

Entry

# Employment in the 21st Century: Pre- and Post-COVID-19 Changes

Antonios Th. Malousis<sup>1</sup>, Panagiotis N. Zefkilis<sup>1</sup> and Theodoros Daglis<sup>2,3,\*</sup> 

<sup>1</sup> Department of Management Science and Technology, School of Economics and Business, University of Patras, 26334 Patras, Greece; ant.malousis@gmail.com (A.T.M.); zefkilispanos@gmail.com (P.N.Z.)

<sup>2</sup> Department of Product and Systems Design Engineering, School of Engineering, University of Aegean, 84100 Syros, Greece

<sup>3</sup> Department of Agricultural Economics and Development, School of Applied Economics and Social Sciences, Agricultural University of Athens, 11855 Athens, Greece

\* Correspondence: theodag14@gmail.com

**Definition:** In the 21st century, prior to the outbreak of the COVID-19 pandemic, numerous transformations were already underway in the field of employment. However, this unprecedented global health crisis has had a profound influence on employment worldwide, yielding both positive and negative outcomes across various labor aspects. Consequently, while certain effects are anticipated to be temporary, others are likely to instigate enduring changes in employment practices.

**Keywords:** employment; 21st century; COVID-19

## 1. Introduction

COVID-19 was an unprecedented event that caused many problems on a global scale for many sectors and industries [1]. Many questions have been posed regarding the impact of COVID-19 on employment [2]. However, some of these are already answered, while others are not.

Crises in general, and more precisely COVID-19, can provoke many repercussions on financial instability and its perception, while self-employed people cite increased financial worry due to the instability of this type of employment [3–5].

Society, the economy, and the environment were heavily affected by the COVID-19 pandemic [6], transforming public policy since governments had to cooperate with major sectors of society [7]. An intense impact was evidenced in various sectors, including healthcare [8], tourism [9,10], and many others.

COVID-19 caused many changes in global and local labor markets; however, most of the changes were scattered irregularly and heterogeneously [11]. Unemployment increased [12], while many changes in employment were associated with negative health-related behaviors [13]. Apart from that, people with disabilities and workers in sensitive sectors were even more exposed to dangers and economic problems [14].

However, there is a consensus that COVID-19 broadened inequalities that already existed in the past in the working place, and that an indispensable issue has arisen from the unique possibilities of telecommuting [15]. Consequently, the pandemic increased many inequalities worldwide, such as those regarding health, because the working class had limited access [16], and lower social groups faced more difficult conditions [17].

More positively, with the emergence of communication technologies, the performance of several jobs outside the workplace has been made easier and more widespread [18]. As a result, during COVID-19, the Internet was an important factor in the movement of the economy [19] and working from home was extensively embraced; however, empirical evidence before the pandemic is lacking [18]. Generally, individuals with busy schedules can benefit from working in flexible conditions [18]. The economic and health sectors can be affected in the future by the development of the digital labor market; however, this favors high specialization [16].



**Citation:** Malousis, A.T.; Zefkilis, P.N.; Daglis, T. Employment in the 21st Century: Pre- and Post-COVID-19 Changes. *Encyclopedia* **2023**, *3*, 853–869. <https://doi.org/10.3390/encyclopedia3030061>

Academic Editors: Raffaele Barretta and Chia-Lin Chang

Received: 15 May 2023

Revised: 29 June 2023

Accepted: 3 July 2023

Published: 14 July 2023



**Copyright:** © 2023 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/>).

To confront such difficult conditions, governments and policymakers should aim to assist all individuals, with a focus on specific social groups that are more vulnerable to such harsh crises (i.e., pandemics) and on those who face the socio-economic challenges of COVID-19-like crises [20].

The remainder of this work describes the changes that COVID-19 caused in employment, depicts the global research interest for the keyword “employment”, and finally provides a conclusion.

## 2. The Impact of COVID-19 on Employment

COVID-19 affected employment at a global and regional level, at a macro and micro level, impacting and also being affected by many factors, some of which are public while others are personal. This section presents, through subsections, the impact of COVID-19 on various aspects of the economy, society, health, and many other factors related to employment.

### 2.1. Employment at a Country Level

COVID-19 had a huge impact on labor worldwide. To begin with, elongated restrictions imposed in several countries created many complications in idle inventory and labor, and many firms reduced their employment opportunities, however, the repercussions on the various industries and countries are heterogeneous [21]. The infection and death rates increased in counties that used in-person teaching, while in endangered counties, according to a panel of United States counties, employment stayed unaffected [22]. In this context, Dang et al. [23] proved that for the case study of Vietnam, unemployment and workers receiving wages below the standard increased, while provisional layoffs, the quality of employment, and wages decreased. In Spain, the lockdown measures caused many job losses, especially in sectors in which working at home was not possible, which especially impacted individuals with low educational levels [24].

More precisely, in India, Kashni and Thakur [25] argue that due to the pandemic, unemployment, inequalities, and poverty increased. Similarly, in South Africa, job losses were evidenced, especially for older adults, but an increase in the employment of young people in services and wholesale and retail trade also took place [26]. More importantly, in Nairobi, Kenya, the largest percentage of residents who reduced their working hours did so due to the lockdown, and they experienced difficulty accessing water due to a decrease in their income and an increase in the price of water. This is important because a lack of access to water is also associated with a low level of hygiene [27]. In India, members of social groups that were employed in the grey economy faced major job losses in comparison with those in other groups, while in rural areas in which individuals had elementary education, the rate of employment recovery had been, by comparison, slower regarding youth employment and wage labor [28].

According to Pizzinelli and Shibata [29], the mismatch between jobseekers and job vacancies during COVID-19 in the UK and the US increased at the beginning of the pandemic but then returned to the previous levels. The employment losses caused by the increased mismatch were fewer during the pandemic than in the global economic crisis. On the other hand, based on Jones et al. [30], many changes in employment and unemployment happened in Canada, but after 2021, there was a recovery and a general increase in labor demand.

Based on data from Cyprus, France, Spain, Greece, Italy, Malta, Croatia, and Portugal, the pandemic increased the inequalities in development among European countries [17]. To be more specific, wealthy countries faced fewer difficulties in their labor market, while in Mediterranean countries, there was a large loss of jobs, mainly in industries with a high risk of COVID-19 infection (e.g., tourism). Following this difficulty, the problems faced by young people that were employed in such sectors increased, while in most countries the protection policies were inadequate [17]. Moreover, significant geographical differences also existed, with different areas of the same country indicating different degrees of mortality,

infection, and the lifting of protection measures [17]. In large urban areas, there was a slight resilience in the youth labor market, in contrast to the 2008 economic crisis [17].

## 2.2. Public Policy

In response to the contraction of the virus, governments and policymakers took several measures, such as lockdowns and restrictions, to limit its spread. Initially, labor demand significantly declined due to the restrictions, and some workers chose to abstain from work for fear of contracting the virus [31]. The strict measures reduced production, leading to an increase in unemployment [32]. Additionally, many employees contracted the virus, which presented serious health problems and prevented them from working for long periods, thereby negatively impacting the labor supply as well [33]. According to data collected from interviews in Indonesia, the advantages and disadvantages of the implementation of measures for COVID-19 were more notable in Occupational Health and Safety labor compared to insurance, compensation, and employment contracts [34].

Furthermore, Green and Loualiche [35] argue that states in the USA whose revenues heavily relied on sales taxes had to discharge more workers than the states who did not. Without the Coronavirus Aid, Relief, and Economic Security Act, local governments would have to raise the percentage of discharged employers by 40%, while the reserve fund gave balance to the employment's fragility to revenue instability, revealing that when district and regional governments allocate balanced spending plans, the procyclicality of civil service provision increases [35].

Moreover, Whitsel et al. [7] conducted a case study to analyze how the pandemic affected different sectors of public policy, like business, healthcare, education, transportation etc., by acting upon cardiovascular health and healthy living conditions. The authors identified the aspects of public policy that improved and areas that need improvement, highlighting the convergence of the state and business sectors. According to Aderson et al. [36], many studies emphasize the employment of immigrant workers in public services; however, considerations regarding the way immigrants might affect the systemic endurance of public services are lacking, both in research and in policy-making.

Additionally, Webb and McQuaid [37], through a literature review, discovered that the pandemic affected informal employment and the economy, both with long-term and short-term ramifications. This may have occurred due to the unsolved tensions that emerged from the aspiration of informal workers to be provided with employment security and continuous flexibility in their labor. As a result, COVID-19 could force governments to take measures to support the security of the workplace and income and formalize employment for informal workers.

Finally, Habibullah et al. [38] discovered a long-term relationship between job losses and the government's lockdown measures in Malaysia. As the lockdown measures became stricter, more employees would be dismissed from their jobs; however, thanks to the government's interventions, job discharges would decrease over time. Similarly, the Korean labor market experienced a relatively small percentage of job losses due to the coronavirus policies and restriction measures, while the coronavirus shock in labor can last longer unless there is no possibility for infection [39].

## 2.3. Economy

Regarding the overall state of the Economy, Simionescu and Giedre Raisiene [40] examined the impact of COVID-19 on employment expectations by using a Google Trends approach. They found low employment expectations for the new EU member countries, while unemployment and inflation were negatively affected even though the economic sentiment indicator improved and raised the expectations of employment. Similarly, Fana et al. [41] classified and analyzed the economic dimensions of employment that were impacted by COVID-19 in Germany, Italy, Spain, the UK, Poland, and Sweden. They found that the effect on employment varied across countries, with the most affected countries

experiencing the worst impact on employment, as they were economically exposed before the pandemic.

Based on the Current Population Survey, a monthly survey administered by the United States Census Bureau, COVID-19 significantly impacted employment in the transportation industry. Specifically, it was highly probable that one out of five of the transportation workers would lose their occupation in comparison with other sectors' employees [6].

Broadband and wired broadband had positive effects on employment and positive economic impacts in rural areas of America [19]. Moreover, D' Amuri et al. [42] evaluated natural unemployment and the labor force participation rate, in relation to continuous inflation. The authors discovered that during the COVID-19 pandemic, natural unemployment remained at similar levels, while on the contrary, natural participation decreased, with the slack being considered according to the participation margin, causing important downward pressures on inflation.

Likewise, exploring the relationship between new technology, labor, and employment emphasizes the significance of issues surrounding control, surveillance, and resistance in promoting positive technological impacts on labor and employment. These issues are crucial for enhancing the experience of work during the COVID-19 pandemic [43].

Regarding the US economy during the pandemic, both advantages and disadvantages have been observed for statistical companies, the private sector, and the academic realm. However, there are still many research questions that need to be answered to draw overall conclusions [44]. Furthermore, a qualitative study at a university in Japan found that the coronavirus preventive measures affected the academic environment, altered the means by which nursing students attended university and altered their career future opportunities. The impacts were categorized into academia, employment/career, changes in the profession, and environmental support [45].

The tourism sector was also severely impacted by the pandemic. Specifically, tourism employees, especially women and young adults, evidenced income decrease or unemployment, with previous economic and social conditions playing a role in this effect [46]. Numerous tourism employees in China faced increasing stress due to unemployment, decreased labor hours, and employment unreliability. Appraisal support suppressed the tourism employee's stress, a situation that changed with positive coping strategies [10]. Solnet et al. [9] investigated how the media presented tourism employment issues in contrast with the pre-pandemic area. In 2020, tourism employment was in the primary news compared to in 2019, when it was in the secondary news. Finally, Sun et al. [20] examined which tourists were more vulnerable to crises in Indonesia, by identifying their profile, profession, and working sector. The authors provided a model that can contribute to recovery from a possible upcoming crisis.

#### *2.4. Companies*

Significant impacts were observed across the various companies. In the American market, restrictive measures had an effect on labor demand, changing the way businesses operated since more operational and administrative skills were required, also changing the communication and management of the company [47]. Sobieralski [48], using data from U.S. airline and government datasets, found that during the pandemic, job losses increased for the airlines; however, large airlines were more intensely affected than the regional and low-cost ones. Customer service and flight operations employees were particularly impacted, while the administrators fared better.

Similarly, according to Otrachshenko et al. [49], based on data from Russia after the first wave of COVID-19, possessing new skills was a great advantage in the preservation of business and the development of start-ups; this is except for the information technologies business, for which previous experience was even more important. Regarding business productivity, various results have been found in five EU countries, with only a small positive effect being due to the business support measures [50]. On the other hand, according to

Olvera et al. [51], the support measures helped reduce job losses in Central America, but the resilience and size of the companies were the most important factors in their survival.

Moreover, in the United States, uncertainty was associated with the trade war between the US and China, while uncertainty in companies provided information about the financial market's uncertainty where there were implications for investors and economic policy forecasts [52]. Costa et al. [53] reported that companies in Italy that were not affected by the pandemic were those that created more jobs and value. Even though the businesses that faced great risk did not contribute to the creation of value and jobs, they engaged more than one-third of the workforce. The most important factors in the survival of businesses were the economic size, the digital transformation, and the innovation of each company. Companies that turned to new and flexible working methods to maintain communication with their customers and employees, as well as those that embraced innovation, efficiently dealt with the repercussions of the pandemic [54].

### 2.5. Job Retention

An important issue that emerged due to COVID-19 was job retention. Employment during the various phases of the pandemic showed different characteristics [55]. However, an increase in stress, pressure, and burnout was evidenced, with factors such as social distancing causing loneliness, and telework, which led to no distinction between home and workplace, further exacerbating burnout [56,57]. The early impact on employment was mostly driven by provisional layoffs and later recalls. In the later stages of the pandemic, employment was tight, and by the spring of 2022, labor recovered to an extent, even though there were extremely tight markets and a depressed employment-to-population ratio with massive retirements [55]. Reallocation trends indicated individuals moving away from low-skilled jobs, while retirements paved the way for promotions, making low-skilled jobs even less desirable [55].

Certain workers, such as healthcare employees, experienced increased job demands [58]. However, Moon et al. [59], studying data from the US, found that many personal traits seemed to play a role in the way individuals respond to excessive requirements; this included, for instance, extraversion, which is linked to less burnout, buffering the effect of the role overload that was encountered during the pandemic. Fatigue, low satisfaction from helping colleagues, low organizational support, and an increase in depression and anxiety were among the reasons why individuals were more likely to quit the academic field [60]. As a result, in addition to high rates of unemployment, during COVID-19, many employers witnessed a high number of their employees quitting, a phenomenon known as the Great Resignation [61]. Contributing factors to this phenomenon include burnout and prolonged stress [62], low income, evolving working norms, or the industry type, especially for healthcare employees [58]. Similarly, employees related to professions with higher mortality risk, lacking significant compensation for it, temporarily resigned in 2020 [63].

Moreover, precarious employment increased during the pandemic, and employees experienced greater uncertainty, job losses, and changes in their life which affected their mental health [64]. To give some numbers, during 2020, precarious employment rose to 13%, especially among women and non-Hispanic people of color, while changes in precarious employment were related to food insecurity and higher anxiety [65]. Regarding these difficulties, vaccination seemed to play a role in employment. Mosbah and Dharmapala [66], analyzing data from 43 nations between 2018 and 2020, found that while COVID-19 harmed workers, after vaccination and especially after the establishment of partial immunity, positive effects were cited on the workforce and employee behavior. However, the job retention support that was provided was beneficial for the Estonian labor market, because 20% of jobs were saved when they were supported by the program, also decreasing the rate of unemployment by 2–4 percentage points [67].

On the other hand, Arceo-Gomez et al. [68], based on data from the Mexican Institute of Social Security, argue that not only did COVID-19 not affect the likelihood of employment and wages, but also that workers who became infected with COVID-19 had a higher

probability of maintaining their current jobs and payment than individuals who did not. The positive or negative response to a job search affects the perceived returns of workers accordingly, and workers' motives to search for a job have not changed according to novel aspects of the COVID-19 recession [69].

### 2.6. Health Issues

COVID-19 negatively impacted health and mental health in many ways. A sample of Israelis during the pandemic showed an increased consumption of alcohol and drugs [70], with addictive behaviors on the rise [71]. Men cited higher alcohol and substance consumption than women, which was also related to employment and the duration of the pandemic [70]. The percentage of women with anxiety disorders was higher than that of men in Canada, while anxiety disorders in women were caused mainly by unemployment and in men by fake news, long hours of watching TV, and the absence of physical exercise [72]. Anxiety disorders caused drug consumption, alcohol, and poor-quality nutrition [72]. Martin et al. [13] found that the main US workers were more likely to smoke and sleep less than 8 hours, especially service workers and those who were not parents. Alcohol consumption was associated with main and non-main workers, but main workers exercised more days, contrary to the women main workers who exercised less than women non-main workers, as stated by Martin et al. [13].

Coutinho et al. [73] examined the relations between sociodemographic factors and the lifestyle of people working in pediatric units in Bahia, Brazil, during COVID-19. The study revealed that people who were not married received 3–5 minimum wages, and that those with more than one job were more likely to follow dangerous lifestyle behaviors.

Levy [74] conducted an online survey with a sample of Israelis to investigate the mutual connection between emotional and mental anguish among adults, genders, and experiences during the quarantine, the duration of COVID-19, and employment. The findings indicated that employment was a very crucial factor in men's psychological state during oppressive conditions like the COVID-19 pandemic. Moreover, individual quarantine had contrary effects on individuals' psychological wellness compared to long-term pandemics, increasing anxiety and depression. Similarly, Wang et al. [75] investigated the impact of the parent's employment on the daily life of teenagers, based on the socioeconomic situation of the family in America. A negative impact on children and increase in family conflicts were evidenced, particularly for parents that lost their jobs, while a positive effect on children was evidenced for those whose parents worked from home due to the better connection between parents and their children. Parents with lower wages were expected to lose their jobs more and were less likely to work from home than parents who had middle or high wages. However, working from home caused musculoskeletal problems for a large percentage of employees [76]. Similarly, Bentley et al. [77], through quantitative research, engaged in the development of an occupational health and safety management model for employees who were working from home in Australia. The authors emphasized the psychological and social risks and argued that it is necessary to support the employees who work from home.

Workers who experienced job loss were more likely to face mental health issues compared to those who remained employed [78]. Permanent in-home service workers were less affected by fear compared to the non-permanent working group [79], while Hagen et al. [80] argue that emotions like anxiety, rage, and loneliness rather than depression were more common in state-level employment. The same sentiments were more common in full-time employees and workers who had been retired, and less common in non-working and homemaker individuals. Economic and labor changes had a major effect on Americans' mental and emotional health during the COVID-19 pandemic [80].

Regarding the measures taken to protect against COVID-19 and the mental health of hospital workers in Mexico, not all workers received protective equipment for COVID-19 from their organization, while the equipment provided by the employers was often unsuitable and most workers acquired better protective equipment on their own [81]. According

to the authors, the continuous exposure to risk and the working environment caused fatigue and mental issues in the workers. In Poland, satisfaction with work decreased among healthcare workers due to COVID-19, especially in medical staff, who faced financial and mental health challenges [82]. Caregivers in the United States, especially those in the early stages of their careers, experienced elevated levels of negative mental health symptoms compared to non-care employees [83].

According to Armenti et al. [84], data referring to COVID-19 cases in employment can be used to identify vulnerable social groups, enhance vaccination procedures, and organize reopening plans. After rehabilitation, the frequency of post-COVID symptoms decreased, apart from physical tiredness, with an important enhancement in the outcomes of psychical efficiency and neuropsychological health [8]. Depression symptoms decreased in healthcare workers in contrast to non-healthcare workers; however, workers reported decreased working ability, with the majority unable to work after rehabilitation [8]. Domiciliary carers in the UK adapted to the new situation, and those who effectively balanced work and personal life managed the risks better, supported by their positivity and the understanding that their work is important [85]. Finally, the introduction of flexible working methods and hours was found to be highly beneficial for employees in Wales [86].

### 2.7. Inequalities

Unfortunately, COVID-19 had various mainly negative impacts on societies and people. Although COVID-19 was initially seen as the “great equalizer” that affected everyone equally [87], it became evident that certain communities, such as Black and Latino communities, experienced higher unemployment rates and greater mortality due to COVID-19, highlighting pre-existing disparities [87–89]. In a research study conducted by Kim et al. [12], Asian Americans, especially those less educated, were more intensely negatively affected than all other racial groups. Moreover, marginalized counties in the USA were disproportionately impacted by COVID-19, with various effects on labor also questioning whether COVID-19 created new forms of inequalities [90]. Similarly, Liao and Villareal [11] found that, regarding the US labor market, immigrants and non-immigrants with the same ethnicity and gender cited a decrease in employment in comparison with native whites but only in the first months of the pandemic; this is except for Hispanic immigrants, who continued to face considerable employment issues as opposed to their native-born White colleagues.

Older individuals in the US faced challenges in finding employment, and their productivity was reduced if they or someone in their family had COVID-19, leading to a decrease in GDP [91]. Young people in the Philippines encountered difficulties in employment and were more vulnerable to COVID-19 [16]. The prioritization of compulsory vaccination measures negatively affected existing inequalities, as young people who were mostly unemployed needed to be vaccinated first in order to work, perpetuating unemployment [16]. Similarly, young people in America faced financial and emotional problems, including racial and gender inequalities in the working environment, and difficulties in employment, amplified by COVID-19, due to a lack of support [92]. As a result, heterogeneity was evidenced regarding the effect of the COVID-19 pandemic for various ages, education levels, and genders as stated by Aldan et al. [32].

COVID-19 worsened gender-related inequalities, particularly in employment [93]. Women were more likely to lose their job, and those who worked at home also had to take care of the family and house-related issues at a higher rate than men, even though the degree of men that engaged with household chores slightly increased [24], showing that gender inequality increased to the detriment of women in paid and unpaid employment. According to Singh et al. [94], in Canada, women’s employment and wages were negatively affected by COVID-19, increasing gender inequalities. The virus spread and the restrictive measures increased family violence, the abuse of women, stress, and other psychological problems in women and children [95]. In general, about two-thirds of countries had a greater reduction in the female workforce than in the male due to COVID-19, but these differences between the two genders were short term [96]. Regarding migrant women, the

challenges they experienced were worsened by gendered racism and by the fragmentation of the labor market based on the capitalist economy [97]. Workers in areas with higher COVID-19 intensity experienced more significant job loss and wage reduction, particularly vocational workers [98]. The effects of the pandemic on the Japanese labor market varied across different age groups, genders, types of employment, industries, education levels, and occupations, impacting vulnerable social groups the most [99].

Remote work became more prevalent during the pandemic, offering some flexibility in terms of location and working hours [100]. However, the level of flexibility provided by the companies to their employees varied, impacting the psychological contract between employees and their managers, since working from home is rendered a privilege that managers are entitled to decide upon (provided to few individuals), while all employees require access to the ability to work from home. In Brazil, the labor forces with the smallest possibility of working remotely were men, countryside residents, low-income individuals with basic education, people of color, young people, freelancers, staffers of the private sector, and farm laborers [15]. According to the authors [15], this mostly is caused by dissimilarities in each profession. For instance, regarding workers' educational level and net income when considering working from home, the inequality gap between the richer, more educated, and most formalized employees and the others has expanded, forcing the latter to decide between employment and salary or contamination.

Based on the case study of Arntz et al. [18], employees in Germany without children reported being more satisfied by working from home even when working one unpaid hour per week. Moreover, working from home plays a role in lowering gender differences, regarding employees with children, working hours, and wages. Similarly, regarding parenthood, fathers and mothers do not indicate similar wages, which means that measures must be taken to eliminate inequalities [18]. Similarly, Dias et al. [101] suggest that a "fatherhood premium" is evidenced in the possibility of resignation in comparison with mothers and childless parents, which may be higher between workers with low and middle-stage education.

More importantly, the place of residence plays a role, according to Paul [102]. Based on this author's research, the ability to work from home varies according to the job sector and education level, and even though rural people tend to prefer remote working more than urban individuals, they can do less frequently. In this context, commutes are decreasing, changing travel behavior; thus, for those that want to work from home but are not able to, this may further dishearten them. We must bear in mind that not all individuals are used to utilizing the technologies necessary for remote working. More precisely, for those with some prior experience, the day-to-day adaptation to remote working (when imposed) was easier compared to those that lacked such experience [103]. After the pandemic, in the US labor market, some people were allowed to choose whether to work remotely or not, while others could not choose [103]. Regarding income and mobilities, lower-income individuals demonstrate less flexibility regarding their mobility, compared to higher income individuals [104]. Moreover, apart from income, race seems to be involved too, since white individuals and highly paid persons are more likely to choose to work from home [105].

Unemployment also affected individuals with disabilities, with both disabled and non-disabled individuals experiencing increased unemployment at the beginning of the pandemic. Temporary layoffs decreased over time, but the number of people actively looking for employment increased [106]. People with disabilities in the UK were mainly employed in professions outside the home and were more exposed to the pandemic than those without disabilities [107]. Similarly, the pandemic drove people with mental health issues away from workplaces and they worked part time, with decreased working hours compared to healthy people in the UK [14]. Finally, according to Ne'eman and Maestas [108], at the beginning of the pandemic, people with disabilities had job losses equivalent to those of people without disabilities, but at the end of the outbreak, the percentage of people with disabilities employed increased. People with disabilities were mainly employed in teleworking positions [108].

### 2.8. Remote Working and Self Employment

The COVID-19 pandemic had a profound impact on the way people work and live, also leading to changes in employment patterns that may have long-term effects [109]. Employers were two to three times more likely to offer the remote working option one year after the outbreak of the pandemic compared to the period before; however, certain requirements seemed to exist, for instance, a degree.

Abd Ghani et al. [110] investigated the way in which companies could examine the productivity and workload of their employees who worked from home during COVID-19 and how employees balanced work and family issues. Agile working models, teamwork, feedback, autonomy at work, and monitoring can have positive effects on the productivity of employees. Also, psychological support and a flexible program can help people to work from home. Moreover, Jones and Manhique [111] studied the digital employment platforms in Mozambique during COVID-19, finding that the demand for employees increased, but there were not changes in the labor supply. These platforms can help workers to face economic shocks. Furthermore, the employment indicator, the average salary, and especially internet access affected teleworking [112].

Barbour et al. [113] collected 1275 observations via a U.S. nationwide panel and examined the transition to working at home from the workplace during COVID-19 and the possibility of continuing to work at home, investigating the factors that impact work at home. The research showed that about 50% of the employees who started working from home during the pandemic were willing to continue working with this type of employment. Many demographic, economic, and educational factors, or the working sector, seem to affect this behavioral change. This is the knowledge that employees can work more efficiently if they are provided with autonomy, flexibility, social interaction, and career development [114].

Deole et al. [115] studied the relationship between working from home and productivity in the United Kingdom. They found that working from home was associated with increased productivity during periods without lockdowns, but this relationship was not present during lockdown periods. Specifically, the productivity of parents who were working from home was reduced because they had to take care of the education of their children, who also were at home because of the lockdown [115]. Furthermore, differences in productivity based on the job sectors existed, and also a relationship between the experiences of the employees and their desire to continue working from home was evidenced [115]. Similarly, Shen [116] studied the way in which the productivity of technology employees was affected by working at home during COVID-19, finding a negative change in individual productivity, while changes in software development rates were evidenced.

In general, the work-from-home arrangements in Switzerland were considered to be temporary; however, certain features, for instance, social groups, travel behaviors, and viable transportation, have been very important research subjects related to this type of employment during the period after COVID-19 [117]. According to the authors, people engaged in this type of employment decreased some aspects of traveling while they increased some others in comparison with their colleagues; meanwhile, telecommuting is not only beneficial for the workers but also for society in general, promoting sustainable transportation.

On the other hand, foreign researchers that migrated to Europe found it difficult to adjust to telecommuting, due to unsuitable working environments and deficient technological equipment [118]. Their worry was focused on their susceptibility regarding precarious contracts and bureaucratic asylum methods, even though they were pleased with public authorities' measures [118]. The authors concluded that most academic researchers did not face a change in their income in contrast to their unemployment ratio.

Flexible employment can be categorized based on the location of work, work schedule, and employment relationships [119]. COVID-19 brought about various changes in employment, shifting towards more flexible arrangements in terms of schedule and location [120]. However, these changes also led to an increase in daily working hours [121]. Similarly, gig workers were affected by the COVID-19 pandemic, but not all of them in the same way

and magnitude [120,122]. In many employment sectors that are related to the system, such as healthcare and supply chains, the number of workers increased, while in others such as tourism, the number decreased [120]. While many argue that flexible and occasional employment provides opportunities, there is a fear about the employment conditions and wages, with the pandemic affecting the work behavior, personal health, and career of individuals [120].

Environment and resource limitations may hinder people from working from home; however, when they adapt to certain arrangements and their tolerance to stress increases, they tend to prefer to work from home. As a result, the stress tolerance of individuals can be considered the most effective means for achieving a community-level decrease in energy [123].

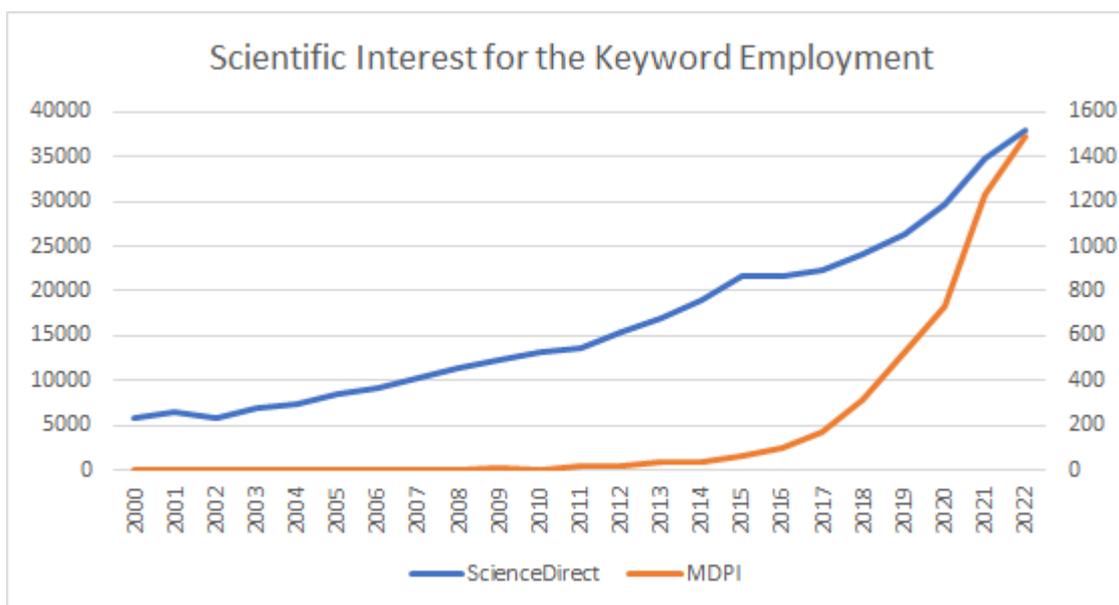
As a result, new types of employment emerged due to COVID-19. Such a breakthrough included digital nomads. Due to the presence of many common features with similar types of employers, for instance, freelancers, a strict definition of “digital nomads” does not exist. Digital nomads are individuals that use mainly telecommunication technologies to earn their living, and via this lifestyle, due to remote working, they can live their life in a nomadic way, traveling to different places, changing the place they live in, etc. Change is the core notion of their lifestyle, as they prefer not only to change environments, but also clients, projects, etc. [124]. Based on this, it should not be surprising that these types of workers engage in various activities, such as nature, tourism, hospitality, and many others [125]. However, since this phenomenon is relatively new, not all tax obligations and disruptions have been solved, but the great potential still exists [126]. Apart from the pandemic, other oppressive conditions, such as limited economic and employment prospects, contribute to this tendency [127], while various dynamics and features can be observed to apply to these individuals [128].

Moreover, COVID-19 had a significant impact on self-employment. The pandemic created many problems for businesses and freelancers since many individuals lost their job and many businesses had to file for bankruptcy; however, specific social groups such as women, non-white, and young self-employed people cited higher unemployment rates [129]. Similar findings can be retrieved from the research work of Mindes and Lewin [130], who state that freelancers in the USA were more intensely negatively affected than other employees, but they had bigger earnings in the harder-hit sectors and when they owned a business; women, non-white and Hispanic people were more intensely negatively affected in both sectors. Wolfe and Patel [5] have stated that higher mental distress and financial worries are associated with each other for self-employed individuals, especially when facing decreased working hours; meanwhile, an unexpected decrease in income can mediate the relationship between happiness and self-employment. On the other hand, support programs can significantly aid self-employment, slightly increasing the survival rate of these jobs [131]. However, different effects were evidenced depending on the education of the person, their business activity, and speed of payment, with a more positive effect being cited by those whose application for the program was accepted quickly [131].

### 3. Scientific Interest for Employment

To provide a snapshot of the scientific interest in the topic of employment, over the years, we derived data from ScienceDirect and MDPI. In Figure 1, we present these data, with the left Y-axis referring to ScienceDirect, and the right Y-axis to MDPI.

Based on the information presented in Figure 1, there has been a general increasing trend over the years. However, there are certain years in which the interest temporarily decreased. Notably, during the years of the pandemic, there was a significant surge in scientific interest in the keyword “employment,” highlighting the importance of studying this field during such challenging times.



**Figure 1.** Scientific interest over the years for the keyword “employment”.

#### 4. Conclusions

COVID-19 impacted employment in many ways; however, its effect on the various countries was not uniform [41]. Scrutinizing the literature review, it is clear that employment and working conditions change; however, this fact is not positive for all professions.

In this regard, during the pandemic, job retention was very difficult for specific jobs and employees, while many individuals cited an increase in stress, pressure, and burnout, some of which were related to social distancing, which caused loneliness, and to telework, which led to no distinction between home and workplace, increasing burnout even more [56,57]. The consumption of alcohol and drugs increased [70], with addictive behaviors generally increasing [71].

As a result, during COVID-19, many employers witnessed many of their employees quitting, a phenomenon known as the “Great Resignation” [61]. There are many reasons known to have played a significant role in this occurrence, some of the most important being burnout and prolonged stress [62], low income, evolving working norms, or the industry type, especially for healthcare employees [58]. Consequently, certain professions were impacted more intensely than others, demonstrating the heterogenous effects of the COVID-19 pandemic on employment worldwide.

On the other hand, new opportunities and innovative ways of working have emerged. Working from home seems to be very popular among employees nowadays, and people engaged in the gig economy are increasing in number, with new types of employees emerging; these include, for instance, the so-called “digital nomads”; however, the changes in employment are very complex and difficult to predict due to various overlapping concepts (e.g., work from home versus home-based work), and a thorough analysis is required from different angles [132].

While employment undergoes changes as usual, not all individuals have equal access to these benefits. In this regard, many inequalities exist, have emerged, or have worsened, some of which are related to income [104], race [105], the gender of the parents [18], the region of residence, and many others. Moreover, the fact that managers are given the power to provide remote working [100] can deteriorate the relationship between them and their employees, worsening the working conditions. In this context, the pandemic increased inequalities [17], creating many problems for certain social groups [129], individuals engaged in certain positions, certain race-related people, people of specific education levels [12], or people of various age [91]. Consequently, the pandemic negatively affected mainly vulnerable social groups [99].

Although it is still premature to draw definitive conclusions about long-term effects, it is undeniable that the pandemic influenced specific trajectories that were already established. For instance, the adoption of remote working and flexible schedules became prevalent. However, certain disruptions were temporary and eventually reverted to their initial state. This demonstrates that while certain aspects appear to change, others revert to their original conditions. Lastly, the pandemic has had enduring impacts on health, leading to numerous career challenges for individuals worldwide.

The findings of this study should be considered by policymakers and practitioners for several reasons. During the recruitment process, employers should keep in mind the profile of prospective employees, particularly in light of the ways in which the pandemic has impacted employment. This study offers valuable insights into what employers should anticipate from their future workforce. Furthermore, these findings should be taken into account when creating a conducive work environment that provides essential tools for ensuring employee satisfaction, effective collaboration, and the attainment of the employer's goals. Lastly, it is crucial to acknowledge the exhaustion and overall negative impacts of the pandemic on both employers and employees. Both parties should address these challenges together, fostering a spirit of collaboration and mutual respect, ultimately leading to improved working conditions.

On a more positive note, during this pandemic, it was proven that support programs alleviated self-employment, increasing their survival rate [131]. This finding shows that government and social agents can play a role in the redistribution of wealth and the provision of programs that aim to eliminate inequalities.

**Author Contributions:** Conceptualization, A.A.T.M., P.N.Z. and T.D.; methodology, T.D.; software, A.T.M., P.N.Z. and T.D.; validation, A.T.M., P.N.Z. and T.D.; formal analysis, A.T.M., P.N.Z. and T.D.; investigation, A.T.M., P.N.Z. and T.D.; resources, A.T.M., P.N.Z. and T.D.; data curation, T.D.; writing—original draft preparation, A.T.M., P.N.Z. and T.D.; writing—review and editing, A.T.M., P.N.Z. and T.D.; visualization, T.D.; supervision, T.D.; project administration, T.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:** Not applicable.

**Data Availability Statement:** Data are available online.

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

## References

1. Daglis, T.; Katsikogianni, M.-A. The repercussions of COVID-19 on the Stock Market of the Tourism Industry. *Tour. Anal.* **2022**, *27*, 77–91. [CrossRef]
2. Hite, L.M.; McDonald, K.S. Careers after COVID-19: Challenges and changes. *Hum. Resour. Dev. Int.* **2020**, *23*, 427–437. [CrossRef]
3. Clarke, M.; Lewchuk, W.; de Wolff, A.; King, A. 'This just isn't sustainable': Precarious employment, stress and workers' health. *Int. J. Law Psychiatr.* **2007**, *30*, 311–326. [CrossRef] [PubMed]
4. Dalton, P.S.; Nhung, N.; Rechenpohler, J. Worries of the poor: The impact of financial burden on the risk attitudes of micro-entrepreneurs. *J. Econ. Psychol.* **2019**, *79*, 102198. [CrossRef]
5. Wolfe Marcus, T.; Patel Pankaj, C. Everybody hurts: Self-employment, financial concerns, mental distress, and well-being during COVID-19. *J. Bus. Ventur. Insights* **2021**, *15*, e00231. [CrossRef]
6. Mack, A.E.; Agrawal, S.; Wang, S. The impacts of the COVID-19 pandemic on transportation employment: A comparative analysis. *Transp. Res. Interdiscip. Perspect.* **2021**, *12*, 100470. [CrossRef] [PubMed]
7. Whitsel, L.P.; Ajenikoko, F.; Chase, P.J.; Faghy, M.A. Public policy for healthy living: How COVID-19 has changed the landscape. *Prog. Cardiovasc. Dis.* **2023**, *76*, 49–56. [CrossRef]
8. Müller, K.; Poppele, I.; Ottiger, M.; Zwingmann, K.; Berger, I.; Thomas, A.; Wastlhuber, A.; Ortwein, F.; Schultz, A.-L.; Weghofer, A.; et al. Impact of Rehabilitation on Physical and Neuropsychological Health of Patients Who Acquired COVID-19 in the Workplace. *Int. J. Environ. Res. Public Health* **2023**, *20*, 1468. [CrossRef]
9. Solnet, D.; Robinson, N.S.R.; Baum, T.; Yan, H. Tourism work, media & COVID-19: A changed narrative? *Ann. Tour. Res.* **2022**, *97*, 103492.
10. Liu, H.; Tan, Q.; Mai, H. Stress-Buffering Effects of Social Support on Tourism Employees during the COVID-19 Pandemic: A Moderated Mediation Model. *Int. J. Environ. Res. Public Health* **2023**, *20*, 2342. [CrossRef]

11. Liao, K.T.; Villarreal, A. Unequal effects of the COVID-19 epidemic on employment: Differences by immigrant status and race/ethnicity. *PLoS ONE* **2022**, *17*, e0277005. [CrossRef] [PubMed]
12. Kim, T.A.; Kim, C.; Tuttle, E.S.; Zhang, Y. COVID-19 and the decline in Asian American employment. *Res. Soc. Stratif. Mobil.* **2021**, *71*, 100563. [CrossRef] [PubMed]
13. Martin, M.; Lennon, R.; Smith, R.; Myrick, J.; Small, M.; Van Scoy, L. Essential and non-essential US workers' health behaviors during the COVID-19 pandemic. *Prev. Med. Rep.* **2022**, *29*, 101889. [CrossRef] [PubMed]
14. Bryan, M.; Bryce, A.; Rice, N.; Roberts, J.; Sechel, C. Exploring mental health disability gaps in the labour market: The UK experience during COVID-19. *Labour Econ.* **2022**, *78*, 102253. [CrossRef]
15. Castro, N.R.; Moreira, G.C. Who worked from home in Brazil? Inequalities highlighted by the pandemic. *Nova Econ.* **2021**, *31*, 899–927. [CrossRef]
16. Estoce, R.H.Y.; Ngan, O.M.Y.; Calderon, P.E.E. How Do COVID-19 Vaccine Policies Affect the Young Working Class in the Philippines? *Int. J. Environ. Res. Public Health* **2023**, *20*, 2593. [CrossRef]
17. Kapitsinis, N.; Sykas, G.; Kanelleas, A.; Psarologos, D.; Saroukou, A.; Voulgaris, D.; Gourzis, K.; Gialis, S.; A Brief Overview on the Uneven Impact of the COVID-19 Pandemic up Employment, 2020Q2 and 2020Q3. Evidence from Cyprus, France, Spain, Greece, Italy, Malta, Croatia and Portugal. 2021. Available online: [https://www.researchgate.net/publication/349623794\\_A\\_brief\\_overview\\_on\\_the\\_uneven\\_impact\\_of\\_the\\_Covid-19\\_pandemic\\_up\\_employment\\_2020Q2\\_and\\_2020Q3\\_Evidence\\_from\\_Cyprus\\_France\\_Spain\\_Greece\\_Italy\\_Malta\\_Croatia\\_and\\_Portugal](https://www.researchgate.net/publication/349623794_A_brief_overview_on_the_uneven_impact_of_the_Covid-19_pandemic_up_employment_2020Q2_and_2020Q3_Evidence_from_Cyprus_France_Spain_Greece_Italy_Malta_Croatia_and_Portugal) (accessed on 15 May 2023).
18. Arntz, M.; Ben Yahmed, S.; Berlingieri, F. Working from home, hours worked and wages: Heterogeneity by gender and parenthood. *Labour Econ.* **2022**, *76*, 102169. [CrossRef]
19. Isley, C.; Low, S. Broadband adoption and availability: Impacts on rural employment during COVID-19. *Telecommun. Policy* **2022**, *46*, 102310. [CrossRef]
20. Sun, Y.; Sie, L.; Faturay, F.; Auwalin, I.; Wang, J. Who are vulnerable in a tourism crisis? A tourism employment vulnerability analysis for the COVID-19 management. *J. Hosp. Tour. Manag.* **2021**, *49*, 304–308. [CrossRef]
21. Ardiyono Sulistiyo, K. COVID-19 pandemic, firms' responses, and unemployment in the ASEAN-5. *Econ. Anal. Policy* **2022**, *76*, 337–372. [CrossRef]
22. Koppa, V.; West, J. School reopenings, COVID-19, and employment. *Econ. Lett.* **2022**, *212*, 110310. [CrossRef]
23. Dang Hai-Anh, H.; Nguyen, C.V.; Carletto, C. Did a successful fight against COVID-19 come at a cost? Impacts of the pandemic on employment outcomes in Vietnam. *World Dev.* **2023**, *161*, 106129. [CrossRef]
24. Farre, L.; Fawaz, Y.; Gonzalez, L.; Graves, J. How the COVID-19 Lockdown Affected Gender Inequality in Paid and Unpaid Work in Spain. *IZA Inst. Labor Econ.* **2020**, 13434. Available online: <https://www.iza.org/publications/dp/13434/how-the-covid-19-lockdown-affected-gender-inequality-in-paid-and-unpaid-work-in-spain> (accessed on 15 May 2023). [CrossRef]
25. Kashni, T.; Thakur, V. A Critical Analysis of Impact on Employment During and After COVID-19 Lockdown on India. *Int. Res. J. Bus. Stud.* **2021**, *14*, 3. [CrossRef]
26. Espi, G.; Leibbrandt, M.; Ranchhod, V. Age, Employment and Labour Force Participation Outcomes in COVID-Era South Africa. National Income Dynamics Study (NIDS) Coronavirus Rapid Mobile Survey (CRAM): Cape Town, South Africa, 2021; pp. 1–21. Available online: <https://cramsurvey.org/wp-content/uploads/2021/07/5.-Espi-G.-Ranchhod-V.-Leibbrandt-M.-2021-Age-employment-and-labour-force-participation-outcomes-in-COVID-era-South-Africa.pdf> (accessed on 15 May 2023).
27. Joshi, N.; Lopus, S.; Hannah, C.; Ernst, C.K.; Kilungo, P.A.; Opiyo, R.; Ngayu, M.; Davies, J.; Evans, T. COVID-19 lockdowns: Employment and business disruptions, water access and hygiene practices in Nairobi's informal settlements. *Soc. Sci. Med.* **2022**, *308*, 115191. [CrossRef] [PubMed]
28. Mangain, P.R. Understanding labour market disruptions and job losses amidst COVID-19. *J. Soc. Econ. Dev.* **2021**, *23* (Suppl. 2), S301–S319. [CrossRef] [PubMed]
29. Pizzinelli, C.; Shibata, I. Has COVID-19 induced labor market mismatch? Evidence from the US and the UK. *Labour Econ.* **2023**, *81*, 102329. [CrossRef]
30. Jones, R.G.S.; Lange, F.; Riddell, C.W.; Warman, C. Canadian Labour Market Dynamics during COVID-19. *Inst. Labor Econ.* **2021**, 14588. Available online: <https://docs.iza.org/dp14588.pdf> (accessed on 15 May 2023). [CrossRef]
31. Aum, S.; Lee, S.Y.T.; Shin, Y. COVID-19 doesn't need lockdowns to destroy jobs: The effect of local outbreaks in Korea. *Lab. Econ.* **2021**, *70*, 101993. [CrossRef]
32. Aldan, A.; Cirakli, M.E.; Torun, H. Covid 19 and the Turkish labor market: Heterogeneous effects across demographic groups. *Cent. Bank Rev.* **2021**, *21*, 155–163. [CrossRef]
33. World Bank. *The Economic Impact of the 2014 Ebola Epidemic: Short and Medium Term Estimates for West Africa*; World Bank Group: Washington, DC, USA, 2014; Available online: <https://documents.worldbank.org/curated/en/194681468119639844/The-economic-impact-of-the-2014-Ebola-epidemic-short-and-medium-term-estimates-for-West-Africa> (accessed on 18 April 2023).
34. Bangun, E.; Rifqi, M.; Prokoso, P. The impacts of the policies implementation to handle the COVID-19 pandemic in the field of employment. *E3S Web Conf.* **2021**, *331*, 02007. [CrossRef]
35. Green, D.; Loualiche, E. State and local government employment in the COVID-19 crisis. *J. Public Econ.* **2021**, *193*, 104321. [CrossRef]
36. Anderson, B.; Poeschel, F.; Ruhs, M. Rethinking labour migration: Covid-19, essential work, and systemic resilience. *Comp. Migr. Stud.* **2021**, *9*, 45. [CrossRef] [PubMed]

37. Webb, A.; McQuaid, R. Employment in the informal economy: Implications of the COVID-19 pandemic. *Int. J. Sociol. Soc. Policy* **2020**, *40*, 9/10, 1005–1019. [CrossRef]
38. Habibullah, M.S.; Saari, M.Y.; Safuan, S.; Din, B.H.; Mahomed, A.S.B. Loss of employment, lockdown measures and government responses in Malaysia during the COVID-19 pandemic: A note. *Int. J. Bus. Soc.* **2021**, *22*, 1525–1549. [CrossRef]
39. Lee, J.; Yang, H.-S. Pandemic and employment: Evidence from COVID-19 in South Korea. *J. Asian Econ.* **2022**, *78*, 101432. [CrossRef]
40. Simionescu, M.; Raisiene, A. A bridge between sentiment indicators: What does Google Trends tell us about COVID-19 pandemic and employment expectations in the EU new member states? *Technol. Forecast. Soc. Chang.* **2021**, *173*, 121170. [CrossRef]
41. Fana, M.; Perez, T.S.; Fernandez-Macias, E. Employment impact of COVID-19 crisis: From short term effects to long terms prospects. *J. Ind. Bus. Econ.* **2020**, *47*, 391–410. [CrossRef]
42. D’Amuri, F.; De Philippis, M.; Guglielminetti, E.; Lo Bello, S. Slack and prices during COVID-19: Accounting for labor market participation. *Labour Econ.* **2022**, *75*, 102129. [CrossRef]
43. Hodder, A. New Technology, Work and Employment in the era of COVID-19: Reflecting on legacies of research. *New Technol. Work Employ.* **2020**, *35*, 3. [CrossRef]
44. Cohen, D.G. Measuring employment during COVID-19: Challenges and opportunities. *Natl. Assoc. Bus. Econ.* **2020**, *55*, 229–239. [CrossRef] [PubMed]
45. Kobayashi, M.; Koga, Y.; Kako, J.; Kakeda, T.; Kiyohara, H.; Kimura, Y.; Ishida, M.; Tsubaki, M.; Nishida, Y.; Harada, K.; et al. How has the COVID-19 pandemic influenced nursing students’ academic experience and career choices? A qualitative descriptive analysis. *Teach Learn Nurs.* **2023**, *18*, 30–36. [CrossRef] [PubMed]
46. Sun, Y.-Y.; Li, M.; Lenzen, M.; Malik, A.; Pomponi, F. Tourism, job vulnerability and income inequality during the COVID-19 pandemic: A global perspective. *Ann. Tour. Res. Empir. Insights* **2022**, *3*, 100046. [CrossRef]
47. Gu, R.; Zhong, L. Effects of stay-at-home orders on skill requirements in vacancy postings. *Labour Econ.* **2023**, *82*, 102342. [CrossRef]
48. Sobieralski, J. COVID-19 and airline employment: Insights from historical uncertainty shocks to the industry. *Transp. Res. Interdiscip. Perspect.* **2020**, *5*, 100123. [CrossRef]
49. Otrachshenko, V.; Popova, O.; Nikolova, M.; Tyurina, E. COVID-19 and entrepreneurship entry and exit: Opportunity amidst adversity. *Technol. Soc.* **2022**, *71*, 102093. [CrossRef]
50. Bighelli, T.; Lalinsky, T.; Vanhala, J. Cross-country evidence on the allocation of COVID-19 government subsidies and consequences for productivity. *J. Jpn. Int. Econ.* **2023**, *68*, 101246. [CrossRef]
51. Olvera, C.B.; Sauri-Gonzalez, M.; Moya Harings, A.D.; Louvin, F. COVID-19 in Central America: Firm resilience and policy responses on employment. *J. Policy Model.* **2022**, *44*, 12801295.
52. Demirer, R.; Gupta, R.; Salisou, A.; Van Eyden, R. Firm-level business uncertainty and the predictability of the aggregate U.S. stock market volatility during the COVID-19 pandemic. *Q. Rev. Econ. Financ.* **2023**, *88*, 295302. [CrossRef]
53. Costa, S.; Sallusti, F.; Vicarelli, C.; Zurlo, D. Firm’s solidity before an exogenous shock: COVID-19 pandemic in Italy. *Econ. Anal. Policy* **2022**, *76*, 946–961. [CrossRef]
54. Bussin, M.H.R.; Swart-Opperman, C. COVID-19: Considering impacts to employees and the workplace. *SA J. Hum. Resour. Manag.* **2021**, *19*, a1384. [CrossRef]
55. Forsythe, E.; Kahn, L.B.; Lange, F.; Wiczer, D. Where have all the workers gone? Recalls, retirements, and reallocation in the COVID recovery. *Labour Econ.* **2022**, *78*, 102251. [CrossRef]
56. Vaziri, H.; Casper, W.J.; Wayne, J.H.; Matthews, R.A. Changes to the work–family interface during the COVID-19 pandemic: Examining predictors and implications using latent transition analysis. *J. Appl. Psychol.* **2020**, *105*, 1073–1087. [CrossRef]
57. Gubler, D.A.; Makowski, L.M.; Troche, S.J.; Schlegel, K. Loneliness and well-being during the COVID-19 pandemic: Associations with personality and emotion regulation. *J. Happiness Stud.* **2021**, *22*, 2323–2342. [CrossRef]
58. Jiskrova, G.K. Impact of COVID-19 pandemic on the workforce: From psychological distress to the great resignation. *J. Epidemiol. Community Health* **2022**, *76*, 525–526. [CrossRef]
59. Moon, Y.-K.; O’Brien, K.E.; Mann, K.J. The role of extraversion in the Great Resignation: A burnout-quitting process during the pandemic. *Personal. Individ. Differ.* **2023**, *205*, 112074. [CrossRef]
60. Schmiedehaus, E.; Cordaro, E.; Perrotte, J.; Stern, M.; Dailey, S.; Howard, K. The great resignation in higher education: An occupational health approach to understanding intentions-to-quit for faculty in higher education. *Teach. Teach. Educ.* **2023**, *123*, 103992. [CrossRef]
61. Klotz, A. The COVID Vaccine Means a Return to Work. And a Wave of Resignations. NBC News 2021. Available online: <https://www.nbcnews.com/think/opinion/covid-vaccine-means-return-work-wave-resignations-ncna1269018> (accessed on 28 April 2023).
62. Mayer, K. What’s behind the Great Resignation? Blame Burnout. Human Resource Executive 2021. Available online: <https://hrexecutive.com/whats-behind-the-great-resignation-blame-burnout/> (accessed on 28 April 2023).
63. Braakmann, N.; Eberth, B.; Wildman, J. Worker adjustment to unexpected occupational risk: Evidence from COVID-19. *Eur. Econ. Rev.* **2022**, *150*, 104325. [CrossRef] [PubMed]

64. Matilla-Santander, N.; Ahonen, E.; Albin, M.; Baron, S.; Bolibar, M.; Bosmans, K.; Burstrom, B.; Cuervo, I.; Davis, L.; Gunn, V.; et al. COVID-19 and Precarious Employment: Consequences of the Evolving Crisis. *Int. J. Health Serv.* **2021**, *51*, 226–228. [[CrossRef](#)] [[PubMed](#)]
65. Oddo, V.; Jones-Smith, J.; Knox, M. Changes in Precarious Employment and Health in the United States Amidst the COVID-19 Pandemic. *Prev. Med. Rep.* **2023**, *31*, 102113. [[CrossRef](#)]
66. Mosbah, E.B.; Dharmapala, P.S. Evaluating the Effects of COVID-19 and Vaccination on Employment Behaviour: A Panel Data Analysis Across the World. *Sustainability* **2022**, *14*, 9675. [[CrossRef](#)]
67. Merikull, J.; Paulus, A. The impact of the COVID-19 job retention support on employment. *Econ. Lett.* **2023**, *222*, 110963. [[CrossRef](#)] [[PubMed](#)]
68. Arceo-Gomez, E.O.; Campos-Vazquez, R.M.; Esquivel, G.; Alcaraz, E.; Martinez, L.A.; Lopez, N.G. The impact of COVID-19 infection on labor outcomes of Mexican formal workers. *World Dev. Perspect.* **2023**, *29*, 100488. [[CrossRef](#)] [[PubMed](#)]
69. Adams-Prassl, A.; Boneva, T.; Golinc, M.; Rauh, C. Perceived returns to job search. *Labour Econ.* **2023**, *80*, 102307. [[CrossRef](#)]
70. Levy, I.; Cohen-Louck, K.; Bonny-Noach, H. Gender, employment and continuous pandemic as predictors of alcohol and drug consumption during the COVID-19. *Drug Alcohol Depend.* **2021**, *228*, 109029. [[CrossRef](#)]
71. Daglis, T. The Increase in Addiction during COVID-19. *Encyclopedia* **2021**, *1*, 1257–1266. [[CrossRef](#)]
72. Lin, S. Generalized anxiety disorder during COVID-19 in Canada: Gender-specific association of COVID-19 misinformation exposure, precarious employment, and health behavior change. *J. Affect. Disord.* **2022**, *302*, 280–292. [[CrossRef](#)]
73. Coutinho, M.O.; Cavalcante Neto, J.L.; Souza, L.H.R.; Mercês, M.C.d.; Fernandes, D.V.; Leite, C.C.F.; Portella, D.D.A.; Draghi, T.T.G.; Santos, K.A.; Costa, L.E.L.; et al. Factors Associated with the Lifestyle of Pediatric Healthcare Professionals during the COVID-19 Pandemic. *Int. J. Environ. Res. Public Health* **2023**, *20*, 2055. [[CrossRef](#)]
74. Levy, I. Stress, anxiety, and depression in times of COVID-19: Gender, individual quarantine, pandemic duration and employment. *Front. Public Health* **2022**, *10*, 999795. [[CrossRef](#)]
75. Wang, M.; Henry, D.; Del Toro, J.; Scanlon, C.; Schall, J. COVID-19 Employment Status, Dyadic Family Relationships, and Child Psychological Well-Being. *J. Adolesc. Health* **2021**, *69*, 705712. [[CrossRef](#)]
76. Chim, J.M.Y.; Chen, T.L. Prediction of Work from Home and Musculoskeletal Discomfort: An Investigation of Ergonomic Factors in Work Arrangements and Home Workstation Setups Using the COVID-19 Experience. *Int. J. Environ. Res. Public Health* **2023**, *20*, 3050. [[CrossRef](#)]
77. Bentley, T.; Caponecchia, C.; Onnis, L.; Brunetto, Y.; Wharton, B.; Cattani, M.; Neto, A.; Vassiley, A. A systems model for the design of occupational health and safety management systems inclusive of work-from-home arrangements. *Appl. Econ.* **2023**, *109*, 103966. [[CrossRef](#)]
78. Ganson, K.T.; Tsai, A.C.; Weiser, S.D.; Benabou, S.E.; Nagata, J.M. Job Insecurity and Symptoms of Anxiety and Depression Among U.S. Young Adults During COVID-19. *J. Adolesc. Health* **2021**, *68*, 53–56. [[CrossRef](#)]
79. Hwang, J.; Jung, H. Impact of In-Home Repair Services on Physical and Mental Harm among Essential Workers: The Mediating Effect of Fear and Moderating Effect of Types of Employment. *Behav. Sci* **2022**, *12*, 497. [[CrossRef](#)] [[PubMed](#)]
80. Hagen, D.; Lai, A.Y.; Goldmann, E. State-level unemployment and negative emotions throughout the Covid-19 pandemic in the United States. *Prev. Med.* **2022**, *164*, 107239. [[CrossRef](#)] [[PubMed](#)]
81. Galvan-Ramirez, M.d.l.L.; Preciado-Serrano, M.d.L.; Gallegos-Bonifaz, M. The Impact of Biosecurity on Biological and Psychosocial Risks for Health Workers of COVID Hospitals in Guadalajara, Jalisco, Mexico. *Int. J. Environ. Res. Public Health* **2023**, *20*, 858. [[CrossRef](#)] [[PubMed](#)]
82. Gustavsson, K.; Goetz-Kundera, Z.; Flaga-Luczkiwicz, M.; Wichniak, A. Which Aspects of Work Safety Satisfaction are Important to Mental Health of Healthcare Workers during COVID-19 Pandemic in Poland? *Int. J. Environ. Res. Public Health* **2023**, *20*, 2870. [[CrossRef](#)]
83. Czeisler, M.E.; Drane, A.; Winnay, S.S.; Capodilupo, E.R.; Czeisler, C.A.; Rajaratnam, S.M.W.; Howard, M.E. Mental health, substance use, and suicidal ideation among unpaid caregivers of adults in the United States during the COVID-19 pandemic: Relationships to age, race/ethnicity, employment, and caregiver intensity. *J. Affect. Disord.* **2021**, *295*, 1259–1268. [[CrossRef](#)]
84. Armenti, K.; Sweeney, H.M.; Lingwall, C.; Yang, L. Work: A Social Determinant of Health Worth Capturing. *Int. J. Environ. Res. Public Health* **2023**, *20*, 1199. [[CrossRef](#)]
85. Donnellan, W.J.; Hirons, A.; Clarke, K.; Muinos, C.; McCabe, L. Exploring Resilience in UK-Based Domiciliary Care Workers before and during the COVID-19 Pandemic. *Int. J. Environ. Res. Public Health* **2022**, *19*, 16128. [[CrossRef](#)]
86. Griffiths, M.L.; Gray, B.J.; Kyle, R.G.; Davies, A.R. Shifting priorities and employment choices among workers in Wales during the COVID-19 pandemic: A longitudinal analysis. *Lancet* **2022**, *400*, S1. [[CrossRef](#)] [[PubMed](#)]
87. Jones, B.L.; Jones, J.S. Cuomo Is Wrong, COVID-19 Is Anything but an Equalizer. *Washington Post*. 2020. Available online: <https://www.washingtonpost.com/outlook/2020/04/05/gov-cuomo-is-wrong-COVID-19-is-anything-an-equalizer/> (accessed on 8 March 2023).
88. Wade, L. An unequal blow. *Science* **2020**, *368*, 700–703. [[CrossRef](#)] [[PubMed](#)]
89. Thebault, R.; Tran, A.B.; Williams, V. African Americans Are at Higher Risk of Death from Coronavirus. *The Washington Post* 2020. Available online: <https://www.washingtonpost.com/nation/2020/04/07/coronavirus-is-infecting-killing-black-americans-an-alarmingly-high-rate-post-analysis-shows/> (accessed on 8 March 2023).

90. Antipova, A. Analysis of the COVID-19 impacts on employment and unemployment across the multi-dimensional social disadvantaged areas. *Soc. Sci. Humanit. Open* **2021**, *4*, 100224. [CrossRef] [PubMed]
91. Wang, F.; Wang, J.-D. Estimating US Earnings Loss Associated with COVID-19 Based on Human Capital Calculation. *Int. J. Environ. Res. Public Health* **2022**, *19*, 1015. [CrossRef] [PubMed]
92. Flanagan, S.; Margolius, M.; Doyle Lynch, A.; Hynes, M. The State of Youth Employment Navigating the World of Work during COVID-19. Navigating the World of Work during COVID-19. 2021. Available online: <https://files.eric.ed.gov/fulltext/ED621432.pdf> (accessed on 15 May 2023).
93. Appelbaum, H.S.; Emadi-Mahabadi, S. Gender Parity in The Workplace: How COVID-19 Has Affected Women. *Eur. J. Bus. Manag. Res.* **2022**, *7*, 1–8. [CrossRef]
94. Singh, V.; Shirazi, H.; Turetken, J. COVID-19 and gender disparities: Labour market outcomes. *Res. Econ.* **2022**, *76*, 206217. [CrossRef]
95. Berg, J.; Woods, N.; Shaver, J.; Kostas-Polston, E. COVID-19 effects on women's home and work life, family violence and mental health from the Women's Health Expert Panel of the American Academy of Nursing. *Nurs. Outlook* **2022**, *70*, 570–579. [CrossRef]
96. Bluedorn, J.; Caselli, F.; Hansen, N.; Shibata, I.; Tavares, M. Gender and employment in the COVID-19 recession: Cross-Country evidence on "She-Cessions". *Labour Econ.* **2023**, *81*, 102308. [CrossRef]
97. Hamedanian, F. Access to the European Labor Market for Immigrant Women in the Wake of the COVID Pandemic. *World* **2022**, *3*, 957–978. [CrossRef]
98. Liang, X.; Rozelle, S.; Yi, H. The impact of COVID-19 on employment and income of vocational graduates in China: Evidence from surveys in January and July 2020. *China Econ. Rev.* **2022**, *75*, 101832. [CrossRef]
99. Kikuchi, S.; Kitao, S.; Mikoshiba, M. Who suffers from the COVID-19 shocks? Labour market heterogeneity and welfare consequences in Japan. *J. Jpn. Int. Econ.* **2021**, *59*, 101117. [CrossRef]
100. Smite, D.; Moe, N.B.; Hildrum, J.; Huerta, J.G.; Mendez, D. Work-from-home is here to stay: Call for flexibility in post-pandemic work policies. *J. Syst. Softw.* **2023**, *195*, 111552. [CrossRef]
101. Dias, F.A.; Chance, J.; Buchanan, A. The motherhood penalty and The fatherhood premium in employment during COVID-19: Evidence from The united states. *Res. Soc. Stratif. Mobil.* **2020**, *69*, 100542. [CrossRef] [PubMed]
102. Paul, J. Work from home behaviors among U.S. urban and rural residents. *J. Rural Stud.* **2022**, *96*, 101–111. [CrossRef]
103. Kong, X.; Zhang, A.; Xiao, X.; Das, S.; Zhang, Y. Work from home in the post-COVID world. *Case Stud. Transp. Policy* **2022**, *10*, 1118–1131. [CrossRef]
104. Iio, K.; Guo, X.; Kong, X.; Rees, K.; Wang, X.B. COVID-19 and Social Distancing: Disparities in Mobility Adaptation by Income. *arXiv* **2020**, arXiv:2011.12510. [CrossRef]
105. Bick, A.; Blandin, A.; Mertens, K. Work Home after COVID-19 Outbreak. Federal Reserve Bank of Dallas. 2020. Available online: <https://www.dallasfed.org/-/media/documents/research/papers/2020/wp2017r1.pdf> (accessed on 28 April 2023).
106. Houtenville, A.J.; Paul, S.; Brucker, D.L. Changes in the Employment Status of People With and Without Disabilities in the United States During the COVID-19 Pandemic. *Arch. Phys. Med. Rehabil.* **2021**, *102*, 1420–1423. [CrossRef]
107. Bryan, M.; Bryce, A.; Roberts, J. Employment related COVID-19 exposure risk among disabled people in the UK. *SSM-Popul. Health* **2021**, *16*, 100984. [CrossRef]
108. Ne'eman, A.; Maestas, N. How has COVID-19 impacted disability employment? *Disabil. Health J.* **2023**, *16*, 101429. [CrossRef]
109. Bamieh, O.; Ziegler, L. Are remote work options the new standard? Evidence from vacancy postings during the COVID-19 crisis. *Labour Econ.* **2022**, *76*, 102179. [CrossRef]
110. Abd Ghani, A.; Zakaria, Z.; Hamzah, A.N.S. COVID-19, Workplace Challenges. *J. Intelek* **2021**, *16*, 151–161. [CrossRef]
111. Jones, S.; Manhique, I. Digital Labour Platforms as Shock Absorbers Evidence from COVID-19. WIDER Working Paper. 2022. Available online: <https://www.wider.unu.edu/sites/default/files/Publications/Working-paper/PDF/wp2022-108-digital-labour-platforms-shock-absorbers-evidence-COVID-19.pdf> (accessed on 15 May 2023).
112. Robu, I.-B.; Dicu, R.-M.; Herghilgiu, I.V.; Sahlian, D.N.; Vuta, M. Can Teleworking Lead to Economic Growth during Pandemic Times? Empirical Evidence at the European Union Level. *Electronics* **2023**, *12*, 154. [CrossRef]
113. Barbour, N.; Menon, N.; Mannering, F. A statistical assessment of work-from-home participation during different stages of the COVID-19 pandemic. *Transp. Res. Interdiscip. Perspect.* **2021**, *11*, 100441. [CrossRef] [PubMed]
114. Harkiolakis, T.; Komodromos, M. Supporting Knowledge Workers' Health and Well-Being in the Post-Lockdown Era. *Adm. Sci.* **2023**, *13*, 49. [CrossRef]
115. Deole, S.; Deter, M.; Huang, Y. Home sweet home: Working from home and employee performance during the COVID-19 pandemic in the UK. *Labour Econ.* **2023**, *80*, 102295. [CrossRef] [PubMed]
116. Shen, L. Does working from home work? A natural experiment from lockdowns. *Eur. Econ. Rev.* **2023**, *151*, 104323. [CrossRef]
117. Huang, Z.; Loo, P.Y.B.; Axhausen, K. Travel behaviour changes under Work-from-home (WFH) arrangements during COVID-19. *Travel Behav. Soc.* **2023**, *30*, 202–211. [CrossRef]
118. Tzoraki, O.; Dimitrova, S.; Barzakov, M.; Yaseen, S.; Gavalas, V.; Harb, H.; Haidari, A.; Cahill, B.P.; Cúlibrk, A.; Nikolarea, E.; et al. The Impact of the COVID-19 Pandemic on the Working Conditions, Employment, Career Development and Well-Being of Refugee Researchers. *Societies* **2021**, *11*, 71. [CrossRef]
119. Spreitzer, G.M.; Cameron, L.; Garrett, L. Alternative work arrangements: Two images of the new world of work. *Annu. Rev. Organ. Psychol. Organ. Behav.* **2017**, *4*, 473–499. [CrossRef]

120. Spurk, D.; Straub, C. Flexible employment relationships and careers in times of the COVID-19 pandemic. *J. Vocat. Behav.* **2020**, *119*, 103435. [CrossRef]
121. McKeever, V. Coronavirus Lockdowns are Making the Working Day Longer for Many. CNBC 2020. Available online: <https://www.cnbc.com/2020/03/30/coronavirus-lockdowns-are-making-the-working-day-longer-for-many.html> (accessed on 8 March 2023).
122. Daglis, T. Sharing Economy. *Encyclopedia* **2022**, *2*, 1322–1332. [CrossRef]
123. Wang, R.; Ye, Z.; Lu, M.; Hsu, S.C. Understanding post-pandemic work-from-home behaviours and community level energy reduction via agent-based modelling. *Appl. Energy* **2022**, *322*, 119433. [CrossRef]
124. ELORUS. Digital Nomads: A Complete Guide. Invoicing. Time Tracking. Expense Management. 2023. Available online: <https://www.elorus.com/resources/Digital-Nomads-A-Complete-Guide.pdf> (accessed on 16 April 2023).
125. Chevtaeva, E.; Denizci-Guillet, B. Digital nomads' lifestyles and coworkation. *J. Destin. Mark. Manag.* **2021**, *21*, 100633. [CrossRef]
126. Tyutyuryukov, V.; Guseva, N. From remote work to digital nomads: Tax issues and tax opportunities of digital lifestyle. *IFAC Pap.* **2021**, *54*, 188–193. [CrossRef]
127. Thompson, B.Y. The Digital Nomad Lifestyle: (Remote) Work/Leisure Balance, Privilege, and Constructed Community. *Int. J. Sociol. Leis.* **2019**, *2*, 27–42. [CrossRef]
128. Green, P. Disruptions of self, place and mobility: Digital nomads in Chiang Mai, Thailand. *Mobilities* **2020**, *15*, 431–445. [CrossRef]
129. Grashuis, J. Self-employment duration during the COVID-19 pandemic: A competing risk analysis. *J. Bus. Ventur. Insights* **2021**, *15*, e00241. [CrossRef]
130. Mindes, C.H.S.; Lewin, P. Self-employment through the COVID-19 pandemic: An analysis of linked monthly CPS data. *J. Bus. Ventur. Insights* **2021**, *16*, e00280. [CrossRef]
131. Block, J.; Kritikos, A.; Priem, M.; Stiel, C. Emergency-aid for self-employed in the COVID-19 pandemic: A flash in the pan? *J. Econ. Psychol.* **2022**, *93*, 102567. [CrossRef]
132. Asiya, I. Work-from/at/for-home: COVID-19 and the future of work A critical review. *Geoforum* **2022**, *128*, 33–36.

**Disclaimer/Publisher's Note:** The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.