

WORKING TIME AND COVID-19 PANDEMIC IN THE SPECIAL ECONOMIC ZONE OF ŁÓDŹ IN POLAND

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Abstract

The effects of Covid-19 disease are continuing to have impact in 2022 on the global, as well as the domestic markets. The human resources, respectively their available working time, as one of the main production inputs is limited and in potential danger. Therefore, the thought about a workforce safety and its effectiveness is so urgent. The aim of the article is not only to follow up on our previous nationwide survey from 2021 in Poland, but above all to describe and understand how the companies, associated in the so-called Special Economic Zone of Łódź in Poland, responded to the issues created by the COVID-19 pandemic in the field of organization and planning of the working time. The paper also focuses on the comparison of the data from 2021 with the data from 2022 i.e., whether there has been any development or any changes in the companies in the investigated areas. These researches and their observation, supported also by a questionnaire surveys and management interviews, led to the results and the statements of this paper. The synthesis of findings also shows that a key characteristic is an organizational flexibility, defined as the ability to adapt to a quickly changing environment.

Key words: working time, flexibility, workforce management, working innovation and solutions, Poland

JEL Code: J22, J53, J81

Introduction

The presented results of research performed in 2021 on the impact of the COVID-19 pandemic on the functioning of companies in Poland clearly indicated that the management of companies passed the test in emergency situations with flying colors. However, in the conclusions of the research, we pointed out that another difficult and very rapidly changing period is still ahead of us (Urban & Chodkowski, 2021). In 2022, we abandoned the nationwide survey and focused more on a selected Polish region with the aim of obtaining and subsequently comparing the impacts of Covid-19 in individual territories, further with the

knowledge and the conclusions already obtained from the nationwide survey conducted in 2021. This article is dealing with the first outputs obtained from the region of Łódź in Poland.

Within the framework of the achieved results, it can be confirmed that the importance of organizational flexibility is growing (Caha & Urban, 2020). The requirement to quickly adapt to changing business conditions is also reflected in the field of workforce management, not only in the terms of employee care, but especially in the terms of the search for new, methodically innovative management approaches (Gottwald et al., 2018). One of the possible ways is the implementation of an organizational flexibility processes (Ramos et al., 2021).

The issue of working time plays main role nowadays and has remained the domain of only a few departments in most businesses (Peterson & Wiens-Tuers, 2014).

The research does not consider the economic effects of the conflict in Ukraine.

1 Research methodology

Analysis, synthesis, and comparison of data obtained based on a questionnaire survey, has created a basic platform for scientific research. The companies, that are operating in the Special Economic Zone in Łódź in Poland, took part in a survey, which we processed in March 2022. We used the CAWI method – an electronic form requiring respondents to complete an online survey, where 53 companies filled in the questionnaire, i.e. 49% of all who entered the survey page. The respondents also rated selected questions on a scale from 1 to 10, where 1 means minimal influence and 10 maximum influence on the evaluated area. The scope of the data obtained allows us to draw conclusions about how companies operating in the “Łódź special economic zone” cope with the issues of working hours in the difficult period of the COVID-19 pandemic. An important factor increasing the reliability of the survey results was the guarantee of anonymity (Plessz, 2020).

The majority, i.e. 89% of the companies that took part in the survey, represented the private sector, the remaining 11% are companies from the public sector. Manufacturing companies (62%) were more represented than service companies (38%). Except for three, all companies (94%) in which the respondents were employed have been operating on the Polish market in the Łódź region for more than 3 years. Of these three, the two have been operating on the Polish market for 1-3 years and the one less than a year. The majority of surveyed firms (64%) employs shift workers, while the remaining firms (36%) work in single-shift mode. Among the firms surveyed, 9% were micro-enterprises employing less than 10 people, 17% employed between 10 and 49 employees (small enterprises), 43% - employed between

50 and 249 employees (medium-sized enterprises) and the remaining 30% were large enterprises employing 250 or more people (European Commission, 2016).

Only those effects that achieved a statistical significance of $p < 0.05$ are given below. Pearson's chi-squared test was used for nonparametric tests in cross tables; the t-test for independent samples was used for quantitative variables and one-way ANOVA was used if factors were present at more than 2 levels (Hindls, 2007).

In addition, the fulfilment of this methodological procedure was supported by the following research question focused on the area of working time planning. Does flexibility and an individual approach to employees help companies effectively manage recruitment, employee fluctuation and productivity?

2. Recruitment and employee's fluctuation during the pandemic

The pandemic situation in 2022 seems to be losing its impact and significance compared to the previous two years. According to Worldometer (2022), a website providing statistical data on various areas, including the COVID-19 pandemic, almost 6 million people have fallen ill in Poland since the pandemic began, and more than 115,000 have died. In recent weeks, however, the number of infections and deaths has been clearly falling, and most restrictions have been canceled.

Two years ago, when the pandemic began in Poland, it was impossible to predict what its scope and impact would be on the economy and the functioning of companies. After a year, in March 2021, as our research at the time showed, the recruitment during the pandemic was easier according to 11 % of the companies surveyed, 35 % of respondents described the situation as more difficult than before the pandemic. Today, in March 2022, it can be concluded from the results that the pandemic is still having a negative impact on the recruitment process, and the degree of this influence is increasing over time. Almost half of those surveyed say that recruiting is more difficult than before the pandemic. These difficulties can be identified especially in the private sector, where shift work regimes are used to a greater extent.

The degree of negative impact was expressed by respondents on a scale from 1 to 10 in the context of the question: How strongly do the recruitment problems during the pandemic affect the functioning of the company? (where 1 means "they have no effect on the functioning of the company" and 10 means "they have a strong, negative effect"). The average for the entire sample was 4.87, indicating a slightly negative impact (the year before it was

4.3). Private sector firms see this impact as greater (average 5.11) compared to public sector firms (average 3.00). Additionally, companies with shift workers also see this impact as higher (average 5.41) compared to companies with non-shift workers (average 3.89).

Similar questions were asked respondents regarding an employee fluctuation during the pandemic. According to 68 % of respondents, the pandemic has no impact on the employee fluctuation, 17 % of respondents say that fluctuation has decreased and 15 % claim that fluctuation has, on the contrary, increased. In 2021, the distribution of responses was similar, 61 %, 20 % and 19 %. These figures suggest that a staff fluctuation has changed slightly, with just over 30 % believing the impact has been positive and negative in equal measure.

Even in the case of fluctuation, respondents had to indicate on a scale how strongly problems with employee fluctuation affected the functioning of the company during the pandemic. The average for the entire sample was 4.72, which indicates a slight negative effect of fluctuation on the functioning of companies. Compared to the research from 2021, where the average value was 3.7, it is possible to observe an increase in this impact.

The average values of the negative impact of recruitment and fluctuation on the functioning of companies are quite strongly correlated ($r = 0.61$), which means that problems occurring in both these areas often occur simultaneously.

It is also necessary to mention that key performance indicators are not measured for such important company activities as recruitment and the fight against employee fluctuation: in 93 % of cases, companies do not measure their performance aimed at increasing recruitment efficiency, and in 91 % of cases, the effectiveness of activities is not even measured in the case of fluctuation (retention of employees). It was similar in the 2021 study (98 % and 91 %, respectively). On the contrary, companies that measure the effectiveness of these processes and wanted to share information about what activities were most effective, state - in terms of recruitment:

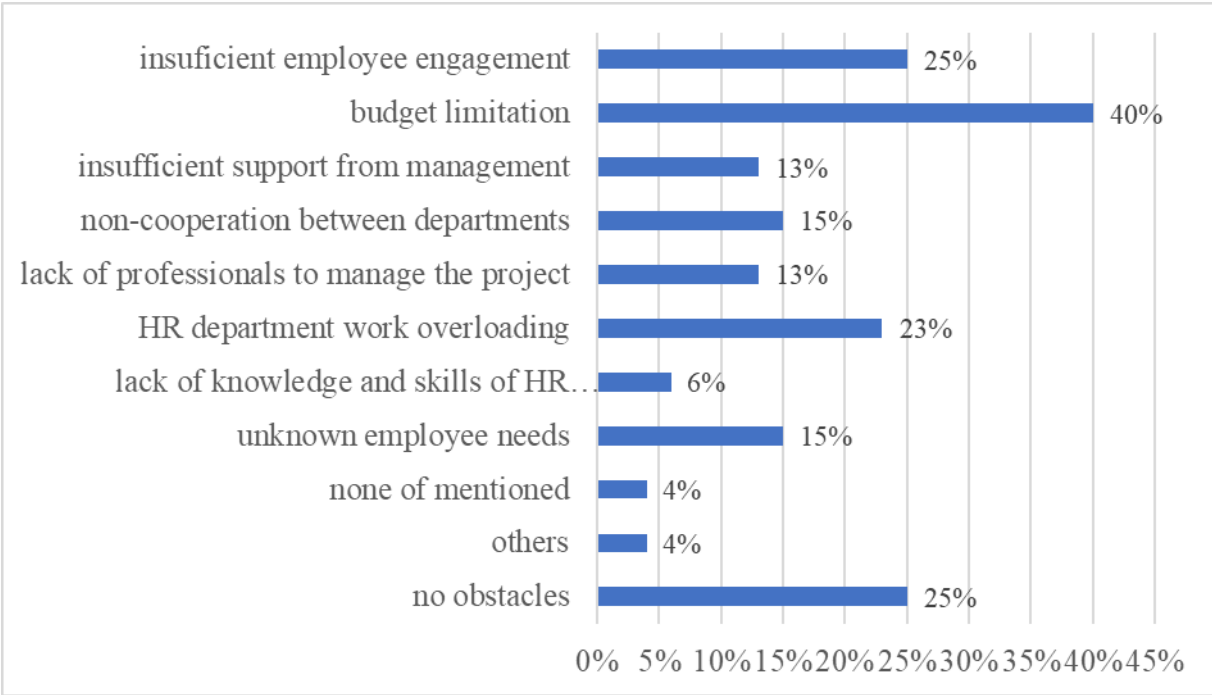
- "Employing foreigners with paid accommodation",
- "Use of digital networks",
- "Direct recommendations from company employees".

When it comes to the most effective employee retention measures, they are:

- "Provision of a financial reward for minimal work absence",
- "Applying an individual approach to employees".

Respondents were also asked about the obstacles they encounter when implementing measures to increase the efficiency of recruitment or retention of employees. Multiple answers were possible.

Fig. 1: Obstacles that companies face in implementing measures to increase the efficiency of recruitment or retention of employees.



Source: own data and processing

It can be seen from the above graph that the majority of respondents (40 %) cite budget constraints as the biggest obstacle. The next two most frequently cited reasons are insufficient employee engagement (25 %) and excessive HR department workload (23 %). A quarter of the companies stated that they did not encounter any obstacles in the implementation of the measures to increase the efficiency of recruitment or retention of employees. In the "other obstacles" category, one company mentioned "reluctance of potential employees to travel to a production plant outside the city of Łódź".

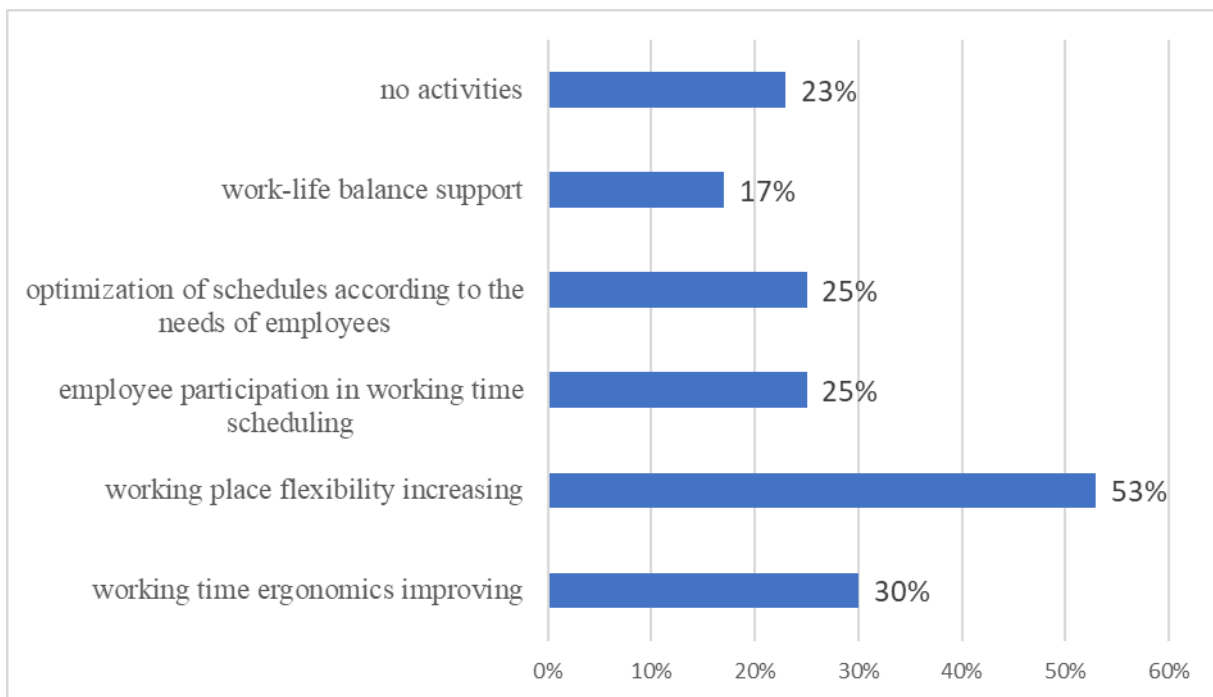
3. Working time planning during the pandemic

Respondents were asked whether scheduling employees' working hours has become more difficult than before the pandemic. More than two-thirds (68 %) of respondents answered this question in the affirmative.

When asked whether the number of absences due to illness increased during the pandemic, 49 % of respondents answered "yes, insignificantly" and 36 % - "yes, to the extent that prevents the performance of tasks". In 15 % of cases, the pandemic did not contribute to increased absenteeism. Compared to the result of the previous year's research, there was a significant increase in the percentage of companies in which sickness has increased to the extent that prevents the performance of tasks (20 %), which is an increase of 16 percentage points.

When evaluating activities improving the quality of working time planning, but not directly related to the pandemic, the respondents answered as follows.

Fig. 2: In our company, the following activities are carried out to improve the quality of working time planning.



Source: own data and processing

The most frequently chosen answer was a flexible workplace including remote work (53 %). Furthermore, an improving the ergonomics of working hours (30 %), an independence of employees in organizing working hours (25 %) and an optimizing working hours according to the needs of employees (25 %). In almost a quarter of cases (23 %), companies have not implemented any of these activities, although a significant part of them answered that the planning of working hours has worsened during the pandemic.

In the next question, the respondents were asked whether there were any activities related to the planning of working hours taking place in their company, which were necessary due to the pandemic. Here, as well, it was possible to select multiple answers. The most frequently mentioned options (30 %) were a changing working hours, a reducing working hours (15 %) and extraordinary layoffs (9 %). There were no activity-induced pandemics in more than half of the companies (53 %). Other extraordinary activities include limiting production and canceling orders, reorganizing production plans or hiring temporary workers.

Compared to the 2021 survey, the two most frequent activities maintained their leading position, however, changing working time schedules reached 41 % of respondents' votes and reducing working hours 26 % and 24 % did not take any action then. This comparison suggests that the second year of the pandemic required fewer pandemic-related corrective or protective measures from companies. A significantly smaller number of cases of employees being sent on compulsory leave, collective wage reductions or layoffs can be particularly positive. Only three companies thought about introducing a 4-day working week, but in the end, they did not introduce this innovative form of working time organization.

4. Workforce management and working time after the pandemic

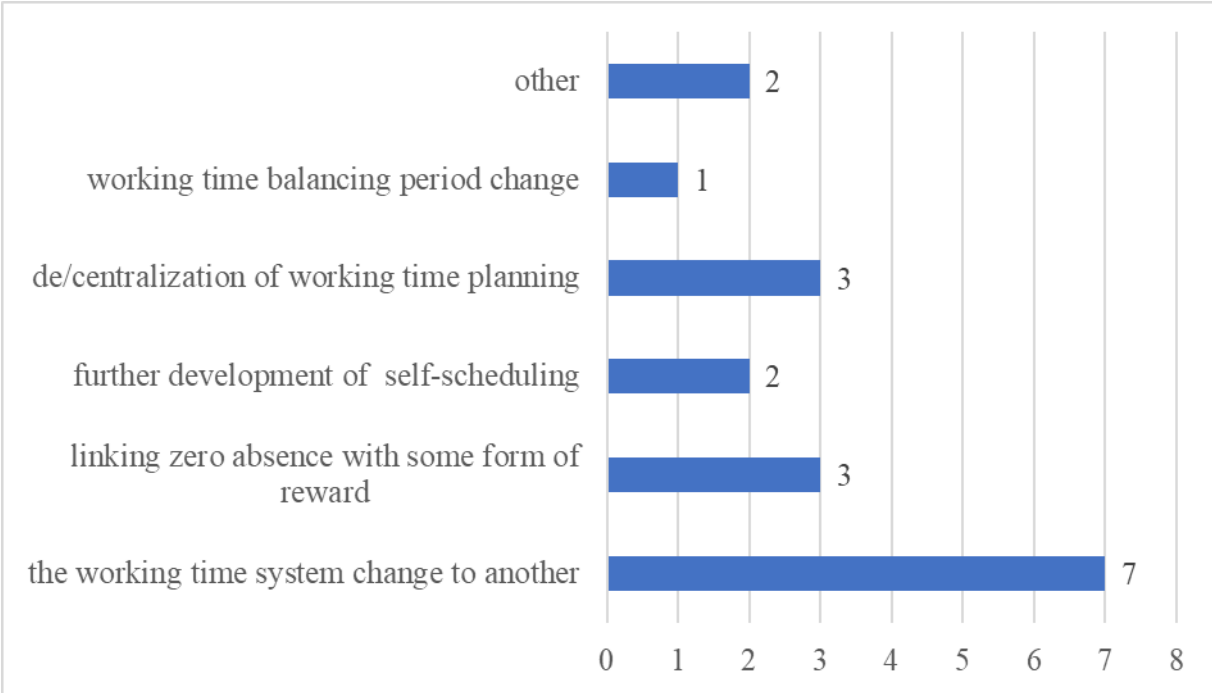
When asked whether companies plan to change the number of employees directly in production (service delivery) by the end of 2022, 38 % of respondents answered that they do not plan to change, and 55 % said that they plan to hire new employees. 8 % of respondents mentioned layoffs. Depending on the size of the company, it can be stated that larger companies plan to hire new employees by the end of 2022 more often than small companies. Compared to the answers from the previous year, there is a significant increase, namely by 22 percentage points, in the answers to the increase in the number of employees.

When it comes to the forecast for hiring in 2022, 17 % of companies believe that there will be an increase in the number of employees as they find it easier to recruit now, compared to 26 % of companies who think that they will find it more difficult to recruit. In terms of company size: larger companies predict that recruitment will be more difficult in the future than it is now. Forecasts for employee retention in the current year are similar, with 34 % of businesses believing it will become more difficult to retain employees and 13 % believing it will become easier. Compared to the previous year, forecasts for recruitment have worsened. 30 % of companies (17 % in 2022) thought it would be easier for them to recruit and 15%

thought it would be more difficult (up from 26% in 2022). When it comes to employee retention, service companies are more pessimistic than manufacturing companies.

Respondents were also asked whether, as a result of the experiences gained during the pandemic, they expect changes in the organization of working time planning in their companies. Most companies (76 %) do not have such plans. The following chart shows which changes 13 companies have indicated they expect to implement. It was possible to select more than one option within a question. Due to the small size of this group (24 %), the absolute number for the survey option is given.

Fig. 3: Intended changes in the organization of working time planning.



Source: own data and processing

Most companies reported one change, three reported two changes, and one reported three changes. Most (7 votes) received the option to "change the working time system to another". In the "other" category, "indirect employment by temporary work agencies" was listed.

Conclusion

The research results presented in this article show that the COVID-19 pandemic has left a number of challenges in the functioning of companies, not only in the short term, but also in the longer, two-year time period. The pandemic has become the seed of interesting and

significant changes in the organization and planning of working time not only (Vahedi-Nouri et al., 2022) among companies associated in the Special Economic Zone of Łódź.

After the outbreak of the pandemic, recruitment proved to be and remains a challenge for many companies. The situation worsened after another year of the pandemic. Respondents cite recruitment issues as having a negative impact on the functioning of their companies, particularly those in the private sector and those with shift work. On the other hand, according to respondents, the impact of the pandemic on fluctuation is relatively small, which can be explained by employees' fear of changing jobs in times of uncertainty (Deng et al., 2022). However, fluctuation has also a negative effect, regardless of the pandemic, on the functioning of those companies that, in terms of their size, are also facing the negative effects of the pandemic on recruitment. It is worth noting that both phenomena - problems with recruitment and fluctuation - are in a strong correlation and therefore coexist. In this context, it is somewhat surprising that only a minority of the surveyed companies measure the effectiveness of their activities aimed at increasing the success of recruitment and retention of employees.

It can be stated that the pandemic has also made it difficult to plan working hours. In addition to the obvious reasons, such as the need to respect the changing restrictions introduced in connection with the pandemic, the increasing rate of absenteeism and material shortages also complicate the planning and management of working time. It turns out that the remedy for matching labor demand with labor availability may be an increased ability to be flexible. The companies have taken a number of corrective actions. Workplaces became more flexible, remote work and task-based working time systems were introduced, work ergonomics improved, employees could partially organize their working hours, shift schedules were optimized with regard to the needs of employees. Regarding remote work, it should be noted that although it is widely used among companies in the Łódź region and the overwhelming majority of respondents recognize it as a benefit, it means longer working hours for more than half of the workers. The article, as well as many other analyses, show that remote work in pure or hybrid form has become an everyday reality and, for many, a new standard for dealing with future threats (Rymaniak et al., 2021).

The measures taken, as well as the waning influence of the pandemic, lead companies to optimistic expectations. By the end of 2022, most companies from the Łódź region plan to increase the number of employees, despite concerns about employee fluctuation. The currently achieved adaptation of companies in terms of organization and planning of working time to the conditions of the pandemic does not currently force most companies to change

their human resources management strategy in the long term. However, some of them count on changes and innovations in the organization of working time planning. Here, as another, higher level of flexibility, it is recommended to use specific tools such as flexible shifts or self-rostering that can be deployed especially where work is done in shifts. Companies are also recommended to continue the process of deploying workforces and resources according to the four steps: 1) continuous monitoring of security situation, 2) situation evaluation and analysis, 3) decision making, 4) workforce deployment (Tušer et al., 2021; Skýpalová et al., 2021).

Finally, the conclusions and results presented especially in chapter 3 also positively answer the set research question: Does flexibility and an individual approach to employees help companies effectively manage recruitment, fluctuation and productivity? However, the essential condition for flexibility is to have an agile and innovative HR management that understands the importance of involving all employees in the management and life of the company, and that promotes a mutual trust, interpersonal skills (Wise et al., 2017) and HR long-term stability in a time of uncertainty.

References

- Caha Z., & Urban, J. (2020). Human Resource Management in SMEs in the Czech Republic – Specifics and Key Requirements. *Innovative Economic Symposium 2019 – Potential of Eurasian Economic Union (IES2019. SHS Web Conf. Volume 73.* <https://doi.org/10.1051/shsconf/20207302001>
- Deng, H., Wu, W., Zhang, Y., Zhang, X., & Ni, J. (2022). The Paradoxical Effects of COVID-19 Event Strength on Employee Turnover Intention. *International Journal of Environmental Research and Public Health*, 19(14), 8434. <https://doi.org/10.3390/ijerph19148434>
- European Commission (2016) *User guide to the SME Definition*, available at https://ec.europa.eu/regional_policy/sources/conferences/state-aid/sme/smedefinitionguide_en.pdf
- Gottwald, D., Zákorová, E., Švadlenka, L., & Pavlisová, H. (2018). Approach to human capital in national postal providers: A cross-country analysis in europe. In *Promet - Traffic - Traffico* (Vol. 30, Issue 5, pp. 623–633). Faculty of Transport and Traffic Engineering. <https://doi.org/10.7307/ptt.v30i5.2744>
- Hindls, R. (2007). *Statistika pro ekonomy*, 8. Vydání, Praha: Professional Publishing, ISBN: 978-80-86946-43-6.

- Peterson, J., & Wiens-Tuers, B. (2014). Work time, gender, and inequality: The conundrums of flexibility. *Journal of Economic Issues*, 48(2), 387-394. <https://doi.org/10.2753/JEI0021-3624480212>
- Plessz, M. (2020). A protocol for an anonymous questionnaire survey according to European regulations. *BMS-Bulletin of sociological methodology*, 145 (1), 100-110, ISSN: 0759-1063.
- Ramos, E., Patrucco, A. S., & Chavez, M. (2021). Dynamic capabilities in the “new normal”: A study of organizational flexibility, integration and agility in the Peruvian coffee supply chain. *Supply Chain Management: An International Journal*. <https://doi.org/10.1108/SCM-12-2020-0620>
- Rymaniak, J., Lis, K., Davidavičienė, V., Pérez-Pérez, M., & Martínez-Sánchez, Á. (2021). From stationary to remote: Employee risks at pandemic migration of workplaces. *Sustainability*, 13(13), 7180. <https://doi.org/10.3390/su13137180>
- Skýpalová, R., Hynková, V. & Dania, T. (2021) Consequences of the Covid-19 Pandemic and Policy Measures in the Czech Economy: Impacts on Labour Markets and Household Incomes. *Economics Management Innovation. Olomouc: Moravian Business College Olomouc*, 13(2), 6-20. ISSN 1804-1299.
- Tušer, I., Jánský, J., & Petráš, A. (2021). Assessment of military preparedness for naturogenic threat: the COVID-19 pandemic in the Czech Republic. *Heliyon*, 7(4), <https://doi.org/10.1016/j.heliyon.2021.e06817>
- Urban, R. & Chodkowski, L. (2021) Working time during the Covid-19 pandemic on the Polish market. *International scientific conference RELIK 2021*
- Vahedi-Nouri, B., Tavakkoli-Moghaddam, R., Hanzálek, Z., & Dolgui, A. (2022). Workforce planning and production scheduling in a reconfigurable manufacturing system facing the COVID-19 pandemic. *Journal of Manufacturing Systems*, 63, 563-574. <https://doi.org/10.1016/j.jmsy.2022.04.018>
- Wise, S., Duffield, C., Fry, M., & Roche, M. (2017). Workforce flexibility—in defence of professional healthcare work. *Journal of Health Organization and Management*. <https://doi.org/10.1108/JHOM-01-2017-0009>
- Worldometer (2022) *Coronavirus Cases*, available at: <https://www.worldometers.info/coronavirus/country/poland/>

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