pay for those further training. A maximum support of 5,000 euros per digital skills check, as well as a maximum funding rate of 80%, is possible here. In addition, a maximum of 10 employees per company can be supported per call for proposals.[106]

---

[105] KMU.DIGITAL (n.d.) online.

[106] Wirtschaftskammer Österreich (Viennaa) online.

4 Empirical research

4.1 Research design

The method used for the empirical part of this bachelor thesis was a quantitative methodology. The reasons for deciding on a survey was on the one hand to reach the most significant possible number of people in small and medium-sized enterprises and thus obtain a representative cross-section of participants and on the other hand to obtain as broad a range of perspectives as possible. The format of interviews in this scale would have therefore not been possible.

As for the topic "Challenges in virtual leadership in small and medium enterprises in times of the COVID-19 pandemic", no questionnaire was available, therefore an own questionnaire was compiled. When preparing the survey, care was taken to ensure that the participants were not overtaxed in order to achieve the highest possible response rate. Another important aspect was that the total time required to complete the questionnaire should not be too long. To grant the participants' privacy on the one hand and on the other hand, to prevent possible external influence on the respondents as well as to obtain an unbiased picture, the answers were collected and evaluated anonymously.

Based on studies and scientific research papers, which have been analysed in the literature section of this bachelor thesis, the questions of the following survey have been brainstormed several times, then carefully formulated and selected. Publications such as "Homeoffice in Zeiten von Corona" by IAB[107], "Homeoffice: Verbreitung, Gestaltung, Meinungsbild und Zukunft" by the Austrian Ministry of Labour[108], or "e-Leadership Skills for Small and Medium Sized Enterprises" by the European Commission[109] were consulted. As comparatively limited literature has been written

---

[107] Frodermann et al. (2021).

[108] Bachmayer/Klotz (2021).

[109] European Commission (2003).

on the changes in virtual leadership in small and medium-sized enterprises during the era of COVID-19, this part of the paper attempts to identify these challenges.

The aim of the survey was to find out what challenges the respondents perceived from "traditional" to virtual leadership in the period since the outbreak of the COVID-19 pandemic. They were asked about their personal impressions on how they have experienced the changes. With the personal feelings about this modification, parallels were then able to be drawn between literature-based theory versus reality, and it was possible to determine whether they coincide or demonstrate differences.

The survey was divided into 15 questions, which took an average of 9 minutes and 37 seconds to complete. Question number 13 was split into six sub-questions; question 14 had eleven.

In some cases, unipolar Lickert scale questions were chosen for this purpose in order to make it easier to answer, to increase consistency, and to highlight potential problem areas for the topic in question.

The questionnaire was conducted via the Microsoft Forms program from the provider Office365.

4.2 Description of the sample

The survey was put online on February 18th, 2022 and could be answered until February 25th, 2022. Respondents thus had one week to take part. The short survey period was deliberately chosen because an unannounced survey naturally has a relatively low response rate. It was assumed that an extension of the response time would not lead to an increase in the response rate.

On February 18th, 2022, the survey was sent out by e-mail to a list of over 3,500 SME e-mail-addresses as well as distributed via the private network. The email addresses of the companies and individuals were compiled with the help of extensive internet

research, as well as recommendations and contacts from acquaintances. The internet research was conducted by looking up individual companies in various industries across Austria. The response rate to this poll is estimated at around 5%, although there is no precise figure available how many people actually received the survey. This is due to the fact that in the cover letter accompanying the survey, the recipients were asked to send the survey also to other eligible persons (snowball system). The addition snowball system was used to partially mitigate the uncertainties resulting from own internet data collection. The goal was to ensure that the net response rate was as high as possible.

The survey was exclusively addressed to small and medium-sized enterprises located and operating in Austria. For this reason, the survey was entirely written and carried out in German.

To guarantee that only research subjects working in SMEs took part in the survey, the first question defined the criteria of SMEs, furthermore asking whether the participant fell into this category. Since the COVID-19 pandemic has been affecting the world for two years as of today (February 2022), it was considered appropriate to also ask people who have worked in an SME not only at the time of conducting the survey but also at some point in the last two years – between February 2020 and February 2022. However, if this was neither nor the case, the survey was automatically terminated after the first question. A total of 188 people took part, 179 of whom gave usable answers, while nine people are/were not employed in an SME. Additionally, this survey differentiated between people who have/had a management position with personnel responsibility and employees without a management position in the last two years. Of these 179 people, 105 were in a leadership position with personnel responsibility, and 74 were employees. Thus, the percentage distribution of responses was 58% leaders and 42% employees. The reason for differentiating between participants with management positions and employees was due to the reason that these two groups could be compared in the evaluation and any differences could be made evident.

In order to guarantee that the survey was completed to the end, simple and understandable wording, as well as a relatively short response time were deliberately

chosen. Additionally, there was an option to receive the results of the conducted survey. For this purpose, the respondents had to enter their email address in the last field, 42.5% took advantage of this offer. Despite the indication of the email address, the survey was evaluated anonymously.

AGE GROUPS IN YEARS

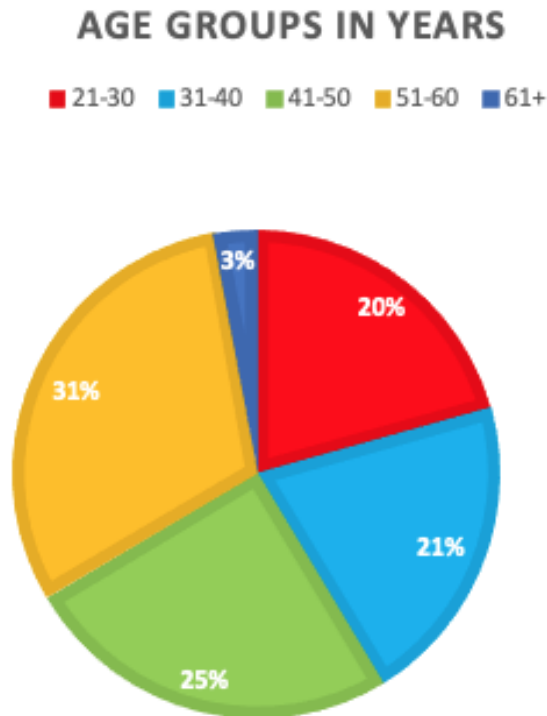■ 21-30 ■ 31-40 ■ 41-50 ■ 51-60 ■ 61+

Figure 1: Age groups in years

In its demographic part, the survey furthermore asked about the age of the respondents to get an approximate insight into their age. 37 people (20,7%) each lay in the age groups 21 to 30 years and 31 to 40 years. 25,1% (45 participants) were 41 to 50 years old. The most significant part was formed by the 51- to 60-year-olds, where 30,7% (55 respondents) lay, the smallest part building the 61+-year-olds, with just 5 participants (2,8%).

4.3 Results and analysis

Since the perspectives of supervisors and employees vary, it was important to separate these two views in the evaluation to be able to compare them. In some cases, there were no noticeable differences, but in others, there were – which of course, had to be addressed.

4.3.1 Working from home during the COVID-19 pandemic

To get an idea of how many people switched to the home office due to the impact of the COVID-19 pandemic, the question was asked how often people worked from home before the outbreak versus the Status Quo. Based on the survey conducted by Statistik Austria in 2021 and in order to be able to accordingly compare the results of the study by Statistics Austria and this survey, the same question and answer options were used.

The results of the survey conducted through this thesis, show enormous changes between the two periods – before the outbreak of the COVID-19 pandemic versus in current times, February 2022:

Working from home	Before COVID-19 in %	Currently in % (February 2022)
Daily	6.70	17.32
Several times a week	7.26	26.82
Several times a month	11.17	17.32
Less often	27.37	20.67
Never	47.49	17.88

Table 2: Work situation before vs since COVID-19

As seen above, there is still a significant amount of people who work from home altogether, even in February 2022. Although the pandemic has been going on for two years at this point in time and the last lockdown in Austria already ended on December 11th, 2021[110], over 17% still work from home on a daily basis and over 26% several times a week. The number of people working from home several times a week has increased by almost 20%, which is the highest growth in this context. While the daily and several times a week home office activity has more than triplet, compared to pre-COVID-19 times. Considering the additional respondents, who worked from home several times a month, this number has increased by the factor of 2.5. A clear shift towards remote working is particularly evident in the figures or the number of respondents, who never worked from home. Here the number dropped significantly by

---

[110] Parlament Österreich (2021) online.

almost 30%; before COVID-19, nearly 50% of the participants have never worked from home, whereas this figure currently stands at about 18%.

In comparison, the survey evaluated by Statistik Austria shows a completely different expression.

The survey was conducted in 2021, asking how many employed people have been working from home before the pandemic overall[111] versus in the two periods March and October of 2020.[112] However, the organisation did not focus its survey on SMEs, but on people in all businesses in Austria, regardless of their size.

Working from home	Before COVID-19 in %	March & October 2020 in %
Daily	5.1	7.9
Several times a week	5.1	12.0
Several times a month	4.7	6.3
Less often	9.2	6.9
Never	75.5	66.9

Table 3: Work situation in Austria before vs during COVID-19[113] [114]

---

[111] Statistik Austria (2021a) p. 1

[112] Statistik Austria (2021b) p. 1.

[113] Statistik Austria (2021a) p. 1.

[114] Statistik Austria (2021b) p. 1.

According to the Statistik Austria survey in general 75.5% never worked from home before the pandemic, while that number only dropped to 66.9% during March and October 2020. Furthermore, fewer people overall worked from home both before and after the outbreak of the pandemic.[115] [116]

In general, a comparison between the unrestricted survey by Statistik Austria in 2021 and the survey conducted in February 2022, which is restricted to only SMEs, shows an even higher figure of SME respondents working from their home before the pandemic and were therefore more affected by virtual leadership.

Linking the data from March and October 2020 to the data from February 2022, an additional immense increase in the proportion of people working from home since then can be detected. While only 33.1% worked from home between March and October 2020, this figure stands now, in February 2022, at 82.1%. This indicates a doubling of the quota of remote work mode since March/October 2020.

4.3.2 Communication tools used during COVID-19

The communication tools used, provide further insight into how communication between leaders and employees has developed through COVID-19. Therefore, it was firstly essential to determine which technical tools of the participants associated virtual leadership during the COVID-19 pandemic. It was possible to select multiple options.

---

[115] Statistik Austria (2021b) p. 1.

[116] Statistik Austria (2021a) p. 1.
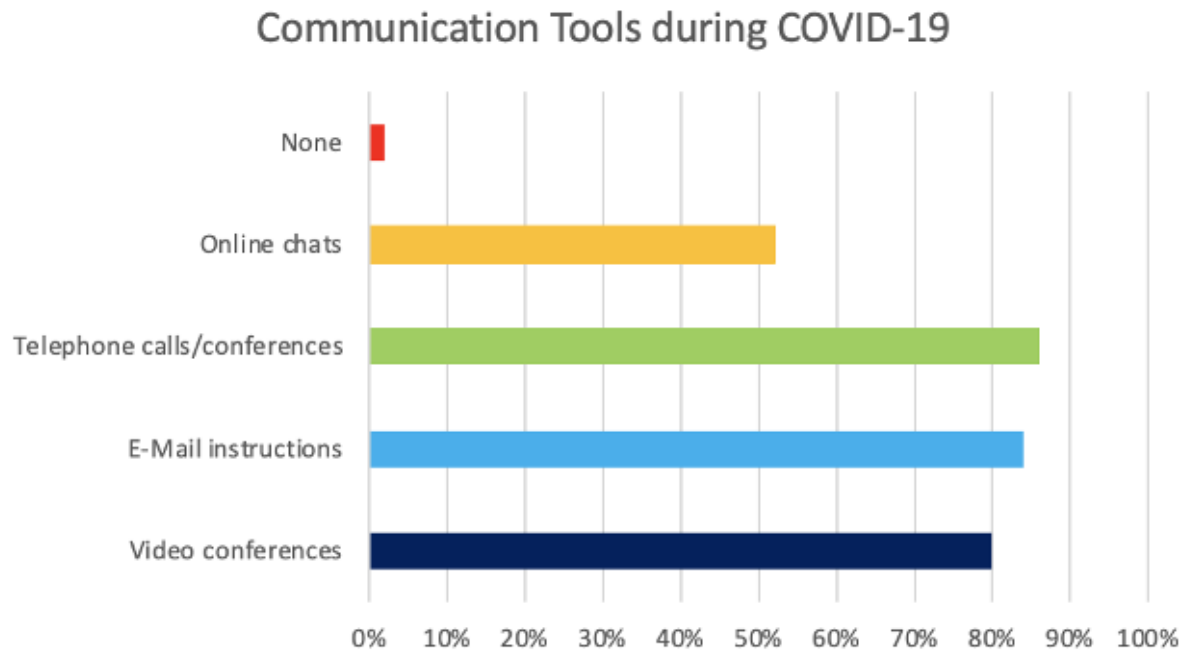
Communication Tools during COVID-19

Figure 2: Communication Tools used during COVID-19

There was a significant usage of at least 80% or more of all listed technical communication tools, with the exception of online chats, which were only used by 52% of respondents. It should be noted here that before the pandemic only 43% of the respondents stated that they had already worked with these technical communication tools. 27% at least partly worked with some of the above-mentioned tools, while 30%, on the other hand, noticed that leadership was not conducted via these types of communication before the pandemic. Consequently, the pandemic has led to almost doubling the usage of the cited technical tools.

While 30% of the respondents did not rely on any of the mentioned technical tools before the outbreak of COVID-19, this figure decreased significantly to 2% during the pandemic. This indicates an enormous increase in using technological programmes like video conferences, e-mails, telephone calls or conferences and online chats. When asked if virtual contacts in general have increased due to the impact of the COVID-19 pandemic, almost 90% agreed very strongly or strongly. Only slightly over 10% perceived a neutral or low influence in this aspect. Both leaders and employees had similar views here: over 90% of supervisors and 84% of workers agreed with this statement, only less than 5% each disagreed. Combining these answers, it can be

identified on the one hand that the use of technical tools has hugely increased, and on the other hand that the reason for this can be traced back to the Corona pandemic.

An important point in connection with the use of technical communication tools is also the general technical know-how, which is very significant, especially in the virtual form of leadership. For this reason, leaders were asked whether they had sufficient knowledge and experience to lead a virtual leadership. At the same time, the employees were asked whether they thought their supervisors had this know-how.

In general, the majority in both parties were clearly convinced that supervisors had sufficient knowledge and experience to successfully implement a virtual form of leadership. However, it should be noted that 45.7% of the supervisors strongly agreed, whereas "only" 36.5% of the employees stated a strong satisfaction as well. Overall, however, 84.7% of supervisors and 74.3% of employees agreed with this hypothesis and were obviously satisfied with the execution of technical tools on a virtual basis so far.

A rather more significant difference can be seen in the level of dissatisfaction: just 1.8% of leaders saw a lack of know-how, whereas 10.8% of employees were dissatisfied with the skills of their superiors.

4.3.3 General effects of COVID-19 on virtual leadership

To get a further and deeper understanding, what an increased usage of technical tools, combined with an increase in virtual contact means, the participants were asked what they associated with virtual leadership. In this context, a good perspective of personal believes by leaders and employees on virtual leadership was possible to be created.

The next series of questions had the following possible answers choices:

- – Strongly agree
- – Agree
- – Neutral
- – Disagree
- – Strongly disagree

Overall, more than 50% see a clear impact on leadership due to the outbreak of the pandemic, 21% a partial impact, 21% a minor impact and only 7% said they did not notice an impact at all.

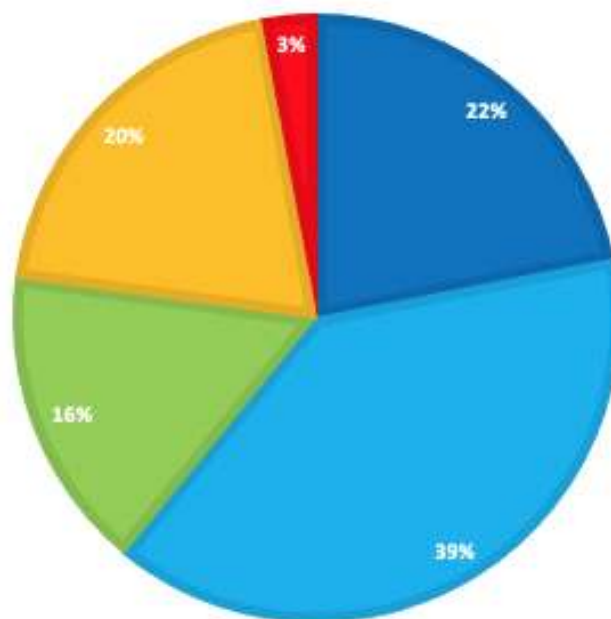Differentiated between leaders and employees the distribution is as follows:

Figure 3: Influence on leadership due to COVID-19, leader perspective

INFLUENCE ON LEADERSHIP DUE TO COVID-19 (EMPLOYEES)

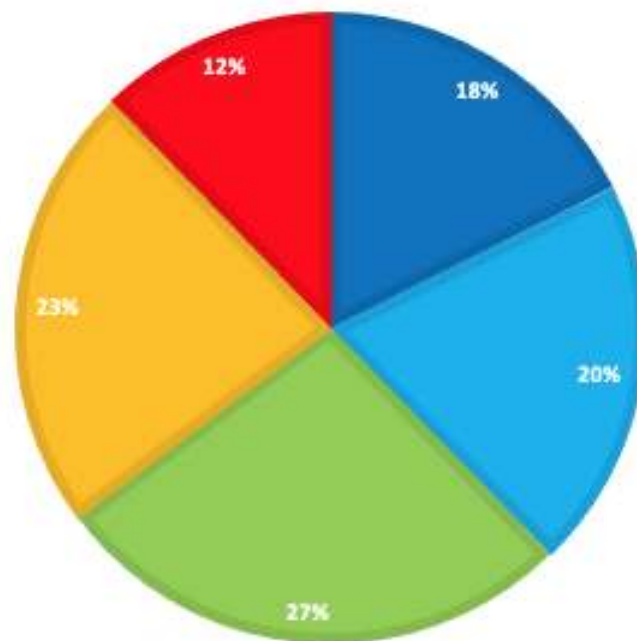■ Strongly agree ■ Agree ■ Neutral ■ Disagree ■ Strongly disagree

Figure 4: Influence on leadership due to COVID-19, employee perspective

In this context, there were apparent differences in perception between managers and employees: while just over 61% of supervisors felt an influence, only 37% of employees were of the same opinion. This is a difference of almost 25%. It should be noted here that 27% of employees (supervisors: 20%) were neutral towards influence, and 35% have perceived little to no effect. This percentage was just 23% for leaders. When interpreting these statements in context, it could mean leaders are more self-critical of their role as managers and saw more challenges and changes adapting to the new way of leading. The change from traditional to virtual leadership requires a lot of knowledge and experience in handling sudden events, which is especially challenging for supervisors. Staff members are also affected by this change, but they do not have to take care in addition to their work that not only they, but a whole team can master the transition.

A very general but essential question was whether the participants judged the virtual leadership as a burden. 17.1% of supervisors and 13.5% of employees were burdened by it; however, the majority of both groups (58% and 63.4%) did not feel strained. This statement is particularly interesting, as the general majority did, on the one hand, perceive a change in the type of leadership, but on the other hand, did not see it as a hurdle and did not feel burdened by it.

4.3.4 Aspects associated with virtual leadership

Question number 13 focused on various aspects associated with virtual leadership and was divided into six sub-questions.

The goal was to analyse how strongly leaders and employees observed these changes.

The participants were asked to assess the following points:

- A more efficient work process
- More independent work
- More solution-oriented work
- Working from home
- Reduction of personal contact
- Higher trust between supervisors and employees

The participants had the following answer options:

- Strongly disagree
- Disagree
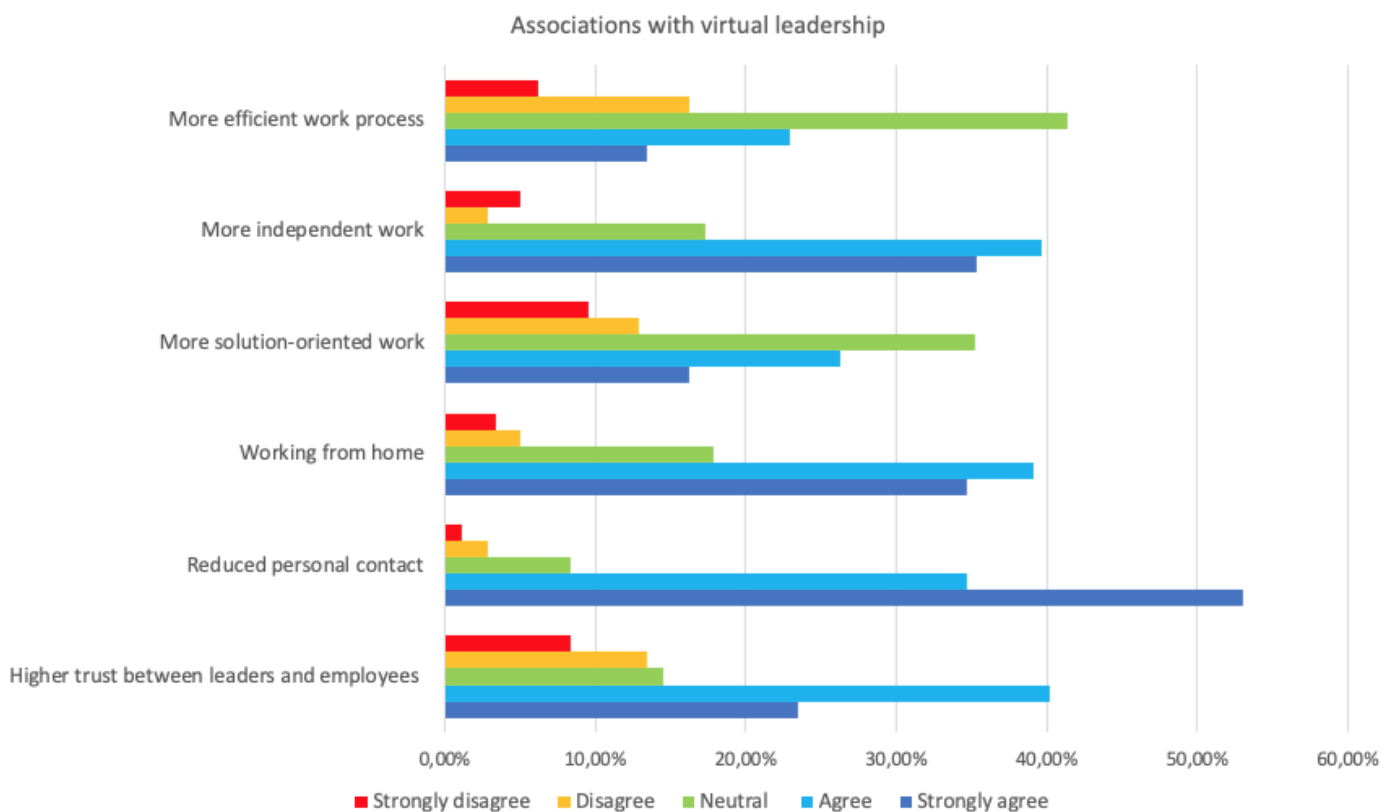- Neutral
- Agree
- Strongly agree.

Figure 5: Associations with virtual leadership

The aspect, which was associated most with virtual leadership, is the reduced personal contact. More than 87% of all participants agreed with this statement, even the majority (53%) strongly agreed. Alongside this fact 75% saw a more independent work. Furthermore, almost two-thirds (63.7%) stated that higher trust between leaders and employees was essential for virtual leadership. This perspective aligns with the theory in chapters two and three. In addition, 75% of the people mentioned that working from home is part of the virtual leadership form.

Decreased communication led to a higher responsibility for their own work, which the workers had to carry out themselves now. This hypothesis aligns with the apparent change which can be seen in independent working: 75% said they work much more/more autonomous, a vanishing minority of 5% disagreed with it. Working more autonomously goes hand in hand with higher trust needed between superiors and employees (63.7% saw this as a matter of fact). Whether this new type of leadership

leads to more solution-oriented work was something the respondents are in disagreement about: 42% saw an improvement here, 35% were unsure, and 23% saw a deterioration.

Although 75% of the participants noted, they worked more alone due to virtual leadership as a result of the pandemic, the work had has not necessarily become more efficient. On the side 36% observed an increasingly more efficient work process, while 41% were of the opinion that it has only improved partially. 22% even stated that there is an efficiency-reducing work process as a result of virtual leadership.

Concluding, the following can be mentioned: due to the rise in working from home and as a consequence, the reduction of personal contact, it was no longer possible to coordinate every step with the leaders. This required more independent work, in which the employees bore more responsibility. Since many things could no longer be coordinated in between, i.e., briefly in a side conversation, and one had to increasingly wait for meetings, only a minority saw less efficient work process as a result of virtual leadership.

Question number 14, "Due to the virtual leadership…", had eleven sub-questions, which were:

- Reduced bonding to the team/company
- Coordination processes between leaders and employees are more difficult/interrupted
- Solve problems more autonomously, without the support of leaders/employees
- Information process between leaders and employees is interrupted/more difficult
- More misinterpretations of instructions from leaders
- Less one-on-one meetings
- Less general meetings
- Problems increasingly not addressed or voiced

- Leader has less time for their employees
- More conflicts/misunderstandings in the team
- All necessary leadership aspects are covered, a successful execution of leadership is possible

The participants were again asked to assess them with the following answer options:

- Strongly disagree
- Disagree
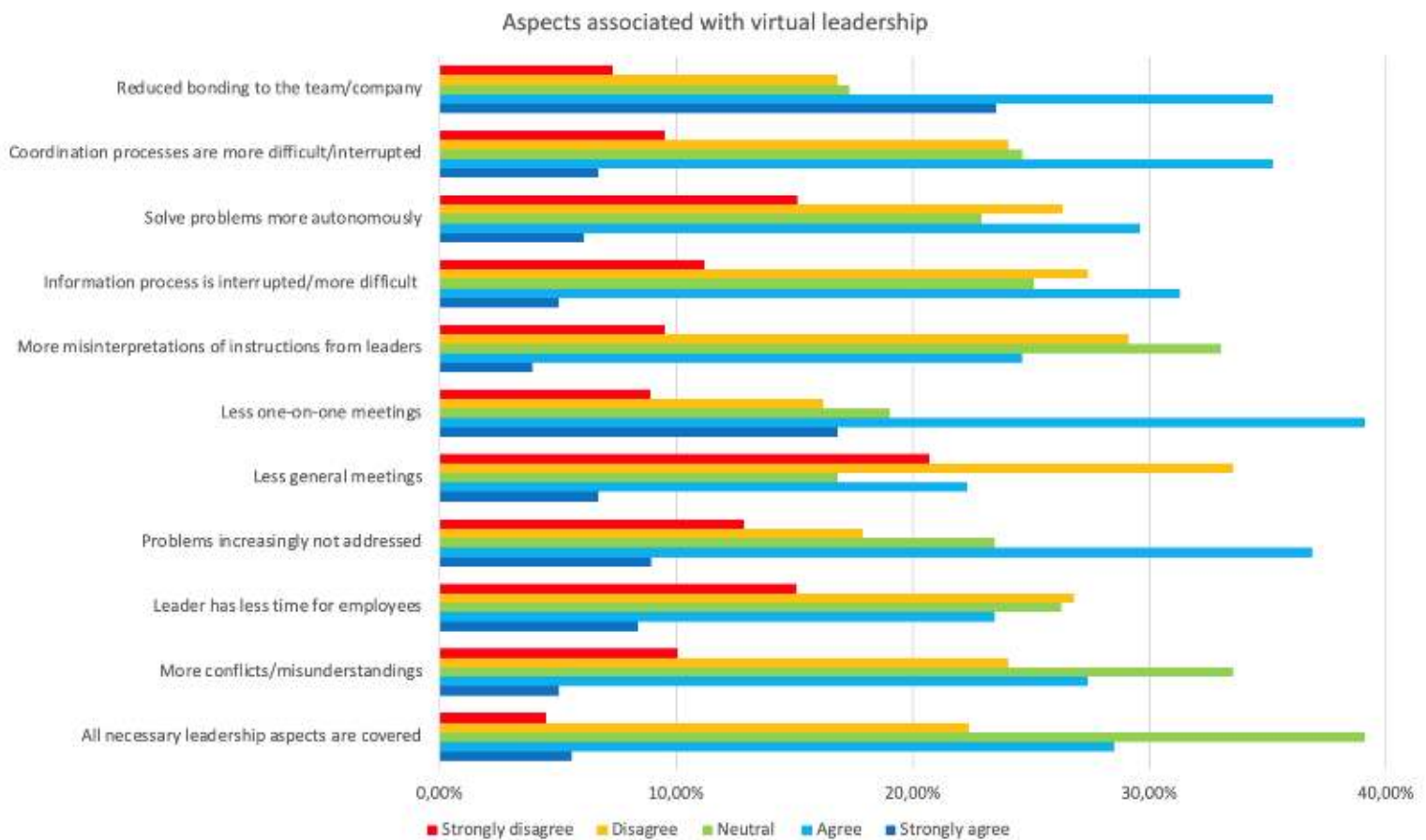- Neutral
- Agree
- Strongly agree

Figure 6: Aspects associated with virtual leadership

The graph shown above, asked the participants how they observed the changes in virtual leadership.

The hypothesis "Due to virtual leadership there are fewer general meetings", was clearly denied by 54.2%. Only less than a third of the participants (29%) observed a decrease of meetings due to virtual leadership. Both leaders and employees, had similar perspectives on this: 55.2% (leaders) and 52.7% (employees) agreed on an overall increase in general meetings.

Comparatively, there was a significant drop of one-on-one meetings, which 55.9% perceived. What is interesting to note, is the diverse cognition between leaders and employees in regard to the reduction of one-on-one meetings: while 48.6% of the

leaders noted a decrease, 66.2% of the employees felt that way as well, which concludes to a remarkable difference of 17.6%.

Misinterpretations of instructions from leaders, is an aspect upon which 28.5% of the participants agreed. On the other hand, 38.6% stated that they were receiving good and understandable instructions from their superiors, 33% noted a varying quality of instructions. These rather diverse opinions in relation to instructions received from leaders, is probably due to the inconsistency of a regular communication basis, as well as the usage of many different communication tools.

Using various communication programmes, combined with a unregular communication in general, also results in an interrupted, or more difficult information process, although the perspectives were once again spread. On the one hand, 38.6% were of the reception of having a good established information process, while on the other hand 36.3% suffered from an interrupted process. Additionally, 25.1% stated an alternation of having a sufficient and insufficient information process among leaders and employees. However, employees tended to perceive a drop in the information process quality more, than leaders: while 31.1% of employees noted having an interrupted information process, 42.9% of leaders disagreed with this statement, as they saw a well-established process in virtual leadership. This indicates a deviating perspective between leaders and their employees one more time.

Looking at whether leaders and employees had to solve occurring problems rather alone, than with the help from their colleagues/employees, the opinions of both parties united: 45% (both leaders and employees) noted an increase in having to solve problems on their own. The fact that there was generally less support in this area also goes hand in hand with the issue that problems were generally less addressed or voiced. 45.81% of leaders and staff saw an increase here, due to virtual leadership. The growth in these two aspects is again linked to the fact that there are generally more general meetings and fewer individual meetings. In general meetings, due to lack of time, it was not possible to address problems in depth, which means that support could not be sought after all.

Another point brought up by the lack of support and speaking up was that coordination processes were also made more difficult or interrupted. 41.9% of the respondents saw a negative trend in work coordination. Again, this can be traced back to the problem of reduced one-to-one meetings, as oral communication was severely limited as a result. This was of enormous importance, especially in the area of work coordination processes.

Despite having troubles with coordination processes, not addressed problems or reduced support from leaders and employees, these aspects do not contribute to an immense increase of conflicts or misunderstandings in a team. Opinions were mixed concerning it: 34.1% noted a reduction, 33.5% perceived no change 32.4% saw an increase. The views of leaders and employees were relatively consistent in this context, with staff tending to think that there was an increase in conflicts on a virtual basis (35.1% were of this opinion, compared to 30.5% of leaders).

Rather divided were the opinions, whether all necessary leadership aspects were covered on a virtual basis, to ensure a successful execution. 39.1% indicated that some aspects were partially covered, while others were partially not covered. 26.7% of respondents perceived poor coverage, but 34.1% perceived satisfactory execution of leadership. This division indicates that virtual leadership is by all means not yet successfully implemented into most company's leadership strategies. This was on the one hand to be expected, but on the other hand surprising, as temporarily working from home seems to have become a new normal since the outbreak of COVID-19, which was two years ago, at this point in time. With the enlargement of remote working, there has also been a switch in direction to more virtual leadership.

On the topic – "Leader has less time for employees" – a split of perception can be seen: while only 27.6% of leaders felt they have less time for their employees, 37.8% of employees noted that they have been allocated less time. Quite a controverse awareness. On the other hand, very interesting, both parties were almost the same

opinion: 42.9% of the leaders and 40.5% of the workers found that supervisors were able to take even more time for their employees due to the virtual leadership mode.

Concluding with the most important figure of this question: About 60% of both groups perceived a significant drop in the bonding to their team and the ability to identify themselves with their company. This may again be linked back to the immensely reduced personal contact, the fewer one-on-one meetings and the increase of general meetings, where the individual characteristics of every leader and employee vanishes into the "big picture" of the team, respectively the company. The bonding and the sense of belonging are one of the most important aspects for a team motivation. Loosing those, can result in less efficient work, less overall communication, an interrupted information process, not addressing problems and in general more conflicts and misunderstandings between leaders and their employees.

4.4   Feedback and remarks

Finally, the participants also had the opportunity to leave a feedback/remark and express their opinion with their own words. 18 people made use of this option.

One factor missing, several times mentioned in the comments, was the lack of personal contact, which caused a lot to be lost. Participants mentioned the following missing factors in this context:

- Information between the lines was lost
- Personal conversations
- Non-verbal communication (gestures, facial expressions)
- How colleagues were "really" doing
- Bonding with the job and the team

Furthermore, it was emphasised that problems are not addressed at all for a long period of time.

One participant stated that virtual leadership requires much more discipline, responsibility, punctuality and active contact with employees. It was explicitly mentioned several times in this context that the casual conversations while having coffee or tea were lost, which nowadays are replaced by having to make active calls or online discussions.

Another person, on the other hand, felt that working in a virtual management style was more efficient than in an open-plan office but felt an apparent loss of commitment to the job.

If the virtual management style is to be continued, it is also important not to keep the exchange solely via telephone conferences but to also plan for video conferences.

Finally, one participant remarked that coordinating a project with many people involved on a virtual basis is not sustainable enough in the long run. Especially if the results also have to be communicated online. A step towards better coordination of such projects would be to take twice or even three times more time for online meetings to ensure that all points and issues can be addressed in time and clarified.

5 Conclusion

This bachelor thesis discussed how the COVID-19 pandemic challenged the virtual leadership in small and medium-sized enterprises in Austria.

Unfortunately, there was not a limited amount of published work on challenges in virtual leadership in small and medium enterprises in the times of COVID-19. Their parallels had to be drawn from related topics, like changes in e-leadership before the pandemic and in companies without differentiating in their sizes. It was only with the help of the survey that the issue could be dealt with accurately.

It was shown that even before the pandemic, SMEs had more remote experience and thus more virtual leadership experience than the entirety of companies in Austria. COVID-19 accelerated and intensified this trend among SMEs by the massive growth in the rate of remote work.

The challenges of virtual leadership related to the pandemic presented in the literature-based part were also evident in the results of the survey, e.g. loss of physical and personal contact, higher trust needed, risk of misinterpretations, …

Although, overall, the successful implementation of virtual leadership in SMEs is well on it's way, the questionnaire results show a further need for action and potential improvement. Particularly in connection with

- Reduced personal contact
- Misinterpretations and work coordination
- Interrupted information processes
- Substitution of one-to-one-Meetings by general meetings
- Accompanied with less time of the leader for the employees.

Especially in particular, the most clearly perceived reduced bonding to the team/company could in the medium to long-term mean a massive change in loyalty, as well as a significant acceleration of personnel change.

Therefore, investments in, as well as adjustments of virtual leadership seem to be necessary and sustainable, because as shown in the literature-based part, the virtual leadership came to stay.

As a conclusion and proofed with the present results conducted in the survey, the changes and challenges in virtual leadership in small and medium enterprises in the times on the Covid-19 pandemic were given for leaders and employees.

Facing these changes and challenges seems to be essential for the satisfaction of managers as well as for the employees and consequently, for increasing the efficiency and improving the profitability of SMEs.

Appendices

Appendix A: Survey

1. Arbeiten Sie derzeit/haben Sie in den letzten zwei Jahren in einem Klein- und Mittelunternehmen gearbeitet? (Kriterien: weniger als 250 Mitarbeiter*innen, maximal € 50 Mio. Umsatz ODER maximal € 43 Mio. Bilanzsumme)

   – Ja

   – Nein

2. Ihr Alter…

   – Eingabefeld

3. Sie sind derzeit/waren in den letzten zwei Jahren… -

   – in einer Führungsposition mit Personalverantwortung

   – Mitarbeiter*in

4. Ihr*e Vorgesetzte*r/ich habe als Vorgesetzte*r hat ausreichend technisches Know-How für eine virtuelle Mitarbeiterführung.

   – Trifft sehr zu

   – Trifft eher zu

   – Teils/Teils

   – Trifft eher nicht zu

   – Trifft nicht zu

5. Als Vorgesetze*r habe ich ausreichen technischen Know-How für eine virtuelle Mitarbeiterführung

   – Trifft sehr zu

   – Trifft eher zu

   – Teils/Teils

   – Trifft eher nicht zu

   – Trifft nicht zu

6. Wie oft haben Sie VOR dem Ausbruch der COVID-19 Pandemie von zu Hause gearbeitet?

   – Täglich

   – Mehrmals pro Woche

– Mehrmals pro Monat

– Seltener

– Nie

7. Wie oft arbeiten Sie DERZEIT von zu Hause?

– Täglich

– Mehrmals pro Woche

– Mehrmals pro Monat

– Seltener

– Nie

8. Der Personalführung basierte bereits VOR der COVID-19 Pandemie auf virtuellen Tools. (E-Mails, Online-Chats, Online-Meetings, Telefonate)

– Trifft sehr zu

– Trifft eher zu

– Teils/Teils

– Trifft eher nicht zu

– Trifft nicht zu

9. WÄHREND der COVID-19 Pandemie, wurden folgende technische Tools regelmäßig verwendet. (Mehrfache Antworten möglich)

– Videokonferenzen

– E-Mail Anweisungen

– Telefonate

– Online Chats

– Keine

10. Durch die COVID-19 Pandemie haben sich die VIRTUELLEN Kontaktpunkte erhöht. (vermehrt E-Mails, Online-Chats, Online-Meetings, Telefonate)

– Trifft sehr zu

– Trifft eher zu

– Teils/Teils

– Trifft eher nicht zu

– Trifft nicht zu

11. Die COVID-19 Pandemie hat einen Einfluss auf das Führungsverhalten.

- Trifft sehr zu

- Trifft eher zu

- Teils/Teils

- Trifft eher nicht zu

- Trifft nicht zu

12. Die virtuelle Personalführung belastet mich.

- Trifft sehr zu

- Trifft eher zu

- Teils/Teils

- Trifft eher nicht zu

- Trifft nicht zu

13. Virtuelle Personalführung assoziiere ich mit …
    a. Höherem Vertrauen zwischen Vorgesetzten und Mitarbeiter*innen

- Trifft sehr zu

- Trifft eher zu

- Teils/Teils

- Trifft eher nicht zu

- Trifft nicht zu

    b. Reduktion des persönlichen Kontaktes

- Trifft sehr zu

- Trifft eher zu

- Teils/Teils

- Trifft eher nicht zu

- Trifft nicht zu

    c. Arbeiten von zu Hause

- Trifft sehr zu

- Trifft eher zu

- Teils/Teils

- Trifft eher nicht zu

- Trifft nicht zu

d. Lösungsorientierterem Arbeiten

– Trifft sehr zu

– Trifft eher zu

– Teils/Teils

– Trifft eher nicht zu

– Trifft nicht zu

e. Selbstständigerem Arbeiten

– Trifft sehr zu

– Trifft eher zu

– Teils/Teils

– Trifft eher nicht zu

– Trifft nicht zu

f. Einem effizienzsteigernden Arbeitsprozess

– Trifft sehr zu

– Trifft eher zu

– Teils/Teils

– Trifft eher nicht zu

– Trifft nicht zu

14. Durch die virtuelle Personalführung…
    a. Werden alle notwendigen Führungsaspekte abgedeckt, d.h. sie ermöglicht eine erfolgreiche Personalführung.

– Trifft sehr zu

– Trifft eher zu

– Teils/Teils

– Trifft eher nicht zu

– Trifft nicht zu

b. Gibt es mehr Konflikte/Missverständnisse im Team

– Trifft sehr zu

– Trifft eher zu

– Teils/Teils

– Trifft eher nicht zu

– Trifft nicht zu

    c. Hat der*die Vorgesetzte*r weniger Zeit für seine*ihre Mitarbeiter*innen.

– Trifft sehr zu

– Trifft eher zu

– Teils/Teils

– Trifft eher nicht zu

– Trifft nicht zu

    d. Werden Probleme vermehrt nicht an- oder ausgesprochen.

– Trifft sehr zu

– Trifft eher zu

– Teils/Teils

– Trifft eher nicht zu

– Trifft nicht zu

    e. Finden insgesamt weniger Meetings statt.

– Trifft sehr zu

– Trifft eher zu

– Teils/Teils

– Trifft eher nicht zu

– Trifft nicht zu

    f. Finden insgesamt weniger Einzelgespräche statt.

– Trifft nicht zu

– Trifft eher nicht zu

– Teils/Teils

– Trifft eher zu

– Trifft sehr zu

    g. Kommt es öfter zu Missinterpretationen der Anweisungen von Vorgesetzten.

– Trifft sehr zu

– Trifft eher zu

– Teils/Teils

- Trifft eher nicht zu

- Trifft nicht zu

    h. Wird die Informationsweitergabe zwischen Vorgesetzten und Mitarbeiter*innen erschwert/unterbrochen.

- Trifft sehr zu

- Trifft eher zu

- Teils/Teils

- Trifft eher nicht zu

- Trifft nicht zu

    i. Muss ich Probleme vermehrt alleine lösen. (ohne die Unterstützung meines*r Vorgesetzten/meiner Mitarbeiter*innen)

- Trifft sehr zu

- Trifft eher zu

- Teils/Teils

- Trifft eher nicht zu

- Trifft nicht zu

    j. Sind die Abstimmungsprozesse zwischen Vorgesetzten und Mitarbeiter*innen erschwert/unterbrochen.

- Trifft sehr zu

- Trifft eher zu

- Teils/Teils

- Trifft eher nicht zu

- Trifft nicht zu

    k. Wird die Bindung an das Team/Unternehmen reduziert.

- Trifft sehr zu

- Trifft eher zu

- Teils/Teils

- Trifft eher nicht zu

- Trifft nicht zu

15. Falls Sie Anmerkungen haben, können Sie diese gerne bekannt geben

6 References

Arnold, C. (2019): The Foundation for Economies Worldwide Is Small Business, retrieved from https://www.ifac.org/knowledge-gateway/contributing-global-economy/discussion/foundation-economies-worldwide-small-business-0, accessed October 8, 2021

Association of Executive Search and Leadership Consultants (n.d.): 4 Components of Effective Leadership, retrieved from https://www.aesc.org/insights/blog/4-components-effective-leadership, accessed February 3, 2022

Avolio, B. / Kahai, S. (2003): Adding the "E" to E-Leadership:: How it May Impact Your Leadership, 31, 4th ed., o.O.:

Bachmayer, W. / Klotz, J. (2021): Homeoffice: Verbreitung, Gestaltung, Meinungsbild und Zukunft, Zusammenfassung der österreichweit ersten integrierten Befragung von Arbeitnehmerinnen und Arbeitnehern sowie Arbeitgeberinnen und Arbeitgebern, retrieved from https://www.bma.gv.at/dam/jcr:bc612283-14a0-42a0-8f58-e932ebffcec2/Homeoffice-Studie%20zur%20Verbreitung,%20Gestaltung,%20Meinungsbild%20und%20Zukunft%20von%20Homeoffice.pdf, accessed January 11, 2022

Bartik, A. / Bertrand, M. / Cullen, Z. / Glaeser, E. / Luca, M. / Stanton, C. (2020): The impact of COVID-19 on small business outcomes and expectations, in: Proceedings of the National Academy of Sciences of the United States of America, 117/30, retrieved from https://www.pnas.org/doi/10.1073/pnas.2006991117, accessed February 3, 2022

Bekirogullari, Z. / Thambusamy, R. (2020): Virtual Leadership in Small Businesses during the COVID-19 Pandemic: Challenges and Possibilities, retrieved from https://www.researchgate.net/publication/346288966_Virtual_Leadership_in_Small_Businesses_during_the_COVID-19_Pandemic_Challenges_and_Possibilities, accessed February 22, 2022

Booher, D. (1992): Executive's Portfolio of Model Speeches for All Occasions, o.O.: Prentice Hall Direct

Bundesministerium für Arbeit (2021): Kocher: "Homeoffice wird uns auch nach der Pandemie im Arbeitsleben begleiten", retrieved from https://www.bma.gv.at/Services/News/Homeoffice-Studie.html#:~:text=Die%20%C3%BCberwiegende%20Mehrheit%20der%20Arbeitgeberinnen,gut%20oder%20eher%20gut%20funktioniert., accessed January 10, 2022

Bundesministerium für Digitalisierung und Wirtschaftsstandort (2021a): KMU im Fokus 2020. Bericht über die Situation und Entwicklung kleiner und mittlerer Unternehmen der österreichischen Wirtschaft, 2021, retrieved from https://www.bmdw.gv.at/dam/jcr:8efe9893-101a-496c-a63f-8ff185a68587/NEU_KMU%20im%20Fokus_2020_barrierefrei.pdf, accessed January 15, 2022

Bundesministerium für Digitalisierung und Wirtschaftsstandort (2021b): Krise als Booster für neue Arbeits- und Organisationskonzepte, Praxisorientierter Leitfaden mit Handlungsanleitungen für KMU, retrieved from https://www.kmudigital.at/Content.Node/kampagnen/kmudigital/leitfaden-arbeits-und-organisationskonzepte.pdf, accessed February 11, 2022

Bundesministerium für Wirtschaft und Klimaschutz (2022): Europäische Mittelstandspolitik, February 5, 2022, retrieved from https://www.bmwi.de/Redaktion/DE/Textsammlungen/Mittelstand/europaeische-mittelstandspolitik.html

Contreras, F. / Baykal, E. / Abid, G. (2020): E-Leadership and Teleworking in Times of COVID-19 and Beyond: What We Know and Where Do We Go, in: Frontiers in psychology, 11, p. 590271, retrieved from https://www.frontiersin.org/articles/10.3389/fpsyg.2020.590271/full, accessed October 10, 2021

Drucker, P. (2013): Managing for the Future, Oxfordshire: Routledge

Earley, S. (2015): 6 Key Components to Effective Leadership, 2015, retrieved from https://www.linkedin.com/pulse/6-key-components-effective-leadership-steve-earley/https://www.forbes.com/sites/ashiraprossack1/2018/08/28/4-key-elements-of-great-leadership/?sh=1731bdadb445, accessed December 10, 2021

European Commission (2003): Commission Recommendation of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises, May 20, 2003, retrieved from https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32003H0361, accessed February 22, 2022

Frodermann, C. / Grunau, P. / Haas, G.-C. / Müller, D. (2021): Homeoffice in Zeiten von Corona, Nutzung, Hindernisse und Zukunftswünsche, 5, retrieved from http://doku.iab.de/kurzber/2021/kb2021-05.pdf, accessed February 16, 2022

Hüsing, T. / Dashja, E. / Gareis, K. / Korte, W. / Stabenow, T. / Markus, P. (2015): e-Leadership Skills for Small and Medium Sized Enterprises, retrieved from https://publications.europa.eu/portal2012-portlet/html/downloadHandler.jsp?identifier=adf969a4-9cac-11e5-b792-01aa75ed71a1&format=pdf&language=en&productionSystem=cellar&part=, accessed January 16, 2022

KMU.DIGITAL (n.d.): Förderung Beratung, retrieved from https://www.kmudigital.at/Content.Node/kampagnen/kmudigital/foerderung-beratung.html, accessed February 23, 2022

Maxwell, J. (2015): The Leadership Handbook. 26 Critical Lessons Every Leader Needs, o.O.: HarperCollins Leadership

Moore, B. (1927): The May conference on leadership, 6th ed., o.O.: Personnel Journal

Morgan, N. (2012): How to Fix What's Wrong with Virtual Meetings, December 10, 2021, retrieved from https://www.forbes.com/sites/nickmorgan/2012/10/10/how-to-fix-whats-wrong-with-virtual-meetings/?sh=4364cf5320b9

Northouse, P. (2021): Leadership: Theory and Practice, 9th ed., o.O.: SAGE Publications

Parlament Österreich (2021): Hauptausschuss verlängert bundesweiten Lockdown bis 11. Dezember, retrieved from https://www.parlament.gv.at/PAKT/AKT/SCHLTHEM/SCHLAG/J2021/259HauptausschussLockdown.shtml, accessed February 10, 2022

Prossack, A. (2018): The 4 Key Elements Of Great Leadership, 2018, retrieved from https://www.forbes.com/sites/ashiraprossack1/2018/08/28/4-key-elements-of-great-leadership/?sh=1d576b05b445, accessed January 23, 2022

Sowcik, M. / Andenoro, A. / McNutt, M. / Murphy, S. (2015): Ledership 2050. Critical Challenges, Key Contexts, and Emerging Trends, o.O.: Emerald Group Publishing Limited

Statistik Austria (2021a): Arbeitssituation: Homeoffice vor der Corona-Pandemie (COVID-19 Prävalenzstudie: November 2020), retrieved from https://www.statistik.at/wcm/idc/idcplg?IdcService=GET_PDF_FILE&RevisionSelectionMethod=LatestReleased&dDocName=125147, accessed February 3, 2022

Statistik Austria (2021b): Statistik Austria Arbeitssituation Homeoffice seit Beginn der Corona Pandemie Teil 2 (COVID-19 Prävalenzstudie: November 2020) Merkmale E, retrieved from https://www.statistik.at/wcm/idc/idcplg?IdcService=GET_PDF_FILE&RevisionSelectionMethod=LatestReleased&dDocName=125148, accessed February 3, 2022

Sugandha, S. (2022): The International journal of analytical and experimental modal analysis. Challenges in E-leadership and solutions to use it effectively after Covid-19, Mahatma Gandhi Central University, Bihar, o.O.:

The Adecco Group (2021): Resetting Normal: Defining the New Era of Work, retrieved from https://www.adecco-jobs.com/-/media/project/adeccogroup/pdf-files/resetting-normal-pdf-files/resetting-normal-2021_the-adecco-group_final_low_new.pdf/?modified=20210923121144, accessed October 9, 2021

University of Cambridge Institute for Sustainability Leadership (2017): Global Definitions of Leadership and Theories of Leadership Development. Literature Review, Report, University of Cambridge, Cambridge

van Wart, M. (2003): A comprehensive model of organizational leadership: the leadership action cycle, in: International Journal of Organization Theory & Behavior, 7/2, pp. 173–208

van Wart, M. / Roman, A. / Wang, X. / Liu, C. (2019): Operationalizing the definition of e-leadership: identifying the elements of e-leadership, in: International Review of Administrative Sciences, 85/1, pp. 80–97

Wirtschaftskammer Österreich (Viennaa): Digital Skills Schecks - 2. Ausschreibung, retrieved from https://www.wko.at/service/foerderungen/qualifizierungsoffensive-digital-skills-ausschreibung-2.html, accessed February 14, 2022

Wirtschaftskammer Österreich (Viennab): Klein- und Mittelbetriebe in Österreich, Definition: Was versteht man unter KMU?, retrieved from https://www.wko.at/service/zahlen-daten-fakten/KMU-definition.html, accessed December 13, 2021