

# COVID-19 Induced Teleworking and Future Expectations: A Systematic Review

Vaggelis Saprikis<sup>1</sup>, Maro Vlachopoulou<sup>2</sup> & Theodora Zampou<sup>2</sup>

<sup>1</sup> Department of Management Science and Technology, School of Economic Sciences, University of Western Macedonia, Kozani, Greece

<sup>2</sup> Department of Applied Informatics, School of Information Sciences, University of Macedonia, Thessaloniki, Greece

Correspondence: Vaggelis Saprikis, Department of Management Science and Technology, School of Economic Sciences, University of Western Macedonia, 50100, Kozani, Greece. E-mail: esaprikis@uowm.gr

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## Abstract

COVID-19 pandemic crisis has brought extraordinary changes to almost all human activities. This unfamiliar situation has affected, among others, the working conditions, under which employees should keep doing their job while protecting themselves and preventing the coronavirus from spreading. As a result, working from home has been considered as a topic of high interest, and a number of empirical studies have been conducted aiming at investigating its impact on contemporary companies, organizations and their employees. The focus of this research is on the employee profile and type of organization, as well as on other factors and conditions that influence the adoption of teleworking policies. Therefore, the scope of the systematic review paper is to analyze and present the factors affecting COVID-19 induced teleworking, the perceived benefits and obstacles of this situation to employees and their firms, as well as the determinants that impact pandemic induced teleworking adjustment along with post COVID-19 intentions. The study proposes a conceptual framework where all the major parameters of firms' and employees' characteristics are combined with the main benefits and drawbacks of teleworking aiming at mapping the current and post COVID-19 working from home situation.

**Keywords:** teleworking, COVID-19 pandemic, influencing factors, adoption, adjustment, post COVID-19 expectations

## 1. Introduction

The COVID-19 pandemic crisis has brought unprecedented changes to various fields of human societies globally to keep people safe and prevent the spread of coronavirus. To tackle the virus outbreak, people are restricted to their homes reducing face-to-face interactions and governments and organizations are enforcing new rules in working conditions, in order to protect the health and safety of employees and customers.

Although closure of offices and pause of operations might have happened in some industries or governmental organizations as a first reaction to the unexpected, it is something that could not last for days. Various measures have been proposed to give a solution to having work-life rolling: Work from Home (WFH) and remote working policy, extending the working day and dividing the employees in shifts, reductions in the companies' and organizations' workforce are some of the most commonly adopted ones (Agba et al., 2021).

According to Vyas & Butakhieo (2020) "*working from home*" was not newly introduced during the COVID-19 period, but it was initially mentioned back in 1973. It is a term that is used to describe that employees conduct their daily tasks remotely, even from their coach, without commuting to the physical location of their office and meeting their colleagues. The whole office is enclosed in the virtual environment of a laptop thanks to online information systems and ICT technologies (Almonacid-Nieto et al., 2020). There have also been alternative ways to define the same concept such as "*telecommuting*" or "*teleworking*" (Kowalski & Swanson, 2005; Betchoo, 2020; Vasic, 2020). In the paper herein, the words *teleworking*, *telecommuting* and *work from home* are equally used to encapsulate the above meaning and set the basis of the study.

Previous research on teleworking has been inspired by different disciplines ranging from transport and environmental planning to sociology, law, human and organizational studies (e.g., Giovanis, 2018; Hook et al., 2020; Karia & Asaari, 2016). Although teleworking is a topic of high interest, there is still a question that crosses our minds about an organization's/ company's or employee's profile that could suit working from home conditions. Further research regarding COVID-19 induced teleworking inquiries are: What are the factors affecting the acceptance of teleworking policies by employees? Should, probably, organizations give special provisions to employees? There is much room for analysis about the factors and circumstances that enable the teleworking policies adoption, and that forms the first research question of this paper:

*RQ1: Which factors affect pandemic induced teleworking adjustment?*

In the new reality of the crisis, the adoption of teleworking can be interpreted simultaneously as a constraint, as well as a resource for new work processes and has become from highly important to absolutely critical, both for firms and employees. Teleworking has nowadays attracted renewed attention in response to COVID-19 pandemic as a new form of digital transformation in the working environment and has become a hot topic of discussion in the current digital transformation argument due to its widespread adoption during the various stages of the epidemic period. The importance of personal presence in the workplace has been diminished and online services, e.g. meetings, suddenly are mandatory, leading to changes in work culture, and accelerating the digital transformation of the workforce (Vasic, 2020), while employees believe that a digital form of work is a safe source of income due to the COVID-19 pandemic (Nagel, 2020).

*RQ2: What are the perceived benefits and obstacles by the COVID-19 to induced teleworkers?*

Within the context of work culture transformation many researchers investigate further and report on the viability and prospects of preserving the teleworking policy in the post-pandemic era. The question that arises “is this change here to stay?” follows the exploration regarding the willingness of employees and companies to continue with the teleworking patterns when the COVID-19 crisis is over.

*RQ3: What expectations do employees and employers have for post COVID-19 teleworking?*

In order to give insights to the above questions, this paper is based on previous research surveys conducted during the different stages of the pandemic period. After analysis of the various surveys' findings, this study aims to conclude on the factors that affect employees' reaction towards teleworking, as well as explore whether they would be willing to adopt it on a regular basis, when there are no special safety conditions. Furthermore, the study evaluates perceived advantages and disadvantages of several employees and firms towards COVID-19 induced teleworking, to finally build a framework, which proposes the way perceived benefits and drawbacks affect the teleworking adoption.

The collected surveys have been conducted in a variation of countries worldwide indicating the common interest of the topic globally. Although there are multiple points of view that researchers choose to approach the topic, this study critically inputs all the different aspects by organizing the various research findings into specific subject streams.

This systematic review paper is structured in four sections. After the research questions are introduced in the first section, the second one describes the methodology being followed. The third section presents and organizes the previous studies that comprise the literature review in specific research streams. Third section concludes by proposing a comprehensive research framework of the topic examined, whereas the last section deals with a discussion about the findings of this study concluding by proposing future research avenues.

## **2. Research Methodology**

To answer the research questions and achieve the goal of this study, a systematic review was performed. In specific, systematic review is a group of research approaches which are utilized to analyze secondary data that bring together the results of primary research to answer a research question(s) (Newman and Gough, 2020). As a result, it can be defined as “a review of existing research using explicit, accountable rigorous research method” (Gough et al., 2017, p. 4). The systematic review of this study was utilized by applying a classic protocol; the PRISMA statement. PRISMA statement consists of a set of four distinct but interconnected phases – Identification, Screening, Eligibility and Inclusion; and helps researchers achieve their scopes (Moher et al., 2009).

In particular, a detailed investigation was conducted for a five-month period - February–June 2021. First, during the *Identification phase*, comprehensive research took place at identifying articles on the topic. The investigation was performed by searching in the following, eleven, scientific databases - 1) Science Direct, 2) Web of Science, 3) Emerald Insight, 4) Scopus, 5) Google Scholar, 6) Springer Link, 7) Wiley and Sons, 8) Taylor and Francis, 9) Sage Journals, 10) IEEE Xplore Digital Library and 11) ProQuest Direct. The criteria for the search terminology

were (“teleworking” or “telecommuting” or “working from home”) and (“COVID-19” or “coronavirus”). Non relevant articles and duplicates were removed.

Second, *Screening phase followed*. All remaining articles were further screened as the aforementioned search terms needed to be mentioned on the paper’s title, abstract or keywords. Add to this, each article should be carried out during the COVID-19 pandemic waves in 2020 and 2021 and conducted a primary research study. Papers that were not written in the English language were omitted as well.

Afterwards, during the *Eligibility phase*, all remained articles were first assessed to test for full-text eligibility and, then, further screened by reading the abstract, their methodology section and finally the whole paper aiming at excluding all non-primary research papers as well as those articles that did not focus on teleworking. This procedure was conducted in two stages. In the first stage, the abstract and methodology sections were checked to determine if each article was relevant to the scope of this study. In the second stage, an in-depth reading helped for final papers’ relevance verification.

Thus, after a persistent and comprehensive examination procedure 28 empirical papers met the above mentioned criteria and consisted of the final sample - *Inclusion phase* -. The flow diagram of the PRISMA statement is presented as follows (Figure 1).

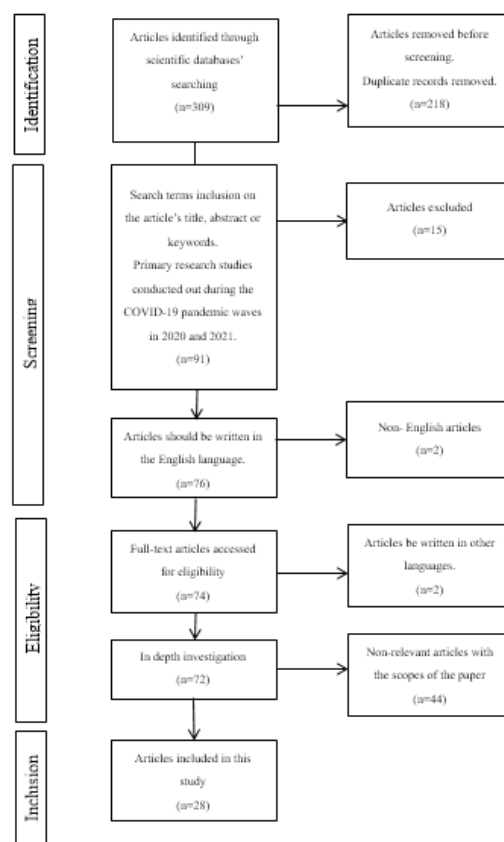


Figure 1. PRISMA procedure

### 3. Literature Review of Teleworking Adoption During and Post COVID-19 Pandemic

The changes that the coronavirus pandemic has brought in various areas have raised the interest of the scientific society resulting in a number of papers published internationally. The fear of virus transmissibility is observed to have led - among others - to an increase in the application of teleworking practices and there are many studies worldwide that explore the topic of teleworking from various aspects.

As explained in the Research Methodology section, a specific process has been implemented in order to conclude a set of 28 publications being selected as the sources of the study herein. All of these sources are based on primary data gathered by surveys conducted during the months of the crisis. The surveys are mainly addressed to the employees, as there is only one study which is conducted from the companies’ perspective.

It is remarkable that each study is mainly executed targeting one country, but on the other hand there are studies in many different countries around the world. This gives an extra value, as it seems that teleworking practices are a topic of common interest in different environments and working cultures. The following table shows the distribution of the selected sources:

Table 1. Empirical papers – per continent and country

Continent	Country	Quantity	Reference	
Africa	Mauritius	1	Betchoo, 2020	
	South Africa	1	Matli, 2020	
Americas	USA	2	Feng & Savani, 2020; Barbour et al., 2021	
	Perou	1	Almonacid-Nieto et al., 2020	
Asia	India	2	Kapoor et al., 2021; Jamal et al., 2021	
	Japan	2	Nagata et al., 2021; Okubo, 2020	
	Singapore	1	Lee, 2021	
	Vietnam	2	Nguyen, 2021; Ly et al, 2020	
	Hong Kong	1	Wong et al., 2020	
	Kuwait	1	Diab-Bahman & Al-Enzi, 2020	
	Philippines	1	Pauline Ramos & Tri Prasetyo, 2020	
	Europe	Spain	1	Morilla-Luchena et al., 2021
		France	1	Carillo et al., 2021
Austria		1	Edelmann et al., 2021	
Belgium		1	Baert et al., 2020	
EU & UK		1	Blaskó, 2020	
Italy		1	Tokarchuk et al., 2021	
Lithuania		1	Raišienė et al., 2020	
Netherlands		1	de Haas et al., 2020	
Oceania	Portugal	1	Tavares et al., 2020	
Oceania	Australia	1	Beck & Hensher, 2020	
Other-Multinational	(USA, Italy, France, Spain, UK and Germany), South East Europe, (France, Italy and Spain)	3	Nagel, 2020; Vasic, 2020; Fana et al., 2020	

### 3.1 Factors Affecting Teleworking During and Post COVID-19

A total of 16 articles have provided insights into how employees have experienced teleworking during COVID-19 crisis, and how the perceived benefits and drawbacks have affected their outlook on the future of teleworking utilization. In addition, several authors investigated how teleworking perceptions and corresponding future attitudes towards teleworking are heterogeneous by their profile and job characteristics. To be more specific, personal profile of employees and perceived benefits or shortcomings, previous experience with teleworking, work related factors, job sectors and finally company/ organizational related factors have been explored by several researchers after the outbreak of COVID-19. The focus of each study on different outcomes of teleworking (such as productivity, teleworkers' satisfaction and preferences, work-life balance/conflict, organizational performance, efficiency) and the use of several variables in order to evaluate factors affecting telework adaptation during the crisis and adoption after coronavirus, shows that there is no common integrated measurement framework that can be used in global surveys of teleworkers. As a result, the presentation of these studies on different approaches is considered as vital for better understanding of the topic. Thus, these 16 articles are presented in the following paragraphs based on two approaches: a) conceptual frameworks of factors influencing employees' teleworking adjustment and b) perceived impact of teleworking during the COVID-19 crisis on life and job aspects.

#### 3.1.1 Conceptual Frameworks of Factors Influencing Employees' and Employers' Teleworking Adjustment

During the pandemic, a significant increase in teleworking practice was observed, leading to research attempts to better address issues affecting the workers' adjustment. As far as it is concerned, only a limited number of

researchers relied on conceptual frameworks approaching a comprehensive set of factors affecting teleworkers' perceptions and attitudes. Their studies basically focused on exploring the factors that have a positive or negative impact on the adjustment of employees to new working conditions from home, as well as on the future adoption of teleworking after the pandemic. In particular, in the case of the examination of employers' views on teleworking, extremely limited research was observed, just one study, perhaps due to the fact that the emphasis was given to the employees to provide themselves concrete and actionable recommendations for the companies where they work. In the following paragraphs, the studies carried out on the basis of conceptual frameworks investigating teleworking adoption are presented.

The adoption of teleworking necessitates upgraded IT infrastructure, change in management and organization of work with adequate resources, technologies and processes already in use of the company, leading to skilled and experienced employees. These are the results of the study of Tokarchuk et al. (2021), who developed a conceptual framework/ model introducing "the organizational e-readiness" as mediator of organizational and technical resources supporting teleworking adoption. In specific, according to a survey conducted during the lockdown on Italian managers working in high-tech sectors, organizational readiness was positively correlated with the degree of teleworking use enhancing competitiveness and efficient management on organizational, technological and human resources. Therefore, many companies have adopted teleworking to the extent that it was adequately supported by their organizational e-readiness. Moreover, the ability of managers to organize and control remote teams seems to be an additional factor to be considered in future research. It is worth noting that the aforementioned study was based on the perceptions of the employers and not the employees' ones.

Furthermore, an adjustment model, derived from the theory of Work Adjustment, focusing on teleworking acceptance due to the crisis, was presented and examined on a sample of 1574 French teleworkers by Carillo et al. (2020). The proposed framework refers to crisis- and non-crisis specific individual, "job and organizational factors". The results indicated the predominance impact of crisis-specific variables that are crisis-related organizational support, job factors, such as professional isolation, teleworking environment, work increase; and finally individual factors, such as personal stress. Concluding the research, specific and applicable recommendations were provided to organizations to adapt their employee support measures, taking into account that variables such as age, education, computer skills, management and job interdependence were found to be significantly associated with teleworking acceptance.

Insights of teleworking during the COVID-19 may be a crucial for the attitude toward the further adoption of teleworking after the pandemic. More information from a developing country contributes to a progress in the understanding of teleworking. Nguyen (2021) examined the factors that influenced home-based teleworking in Vietnam during and after the pandemic lockdown, classifying these factors in socio-demographic characteristics, household characteristics, company related variables, attitudes toward work and teleworking, and previous experience (based on a framework using graphical description of three binary logit models). The emergence of COVID-19 impacted on the perception of home-teleworking through the infection fear. However, the lack of familiarity with the type of work and training, represented by the difficulty of accessing data, had a negative impact on teleworking adaptation. Due to the presence of almost all members of the household, mainly children, teleworkers were confronted with blurred boundaries between work and personal life, making them less likely to accept teleworking. The role of company-specific variables was significant due to the enforcement of teleworking during the crisis by employers.

Another conceptual framework has been suggested by Barbour et al. (2021), that investigates teleworkers' behavior switching to work-from-home during the pandemic, followed by evaluating the probability of ongoing to work-from-home. Through a survey in July and August of 2020, it was found that almost 50 percent of the respondents, who did not have any work-from-home experience started to work-from-home during the COVID-19 pandemic, mentioned their intention to continue work-from-home. 1,275 responses were collected via a survey questionnaire that was administered through a U.S. nationwide panel (Prime Panels), were utilized in the model estimation. The results gave useful insights into how explanatory variables impacted work-from-home choices during different stages of the pandemic analyzing socio-demographic characteristics, different job sectors and residential location. It was revealed that gender, age, income, the presence of children, education, residential location and job sectors were significant factors in explaining these behavioral shifts and post-pandemic preferences. Moreover, according to the survey's findings, workers from large cities had a higher probability of continuing teleworking in the post pandemic future.

Furthermore, the study of Jamal et al. (2020) in India, based on the job demands and resources model (JD-R model) seeks to provide empirical understandings into the experiences of COVID-19 induced "mandatory full-time telecommuting". It was revealed that workload stress, job isolation and family intervention at work lead to

exhaustion and stress, whereas work autonomy, schedule flexibility and sufficient technology infrastructure improve employee work-life balance and productivity leading to job satisfaction.

### 3.1.2 Perceived Impact of Teleworking During the COVID-19 Crisis on Life and Job Aspects

The research of Baert et al. (2020) examined Flemish employee perceptions of teleworking during and after the pandemic on various life and job aspects. Respondents were mostly positive about teleworking as 85% of them believed that teleworking will be dominant in the future. Furthermore, its primary perceived benefits are increased efficiency, better work-life balance, lower risk of burnout, whereas the perceived disadvantages are promotion opportunities and weakened bonds with colleagues and their employer.

The study of Raišiene et al. (2020) in Lithuania distinguished between “the most satisfied and the most dissatisfied teleworkers”, indicating dissimilarities in the evaluation of factors that affect teleworking efficiency depending on gender, age, education, work experience, and experience of teleworking. Thus, those more satisfied with teleworking were younger and middle-aged employees, who could combine teleworking with work in the office and who had a satisfactory professional and teleworking experience before the quarantine. In terms of gender, it was observed that men found their careers more successful when they have the opportunity to work in the natural workspace. Regarding the age, the research proved that the younger employees are more technology-friendly, whereas older ones think about more valuable work which takes place in the physical workspace. The most dissatisfied teleworkers highlighted the negative effects of teleworking, such as lack of face-to-face interaction with the manager, lack of feedback and the manager’s inability to estimate the workload. Concluding the authors suggests that outgoing research knowledge can contribute to a better organizational management reducing the problems faced by teleworkers enhancing employee productivity and teleworking efficiency.

Moreover, the research of Ly et al. (2020) focused on job satisfaction of a 100 employee sample in Quy Nhon City (Vietnam), who worked at home during the April 2020. Research findings revealed a high level of job satisfaction and the influence of both demographic factors and work-related factors on it. Job satisfaction was statistically linked to age, working tasks, workload and work performance, job advantages and difficulties. These findings could give government and employers the opportunity to increase job performance with the new normality of teleworking in Vietnam.

Furthermore, Okubo (2020) investigated which jobs are suitable for teleworking and discussed what difficulties are associated with teleworking in Japan, by conducting an analogous survey on Japanese workers. Regarding survey’s results, the rate of teleworking utilization varied across industries, occupations, regions and firm size. Some jobs, such as services with face-to-face communication are the most inappropriate for teleworking. Additionally, about half of employees in the food and drink and accommodation industries saw a large decline in salary and working time, unlike employees in the ICT, research and public service areas.

Perceived advantages of teleworking, according to the findings of another survey conducted by Betchoo (2020) in Mauritius, were better time management (the most preferred reason), less disruption and time wasted, better work-life balance, higher productivity and greater confidence. Concerning its disadvantages, respondents mentioned the inability to meet face-to-face, the lack of guidance on technology issues, lack of support from management, as well as remoteness and no recognition for their work.

Fana et al. (2020) aimed at better understanding how the considerable shift to teleworking induced by COVID-19 impacted on employees’ jobs and lives. The results revealed were quite multifaceted depending on workers’ job and family factors. In specific, for a number of employees teleworking increased satisfaction and productivity as well as provided better work life balance, while for others teleworking prevented them from communicating face-to-face with colleagues and managers. Moreover, workers with school-age children and especially women found it difficult to find a balance between work and family. The majority of the respondents, however, would like to continue working remotely at least infrequently in the future.

The study of Tavares et al. (2020) in Portugal highlights the importance of the support of the organization regarding training of the workers in technological issues and time/schedule management. The results showed that teleworking adaption happened quickly and the main obstacles faced by teleworkers were the lack of professional communication, work-family balance problems, the lack of infrastructure resources and time/schedule management issues.

To add to this, Diab-Bahman et al. (2020) studied 192 employees from Kuwait who were currently working from home aiming at revealing COVID-19 induced work expectations. It was found that employees’ prime expectations were positive sentiments about how their organization handled employees’ communication and motivation during

the pandemic. Concluding the results, organizations are advised to reconsider their conventional employment policies and expectations in order to better adapt teleworking in the future.

As a result of the COVID-19 crisis, Matli (2020) provided insights from remote employees' experiences in South Africa. The positive aspects of remote working are the use of advanced technology, avoidance of commuting traffic and costs, whereas as negative aspects are work overload and timely execution. According to these researchers, social structures and the support with adequate infrastructure for remote workers requires governmental measures to create an enabling environment for teleworking. The findings, similar to other research results, indicated that remote working may continue to play a more active role in the future after the crisis.

The effect of working from home on employees' productivity was investigated by Pauline Ramos and Tri Prasetyo (2020) in Philippines, analyzing "the causal relationship between work from home factors, job satisfaction, job performance, commuting satisfaction, job stress and productivity". The results showed that work from home factors increase employees' job satisfaction and productivity, thus, organizations should view working from home as one of their future work provisions.

Another study regarding how firms in the South-East European countries have reacted to COVID-19 pandemic and working from home probabilities, and future expectations to overcome drawbacks of home working is the research of Vasic (2020). The focus of the study was on problems related to social isolation faced by teleworking under lockdown. The results indicated that factors such as lack of traditional leadership, physical workspace, isolation, workload, work-life balance and/ or conflict, job performance measurement, stress, job insecurity, etc. affected the teleworking adjustment of employees during the crisis. Empirical implications for the organizations were that support (including psychological support and training) and proper leadership should be provided to teleworkers in order to achieve job satisfaction and high organizational performance. Table 2 summarizes the main characteristics of the aforementioned studies.

Table 2. Studies based on conceptual frameworks and factors affecting life and job aspects

Research focus	Reference	Summary of Research
Conceptual Frameworks / models	Tokarchuk et. al (2021)	<i>Country:</i> Italy <i>Industry:</i> managers in high-tech sectors <i>Methodology:</i> Conceptual framework / model <i>Findings:</i> organizational e- readiness affects teleworking adoption during the pandemic
	Carillo et al. (2020)	<i>Country:</i> France <i>Methodology:</i> "Interactional Model of Individual Adjustment" tested to 1574 teleworkers <i>Findings:</i> Predominance of the influence of crisis-specific variables that are job factors and individual factors (personal stress). Recommendations are provided to organizations for appropriate support measures for their teleworkers
	Nguyen (2021)	<i>Country:</i> Vietnam (Hanoi) <i>Methodology:</i> A framework with graphical description of three binary logit models <i>Findings:</i> Socio-demographic characteristics, household characteristics, company related variables, attitudes toward work and teleworking; and previous experience constituted factors that affect teleworking
	Jamal et al. (2020)	<i>Country:</i> India <i>Methodology:</i> Job demands and resources model (JD-R model) <i>Findings:</i> Workload pressure, task interdependence, professional isolation and family interference in work lead to exhaustion and stress, whereas work autonomy & flexibility, technology infrastructure improve employee work-life balance, productivity leading to job satisfaction
	Barbour et al. (2021)	<i>Country:</i> USA <i>Methodology:</i> conceptual framework using binary logit models with heterogeneity in means <i>Findings:</i> Gender, age, income, the presence of children, education, residential location and job sector; all of them played a significant role in explaining the behavioral shifts and post-COVID behavior

Perceived impact of telework during and after COVID-19 crisis on life and job aspects	Baert et al. (2020)	<i>Country:</i> Belgium <i>Methodology:</i> A state-of-the-art web survey <i>Findings:</i> Positive aspects of teleworking: increased efficiency, improved work-life balance, and lower risk of burnout. Negative impacts on promotion opportunities and work relationship. 85% of the surveyed employees believed that teleworking is here to stay
	Raišiene et al. (2020)	<i>Country:</i> Lithuania <i>Methodology:</i> Evaluation of teleworking during the COVID-19 <i>Findings:</i> More satisfied with telework are younger and middle-aged employees, who can combine teleworking with work in the office and who have highly paid job and teleworking experience
	Ly et al. (2020)	<i>Country:</i> Vietnam (Quy Nhon City) <i>Methodology:</i> Focus on employees' satisfaction <i>Findings:</i> Job satisfaction is statistically linked to age, work tasks, workload and work performance, job advantages and difficulties
	Okubo (2020)	<i>Country:</i> Japan <i>Methodology:</i> Focus on type of organizations and job sectors <i>Findings:</i> The rate of teleworking use varies across industries, occupations, regions and firm size
	Betchoo (2020)	<i>Country:</i> Mauritius <i>Methodology:</i> Focus on pros and cons of teleworking <i>Findings:</i> Advantages: better time management, less disruption and time wasted, better work life balance, higher productivity and greater confidence Disadvantages: inability to meet face-to-face, the lack of guidance on technology issues, lack of support from management, as well as remoteness and no recognition for their work
	Fana et al. (2020), Joint Research Centre (JRC) of the European Commission	<i>Countries:</i> France, Italy and Spain <i>Methodology:</i> Interviews among teleworkers during the lockdown and after <i>Findings:</i> The results revealed were quite multifaceted depending on workers' job and family factors
	Tavaras et al. (2020)	<i>Country:</i> Portugal <i>Methodology:</i> Information about teleworking and individual's adaptation process and difficulties during the COVID-19 teleworking period <i>Findings:</i> Obstacles faced by teleworkers were the lack of professional communication, the lack of infrastructure resources, the time/schedule management and the work-family balance
	Diab-Bahman et al. (2020)	<i>Country:</i> Kuwait <i>Methodology:</i> Focus on COVID-19 induced work expectations <i>Findings:</i> Organizations are advised to reconsider their conventional employment policies and expectations in order to better adapt teleworking in the future
	Matli (2020)	<i>Country:</i> South Africa <i>Methodology &amp; Findings:</i> Insights from remote workers' experiences and need for governmental support
	Pauline Ramos and Tri Prasetyo (2020)	<i>Country:</i> Philippines <i>Methodology:</i> Analysis of 250 electronic questionnaires using Structural Equation Modelling <i>Findings:</i> teleworking dimensions increase employee's job satisfaction and productivity
Vasic (2020)	<i>Country:</i> South-East Europe (Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Greece, Moldova, Montenegro, North Macedonia, Romania, Serbia, Slovenia, and Turkey) <i>Methodology:</i> Conducted between the 10th of April and 10th of May 2020. <i>Findings:</i> Employees leadership and support is the prerequisite for the success of teleworking	



### 3.2 *Teleworking's Impact on Specific Areas / Aspects*

Based on comprehensive literature review, there have been 18 papers that focus their study on teleworking's impact on specific areas/ aspects that can be grouped in four main streams according to the area of their special focus. These streams are: a) Organizational support, e-readiness and level of digital transformation, b) Work-family balance and working parents, c) Health aspects and d) COVID-19 impact on daily mobility behavior; and are presented as follows.

#### 3.2.1 Organizational Support, E-Readiness and Level of Digital Transformation

The first stream includes four papers, which highlight the companies' and organizations' key role in the process of teleworking adoption. A special emphasis is given on companies' e-readiness in order to follow teleworking policies, which finally leads to perceived job satisfaction and acceleration of digital transformation. In particular, Tokarchuk et al. (2021) were concerned about how the firm's e-readiness impacts on teleworking adoption. After 179 middle-managers of Italian high-tech companies have been questioned, it was confirmed that technological infrastructure, managers' skills to coordinate teams remotely, equipment of information systems and virtual platforms, and agility to organizational changes played a significant role to what extent companies are ready to proceed with teleworking. The outcoming result of this research was that various organizations adopted teleworking to the adequate degree supported by their organizational readiness. Tokarchuk et al. (2021) were the only researchers compared to the rest papers of this systematic review article who approached the teleworking issue from the businesses' perspective.

Pauline Ramos and Tri Prasetyo (2020) completed a survey in the Philippines investigating the interrelationships between work from home factors, job satisfaction, job performance, commuting satisfaction, job stress and productivity. Based on the findings, organizations can take advantage of working from home as it seemed to have a significant positive impact on job satisfaction and productivity, whereas it did not affect job stress.

In parallel, Nagel (2020) also investigated job satisfaction, as employees working from home during the pandemic perceived it. It seems that workers welcome working in the digital world and are willing to continue in this routine in the post COVID-19 era as well. The study makes clear that there is a strong possibility for working exclusively digital in the future and gives room to talk about digital acceleration. Although the results confirmed the impact of the COVID-19 pandemic on the acceleration of digital transformation, further researches are vital to approve this statement in the long run.

Edelmann et al. (2021) are the ones who correlated the digital transformation with the organizational culture, and brought forward the required changes in the public sector in order to follow the fast pace of such "digitization". The COVID-19 induced teleworking process in the public sector is a great opportunity to counteract the low acceleration that usually rigid public tends to have.

#### 3.2.2 Work-Family Balance and Working Parents

Another stream of studies concerned the maintenance of balance between work and family life when working from home. These studies emphasized on the challenges that working parents faced during the pandemic lock-down, when employees had to execute their daily tasks, while kids had no school.

Work-family balance as a result of teleworking is valued positive by many, given the needed flexibility in working hours, and offered by the employers as a primary goal of their policy to improve employee well-being (van der Lippe & Lippényi, 2018; Delanoëje & Verbruggen, 2019), but it also can be valued negative, due to unwanted intrusions and blurring of boundaries between work and family tasks.

Based on the work-family balance theory, the research of Wong et al. (2020) aimed to reveal the factors that impact employees' work from home effectiveness and whether they want its extension when the pandemic is over, through a sample of 1,976 employees in Hong Kong. The results of this research showed that the effectiveness of work from home (WFH) is enhanced by personal and family well-being, perceived as positive experiences, but is reduced by environmental barriers and resource constraints perceived as negative experiences. In specific, regarding the impact of work-family balance factor on teleworking, a higher preference was indicated amongst female workers compared to their male coworkers. Research findings provided empirical evidence of the impact of working from home on work-family balance and are consistent with work-family balance and role theories, which mention that achieving work-family balance would help reduce the role conflict and improve wellbeing, which then enhances job performance.

Feng and Savani (2020) studied the difference in perspectives that working parents have based on their gender. Mothers turned out to be more distracted with childcare when working from home in comparison to fathers. That reflected on women reporting lower productivity and less job satisfaction than male employees.

Blaskó (2020) highlighted the difficulty in keeping work-life balance when employees work from home. His study focused on the interference of work to family and vice versa, exploring the implications of teleworking related to this issue in all European countries affected by lockdown measures. Greater autonomy, more time to spend with the family and the possibility to enter into the labor market having children were the perceived benefits of teleworkers. On the other hand, the situation of mothers working at home and children not going to school made the whole family and especially mothers with young children faced the negative effects of teleworking.

On the other hand, Kapoor et al. (2021) focused on working mothers in India. They gave insights regarding the correlation between teleworking and perceived stress and psychological well-being. This research intended to motivate organizations to give working mothers the option of having a flexible plan with working hours beyond the strict job policy.

### 3.2.3 Health Aspects & Impact of Teleworking on the Psychological Well-Being of Employees

The third stream of studies consists of three papers that examine the impact of teleworking on health as well as on psychology. Although people stay home to protect their health from the virus, they end up being concerned about their health physically and mentally due to the inclusion of telework.

Nagata et al. (2020) presented survey findings on the health effects of the direct introduction of teleworking due to the COVID-19 crisis, and develop a health impact assessment (HIA) to evaluate positive and negative health effects of teleworking. They also suggested countermeasures on the negative effects on workers, non-workers as well as their families. Teleworking drawbacks on health can be mitigated by e.g., medical guidelines, shared responsibilities within families, business communication etc. Thus, enterprises should consider implementing objective task management and conduct regular physical and mental health checkups to their employees.

Lee (2021) approached teleworking from a psychological point of view. The findings indicated that organizations can have an impact on the emotional situation of their employees during the pandemic by creating safety. Organizational support for transmitting to teleworking can help the workers psychologically, who finally can face the crisis with a less stressful manner.

A social services approach to teleworking presented by Morilla-Luchena et al. (2021) in Spain, pointing out that effects of teleworking on the psychological well-being of employees have not been thoroughly investigated. Some teleworking experiences connected to social services indicated the inability of most employees to have full-time teleworking due to the nature of their work. The research outcomes showed that men use telework to a greater extent than women, and regarding age, the segment that mostly used teleworking was from 47 to 59 years of age. Positive experience of teleworking is related to reduced work stress and role conflict, as well as increased autonomy, whereas increased role ambiguity and reduced support and feedback are the negative experiences of teleworking.

The research of Almonacid-Nieto et al. (2020) focused on the impact of teleworking on job burnout of higher education administrative personnel in the Junín region of Peru during the crisis of COVID-19. According to this study, existing teleworking skills reduced emotional fatigue and depersonalization. Additionally, although the teleworking conditions are related to achieving personal fulfillment, they do not seem to be related to job burnout reduction.

The study of Jamal et al. (2020) in India, based on the job demands and resources model (JD-R model) focused herein on employee mental well-being, studied factors that act as facilitators or barriers to telecommuting and their impact on employees' practical and psychological outcomes. Thus, workload pressure, professional isolation and family interference in work lead to exhaustion and stress, whereas work autonomy, schedule flexibility and sufficient technology resources improve employee work-life balance, productivity and job satisfaction. Moreover, improved well-being was also found to reduce stress for full-time telecommuters.

### 3.2.4 COVID -19 Impact on Daily Mobility Behavior

The focus of the following studies was on travel behavior aspects, including teleworking experiences. In specific, the study of de Haaset al. (2020) aimed to investigate to what extent the coronavirus measures in the Netherlands impact people's daily mobility behavior (including teleworking) with a 2500 sample from the Netherlands Mobility Panel. Most workers that increased the hours working from home reported positive experiences, taking into consideration that 44% of them believed that they are experienced homeworkers before the coronavirus crisis. For those who indicated to have positive experiences with working from home, expectations to continue this behavior in the future are higher. Moreover, workers' experiences differed per sector, with people from the sector 'Automation and IT' being most positive, while in 'Healthcare' and 'Retail' relatively few people have started working from home, and people working in the section 'Education' were much less positive.

Beck et al. (2020) considered their research regarding COVID-19 induced work from home as an investment in transport. This research belonged to an ongoing series of analyses of a longitudinal travel and activity survey. Analyzing data collected at different points in the COVID-19 curve in Australia, it presented the perceived benefits and drawbacks of teleworking. Employees positively reacted to teleworking and its future use after the pandemic, demanding sufficient employer support. The highest benefits of working from home were not having to commute and the creation of a more flexible work schedule, which are positive for transport authorities in order to solve a congestion problem or encourage the spread of peak hours through the provision of telework. When it comes to the negative aspects of working from home, especially for women, the interruption from family and children was the most likely answer, which was generally followed by the inability to concentrate on work.

As Barbour et al. (2021) argued in their study, the analysis of the factors affecting the work from home adjustment during the pandemic and its future adoption after the pandemic was inherently linked to the transportation systems policy, exploring a viable alternative to reduce emissions from workers mobility. Based on the results of the applied model, policies to encourage work from home should be considered the residential location, as the respondents living in large cities were more likely to continue working from home, while respondents from small cities were less likely to do so. The above streams of studies are summarized at the Table 3 below.

Table 3. Teleworking's impact on specific areas/ aspects

Specific areas/ aspects	Reference	Summary of Research
Organizational support, e-readiness & level of digital transformation	Tokarchuk et. al (2021)	<i>Country:</i> Italy <i>Industry:</i> Manufacturing firms' managers in high-tech sectors <i>Findings:</i> Organizational e- readiness influences teleworking adoption
	Ramos and Tri Prasetyo (2020)	<i>Country:</i> Philippines <i>Industry:</i> Private Sector <i>Findings:</i> Teleworking affects positively job satisfaction and productivity, whereas it does not affect job stress
	Nagel (2020)	<i>Countries:</i> USA, Italy, Spain, France, UK & Germany <i>Industry:</i> Private Sector <i>Findings:</i> There is a decrease in the importance of traditional jobs as a secure source of income in comparison to the digital types of work. Employees believed that digital transformation has been accelerated and can imagine themselves working exclusively digitally in the future
	Edelmann et al. (2021)	<i>Country:</i> Austria <i>Industry:</i> Public Sector <i>Findings:</i> Changes are required in the public sector to follow the fast pace of digital transformation, especially regarding the working culture. The pandemic crisis is a great opportunity to speed up the low acceleration that public sector tends to have
Work-Life Balance & Working Parents	Wong et al. (2020)	<i>Country:</i> Hong Kong <i>Industry:</i> 1,976 Hong Kong working people <i>Findings:</i> The effectiveness of work from home is improved by personal and family well-being, but is reduced by environmental barriers and resource constraints
	Feng & Savani (2020)	<i>Country:</i> USA <i>Industry:</i> Private Sector <i>Findings:</i> There is a gender gap. When WFH mothers tend to be more distracted with childcare in comparison to fathers, they reported lower productivity and less job satisfaction than male employees
	Blaskó (2021)	<i>Countries:</i> EU & UK <i>Industry:</i> Private Sector <i>Findings:</i> When WFH there is interference of work to family and vice versa, leading to parents having difficulty in keeping work-life balance
Health aspects &	Kapoor et al. (2021),	<i>Country:</i> India <i>Industry:</i> Private Sector-only working mothers <i>Findings:</i> Teleworking acted as a partial mediator and resilience proved to be a significant moderator for teleworking-well-being relationship
	Nagata et al. (2020)	<i>Country:</i> Japan

impact of teleworking on the psychological well-being of employees	Lee (2021)	<p><i>Industry:</i> Private Sector</p> <p><i>Findings:</i> Teleworking drawbacks on health can be mitigated by e.g., medical guidelines, shared responsibilities within families, and business communication</p> <p><i>Country:</i> Singapore</p> <p><i>Industry:</i> Private Sector</p> <p><i>Findings:</i> Organizations can have an impact on the emotional situation of their employees by creating safety</p>
	Morilla-Luchena et al. (2021)	<p><i>Country:</i> Singapore</p> <p><i>Industry:</i> Social services</p> <p><i>Findings:</i> Teleworking on the psychological well-being of employees have not been well studied</p>
	Almonacid-Nieto et al. (2020)	<p><i>Country:</i> Peru</p> <p><i>Industry:</i> Private Sector, higher education</p> <p><i>Findings:</i> Teleworking skills reduce depersonalization and emotional fatigue. Also, teleworking conditions are related to achieving personal fulfillment, but they do not seem to be related to job burnout reduction</p>
	Jamal et al. (2020)	<p><i>Country:</i> India</p> <p><i>Focus:</i> On employee mental well-being</p> <p><i>Findings:</i> Workload pressure, professional isolation and family interference in work lead to exhaustion and stress, whereas work autonomy, schedule flexibility and sufficient technology resources improve employee work-life balance, productivity and job satisfaction</p>
COVID-19 impact on daily mobility behavior & effect on travel behavior	de Haas et al. (2020)	<p><i>Country:</i> Netherlands</p> <p><i>Survey:</i> Netherlands Mobility Panel (MPN)</p> <p><i>Findings:</i> The majority of the respondents reacted positively to teleworking. The 27% of workers expressed future expectations to work from home</p>
	Beck et al. (2020)	<p><i>Country:</i> Australia</p> <p><i>Survey:</i> Travel survey on the impact of COVID-19</p> <p><i>Findings:</i> Employees positively reacted to teleworking and wished to continue use it after pandemic</p>
	Barbour et al. (2021)	<p><i>Country:</i> USA</p> <p><i>Survey:</i> Binary logit models with heterogeneity in means – conceptual framework</p> <p><i>Findings:</i> Factors affecting the work from home adjustment during the crisis and its future adoption after the pandemic was inherently linked to the transportation systems policy</p>

### 3.3 Factors Affecting Teleworking Adoption During and Post COVID-19 Pandemic Conceptual Framework

The systematic review of the empirical studies revealed a number of characteristics and perceptions which impact both employees and organizations/ companies during the COVID-19 pandemic concerning their teleworking practices. Therefore, in reference to these findings, a proposed framework has been developed with the aim to map the main elements which configure the teleworking environment during COVID-19 pandemic and is expected to influence the post COVID-19 era as well. At first, these features are categorized into employees and organization/ company characteristics. In specific, employees' characteristics are classified in three categories; a) profile, b) work and c) teleworking environment & infrastructure, whereas organization/ company's characteristics are classified into two categories; a) profile and b) level of e-readiness. Both employees and enterprises' features have proved to impact on their perceptions regarding the expected benefits and drawbacks of the current teleworking utilization. As a result, all of the aforementioned elements have already influenced both entities to proceed to teleworking adjustments during the COVID-19 pandemic and is believed that they are going to impact the post COVID-19 working environment era as well.

With reference to employees, a significant number of studies mentioned the importance of teleworker's personal characteristics/ profile for the smooth and substantial adoption and use of telework. Age (Baert et al., 2020; Barbour et al., 2021; Beck & Hensher, 2020; Carillo et al., 2021; de Haas et al., 2020; Ly et al, 2020; Morilla-Luchena et al., 2021; Nguyen, 2021; Raišienė et al., 2020; Wong et al., 2020;), gender (Baert et al., 2020; Barbour et al., 2021; Beck & Hensher, 2020; Blaskó, 2020; de Haas et al., 2020; Feng & Savani, 2020;

Morilla-Luchena et al., 2021; Nguyen, 2021; Raišienė et al., 2020; Wong et al., 2020), educational level (Baert et al., 2020; Barbour et al., 2021; Beck & Hensher, 2020; Carillo et al., 2021; de Haas et al., 2020; Morilla-Luchena et al., 2021; Nguyen, 2021; Raišienė et al., 2020) and marital status (Barbour et al., 2021; Beck & Hensher, 2020; Blaskó, 2020; de Haas et al., 2020; Fana et al., 2020; Morilla-Luchena et al., 2021; Nguyen, 2021) have been considered as the most important factors concerning employee's profile, thus, a significant number of empirical studies did prove their effect. For example, Carillo et al. (2021) confirmed that younger and higher educated employees are more receptive to telework. On the other hand, married women with kids at home have found it really hard to teleworking especially during lockdowns (Baert et al., 2020; Nguyen, 2021). Moreover, the impact of previous telework experience (Beck & Hensher, 2020; de Haas et al., 2020; Morilla-Luchena et al., 2021; Nguyen, 2021; Raišienė et al., 2020; Vasic, 2020) and perceived digital literacy (Baert et al., 2020; Carillo et al., 2021; Edelmann et al., 2021; Fana et al., 2020; Nguyen, 2021; Okubo, 2020; Raišienė et al., 2020; Vasic, 2020) does impact positively to a significant extent as well. Finally, income (Barbour et al., 2021; Beck & Hensher, 2020; Nguyen, 2021) and residential location (Barbour et al., 2021; Beck & Hensher, 2020; de Haas et al., 2020; Okubo, 2020) are also important determinants of teleworking utilization. Regarding employee's job, the characteristics of his/ her work, along with the type and sector involved seem to impact on their teleworking duties (Beck & Hensher, 2020; de Haas et al., 2020). For instance, 'automation and IT' sector greatly accepted teleworking (de Haas et al., 2020). In contrast, brick-and-mortar store retailers could not telework (Beck & Hensher, 2020). Finally, it has been considered as important parameter for the employee to be equipped with the necessary hardware and software equipment for his/ her teleworking (Edelmann et al., 2021; Fana et al., 2020; Jamal et al., 2021; Ly et al., 2020; Morilla-Luchena et al., 2021; Okubo, 2020; Tavares et al., 2020; Vasic, 2020; Wong et al., 2020). To add to this, the proper teleworking environment at home has also proved to impact deeply on his/ her perceptions towards teleworking (Carillo et al., 2021; Pauline Ramos & Tri Prasetyo, 2020; Tavares et al., 2020; Vasic, 2020; Wong et al., 2020).

Concerning the organization/ company's features, the extant empirical studies proved the importance of its profile for the adoption and use of telework. Particularly, the size of the enterprise seems to impact substantially. Okubo (2020) confirmed that the rate of telework utilization increases as the number of employees increases. Furthermore, the industry type also plays a vital role (Barbour et al., 2021; de Haas et al., 2020; Fana et al., 2020; Ly et al., 2020; Morilla-Luchena et al., 2021; Nguyen, 2021; Okubo, 2020; Raišienė et al., 2020; Wong et al., 2020). For instance the IT sector is more receptive to teleworking as the vast majority of its activities are keen on the characteristics of telework (e.g. Barbour et al., 2021). Finally, public organizations have been more receptive to teleworking compared to private companies as the formers have transferred faster and to a greater extent their activity by taking advantage of the teleworking capabilities (Morilla-Luchena et al., 2021). With reference to firm's e-readiness, enterprises with organizational resources to support teleworking, such as previous similar experience and adequate work organization perceived more the benefits of teleworking (Diab-Bahman & Al-Enzi, 2020; Tokarchuk et al., 2021; Vasic, 2020). Moreover, the organizational support for teleworking (Beck & Hensher, 2020; Diab-Bahman & Al-Enzi, 2020; Edelmann et al., 2021; Lee, 2021; Tokarchuk et al., 2021; Vasic, 2020) along with technological readiness (Tokarchuk et al., 2021; Vasic, 2020) proved to positively impact as well. For instance, Vasic (2020) showed the importance of firm's digital transformation for the positive perceptions and use of telework.

In regard to the main perceived benefits, productivity (Baert et al., 2020; Betchoo, 2020; Diab-Bahman & Al-Enzi, 2020; Edelmann et al., 2021; Feng & Savani, 2020; Jamal et al., 2021; Pauline Ramos & Tri Prasetyo, 2020; Wong et al., 2020) along with work schedule flexibility (Beck & Hensher, 2020; Betchoo, 2020; Blaskó, 2020; Diab-Bahman & Al-Enzi, 2020; Edelmann et al., 2021; Jamal et al., 2021; Ly et al., 2020; Pauline Ramos & Tri Prasetyo, 2020; Raišienė et al., 2020) and job satisfaction (Baert et al., 2020; Fana et al., 2020; Feng & Savani, 2020; Jamal et al., 2021; Ly et al., 2020; Pauline Ramos & Tri Prasetyo, 2020; Raišienė et al., 2020) top the list; followed by work autonomy (Carillo et al., 2021; Edelmann et al., 2021; Fana et al., 2020; Jamal et al., 2021; Raišienė et al., 2020; Tavares et al., 2020) and commuting avoidance (Beck & Hensher, 2020; Diab-Bahman & Al-Enzi, 2020; Ly et al., 2020; Nagata et al., 2021; Nguyen, 2021; Pauline Ramos & Tri Prasetyo, 2020; Raišienė et al., 2020). Furthermore, a considerable number of studies proved the positive effect on work-family balance (Baert et al., 2020; Betchoo, 2020; Raišienė et al., 2020; Vasic, 2020; Wong et al., 2020), whereas reduction of COVID-19 infection risk (Nagata et al., 2021) and environmental benefits were also identified (Nguyen, 2021). Concerning anticipated drawbacks, work overload (Nagata et al., 2021; Carillo et al., 2021; Raišienė et al., 2020; Vasic, 2020; Fana et al., 2020; Ly et al., 2020; Matli, 2020; Jamal et al., 2021; Edelmann et al., 2021), personal stress (Carillo et al., 2021; Edelmann et al., 2021; Fana et al., 2020; Kapoor et al., 2021; Nagata et al., 2021; Pauline Ramos & Tri Prasetyo, 2020; Vasic, 2020; Wong et al., 2020;) and work-family conflicts (Baert et al., 2020; Beck & Hensher, 2020; Blaskó, 2020; Fana et al., 2020; Jamal et al., 2021; Ly et al., 2020; Nguyen, 2021; Raišienė et al., 2020; Tavares et al., 2020; Vasic, 2020; Wong et al., 2020) were identified as the most major ones.

Professional isolation (Baert et al., 2020; Edelmann et al., 2021; Jamal et al., 2021; Matli, 2020; Nagata et al., 2021; Vasic, 2020), lack of face-to-face interaction with colleagues (Baert et al., 2020; Betchoo, 2020; Edelmann et al., 2021; Morilla-Luchena et al., 2021; Raišienė et al., 2020) and complicated access to work-related information and systems (Baert et al., 2020; Edelmann et al., 2021; Ly et al., 2020; Okubo, 2020; Raišienė et al., 2020) were also pointed out by various empirical studies. To add to these, less work motivation (Fana et al., 2020; Nagata et al., 2021) and career prospects constraints (Baert et al., 2020; Fana et al., 2020) were reported as well. Finally, health issues (Fana et al., 2020; Morilla-Luchena et al., 2021), such as physical conditions and well-being concerns and decreased relationship and management control (Fana et al., 2020) completed the list of the key perceived drawbacks of telework. At this point it should be emphasized, though, that there have been benefits which were identified as drawbacks in some studies and vice versa. For example, the lack of ability for brick-and-mortar store retailers to teleworking minimizes their productivity. Conversely, for a group of employees teleworking leads to professional isolation, whereas a significant number of them reported that it helped them have work autonomy.

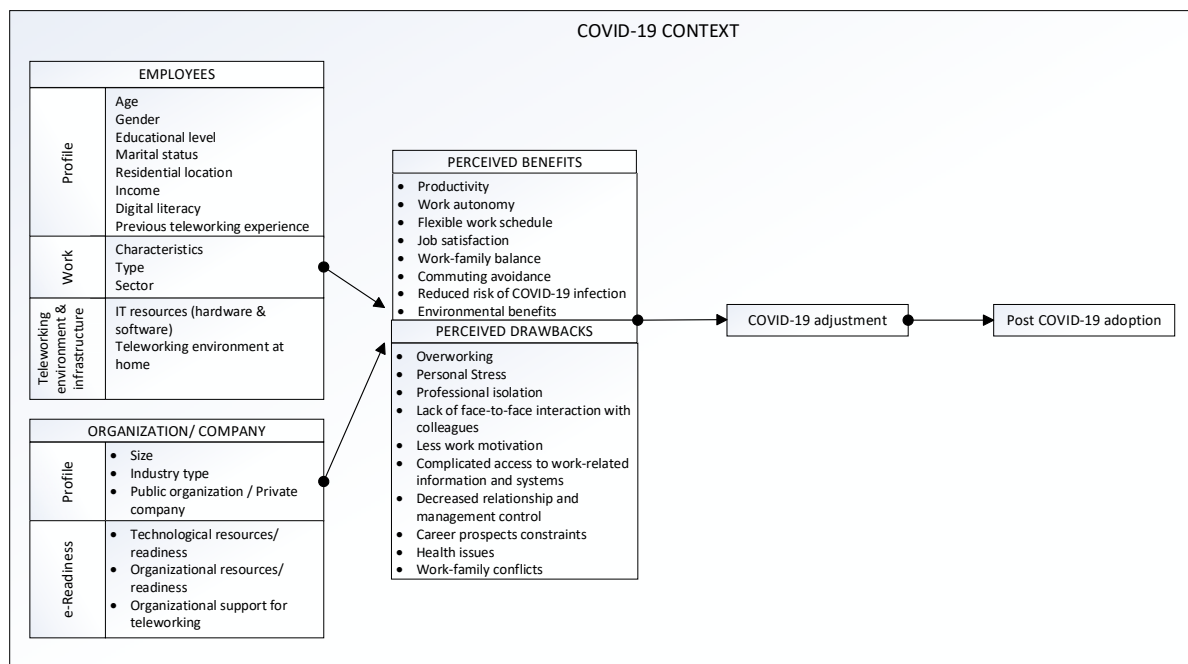


Figure 2. Conceptual framework - Factors affecting teleworking adoption during and post COVID-19 pandemic

#### 4. Conclusion

A significant increase in teleworking usage practices due to the COVID-19 pandemic has been a fact worldwide. During this difficult period for the humanity, companies and organizations along with their employees have tried really hard not to stop their business activities and minimize face-to-face contacts to the greatest extent. To add to this, lockdown periods have also forced all these entities to utilize ICT solutions; and teleworking practices have taken place in the majority of industries and sectors as much as possible. There have been many companies, however, that have found it really difficult to adopt these technological solutions as the nature of their activities, the absence of relevant skills to employees or IT resources shortage prevent them from teleworking practices. As a result, this systematic literature review paper aims to explore the factors that have played a decisive role in teleworking adaption, taking into account both employers and employees towards this significant organizational chance that leads to digital transformation. In specific, the article intends to explore how the COVID-19 pandemic has impacted on people's behavior and attitude triggering changes in their working patterns as well as expectations for the future, based on previous, very recent (2020-2021), empirical studies' review. In terms of research and future policy, it is vital to consider how individuals' respond to coronavirus induced teleworking and how the resulting positive and negative experiences might lead to future working patterns after this pandemic will not be longer a threat. Understanding the positive and negative determinants in different contexts is considered as vital with the aim to develop more specific teleworking practices. This is the reason why the paper also focuses on presenting multiple points of views from previous researchers on the topic; and critically

input all these different aspects by organizing the various research findings into subject streams. Moreover, the ability of managers to organize and control remote teams seems to be an additional factor to be considered in future research. Thus, as it was presented by a number of previous empirical studies, it is of high interest to highlight that a considerable number of employees worldwide may prefer to continue teleworking at least for some days during the week in the future, as their current experience might eliminate their possible hesitations and make them more receptive to teleworking practices. Furthermore, the study through the evaluation of the main perceived benefits and drawbacks of individuals and firms towards COVID-19 induced teleworking, along with their specific characteristics (employees' profile, work and teleworking environment & infrastructure – companies' profile and e-readiness) presents a comprehensive conceptual framework, which summarizes the basic parameters that affect the teleworking adjustment and define the post COVID-19 adoption period. This framework is expected to be a significant tool for redefining teleworking during, as well as after the COVID-19 pandemic period and might help both employers' and employees' actions towards the adoption or not of teleworking practices as well as the level of its utilization. Thereby, this systematic review research contributes to the extant literature on such an important and time critical topic on the expected teleworking consequences of the COVID-19 crisis, but also to the overall scientific literature on teleworking.

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