

Article

From Stationary to Remote: Employee Risks at Pandemic Migration of Workplaces

Janusz Rymaniak ¹, Katarzyna Lis ², Vida Davidavičienė ^{3,*} , Manuela Pérez-Pérez ⁴ 
and Ángel Martínez-Sánchez ⁴ 

¹ Department of Management, Faculty of Management and Finance, WSB University in Gdańsk, 80-266 Gdańsk, Poland; rymaniakjanusz3@wp.pl

² Department of Labour and Social Policy, Poznań University of Economics and Business, 61-875 Poznań, Poland; katarzyna.lis@ue.poznan.pl

³ Department of Business Technologies and Entrepreneurship, Vilnius Gediminas Technical University, LT-10223 Vilnius, Lithuania

⁴ Department of Business Management and Organization, School of Engineering and Architecture, University of Zaragoza, 50015 Zaragoza, Spain; manuela.perez@unizar.es (M.P.-P.); amarzan@unizar.es (Á.M.-S.)

* Correspondence: vida.davidaviciene@vilniustech.lt

Abstract: The first lockdown due to COVID-19 in the year 2020 created a particular scenario that forced a change to telework among diverse professions and social groups. This article presents the results of research carried out among samples of Polish, Lithuanian and Spanish remote workers concerning working conditions in organizations and at home, and the potential impact of some professional hazards from home-based telework. On the contrary to earlier published papers on pandemic-induced telework that focused on how the limitations at home of first-time remote workers impacted on their well-being and work–family balance, our research contributes to a more recent endeavor that focuses the analysis on the work design perspective. The results of the survey indicate that employees felt more stressed and in conflict at their remote workstations when they had to telework during the lockdown, and that this negative output was significantly related to the deterioration of some working dimensions like space, quality and design but not to the perception of professional hazards from home-based telework. According to our research, the forced situation seemed not to be a favorable factor for implementing changes in light of the insufficient technical and organizational preparation of employers as well as the employees' mental preparation. It should be necessary to update sequentially the results of the epidemic-induced telework and conduct research for various stages of the pandemic and the subsequent economic recovery. This could help popularize remote work as one of the tools of the labor market in the future and as a tool for treating labor resources as an element of sustainable development.

Keywords: remote work; telework; labor market; work design; workplace; pandemic crisis; sustainable development



Citation: Rymaniak, J.; Lis, K.; Davidavičienė, V.; Pérez-Pérez, M.; Martínez-Sánchez, Á. From Stationary to Remote: Employee Risks at Pandemic Migration of Workplaces. *Sustainability* **2021**, *13*, 7180. <https://doi.org/10.3390/su13137180>

Academic Editor:
Christian Vandenberghe

Received: 1 June 2021
Accepted: 23 June 2021
Published: 26 June 2021

Publisher's Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Copyright: © 2021 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

1. Introduction

The COVID-19 pandemic has hit hard worldwide and brought a lot of changes in social, economic, political and business environments. The health care systems were even about to collapse during the first wave and many countries had to make dramatic decisions and implement challenging solutions in all spheres of activities. Most challenging and hard was the acceptance of lockdowns, finding new ways of operating businesses, implementing new ways of communication and supporting citizens in the context of social distancing. Telework was part of the solution to keep organizations running during the global lockdown between March and June 2020 caused by the first wave of COVID-19. After July 2020, economies reopened gradually again but the evolution of the pandemic

and the following waves forced back restrictions and local lockdowns that made telework enlighten the lives of organizations as never before. This article focuses the analysis on three European countries—Poland, Lithuania, and Spain—that shared several characteristics from a teleworking perspective at the outbreak of the pandemic and made them especially interesting to study. First, the teleworking rate (percentage of teleworkers in the workforce) in these three countries before the COVID-19 pandemic was below the 13.5 per cent average in the EU-28 (Eurostat Labor Force Survey, 2018). Second, although the European Framework Agreement on Teleworking was launched in 2002, none of these three countries had developed specific teleworking rules and regulations which created confusion in the management of an unprecedented situation where most organizations were forced, overnight, to work remotely during the lockdown. This means that they were less familiar with telework than other European countries with more presence and experience in managing and regulating remote work. At the same time, there are also differences between Poland, Lithuania and Spain such as economic size, economic structure or even climate that offer enough diversity to study the different impacts of remote work in the unusual situation of a lockdown.

The COVID-19 pandemic has boosted the necessity to work remotely. Even though presential work is the usual type of labor organization, the lockdowns brought telework upfront as never before. Telework is a way of flexible working that enables workers to get access to their labor activities from different locations by the use of ICTs (information and communication technologies). Telework is usually adopted on a voluntary basis, but during the first lockdown of 2020 people were forced to work remotely because of fears of COVID-19 and because of mobility restrictions enforced by the governments. The shock from COVID-19 was even larger in low-teleworking countries with limited legislation regulating telework, thus the importance of studying the impact of pandemic-induced telework in such countries.

In the 40 years of experience since the oil crises of the 1970s, telework has been developed more intensively in North America and northern European countries in their modalities of home-based telework and mobile workers (for example, those who operate from different locations with mobile devices) [1]. During the lockdown, mobile telework was greatly diminished as well due to mobility restrictions, leaving home-based telework as almost the only feasible alternative. The advantages of telework have been thoroughly discussed [2]. The literature usually highlights that telework may influence positively on the employee's productivity and work–family balance; whereas, the negative side focuses on the difficulties to manage space and time boundaries at home with other family members as well as the need to reorganize tasks, job planning and supervision. This negative side may have been even darker during the lockdown since so many employees and organizations did not have any previous experience.

Even though there are already a few studies that have reported the situation of epidemic-induced telework during the first COVID-19 lockdown in some countries, i.e., [3], they usually focus on the difficulties to manage work and family in home-based environments forced overnight to telework and the main limitations encountered by remote employees at home. However, there is a literature gap in studying the characteristics of work changed by pandemic-induced telework. Telework and remote working have usually been adopted on a voluntary basis, but due to lockdowns, remote working was no longer a discretionary option. This means that previous findings about remote working may have probably suffered from a selection bias. Our paper wants to contribute to fill this gap between the past and the present work organization scenario by studying the differences perceived by employees of their working conditions and prospects before and during the lockdown with a systematic analysis of several dimensions of work design and extending this comparison along different countries with low experience in teleworking.

This study aims to analyze the perception among employees of the various types of risks in employment and working organization dimensions before and during the

pandemic, which also involve the need to organize makeshift workplaces and home-telework. Specifically, the following research problems are studied:

1. The level of the employee's perception of the risks concerning transformations in employment, work organization in the new remote working situation and the conditions resulting from the pandemic.
2. The level of the employee's evaluation of their stationary workplaces and, in context, remote workplaces (homes) organized by remote employees as needed and required.
3. Whether there is any influence of the risks perceived by employees on the organization of remote workplaces or if it only coexists with the new working location.

The implementation of the research will show empirically the views of employees in a new, theoretically unpredictable situation. The results of the research will be useful to managers in developing scenarios of remote work for their companies. The literature's review, analysis and synthesis were employed for developing the empirical research, the data were collected by an online questionnaire administered to the surveyed employees and the data were analyzed by descriptive and multivariate statistics.

The paper is structured as follows. The next section establishes the theoretical background of the paper followed by the methodology of the empirical research. Then, the results of the paper are shown with their discussion. The paper ends with conclusions and some limitations and future research.

2. Theoretical Background

2.1. The Resource-Based View (RBV) and Capabilities Theory

The RBV is an organizational theory that deals with the strategic aspects of directing a firm to a development path based on resources and competences [4] that can be differentiated between "productive" means and "administrative" resources [5]. A firm could obtain a competitive advantage when its resources are valuable, rare, inimitable and non-substitutable [6]. Contrary to the RBV, the dynamic capabilities perspective considers that accumulating valuable resources is not enough because firms need dynamic capabilities to create, apply, integrate, expand or modify those resources [7]. This perspective could help to understand how some firms were better able to cope with the pandemic in light of capabilities like organizational agility or innovation. Agile firms are more flexible, adaptive and rapid to overcome unpredictable environmental changes.

According to the RBV and capabilities theories, the firm's intangible resources are more difficult to imitate and replicate by competitors. Among intangible resources, work organization and human resources management are idiosyncratic features for each firm. In fact, human resources are the basic key in the firm's flexibility system that enables it to react with agility to environmental changes. Although some management practices (e.g., flexi-time) and types of work (presential vs. remote) are available to many firms, it is how firms manage them that constitutes a resource difficult to imitate. This intangible asset may contribute to, for example, a greater organizational commitment in those companies whose employees are more satisfied because they can improve their work-family balance when they are able to avoid long commutes or climate hazards by working remotely. Job satisfaction and organizational commitment may in turn contribute positively to the firm's competitive advantage. This management system cannot be not easily imitated by competitors because there are many intangible components involved. The pandemic-induced remote work has facilitated location flexibility in order to manage the different waves of COVID-19 without closing down and keeping employees' status and competencies. In this way, surviving firms are more able to use the transfer of state funds for new project investments.

2.2. Remote Work

The concept of remote work is inherently included within various terms such as remote work itself, telework, telecommuting or even virtual working [8] which involves virtual teams with their work specifics and research topics [9,10]. When the location is specified,

we also have such forms as, e.g., home-based telework or coworking in telecenters, where employees rent out adequate office space together with colleagues or employees from other companies. This is a two-fold concept. It is usually bound strictly by time and entails the performance of tasks for the benefit of the company/companies located near the location of the rented premises. It is sometimes a more long-term form, mainly for freelancers, startups or small enterprises that become the location of their headquarters; according to Gandini [11], it becomes a 'third way' of working, halfway between a 'standard' work life within a traditional, well-delimited workplace in a community-like environment, and an independent work life as a freelancer, characteristic of freedom and independence, where the worker is based at home in isolation.

These aforementioned forms facilitate the identification of the essence of remote work. The 20th century research emphasized that remote work is work performed outside of the location of the company (in a different location from a traditional office) and with the use of ICTs. The early research of remote work arose from the concerns associated with working outside the company premises, i.e., the difficulties of ongoing task assignment and the supervision and control of employees during their working time [12]. However, the development of ICTs, particularly mobile devices (laptops, smartphones, etc.) and software (e.g., Bluetooth, intranet, e-mails, etc.), made remote work to be adopted by flexible organizations. This trend helped to differentiate the criteria of locations (home-based telework, telecentres, mobile telework) and also to test relationships between telework performance and the use of ICTs. On the one hand, remote workers were recognized to offer a higher level of communication and information efficiency and be more beneficial to the company [13]. On the other hand, ICTs' development created new possibilities for the management of organizations (including virtual organizations). Human resources management is particularly one of the fields which is strongly affected by ICTs [14].

Hislop, Axtell, and Daniels [15] deemed telework to be composed of five aspects: the location of work; the extent to which work involves the use of ICTs; the extent of communication with people external to the organization; the extent of communication with colleagues and supervisors within the organization; and the knowledge intensity of the work. The location of work and technology were supplemented with the needs of internal and external communication (frequency and range of contacts) as well as the considerable knowledge and skills of the employees in the application and operation of technological solutions and equipment.

There are also other typologies used in research and managerial practice. For example, the application of the contractual relationship and work locations criteria led to the establishment of the category of stationary teleworkers, mobile teleworkers and flexi teleworkers (a mix of both categories) who can work both for the organization or under external contracts [16]. The increased development of ICTs makes this process easier and facilitates working anywhere at any time, thus neutralizing the distance between the geographical locations of the workplaces and the company [17]. Simultaneously, the range of organizational solutions assumed as win-win for both the employer and the employee is increasing, which is explained in various theories and concepts, including the theory of the flexible firm. This theory promotes the rationality of adapting the number of hours worked and the number of employees (numerical flexibility) or their range of skills (functional flexibility) to accommodate changes in production levels and technologies [18]. Telework, in particular, or remote work in general is another form of human resource flexibility that may contribute to numerical or functional flexibility at the same time that offers spatial (location based) flexibility to employees and organizations. The literature has studied the influence of these types of human resource flexibility on firm performance and innovation. For instance, some studies have found a positive influence of internal human resource practices and external knowledge experts on innovation, whereas temporary employment has negative effects [19].

Other research topics have focused on various implications concerning remote work and remote workers like managing the limits of remote work in the aspects of work-family

and family–work balance. These are based on the integration of work and free time and alternatively based on the preservation of a clear boundary between them [20,21], balancing professional and personal life and general job satisfaction [22], impact of remote work on working efficiency and wellbeing [23], and ultimately the greater satisfaction of remote employees than stationary employees in a call center [24].

Despite the fact that the results of such research are mixed, the trend of growth of remote work is progressive and in some countries like the Netherlands or Sweden the level of telework was already over 30 per cent of the workforce before the COVID-19 pandemic. For instance, the high level of remote work in Sweden resulted from factors associated with the trust and control of managers, the nature of the workplaces, the work tasks, the contracts in industries based on knowledge and in the importance given to balance professional and personal lives. Remote work was slowly coming out of the advanced services sector and had started to penetrate other sectors of the economy [25].

The previously discussed theoretical constructions and their typologies have been usually analyzed during standard working conditions of the economy and markets. Even dynamic capabilities like agility are projected into frameworks where some variables remain predictable. Organizational theories are put to the test under extreme conditions like wars, natural disasters and pandemics. In addition, because of the largely voluntary nature of prior remote working, some of the previous findings on telework and remote working may have probably suffered from a selection bias. However, during the first wave of the COVID-19 pandemic when remote working was no longer a discretionary option but rather a compulsory requirement, there are less chances to use organizational theories and the focus instead is on understanding how to get the most out of remote working. Such a shift of research focus essentially requires that our paper draws on the theoretical perspective of work design which refers to the content and characteristics of work positions.

2.3. Job Characteristics Model (JCM)

Work design is one of the most influential theoretical perspectives in existing remote working literature. Work characteristics may moderate or mediate the effect of remote work on work outcomes. The identification of research principles and elements of remote work positions requires a review of the literature about the design standards of contemporary work and the development of the remote work concept, as the transformations in contemporary workplaces result from various factors, from substantive essence to the developmental needs of the economy.

The essence of designing work at the organizational level was based on establishing the sets of tasks and activities [26] which were required for the designation of uniform or similar sets of activities. This facilitates the work of employees and the selection of the right people with appropriate predispositions to the requirements established by said tasks [27]. Taylor [27] wanted to create and implement entire work systems with standardized operations and highly simplified positions, i.e., to standardize and simplify the work. Technological progress and identification of more and more diverse sets of actions gradually led to the need for a work analysis [28], which led to institutionalization in the form of development of vocations and specializations [29].

Another direction pointed out the research to the development of a model and theory recognizing the impact of work on the mental states and attitudes of employees. Sets of work attributes (characteristics) were developed, which led to the creation of the Job Characteristic Model and the Job Characteristic Theory (JCM and JCT) through gradual specification, supplementation and correction of the initial principles of Herzberg, Turner and Lawrence. Such a model and theory survived as the fundamental form of work design until the early 21st century despite the evolution of work, changed conditions and competitive research concepts [30–32]. The five main attributes known as task characteristics were expanded over other characteristics with a direct or indirect impact on work. Morgeson and Humprey [33] used the expanded task characteristics and sets of characteristics defined

as knowledge, social and work context to develop a measurement tool in the form of the Work Design Questionnaire (WDQ). Further research verified the principles and defined them as knowledge (information processing, diverse skills, specialization), social (social support, interactions with beneficiaries outside of the organization, feedback), physical (work conditions, health, ergonomics, physical requirements, workload, equipment) and additional, including workday cycles, time pressure, temporal horizon, virtual work, skill and ability requirements [34]. Some of the components were tested in directional studies, including physical work characteristics in the perspective of employees and employers [35]. The developed integrative model was modified and used in empirical research [36,37].

A concept emerged concerning approaching the work in the following perspectives: relational and proactive. The relational perspective is based on the assumption that the more jobs, roles and tasks there are, the greater the social fix based on increasing the co-dependency and interaction with colleagues and service recipients. The proactive perspective is the rising importance of employees taking the initiative of projecting and creating changes in the work methods based on increasing uncertainty and dynamics [38]. However, in the current state of theoretical progress, it does not develop operating instruments.

Our study focuses on this work design perspective and analyzes work organization dimensions, including work output, by comparing employees' perceptions of their workstations before the pandemic and their remote workstations (basically home-based telework) during the pandemic. It is a fact that during the lockdown many people were forced to work from home or faced an elevated workload. For some employees, and the self-employed, the current crisis even threatens their career perspectives, professional status and income. As a consequence, it is expected that a rise in the levels of psychological disorders like anxiety or depression can be translated to assessments of work outputs of remote workstations. This negative effect on work output can be assessed by the employees' perceived levels of stress, nervousness, anxiety and fear or increased exhaustion and discouragement at work. These unhealthy effects may depend, on one hand, on the work conditions at remote working (home-based telework) in comparison to the conditions they had at their stationary workplaces before the pandemic. If employees have eventually worse remote working conditions because of improvisations and lack of experience in remote working at the company, then they are going to feel more depressed and stressed at home. Additionally, unhealthy effects can also be experienced as a consequence of employees' fears about the perceived labor risks (salary cuts, layoffs, etc.) they can encounter at home because of the economic crisis and being out of the office. There is a potential contribution to the literature that can be made by analyzing the following propositions in a comparative cross-country study:

Proposition 1. *The greater the negative change in the dimensions of work organization in remote working versus stationary workstations, the greater the negative assessment of work output (health effects) during remote working.*

Proposition 2. *The greater the labor risks perceived by employees in remote working, the greater the negative assessment of work output (health effects) during remote working.*

Our research could help organizations to manage remote work effectively. The advantages of remote working have been taken for granted because it has been mostly adopted on a voluntary basis. However, the forced adoption of telework because of the pandemic will accentuate the deficiencies and differences of resources and capabilities of little prepared organizations and employees for remote working. Then, the importance of work design should be highlighted before promoting remote working to a larger percentage of the workforce.

3. Methodology

The data for this study were collected from a survey questionnaire administered by e-mail and online to remote employees in Poland, Lithuania and Spain who had to telework

during the first wave and lockdown of the pandemic. These three countries share a low teleworking rate (percentage of teleworkers in the workforce) below the EU-28 average and a lack of specific telework regulations before the pandemic.

The period of collecting data with two remainders extended from April to July 2020. The project was entitled “Remote Work in Organizational and Social Dimensions”. The international research aimed to collect quantitative data and employee opinions concerning stationary and remote work and workplaces, as well as their various aspects, including efficiency or occupational health during the lockdown when employees had to move their work to their homes at the request of their employers.

The e-mail option covered surveys conducted in Poland and in Lithuania whereas in Spain it was only online. The Polish e-mail version (in Excel format) contained quantitative surveys performed with the method of (self) photography of the workday while the online version presented the quantitative data according to the method assessing task quantity and time. Regarding the Lithuanian survey, it was conducted in Excel according to the task assessment method. It involved the compilation of the data concerning the opinions of respondents in the scope of their projected consequences of the radical transformations of work and its conditions as well as comparison of evaluations of stationary workplace parameters (normal, previous working conditions) and the organization and performance of the task assigned under the ad hoc remote workplaces at home.

The nature of the sample selection is partially purposive and partially random. The purposive part includes Polish questionnaires dedicated to employees of the school and higher education sector as well as of local and national government administration. The latter also includes the employees of the office of the mayors of Poznań, Gdańsk and Słupsk (the city mayors endorsed the surveys), teachers, and employees of courts and prosecutors’ offices, who make up 62% of Polish and 60% of Lithuanian respondents. The Spanish questionnaires were addressed mainly to people employed in the science and education sector (78%), which makes it the most homogeneous group of respondents. The remaining respondents compose a randomly selected group.

The number of questionnaires received with complete information was 1599 (680 Polish, 435 Lithuanians and 484 Spanish). The internal sample cohesion was high for all sets. In scope of risk factors, the Cronbach’s alpha coefficient came to 0.793 for the Polish population, 0.692 for the Lithuanian population and 0.871 for the Spanish population. In turn, the Cronbach’s alpha values for the set of workstation parameters came to 0.720 for the Polish population, 0.736 for the Lithuanian population and 0.726 for the Spanish population. The entire sets came to the values of 0.764 for the Polish population, 0.792 for the Lithuanian population and 0.752 for the Spanish population to meet the required high credibility level of the test.

The theoretical background was used as the basis for establishment of the research characteristics and dimensions concerning the types of workplaces. The essence and range of remote work was used to establish the key characteristics of the research in the scope of both stationary and remote workplaces. The questionnaire included 25 items depicting the individual working dimension of stationary and remote workstations. Prior to data collection, the content validity of the items and scales was established by grounding them in existing literature. Different sources were used to adapt items and elaborate the questionnaire [33–35] that was pretested in March 2020 with 10 remote employees. The surveyed employees assessed each item on a 5-point Likert scale, where: 1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; 5 = strongly agree. Examples of items: “The workstation takes up space necessary for carrying out my tasks freely” “When working, I am able to change my body posture depending on my needs (no constrained body postures)”, “My work causes stress, nervousness, anxiety and fear”, “I experience increased exhaustion and discouragement at work”, “I perform predominantly repetitive tasks, with fixed structures and procedures”. An exploratory factor analysis with Varimax rotation determined six factors underlying the set of items. In all cases, the results showed factor loadings of over 0.5 and a percentage for explained accumulated variance in excess of

50%. The reliability of constructs was assessed using the internal consistency method via Cronbach's alpha. All factors had a Cronbach's alpha greater than 0.7 which is considered adequate. A confirmatory factor analysis confirmed the composition of the constructs identified in the exploratory factor analysis. The factors or 'work dimensions' as we will name them in the paper are: space, ergonomics, quality, design, health, and technology (Table 1). The next paragraphs describe the composition of each work dimension.

Table 1. Work dimensions of the survey.

Work Dimension	Characteristic of Items
Space	Freedom of movement. Arrangement. Density. Exclusiveness.
Ergonomics	Freedom of action. Lighting. Equipment. Access.
Quality	Concentration. Punctuality. Accuracy. Feedback.
Design	Repeatability. Decision-making. Consultation. Rhythmicity. Crunch.
Health	Imbalance. Conflicts with relatives. Professional conflicts. Exhaustion.
Technology	Base. General Suites. Support. Management.

The first factor or dimension is named Space, as in the expansion of the organization's limits resulting from the transfer of workplaces outside of its location. It is one of the main elements of a remote nature of work and includes four characteristics: freedom of movement, arrangement, density and exclusiveness. Freedom is a parameter which determines the ability of free task performance on the workplace, i.e., the physical location, arrangement of equipment and access to databases, materials and equipment. Employees often deem this characteristic as "my place at work". Arrangement is the employee's perception of the spatial configuration of the workplace and its impact on emotions and attitudes, i.e., approach to, organization of and performance of work. Density is associated with relative space configuration, i.e., the number of workplaces and people present at or near the workplace, which may have a potentially negative impact on the employee's focus and performance. In this context, it is the element of work density understood from a reistic perspective. Exclusiveness is particularly important in remote work, where there may be a potential conflict of interest during work at home between the employee and other household members, usually concerning the use of equipment. The exclusion of the workplace from general space makes it easier to specify the "workspace" at home.

The second workplace dimension is Ergonomics (four items), which is closely tied to the working conditions and it is one of the oldest research dimensions in the workplace. Freedom of action is its first characteristic and is based on the ability to change the body's position depending on the needs. For instance, the experiences of teachers in the first days of working remotely indicated reports of problems concerning the skeletal system resulting from hours of forced work in the same position. The second characteristic is lighting, which determines the comfort of work in the short-term and long-term vision diseases. The next one is equipment of the workplace (mobile devices, tools, information, materials), as the level of completeness of the aforementioned elements determines the working possibility and quality. The fourth characteristic is access, which covers connections, databases, software and communication. These are mainly ICT elements, which, after being spatially allocated outside of the location of the organization, are the second determinant of the remote nature of a workplace.

The third workplace dimension is named Quality, which concerns the progress and effects of work as well as the progress of relations between the remote workplace and the organization. It includes the concentration characteristic, which determines the potential to focus on the performed activities and tasks. The next characteristic is punctuality, which is obedience of the standard performance deadlines. Next is accuracy, which is understood as legitimate performance, which does not produce the need for corrections or supplements. The final characteristic in this group is feedback, which is information concerning the

effects and evaluation of the work, organizational transformations, etc., provided in an ongoing manner.

The fourth dimension is Design whose first characteristic is repeatability, which defines the level of performance of the same sets of actions of established schematics and procedure of conduct. The next characteristic is decision-making, the freedom to make decisions concerning organization, time, performance methods, tool selection, etc. The third characteristic is consultation, in the scope of which we analyze the level of demand for consultations and teamwork. Another one is rhythmicity, which determines the workload and allows for action spread evenly over time in daily and weekly intervals. The last characteristic is crunch, acceleration of performance in the event of upcoming stage deadlines in the scope of clearing tasks or the final result. In other words, this is a definition of the level of task stacking, which usually appears in designing teams, e.g., in video game or software designing [39,40]. It also accompanies remote work and is a negative consequence of the home office, because the managers and other stakeholders often think that the remote worker is always at work at any time of the day or the week.

The fifth dimension is Health with characteristics associated to the employee's stress, fatigue at work and work–family conflict conditions. The first characteristic is imbalance, which determines the level of tension, nervousness, anxiety and fear. The second characteristic is determination of the level of conflicts with relatives, which results from the “transfer” of problems at work into the forum of the family. There are also professional conflicts, where the emerging conflicts concern colleagues, supervisors and work acquaintances. The last characteristic in this group is exhaustion, i.e., a sense of rising fatigue and discouragement with work or the working environment.

The last workplace dimension is Technology (four items). This dimension is characterized by the types of support for the employee and the nature of the performed work. The base characteristic defines the range of performance directly in the organization's databases, which entails constant and direct access. The general suites characteristic establishes the level of use of generic office software. Support is the level of necessity concerning the use of additional information channels such as e-mail, intranet or mobile telephones. Finally, we have management, which is the range of decision-making and management attributes in the given workplace.

Regarding the professional risks facing remote employees during the pandemic, a review of the literature and mass media came out with the following individual risks: salary cuts, changes in tasks, changes in work contracts, layoffs, changes in working downtimes and breaks, temporary telework and permanent telework. The last two risks relate to the fear of finding themselves in a telework setting forever or for a long time. They were also assessed on a 5-point Likert scale.

Descriptive statistics and a linear regression were used to analyze the information from the survey. Two-stage correlation tests were applied in order to establish the nature of the relations occurring between risk perception and remote workplaces. The first stage was based on the partial and multiple correlation method, the second was based on the Pearson correlation. This procedure was aimed at the establishment of the meaning of component dimensions, which is required in order to answer the question concerning the nature of impact/co-dependency.

A multivariate analysis of a linear regression has been carried out with the six work design variables and the perception of risks. The dependent variable in this analysis has been the difference of health between remote and stationary workstations. A positive value of this variable indicates that the employee feels more stressed and in more conflict at home (remote) than in his/her stationary workplace. The independent variables are the other five work design variables (differences of remote versus stationary values of space, ergonomics, quality, design, technology) and the average professional risks perceived by the employee at his/her lockdown situation.

4. Results

This section shows the results of the survey. First, we report the assessment of the different professional risks faced by employees in the pandemic. Then, there is a comparative analysis of the assessments of working dimensions in stationary versus remote workplaces for each country. The third subsection reports the results of the linear regression. Finally, there are insights into each country about their situation with some additional information.

4.1. Risk of Employee's Professional Situation

The regulations associated with the pandemic have allowed employers to introduce salary cuts to produce a risk of deterioration of the financial situation for employees. This risk covers reduction of salaries, late salary payments, insolvency of the employer and attempts at replacing remuneration with in-kind rewards. Compared to other countries, Polish employees are most afraid of such a situation (Figure 1). The next risk for employees is the changes in tasks. Employees are afraid of having more tasks and of performing them remotely. Both Polish and Spanish employees identify this risk at a similar level.

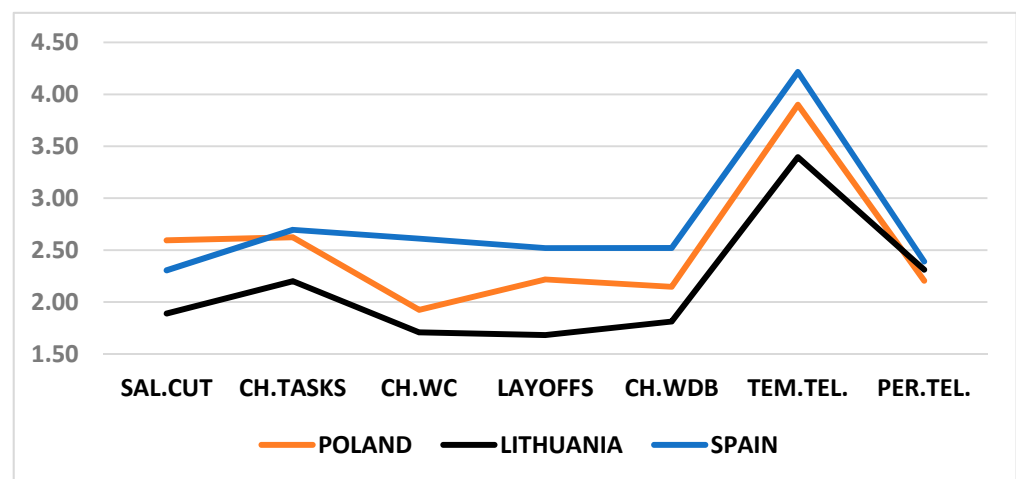


Figure 1. Results of research on the risks of employees' occupational situation (5-point Likert scale). Source: research results.

Working conditions are based on job contracts, which may be amended during the pandemic. Working conditions are understood as all factors appearing in the organization in association with the nature of the work and the environment in which it is performed. Spanish employees are most afraid of changes in tasks. The risk of layoffs and changes of working downtimes and breaks during the pandemic entails a high probability of unemployment. Spanish employees are the most afraid of such situations.

The pandemic has created the opportunity for employees to shift to temporary telework. This is the greatest risk in the surveyed countries. The highest risk is declared by Spanish and the lowest by Lithuanian employees. The pandemic has produced a situation where employers may decide to move employees to work remotely on a permanent basis. This risk is seen as low by employees of all countries.

The ranking analysis of the risks concerning the professional situations of employees in each country during the pandemic has established the levels shown in Table 2. All employees are most afraid of the risk of being shifted to temporary telework, but the level of this risk is the greatest among Spanish employees. Polish employees see the following risks as low in order: changes in tasks, salary cuts, layoffs, permanent telework, changes of working downtimes and breaks. They also see the risk of changes in work as unlikely.

Table 2. Ranking of validity of risk of employees' professional situation.

Measurement Level	Average Item Value in the Research		
	Poland	Lithuania	Spain
5.0–4.01	-	-	temporary telework–4.22
4.0–3.01	temporary telework–3.90	temporary telework–3.40	
3.0–2.01	changes in tasks–2.62 salary cuts–2.59 layoffs–2.22 permanent telework–2.21 changes of working downtimes and breaks–2.15	permanent telework–2.31 changes in tasks–2.20	changes in tasks–2.71 changes in work contracts–2.61 layoffs–2.61 changes of working downtimes and breaks–2.61 permanent telework–2.39 salary cuts–2.31
2.0–1.01	changes in work contracts–1.93	salary cuts–1.89 changes of working downtimes and breaks–1.81 changes in work contracts–1.71 layoffs–1.68	
0.0–1.00	-	-	-
max-min (scale %)	1.97 (39.5)	1.71 (34.3)	1.91 (38.2)

Source: research results.

The pandemic in Lithuania has caused the following risks to be perceived as low by employees: permanent telework and changes in tasks. They see the risk associated with salary cuts, changes of working downtimes and breaks, changes in work contracts and layoffs as the least likely. Spanish employees do not ignore the risks, but they perceive their probability as low, with the exception of the aforementioned risk of temporary telework.

4.2. Stationary vs. Remote-Comparative Analysis of the Workplaces

The sets of workplace characteristics and dimensions were analyzed in scope of the opinions of the surveyed Polish, Lithuanian and Spanish employees (see Figure 2). According to the data presented in the table of Figure 2, the dimensions of stationary workstations (S) in the surveyed countries present a similar dimensional structure and order. Polish workstations are dominated by ergonomics and quality, followed by space, organization and technology. In Lithuanian workplaces, the most important dimension is ergonomics, followed by space and quality. Spanish workplaces are characterized with the highest level of the ergonomics dimension, followed by quality, organization, technology and ultimately health. Employees assess health as much lower, with the average being between neutral and disagree. According to the structure of characteristics, this is a positive atmosphere at stationary work, which does not produce conditions of stress or projections of professional burnout.

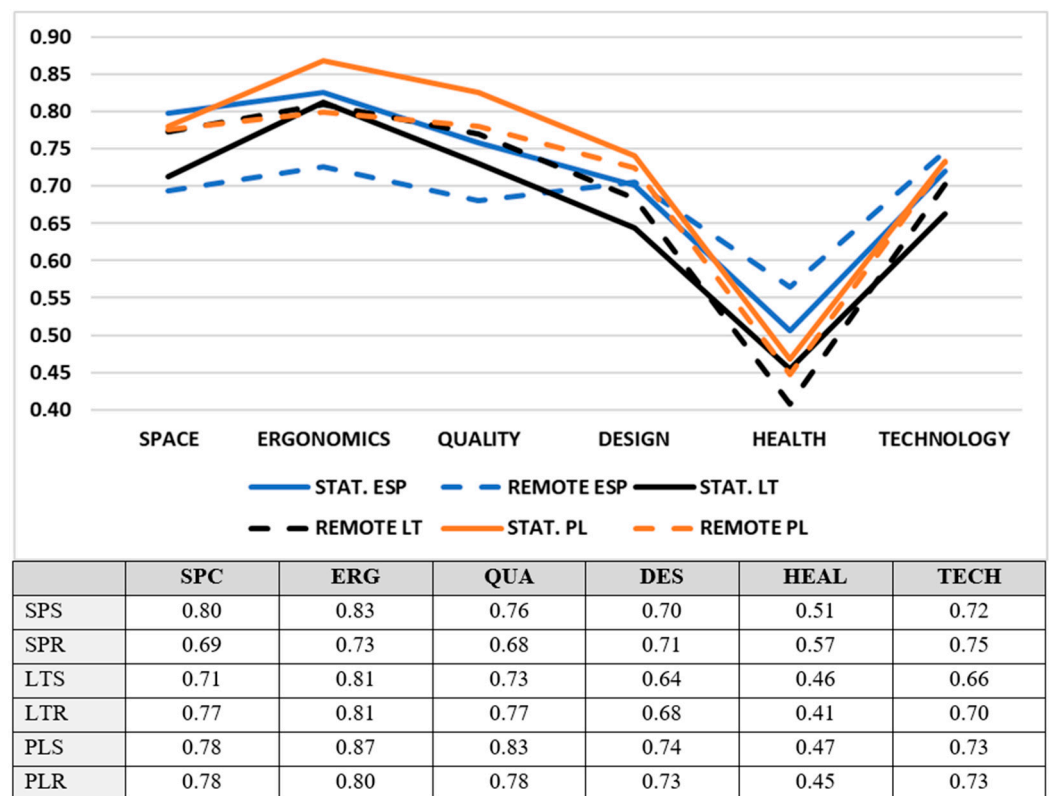


Figure 2. Characteristics of the surveyed stationary and remote workplaces in Poland (PL), Spain (SP) and Lithuania (LT). Note: The variables take the value between 0 and 1 where 1 indicates strong agreement with the employee's perception of the surveyed statements. Source: research results.

Remote workstations (R) have a different structure of dimensions. Polish employees are the most focused on the importance of dimensions, as while the role of the ergonomics dimension is decisive (the average level is the highest response—strongly agree), they attribute equal importance to the dimensions of space and quality and slightly less (5% in the scale value) to the importance of the organization and technology. In this matter, the Polish workplaces are the most structurally balanced, as long as we omit the factor dependent on human relations, i.e., the health burdens resulting from employment relations. Lithuanian employees attribute the greatest significance to the parameters of ergonomics, space and quality and value the work organization dimension by 9% less in the scale of values. Finally, Spanish employees point to the dominating importance of technology, ergonomics and organization with a low 5% difference in the scale value for the parameters of space and quality.

In evaluating the workplaces from the perspective of specific characteristics, the differences between stationary and remote workplaces are dictated by various factors. The higher value of the space dimension among Lithuanian employees dictated lower density and a higher level of exclusive space at home. In effect, the value of space in remote workplaces exceeded the value of stationary workplaces on the scale of values by 5%. There were similar instances on other dimensions. The higher grade given to the dimension of quality results from the 13% higher ability of concentration at home.

In scope of design, there was a rise in all parameters in favor of remote work, although the most important one is the 8% rise of the characteristic of repeatability, which suggests greater standardization and simplification of tasks performed remotely (missing or considerably reduced auxiliary and supplementary actions). In scope of the dimension of technology, the share of basic tasks performed directly in (with) the base increased by 13%. A particular characteristic is the multidirectional change of values in the characteristics of the ergonomics dimension. The 9% higher value of the equipment characteristic in station-

ary workplaces is accompanied by an 8% growth in the freedom of action characteristic in remote workplaces. This result, which emphasizes the natural location-based advantages of these forms, did not alter the general value of the dimension, which remained at 81% (strongly agree) as the determinant of both types of Lithuanian workplaces.

Polish employees show greater values for stationary workplaces than remote ones, but this does not always have an impact on the dimension value. In the case of space, the 11% higher value of the freedom of movement characteristic is accompanied with a 10% advantage of the density characteristic in remote work. The clear superiority in evaluation of the ergonomics dimension is assured by the over 10% higher values of the equipment and access characteristics. This indicates a limited nature of activity in the makeshift remote workplaces. The advantage of stationary workplaces in the dimension of quality is determined by the 10% higher grade given to the characteristic of feedback in stationary workplaces. General assessment of Polish workplaces shows that the respondents give stationary workplaces a higher grade. Only seven out of the 25 characteristics of work dimensions (i.e., only 28% of characteristics) hold higher values for remote workplaces, and only density holds a significant (10% or higher) value.

Spanish employees show an 8–11% higher level in the values of the characteristics and dimensions of space, ergonomics and quality. Almost all characteristic in these dimensions, with exception of freedom of action, lighting and consultations (higher by 4%) are higher by over 10% when compared to those in remote workstations. The dimensions of health and technology present a slightly higher level in remote workplaces. This indicates that remote work is perceived as more stressful than stationary workplaces among Spanish employees. The dimension of design sees a 4% growth in the level of the characteristics of repeatability and crunch, i.e., simplification and acceleration of actions, which, under the delays caused by the pandemic, also appeared in education and schools. These changes have no effect on the value or significance of the dimension.

The discussed characteristics are reflected in Figure 3, which demonstrates the scale of the shift (the difference between the max and min values of characteristics). Comparison of the spread between stationary and remote workplaces allows for creation of a preliminary model typology. The positioning model is created based on two variables. The first is the spread value. Theoretically, we could assume that there are three possible positioning situations with consideration of a 5% difference both ways. When the value of the spread between remote and stationary workplaces is even, we can define it as an even model ($R \pm = S$). If there is a greater value of remote workplaces in the spread, we have a progressive model ($R \pm > S$). When the advantage goes to stationary workplaces, we have the adaptive model ($R \pm < S$). The second variable is the relative position of the max value. If in the given model it is higher in remote workplaces or identical to stationary workplaces, we have the active variation. If it is lower than in stationary workplaces, we have the passive variation.

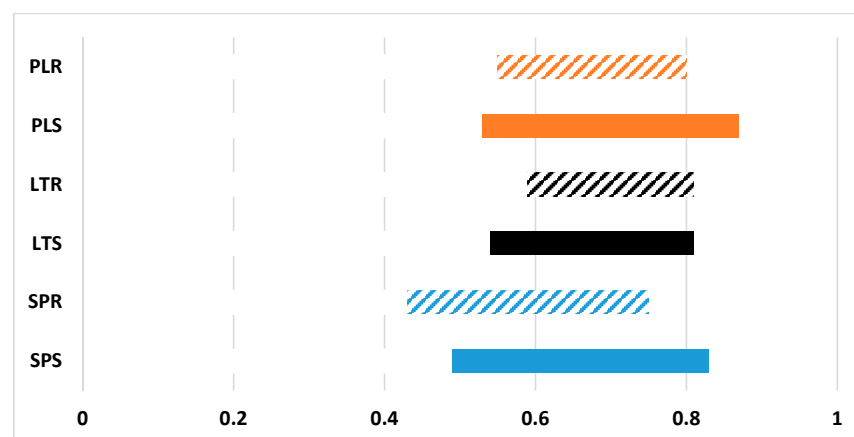


Figure 3. Range of shift of stationary (solid color) and remote (pattern) dimension values in workplaces in Poland, Lithuania and Spain (min-max). Country colours—see Figure 1. Source: research results.

The research results indicate three different variations of two models. Polish employees demonstrate the adaptive passive model as the max value of remote workplaces is 7% than of stationary workplaces. Lithuanian employees, who are in the central part of the figure, demonstrate an adaptive active model, because the max value is identical for stationary workplaces at a higher spread value and determined by the dimension of ergonomics. Spanish employees demonstrate a balanced passive model because the position of the max value is not lower at a small, 2% difference in the value of the spread.

A particular characteristic of workplaces in the three surveyed countries is the fact that the dimension of ergonomics always has the maximum value, while the dimension of health always has the minimum. However, remote workstations are assessed as more stressful and conflictive than stationary workplaces among Spanish employees. They also valued the other work dimensions (space, ergonomics, etc.) in remote working as lower than in previous stationary workstations which means that Spanish employees perceive that their working conditions have deteriorated because of the pandemic. At the same time, the labor risks perceived by Spanish employees are greater than by Polish and Lithuanian employees. A lower perception of labor risks among Polish and Lithuanian employees is in line with their lower perception of remote workplaces as stressful and discouraging. These results offer some insight on the research propositions of the paper but the linear regression in the next subsection will test the actual support for these propositions.

4.3. Multivariate Analysis

Table 3 shows the results of the linear regression for each country. There are similarities of statistically significant variables between countries. In all of them, a deterioration of the variable health is related to a deterioration of the variable space and the variable quality which means that the surveyed employees have a worse working space (less freedom of movements or lack of privacy and exclusivity) and a worse working environment (more noises and interferences and lack of feedback) at their remote (home) workplaces. In the case of Lithuania, the negative impact on health is also enhanced by the deterioration of the variable design. This result supports Proposition 1 and reinforces the importance of having well designed workplaces at remote workstations in order to avoid the negative effects of forced telework. It also suggests that telework is not suitable for everyone and that some employees would experience negative effects according to their specific jobs. In Poland and Lithuania, the variable technology is statistically significant which indicates that the more intensive use of ICTs by remote employees during lockdowns increased their levels of stress and conflicts at home. The fact that this variable is not statistically significant in the Spanish regression may be related to the more homogeneous character of this sample since it is composed mainly of people employed in the science and education sector and thus more familiar with the use of ICTs even at home.

Table 3. Linear regression of the remote versus stationary health variable of remote (R) versus stationary (S) workstations.

	Poland	Lithuania	Spain
R–S Space	−0.217 *** (5.575)	−0.192 *** (3.94)	−0.385 ** (2.494)
R–S Ergonomics	0.000 (0.012)	−0.007 (0.155)	0.002 (0.008)
R–S Quality	−0.129 *** (3.407)	−0.086 * (1.823)	−0.412 ** (2.062)
R–S Design	−0.036 (0.892)	−0.094 * (1.865)	0.086 (0.554)
R–S Technology	0.208 *** (5.262)	0.208 *** (4.276)	0.129 (0.960)
Risks average	−0.036 (0.962)	−0.007 (0.156)	0.079 (0.61)
Adjusted R ²	0.082	0.072	0.308
F	10.965 ***	6.610 ***	4.346 ***

Notes: Standardized beta values. T-values between brackets. Levels of significance * $p < 0.1$; ** $p < 0.05$; *** $p < 0.001$.

Finally, the results indicate that the perception of negative professional risks are not statistically significant. Proposition 2 is not supported which indicates that the design of remote workplaces is more important in the adequate development of teleworking outputs than the temporary short-term economic impacts on the pandemic-induced teleworkers.

4.4. Insight into the Spanish Case

The Spanish case is interesting because it illustrates the weaknesses of a country that, although it has approved several laws since the European Framework Agreement on Teleworking was launched in 2002, has legislation that only refers to the concept of telework, modernization and equality among employees with the use of these new technologies. There were a few pilot experiences in a handful of private firms and in the Public Administration but little real progress due to the lack of specific legislation and also due to a low level of telework offered by Spanish companies and administrations. Only 13% of Spanish companies in the year 2019 offered telework to their employees and only 8.3% of the Spanish workforce teleworked at least partially. This is a low figure compared to telework rates above 30% in northern European countries like the Netherlands or Sweden before the pandemic, and below the 13.5% average of EU-28. When thousands of Spanish organizations were forced to telework overnight during the lockdown of the first wave of COVID-19, major shortcomings arose because this had never happened before.

The difficulties and consequences of the lockdown forced governments to bring forward the pending legislation of telework. After negotiations during the summer of 2020 between the government, trade unions and employer associations, a first Telework Enhancement Act (<https://www.boe.es/boe/dias/2020/09/23/pdfs/BOE-A-2020-11043.pdf>) (Accessed on 24 June 2021) was signed on 23 September 2020 to regulate telework among private employees and a second Telework Enhancement Act appeared shortly after on 30 September to regulate telework among public servants (<https://www.boe.es/boe/dias/2020/09/30/pdfs/BOE-A-2020-11415.pdf>) (Accessed on 24 June 2021). The situation of public servants is representative of the tremendous impact of the first COVID-19 lockdown because 80 per cent of these employees were teleworking between March and June 2020; however, the telework rate declined after the lockdown and in April 2021 was 26 per cent, a greater figure than before COVID-19. Nevertheless, further and more detailed regulation has been negotiated and approved in April 2021 that will potentially affect around 230,000 public servants annually who will be provided by computers, software and cybersecurity at home.

In Spain, as in other countries, many employees found themselves overnight in an unknown teleworking environment. They improvised the best they could and adapted to the new situation. Any activity feasible to be teleworked found its way through organizations in order to keep essential operations running and minimize the economic damage of the pandemic. However, the adaptation of employees, companies and public administrations was so accelerated that the comparison of the assessments made by Spanish employees about their working conditions indicated a deterioration of such dimensions as space, ergonomics, quality or health (Figure 4). This is an example of how important it is to plan and manage very carefully all aspects of telework implementation. Teleworking cannot be improvised overnight. Organizations need to adapt to remote working conditions. This has been proven even more necessary when all family members are confined at home during a pandemic and when people living mostly in small flats as in Spain, instead of in detached or semi-detached houses (Spain is the second country in the EU-27 ranking of percentage of population living in flats (64.9%) in comparison to 9% in Ireland or 15% in the UK in the year 2018; Spain leads the European ranking of the number of elevators), have to deal with different jobs at home and the care of children and elders. It is not surprising that the comparison of these variables with the other countries more used to telework result in worse values in terms of space, ergonomics, quality and health. However, technology has not been a special difficulty in the Spanish case; employees have reported a little improvement in this dimension because they have been able to use more intensively

those technologies already available within the organization but not so needed on-site. The old adage that “necessity is indeed the mother of invention” is very pertinent to illustrate that some difficulties are not so great when there is no alternative.

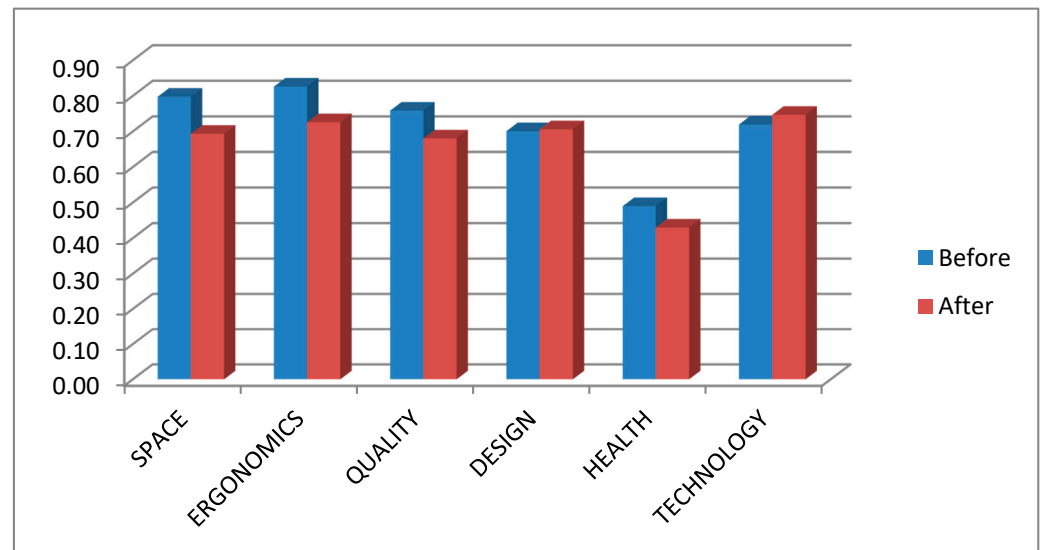


Figure 4. Comparisons of working related variables before and after the forced adoption of telework in Spain. Note: The variables take the value between 0 and 1 where 1 indicates strong agreement with the employee’s perception of the surveyed statements.

It is also interesting to compare in the Spanish case the correlations between these perceptions of working conditions after the forced adoption of telework and the possible changes that the pandemic may produce in the labor market. We found some statistically significant correlations (Table 4) in the sense that those employees whose working conditions had somewhat deteriorated during the lockdown (ergonomics, quality or health) felt that the pandemic would eventually bring more layoffs, salary cuts or job instability. This was certainly a negative vision of the future ahead. However, there is another interpretation of these results from a managerial perspective. Employees have experienced a downturn in their working conditions during the lockdown because teleworking had been adopted forcibly and without any initial preparation whatsoever. Another study carried out among Spanish social workers who were forced to telework during the first wave of COVID-19 also found a greater degree of overloading of professionals who telework, since they experienced, to a greater extent than workers who were present, the feeling of being overwhelmed by the situation [41]. Unless organizations make an extra effort to convince employees of the advantages of telework and support them to develop friendly working conditions at home, that bleak vision of the future could become a crude reality.

Table 4. Correlations of the employees’ working perceptions after the forced adoption of teleworking with the impact of the pandemic on the Spanish labor market conditions.

Impact of the Pandemic	Space	Ergonomics	Quality	Design	Health	Technology
Salary cuts	−0.023	−0.307	−0.488 *	−0.092	−0.450 *	−0.032
Changes in tasks	−0.115	−0.462 *	−0.420 *	0.015	−0.506 *	0.033
Changes in work contracts	−0.296	−0.510 *	−0.496 *	−0.120	0.340	−0.220
Layoffs	−0.260	−0.428 *	−0.544 **	−0.137	−0.154	−0.306
Changes of working downtimes and breaks	−0.308	−0.596 **	−0.441 *	−0.292	−0.405	−0.357
Temporary telework	0.091	0.127	0.310	0.156	0.106	0.223
Permanent telework	−0.390	−0.275	−0.173	0.040	−0.296	−0.208

Level of significance: * $p < 0.05$, ** $p < 0.01$.

This means that this is up to them, the organizations, to invest in improving, organizing and supervising adequate working conditions at home. As always, organizations of excellence will rise to the occasion, and others may even find an opportunity to further move their virtual activities offshore to remain competitive. In order to facilitate the transition to a new model of labor relations inevitably during this post-COVID age, the two Telework Enhancement Acts that were approved in Spain after the global lockdown clarify now, among other issues, how and when to establish a telework contract, which costs have to be financed by the organization such as ICTs and Wi-Fi at home and the equality rights of teleworkers vs. non-teleworkers in the organization under any circumstance. However, a recent UBS survey among 675 top European executives in June 2021 revealed that Spaniards executives (in comparison to Germany, France, Italy and the UK) are the most reluctant to allow their employees to telework from home because 88% of Spaniards executives believe that the employee's productivity is lower at home than at the office; actually 47% of surveyed Spaniards executives stated that they will not allow their employees to telework when the pandemic is finished (<https://www.ejeprime.com/oficinas/dudas-sobre-el-teletrabajo-el-88-de-los-directivos-piensa-que-la-productividad-es-menor.html>) (Accessed on 25 June 2021).

Although Spaniards executives still seem reluctant towards the telework of employees at home, the outbreak of the pandemic and its economic consequences may pressure the diffusion of telework to low-skilled jobs. While telework was previously deemed suitable only in high-status jobs that enjoy more desirable contracts, afford a high degree of autonomy, are result-oriented and are in little need of monitoring and control, nowadays jobs with a lower status are also considered eligible to be performed remotely or under flexible work arrangements. Actually, telework and ICT-based mobile work is spreading into more precarious, temporary and lower-paid jobs, especially among home-based teleworkers and highly mobile teleworkers [42]. The diffusion of telework to low-skilled jobs could then imply that the working conditions associated with telework may deteriorate step by step unless specific legislations are able to avoid such circumstances.

4.5. Insight into the Lithuanian Case

Figure 5 depicts the perception of the pandemic from the perspective of mandatory and makeshift installation of periodic remote workstations at home is depicted. The data show the superiority of the ergonomics dimension, which is recognized at a uniform, strong level (average: strongly agree) for both types of workplaces, and the "novelty" effect, which is based on higher grades for remote workplaces in all other dimensions. The dimension of space is understandable, as it can be regulated alone in the scope of functions: workspace—outside of work. In turn, there are no other circumstances of "accompanying" space such as the need to commute or do things elsewhere in the building or in other buildings. In other words, the workspace at home is "closed", i.e., friendlier to the employee. This leads to increased performance concentration; organization of the remote workplace adapted to needs and personalized by the employee; less negative impacts of the surroundings (minimization of problematic situations and conflicts resulting from the lack of direct contacts); and improved use of the available range of technology. It seems that this is an instance of the application of the available technologies, i.e., a similar situation to that of Spanish employees.

The regularities shown in the opinions of respondents are reflected in the results of statistical correlations (Table 5) because the number of significant correlations is low. The individual types of restrictions are felt by employees in the context of selected remote work dimensions. The employees sense that the salary cuts or the periodical, more long-term problems employers may have in the scope of remuneration payments may become a vital issue.

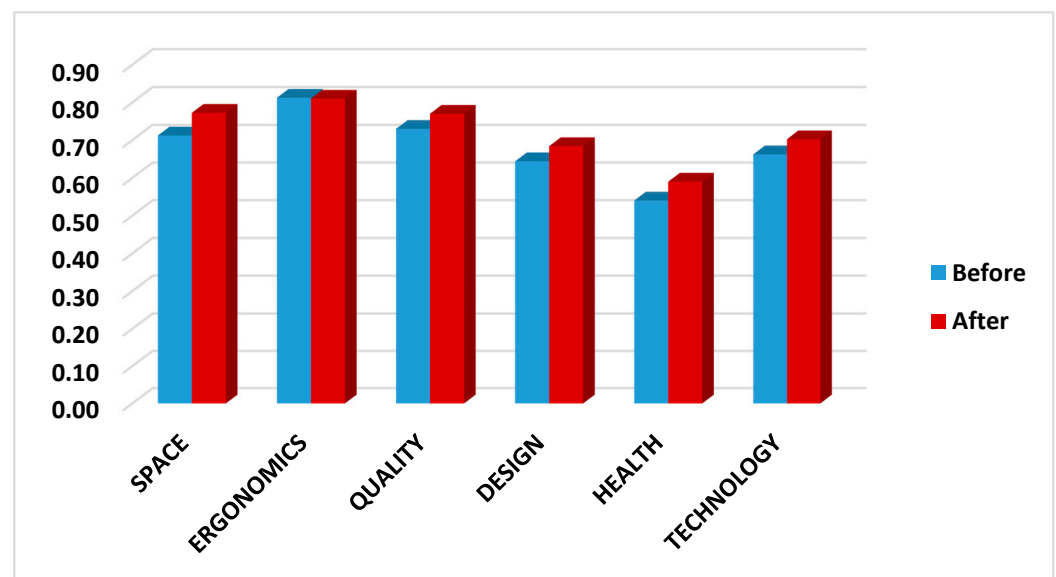


Figure 5. Comparisons of working related variables before and after the forced adoption of telework in Lithuania. Note: The variables take the value between 0 and 1 where 1 indicates strong agreement with the employee's perception of the surveyed statements.

Table 5. Correlations of the employees' working perceptions after the forced adoption of teleworking with the impact of the pandemic on the Lithuanian labor market conditions.

Impact of the Pandemic	Space	Ergonomics	Quality	Design	Health	Technology
Salary cuts	−0.116	0.146 *	0.088	0.123	0.028	0.207 **
Changes in tasks	0.013	0.086 *	0.035	0.094	0.002	0.133 *
Changes in work contracts	−0.007	0.033	0.036	−0.002	0.061	−0.069
Layoffs	−0.044	0.019	0.014	0.012	0.109	−0.058
Changes of working downtimes and breaks	0.037	−0.060	0.007	0.070	0.039	−0.089
Temporary telework	−0.107	0.085	−0.004	−0.064	0.058 *	0.115
Permanent telework	−0.115	0.080	0.031	−0.115	−0.136 *	0.144 *

Level of significance: * $p < 0.05$, ** $p < 0.01$.

The changes in opinions associated with organization of work are expected to be adequate to the ergonomic conditions of workplaces at home. In contrast to Spanish employees, they do not associate the expected changes too much with working quality, but the dimension of technology seems important. The changes in remunerations, specifically the reductions, may have a greater impact on requirements in the scope of technological equipment and on adaptation to the types of tasks with the equipment present at home. The correlation is weak or average. This also concerns the relation of permanent, long-term telework, which, in contrast to Spanish employees, has been established by Lithuanian employees as significant, but at an average level.

They also believe that the final impact model depends on technological transformation, i.e., better equipment in the workplace. Interestingly, remote work performed periodically and permanently also requires examination of the mental burdens, where the respondents believe that the permanent introduction of remote work would reduce the negative health consequences among employees.

4.6. Insight into the Polish Case

The comparative analysis shows that the most important working dimension is ergonomics (Figure 6.) as in Lithuania and Spain. The transformations occurring in scope

of the characteristics of this dimension alter only the inner structure and do not lead to a loss of significance. Employees grade the dimensions of space and technology equally, which means that they treat both in the same way despite the obvious change in conditions. However, it is hard to state based on this survey whether this is an approval of an objective change of location (we examine each workplace type with different requirements of the same criterion) or only an approval of the satisfaction produced by the makeshift level of job security at home.

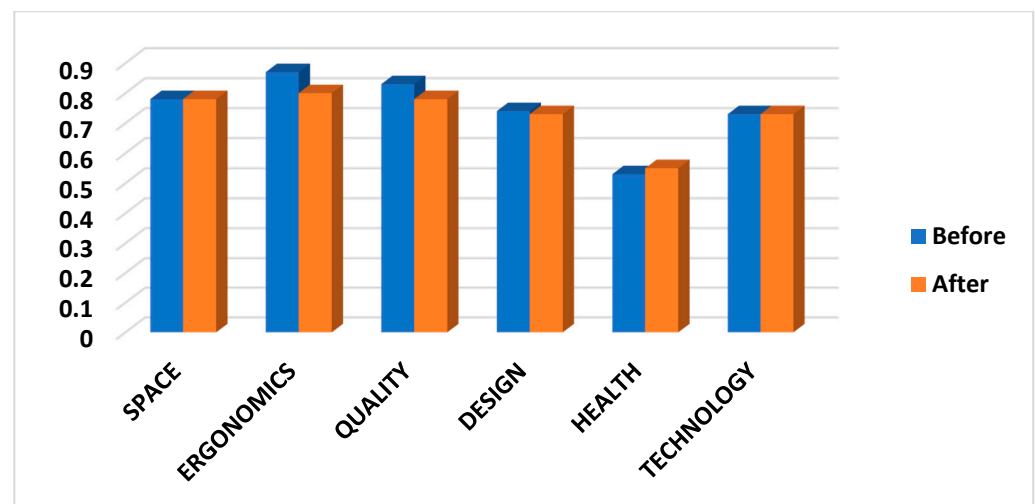


Figure 6. Comparisons of working related variables before and after the forced adoption of telework in Poland. Note: The variables take the value between 0 and 1 where 1 indicates strong agreement with the employee's perception of the surveyed statements.

Space and quality are the most statistically significant aspects in the surveys of Polish remote work (Table 6). The respondents associate them with the concerns towards changes in tasks, contractual terms, job instability and even fear of layoffs. Although the correlation values are small, the relations with space may lead to concerns with the need to allot space and the quality of work under unstable and uncertain conditions. This is due to the fact that specific regulations in Poland—the COVID-19 shields—gradually gave employers greater authorizations in the scope of regulation of the work of employees, layoffs, no severance and other bothersome restrictions, which are not possible in accordance with the labor code. The fear of being laid off was also related to the quality of work and the threat of layoffs also “appeared” in the results in the form of negative correlation with the organization of work at home. Employees were also concerned with the threat of reduced remuneration or changes to employment conditions resulting from incomplete equipment at the remote workplace.

Table 6. Correlations of the employees' working perceptions after the forced adoption of teleworking with the impact of the pandemic on the Polish labor market conditions.

Impact of the Pandemic	Space	Ergonomics	Quality	Design	Health	Technology
Salary cuts	−0.023	0.066	−0.046	−0.072	−0.036	0.113 *
Changes in tasks	0.177 **	−0.025	−0.115 *	−0.017	0.004	0.103
Changes in work contracts	0.175 **	−0.018	−0.206 **	−0.061	0.022	0.113 *
Layoffs	0.146 *	−0.050	−0.051	−0.116*	−0.025	0.081
Changes of working downtimes and breaks	0.181 *	−0.003	−0.200 **	−0.049	−0.070	0.052
Temporary telework	−0.015	0.074	−0.050	−0.003	0.032	0.058
Permanent telework	0.076	−0.039	−0.035	0.168 **	0.058	−0.042

Level of significance: * $p < 0.05$ ** $p < 0.01$.

5. Discussion and Concluding Remarks

On the contrary to the earlier published papers on pandemic-induced telework that focused on how the limitations at home of first-time remote workers impacted their well-being and work–family balance [3,41], our research contributes to a more recent endeavor that focuses the analysis on the work design perspective [43,44]. Many previous findings about remote working may have suffered from a selection bias since it was usually adopted on a voluntary basis. The pandemic of COVID-19 opened up an international experiment on labor markets as remote work was practically the only form of labor activity in many professions. This unusual situation created the opportunity to assume scientific research with the action in research method. We have presented some of the results of the remote work project, which concerns people who found themselves facing a life turned upside down and forced to perform all functions at the same time at home. These results described the awareness of risks produced by the pandemic in professional lives, a comparative assessment of the work organization design of stationary versus remote workplaces and the evaluation of the nature of the processes involved in shifting work from the organization to home. The research involved analyses of Polish, Lithuanian and Spanish employees. This section discusses the reported results and shall remark on some conclusions. Our findings could help organizations to manage remote work effectively.

The predominantly positive view of remote working in the literature to date might make managers ignore the need to consider how flexible workers' jobs are designed. The current research revealed the importance of work design. Other studies have also suggested that managers may improve remote workers' productivity and well-being by designing high-quality remote work [43]. The work design perspective and job characteristics model can guide managers to design a better job for remote workers during the pandemic or even in future flexible work practices. For example, managers could engage in more supportive management practices especially in this extraordinary context, such as building trust within the distributed team or sharing information rather than close monitoring in order to avoid the deterioration of the health dimension (work outcome) found in our study.

A work design perspective could also potentially help individuals to cope with challenges in remote working since it is sometimes detrimental for the relational aspects of work. Our study found a negative relationship between the dimensions of quality and health. Another study of epidemic-induced telework in France [3] also found that professional isolation was the most negative influential factor affecting telework adjustment. In addition to the top–down approach (i.e., re-designing remote work), individuals can proactively craft their jobs [45]. Thus, remote workers can proactively nowadays utilize current advanced enterprise social media to socialize with others in an informal manner to overcome loneliness and avoid negative assessments of health (work outcome). For instance, a qualitative study revealed that teleworkers experienced more professional isolation when they missed opportunities to engage in developmental activities at work [46]. That could help to counteract the negative impact of the lack of contacts and informal relationships with colleagues, as well as feedback from the manager and the organization.

The essence of the problem is based on the fact that remote work was seen before the pandemic as a benefit, available only to specialists working for major companies or corporations, who usually had the opportunity to take advantage of the so-called home office 1–2 days a week. However, scholars and practitioners might overstate the bright side of remote working, especially if they rely on the established research. Prolonged physical absences among full-time employees when not on a business trip were never seen as something positive and telework was regulated as an extra and special element of the employment relation. Indeed, regulations covering the new solutions were established in Poland and Spain when the pandemic was already in place and neither of them are definitive and they need more detailed development. This means that special care should be taken to assess how many employees there are and who will be able to telework. For instance, in the Spanish Public Administration, potential teleworkers will be assessed, both their jobs and personally, before going to remote work. Less-disciplined people may

experience more challenges while working from home. Given that such challenges will influence an individual's performance and well-being, employees and employers need to consider the fit between flexible work arrangements and the person [47,48].

The deterioration of working dimensions such as space or quality in remote settings and their negative relationships to health could possibly lead to changes in home design and affect the housing market structure. Indeed, some Spanish real estate websites reported a greater interest by potential buyers towards detached and semi-detached houses after the lockdown of 2020. A study among pandemic-induced teleworkers in France [3] also highlighted that the need for appropriate telework conditions at home was the second most important factor influencing employee adjustment. From now on, the need for greater space at home to keep boundaries between work and personal life or at least the availability of one room dedicated to home-based telework should be kept in mind. This might happen again. Besides, the growing diffusion of telework to more working positions than ever before [42] could make these changes not only temporary but rather a permanent living arrangement.

Maybe it is no surprise that the highest risk perceived among employees was finding themselves locked in a telework situation for a long time. Spanish employees were the most afraid of all, but the three surveyed countries had teleworking rates below the EU-28 average. This indicates that the lack of experience and specific regulations on telework enhanced the uncertainty during those turbulent times. Then again, the relevance that the work design perspective may play to contribute to developing better remote workplaces may enhance employees' organizational commitment and job satisfaction. According to the RBV and capabilities theory [7], only firms able to develop intangible assets from work organization and human resources management systems that are difficult to imitate will be able to cope with uncertainties created by pandemics like COVID-19.

This means that firms could implement pilot projects to face different contingencies and get the most out of the advantages that telework can offer to firms and employees [2]. If firms develop emergency plans to cope with potential earthquakes, strikes, etc., why should they not prepare themselves for remote working whenever it is necessary? Firms more able to develop such capabilities would have more chances to overcome turbulent times and profit from the opportunities offered in the wake of the crises. Nevertheless, we reiterate that home-based telework is not suitable for everyone and that firms should focus their remote working options on those employees who are more mentally prepared and have better living conditions in order to avoid stressful working situations that may hamper their productivity and performance.

Other risks were not so feared (salary cuts, even layoffs) maybe because employees are more familiar with the consequences of economic crises. Nevertheless, Spanish employees are perhaps more realistic as they assessed greater values to other risks. Or maybe it is because they are more used to the fact that the two latest economic crises of 2008 and 2012 hit harder in Spain than in Poland and Lithuania (Spain also had the greatest decline of GDP in Europe in the year 2020). Nevertheless, there is hope in any of the three countries that state and European recovery funds will help companies to regain their competitiveness and reduce the negative consequences of lockdowns and bankruptcies. Consequentially, there are differences between the subjective optimism among employees and the objective effects on the market.

The ranking of risks is inherently embedded in the differences of working dimensions which reinforces the relevance of the work design perspective and the job characteristics model. Spanish employees better assessed their stationary workplace than the remote workstation (at home) during the pandemic. However, Lithuanian employees' assessments were the other way around. In Poland, the contrast was not so clear because some working dimensions were similarly valued in stationary and remote settings. Thus, lack of legislation and fear of teleworking took a toll on less prepared employees and organizations for remote working. This is the reason for the different models of positioning remote and

stationary workplace relations by employees in individual states, which suggests that the current approach to popularizing remote work differs.

The evaluation of the nature of shifting work to home is also mixed. The risks on economic and employment were significantly related to the dimensions of ergonomics and quality among Spanish employees. In turn, there are significant correlations with ergonomics and technology among Lithuanian employees and mainly with space and quality among Polish employees. It seems that the existing differences are more a consequence of the employees' living conditions at home than of their direct fears of creating remote workplaces, especially as the value of correlation is weak or at most average. This means that the employment risks are not the determining factors in the creation of mandatory remote workplaces.

As our concluding remarks, the results of our research concerning the first wave of the pandemic show first that there is no widespread approval for the expansion of remote work. Employees felt more stressed and in conflict in their remote workstations, and this negative output was significantly related to the deterioration of some working dimensions like space, quality and design. The previous theoretical and practical experiences obtained from the reorganization projects, which gradually introduce remote work, have turned out to be of little use in a situation of sudden and unpredictable change. Employers were not prepared organizationally or sometimes even technologically to take ad hoc action, and employees were not prepared mentally to accept the forced situation. The lack of legal solutions made the temporal adaptation even harder for low-teleworking countries into parallel labor markets with high levels of remote working along the lines of, e.g., the aforementioned Swedish labor market. The true empirical verification will not emerge, probably, until the end of the pandemic and the market will test the financial reality of businesses and organizations. Employees will individually decide whether remote workplaces can be a more permanent full-time or part-time option.

A final conclusion from our study regards the importance of preparing for remote working along all dimensions from a work design perspective. Telework cannot be adopted overnight unless the firm has previously made substantial efforts in the design of remote work settings to enhance employees' organizational commitment and job satisfaction. This time there are already specific country's legislations on telework in place, and more details have been negotiated between trade unions and employer associations during the pandemic, but that legislation only offers a framework to establish teleworking plans at the firm level. Therefore, firms must analyze carefully their remote working options, study the employees' working dimensions at home and eventually focus on those employees who are more mentally prepared and are in a disposition to have better working conditions in their home environment.

6. Limitations and Future Research

The conclusions of our study should be analyzed according to its limitations. First, we have used perception measures that are not totally free of response bias. Second, our measures are from a cross-sectional study that cannot test causal relationships. Future studies could collect longitudinal data with larger, more homogeneous and more diverse samples to assess, for instance, the dynamic effects of the pandemic on the working conditions of teleworkers. Nevertheless, the studied lockdown was perhaps the most restricted so far during the pandemic and our suggested conclusions should survive the test of time.

Another interesting future research option could be to assess the influence of pandemic-induced telework on innovation during COVID-19. Red Hastings, the Co-CEO of Netflix, in a Wall Street Journal article on 7 September 2020 deemed remote work "a pure negative because it is much more difficult to debate ideas" (<https://www.wsj.com/articles/netflixs-reed-hastings-deems-remote-work-a-pure-negative-11599487219>) (Accessed on 24 June 2021). Some scholars have also suggested a negative relationship between the job's level of tacit knowledge and telework adoption [49]. Online meetings tend to be more complicated

when the number of participants increases or the topic of discussion becomes more abstract. A one-hour meeting in a presential format may require at least two or three hours in an equivalent virtual format. We have not differentiated the type of telework in our study but it could be useful to analyze which changes, if any, have the organizations introduced during COVID-19 to deal with virtual work in their innovation procedures either to develop new products or to implement organizational and technological innovations. The largest stimulus package ever financed by the EU to promote economic recovery after COVID-19 focuses precisely on innovation, the sustainability from digital transitions and fighting climate change. The skies were never so blue and the air was never so clean as they were during the global lockdown of 2020. Several scholars have shown the positive impact of telework to reduce commuting and pollution (for a Spanish study see for instance, [1]). Thus, it could be useful for managers to know the advances made by some organizations to manage innovation processes in pandemic-induced telework environments.

Author Contributions: Conceptualization, J.R., V.D. and M.P.-P.; methodology, J.R., K.L., V.D. and M.P.-P.; software, K.L. and J.R.; validation, K.L., Á.M.-S. and M.P.-P.; investigation, J.R., K.L., V.D., Á.M.-S. and M.P.-P.; resources, J.R., V.D. and K.L.; data curation, J.R. and K.L.; writing—original draft preparation, J.R., K.L.; writing—review and editing, V.D., Á.M.-S. and M.P.-P.; visualization, J.R. and Á.M.-S.; supervision, J.R. and V.D. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: Ethical review and approval were waived for this study, due to data collection process specificity (the data was collected anonymously and the participants could not be identified).

Informed Consent Statement: The surveyed employees participated voluntarily and anonymously after explaining them the purpose of the study and offering guaranties that the information provided will be never presented individually but only as aggregated.

Data Availability Statement: The data are available on request.

Acknowledgments: The authors thank mgr Witold Gedymin of the University of Economics in Poznań for the specialist help and performing complex statistical analyses.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Pérez-Pérez, M.; Martínez-Sánchez, A.; De-Luis-Carnicer, M.P.; Vela-Jiménez, M.J. The environmental impacts of teleworking: A model of urban analysis and a case study. *Manag. Environ. Qual.* **2004**, *5*, 656–671. [\[CrossRef\]](#)
2. Groen, A.C.B.; Triest, P.S.; Coers, M.; Wtenweerde, N. Managing flexible work arrangements: Teleworking and output controls. *Eur. Manag. J.* **2018**, *36*, 727–735. [\[CrossRef\]](#)
3. Carillo, K.; Cachat-Rosset, G.; Marsan, J.; Saba, T.; Klarsfeld, A. Adjusting to epidemic-induced telework: Empirical insights from teleworkers in France. *Eur. J. Inf. Syst.* **2020**, *30*, 69–88. [\[CrossRef\]](#)
4. Penrose, E. *The Theory of the Growth of the Firm*; Wiley: New York, NY, USA, 1995.
5. Perry, L.T.; Hansen, M.H.; Reese, C.S.; Pesci, G. Diversification and focus: A bayesian application of the resource-based view. *Schmalenbach Bus. Rev.* **2005**, *57*, 304–319. [\[CrossRef\]](#)
6. Barney, J.B.; Clark, D.N. *Resource-Based Theory. Creating and Sustaining Competitive Advantage*; Oxford University Press: New York, NY, USA, 2007.
7. Barreto, I. Dynamic Capabilities: A Review of Past Research and an Agenda for the Future. *J. Manag.* **2010**, *36*, 256–280. [\[CrossRef\]](#)
8. Gajendran, R.S.; Harrison, D.A. The Good, the Bad, and the Unknown About Telecommuting: Meta-Analysis of Psychological Mediators and Individual Consequences. *J. Appl. Psychol.* **2007**, *92*, 1524–1541. [\[CrossRef\]](#)
9. Davidavičienė, V.; Al Majzoub, K.; Meidute-Kavaliauskiene, I. Factors Affecting Knowledge Sharing in Virtual Teams. *Sustainability* **2020**, *12*, 6917. [\[CrossRef\]](#)
10. Davidavičienė, V.; Majzoub, K.A.; Meidute-Kavaliauskiene, I. Factors Affecting Decision-Making Processes in Virtual Teams in the UAE. *Information* **2020**, *11*, 490. [\[CrossRef\]](#)
11. Gandini, A. The rise of coworking spaces: A literature review. *Ephemer. Theory Politics Organ.* **2015**, *15*, 193–205.
12. Pyöriä, P. Managing Telework: Risks, Fears and Rules. *Manag. Res. Rev.* **2011**, *34*, 386–399. [\[CrossRef\]](#)
13. Pérez-Pérez, M.; Martínez-Sánchez, A.; de-Luis-Carnicer, P.; Vela Jiméñez, M.J. The synergism of teleworking and information and communication technologies. *J. Enterp. Inf. Manag.* **2005**, *18*, 95–112. [\[CrossRef\]](#)

14. Merkevičius, J.; Davidavičienė, V.; Raudeliūnienė, J.; Buleca, J. Virtual organization: Specifics of creation of personnel management system. *Ekon. Manag.* **2015**, *18*, 200–211. [CrossRef]
15. Hislop, D.; Axtell, C.; Daniels, K. The Challenge of Remote Working. In *Oxford Handbook of Personnel Psychology*; Cartwright, S., Cooper, C.L., Eds.; Oxford University Press: Oxford, UK, 2008; pp. 564–585.
16. Garrett, R.K.; Danziger, J.N. Which Telework? Defining and Testing a Taxonomy of Technology-Mediated Work at a Distance. *Soc. Sci. Comput. Rev.* **2007**, *25*, 27–47. [CrossRef]
17. Messenger, J.; Gschwind, L. Three Generations of Telework: New ICT and the (R)Evolution from Home Office to Virtual Office. *New Technol. Work Employ.* **2016**, *31*, 195–208. [CrossRef]
18. Felstead, A.; Henseke, G. Assessing the growth of remote working and its consequences for effort, well-being and work-life balance. *New Technol. Work Employ.* **2017**, *32*, 195–212. [CrossRef]
19. Martínez-Sánchez, A.; Vela-Jiménez, M.-J.; Pérez-Pérez, M.; D-Luis-Carnicer, P. The Dynamics of Labour Flexibility: Relationships between Employment Type and Innovativeness. *J. Manag. Stud.* **2011**, *48*, 715–736. [CrossRef]
20. Kossek, E.E.; Lautsch, B.A.; Eaton, S.C. Telecommuting, control, and boundary management: Correlates of policy use and practice, job control, and work-family effectiveness. *J. Vocat. Behav.* **2006**, *68*, 347–367. [CrossRef]
21. Eddleston, K.A.; Mulki, J. Toward Understanding Remote Workers' Management of Work-Family Boundaries: The Complexity of Workplace Embeddedness. *Group Organ. Manag.* **2017**, *42*, 346–387. [CrossRef]
22. Wheatley, D. Employee Satisfaction and Use of Flexible Working Arrangements. *Work Employ. Soc.* **2017**, *31*, 567–585. [CrossRef]
23. Grant, C.A.; Wallace, L.M.; Spurgeon, P.C. An exploration of the psychological factors affecting remote e-worker's job effectiveness, well-being and work-life balance. *Empl. Relat.* **2013**, *35*, 527–546. [CrossRef]
24. Bloom, N.; Liang, J.; Roberts, J.; Ying, Z.J. Does Working from Home Work? Evidence from a Chinese Experiment. *Q. J. Econ.* **2015**, *130*, 165–218. [CrossRef]
25. Vilhelmson, B.; Thulin, E. Who and Where the Flexible Workers? Exploring the Current Diffusion of Telework in Sweden. *New Technol. Work Employ.* **2016**, *31*, 77–96. [CrossRef]
26. Oldham, G.R.; Fried, Y. Job design research and theory: Past, present and future. *Organ. Behav. Hum. Decis. Process.* **2016**, *136*, 20–35. [CrossRef]
27. Taylor, F.W. *Zarządzanie Warsztatem Wytwórczym (Shop Management)*; Księgarnia Wł. Wilak: Poznań, Poland, 1926.
28. Morgeson, F.P.; Dierdorff, E.C. Work analysis: From technique to theory. In *APA Handbooks in Psychology®. APA Handbook of Industrial and Organizational Psychology*; Zedeck, S., Ed.; American Psychological Association: Washington, DC, USA, 2011; Volume 2, pp. 3–41.
29. Morgeson, F.P.; Dierdorff, E.C.; Hmurovic, J.L. Work design in situ: Understanding the role of occupational and organizational context. *J. Organ. Behav.* **2010**, *31*, 351–360. [CrossRef]
30. Oldham, G.R.; Hackman, J.R. Not What It Was and not What it Will Be: The Future of Job Design Research. *J. Organ. Behav.* **2010**, *31*, 463–479. [CrossRef]
31. Suifan, T.S. The effects of work environmental factors on job satisfaction: The mediating role of work motivation. *Bus. Theory Pract.* **2019**, *20*, 456–466. [CrossRef]
32. Sariwulan, T.; Capnary, M.C.; Agung, I. Contribution indicators of work stress and employee organizational commitments case study. *Bus. Theory Pract.* **2019**, *20*, 293–302. [CrossRef]
33. Morgeson, F.P.; Humphrey, S.E. The Work Design Questionnaire (WDQ): Developing and Validating a Comprehensive Measure for Assessing Job Design and the Nature of Work. *J. Appl. Psychol.* **2006**, *91*, 1321–1339. [CrossRef]
34. Grant, A.M.; Fried, Y.; Juillerat, T. Work matters: Job design in classic and contemporary perspectives. In *APA Handbooks in Psychology®. APA Handbook of Industrial and Organizational Psychology*; Zedeck, S., Ed.; American Psychological Association: Washington, DC, USA, 2011; Volume 1, pp. 417–453.
35. Lis, K.; Rymaniak, J. Fizyczne cechy pracy w perspektywie pracowników i pracodawców. *Zesz. Nauk. Małopolskiej Wyższej Szkoły Ekon. Tarn.* **2016**, *31*, 117–129. [CrossRef]
36. Rymaniak, J. Współczesne cechy pracy: Koncepcja teoretyczna i weryfikacja empiryczna, [w:] M. Makowiec (Red.). *Wybrane Probl. Kształtowaniu Zachowań Organ.* **2015**, 15–22.
37. Rymaniak, J. Contemporary Labour and Human Resources Management as Seen by the Production Sector and The Judiciary Employees. In *Advances in Human Factors, Business Management, Training and Education, Proceedings of the AHFE 2016 International Conference on Human Factors, Business Management and Society, Walt Disney World, FL, USA, 27–31 July 2017*; Kantola, J.I., Barath, T., Nazir, S., Andre, T., Eds.; Springer: Genève, Switzerland, 2016; pp. 1179–1190.
38. Grant, A.M.; Parker, S.K. 7 Redesigning Work Design Theories: The Rise of Relational and Proactive Perspectives. *Acad. Manag. Ann.* **2009**, *3*, 318–375. [CrossRef]
39. Schreier, J. Inside Rockstar Games' Culture of Crunch. 2018. Available online: <https://kotaku.com/inside-rockstar-games-culture-of-crunch-1829936466> (accessed on 30 April 2021).
40. Gao, Y. In China Tech, '996' Means Work, Work and More Work. 2019. Available online: <https://www.bloomberg.com/news/articles/2019-05-11/in-china-tech-996-means-work-work-and-more-work-quicktake> (accessed on 30 April 2021).
41. Morilla-Luchena, A.; Muñoz-Moreno, R.; Chaves-Montero, A.; Vázquez-Aguado, O. Telework and Social Services in Spain during the COVID-19 Pandemic. *Int. J. Environ. Res. Public Health* **2021**, *18*, 725. [CrossRef] [PubMed]

42. López-Igual, P.; Rodríguez-Modroño, P. Who is teleworking and where from? Exploring the main determinants of telework in Europe. *Sustainability* **2020**, *12*, 8797. [[CrossRef](#)]
43. Wang, B.; Liu, Y.; Qian, J.; Parker, S.K. Achieving effective remote working during the COVID-19 pandemic: A work design perspective. *Appl. Psychol.* **2021**, *70*, 16–59. [[CrossRef](#)] [[PubMed](#)]
44. Rigotti, T.; Yang, L.Q.; Jiang, Z.; Newman, A.; De Cuyper, N.; Sekiguchi, T. Work-Related Psychosocial Risk Factors and Coping Resources during the COVID-19 Crisis. *Appl. Psychol.* **2021**, *70*, 3–15. [[CrossRef](#)]
45. Zhang, F.; Parker, S.K. Reorienting job crafting research: A hierarchical structure of job crafting concepts and integrative review. *J. Organ. Behav.* **2019**, *40*, 126–146. [[CrossRef](#)]
46. Cooper, C.D.; Kurland, N.B. Telecommuting, professional isolation, and employee development in public and private organizations. *J. Organ. Behav.* **2002**, *23*, 511–532. [[CrossRef](#)]
47. Golden, T.D.; Veiga, J.F.; Simsek, Z. Telecommuting's differential impact on work-family conflict: Is there no place like home? *J. Appl. Psychol.* **2006**, *91*, 1340–1350. [[CrossRef](#)] [[PubMed](#)]
48. Perry, S.J.; Rubino, C.; Hunter, E.M. Stress in remote work: Two studies testing the demand-control-person model. *Eur. J. Work Organ. Psychol.* **2018**, *27*, 577–593. [[CrossRef](#)]
49. Pérez, M.P.; Sanchez, Á.M.; de Luis Carnicer, M.P.; Jiménez, M.J.V. Knowledge tasks and teleworking: A taxonomy model of feasibility adoption. *J. Knowl. Manag.* **2002**, *6*, 272–284. [[CrossRef](#)]