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Occupational Health and Safety of Employees in the Czech Republic - Occupational Accident Statistics of Employees in the Czech Republic Based on Their Nationality

BOZP zaměstnanců v ČR - Pracovní úrazovost zaměstnanců v České republice s přihlédnutím ke státní příslušnosti

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Abstract:

The article deals with occupational health and safety in the Czech Republic, specifically the rate of work injury at foreigners working in the Czech Republic. Employees from selected countries were chosen for the period between 2008 and 2017. The number of accidents gained from statistical databases resulted in an analysis mapping the trends of occupational accidents in the countries of origin as well as the Czech Republic. The result points to the general conclusion that the Czech Republic has seen a decline in occupational injuries which can also be observed among most foreign employees working there. The only exception is represented by employees from Mongolia and Moldova, where occupational accident rates are on the rise. Employees from the Ukraine experienced stagnation in the chosen factors of interest.

Keywords: *foreign worker, labor migrant, migrant worker, occupational health, occupational injury, occupational safety*

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Abstrakt:
Článek se zabývá BOZP zaměstnanců v ČR, konkrétně pracovní úrazovostí u cizinců pracujících v České republice. Byli sledováni zaměstnanci z vybraných zemí v letech 2008-2017. Z dat o počtu úrazů, získaných ze statistických databází, byla zpracována analýza mapující trendy v pracovní úrazovosti v zemích původu vybraných cizinců a v České republice. Bylo zjištěno, že v rámci České republiky dochází obecně k poklesu pracovní úrazovosti zaměstnanců, což platí i pro většinu pracujících cizinců. Výjimku tvoří zaměstnanci z Mongolska a Moldavské republiky, kde se úrazovost zvyšuje a zaměstnanci z Ukrajiny, kde dochází ke stagnaci výskytu sledovaného faktoru.

Kľúčové slová: *zahraniční pracovník, pracovní migrant, migrující pracovník, ochrana zdraví při práci, pracovní úraz, bezpečnost práce*

Introduction

Occupation health and safety is anchored in a number of international and legal documents. On a national level, this field is implemented relatively well which can be observed through a gradual decline in the number of occupational accidents including deaths. In the case of foreigners working the Czech Republic, this field is inadequate in terms of methodology. From the data available for the past 10 years, only a limited set of information is available. During this timeframe, only data on employees from selected countries was gathered. Within approximately the last five years, data on occupational accidents covers all employees based on their nationality. This data set however is not sufficient for the purpose of observing accurate trends. Due to the fact that the Occupational Safety Research Institute (Výzkumný ústav bezpečnosti práce, v. v. i. (VÚBP)) is currently working on an assignment focused on the employment of employees from non-European countries in terms of occupation health and safety, it is important that a priority is set for those foreigners that are experiencing the highest rates of occupation accidents, i.e. those where the situation is the worst. Subsequently, it will be possible to focus on these groups in future research.

The following contribution is one of the sets of outputs from the project, which was presented as a working version at the BOZP "Aktuálne otázky BOZP" (Occupation Health and Safety "Current Occupation Health and Safety Topics") event which took place in November, 2018.

1. Methodology and materials

The topic of this paper was the analysis of occupational accident rates of insured individuals working in the Czech Republic with a particular focus on foreigners working in the country between 2008 and 2017. The analysis also included other work-related injuries, deaths and serious injuries. The foreigners covered under this assignment came from Belarus, Bulgaria, Moldova, Mongolia, Germany, Poland, Russia, Slovakia as well as the Ukraine. The required data sets were available on these particular groups.

Concurrently, an analysis of occupational accidents was carried out for the countries of origin from the selected groups. The analysis included values capturing the percentage values of change in occupational accidents for the countries in question in the selected time slot (relative to 2008/2009 respectively) without taking into account occupational deaths.

The research was carried out using a quantitative method using data provided by the Labour Office of the Czech Republic (ÚP) [1], Czech Statistical Office (ČSÚ) [2] State Labour Inspection Office (SÚIP) [3], internal sources of the Occupational Safety Research Institute (VÚBP) [4] data published by Eurostat [5] as well as data available from the International Labour Organization (ILO) [6].

The data concerning foreigners working in the Czech Republic were valid as of 15.10.2018. The data covered the entire Czech Republic. The analysis included foreigners registered by the Labour Office (excluding sole proprietors). The data used for the assessment of occupational accidents in the countries of origin of the selected foreigners were valid as of 15.10.2018, i.e. they were accessible in the respective databases.

The subjects of the research were legally employed (employees) foreigners, which were registered with the Labour Office between 2008 and 2017.

The main dataset is represented by employees (insured individuals) working in the Czech Republic as a whole, including employees from foreign countries which were monitored in respect to occupational accident statistics between the years of 2008 and 2017. The employees who came from the select countries during the time they were monitored accounted for 75 to 92 % of the employed foreigners in the Czech Republic. Foreigners formed approximately 4 to 8 % of employed (and insured) individuals in the Czech Republic. In the case of other foreigners working in the Czech Republic, their nationality was not listed along with the injuries that occurred. A detailed description of the main dataset can be seen in the following table 1.

Tab. 1 Yearly numbers of employees (insured) in the Czech Republic (adjusted based on [1, 4].

Nationalities	**Numbers of employees (insured) by year**									
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Czech Republic[1]	4 527	4 253	4 311	4 212	4 472	4 440	4 464	4 507	4 571	4 672
Belarus[2]	14	12	11	11	---3	---3	---3	16	19	27
Bulgaria[2]	51	46	57	70	---3	---3	---3	198	258	315
Moldavia[2]	86	57	35	26	---3	---3	---3	25	30	37
Mongolia[2]	130	42	35	28	---3	---3	---3	25	32	44
Germany[2]	28	30	31	32	---3	---3	---3	37	40	44
Poland[2]	207	203	190	197	---3	---3	---3	250	314	391
Russia[2]	33	36	37	39	---3	---3	---3	67	83	111
Slovakia[2]	1 002	982	1 007	1 064	---3	---3	---3	1 503	1 616	1 771
Ukraine[2]	811	575	421	353	---3	---3	---3	418	546	817

Comment: [1]Data in the thousands of employees. [2]Data in hundreds of employed foreigners. [3]No data available for these years.

2. Results

The following section presents the results of the research that was carried out with the help of visualizations. The concrete chosen values are presented within the visualizations or their associated descriptions. From the data available, it can be deduced that the general trend in occupational injuries in the Czech Republic is a falling one. This holds true for most of the employed foreigners. An exception can be observed with employees from Mongolia and Moldavia. A stagnant situation can also be observed with employees from the Ukraine. In the case of employees from Belarus, there is a decline in occupational injuries, but the percentage change is higher than was the case in 2008.

2.1. Czech Republic

In the case of employees (insured) working in the Czech Republic, one can observe a decline in the rate of occupational accidents. Based on data from the State Labour Inspection Office (SÚIP) as well as internal data of VÚBP [3, 4] there was a decline from 1,35% to 0,95% in occupational accidents between 2008 and 2017. The decline was applicable to occupational death and severe injuries. This trend can be observed in Fig 1a.

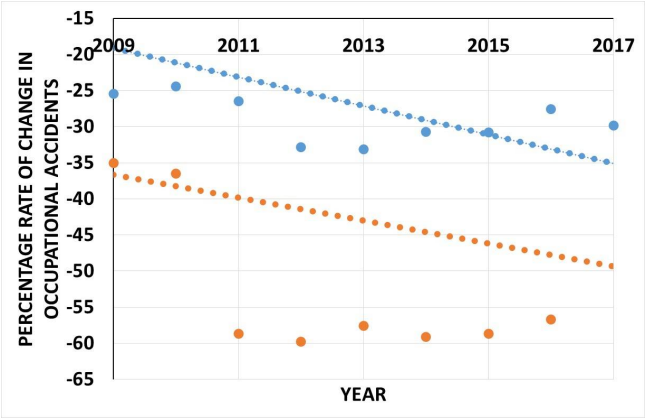

Fig. 1a Trend of occupational accidents of employees (insured) in the Czech Republic according to [3], [4] and [5].

2.2. Belarus

In the case of employees from Belarus in the Czech Republic, one can observe a falling trend in occupational accidents. When compared to 2008 however, there was no decline. During the measured timeframe, the rate of occupational accidents varied between 0,81 to 0,19 %. A falling trend in terms of the number of occupation accidents can be observed in Belarus as well. This can be observed in Fig 1b.

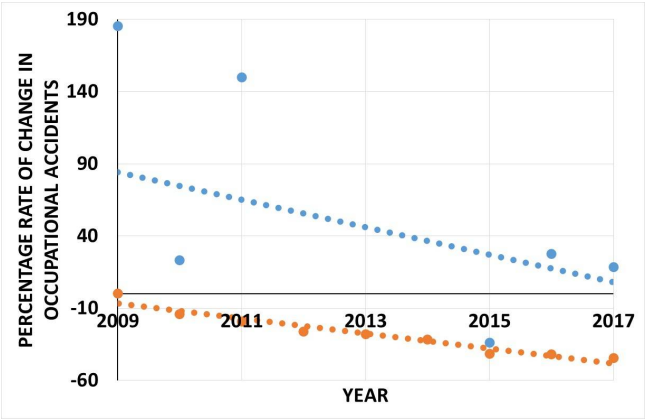

Fig. 1b Trend of occupational accidents of employees from Belarus according to [3], [4] and [6].

2.3. Bulgaria

In the case of employees from Bulgaria in the Czech Republic, one can observe a falling trend in occupational accidents. During the measured timeframe, the occupational accident rate of Bulgarians varied between 1,12 and 0,02 %. The falling trend in the number of occupational accidents can also be observed in Bulgaria. This can be observed in Fig 2a.

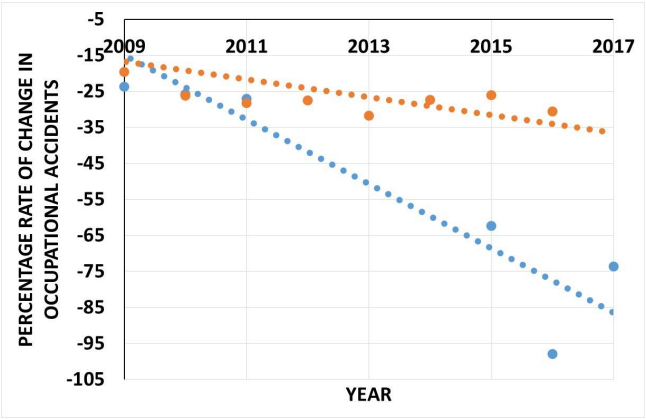

Fig. 2a Trend of occupational accidents of employees from Bulgaria according to [3], [4] and [5].

2.4. Moldova

In the case of employees from Moldavia in the Czech Republic, one can observe a rising trend in occupational accidents. During the measured timeframe, the rate of occupational accidents varied between 0,27 to 0,85%. In Moldavia however, one can observe a falling trend in the number of occupational accidents. This can be observed in Fig 2b.

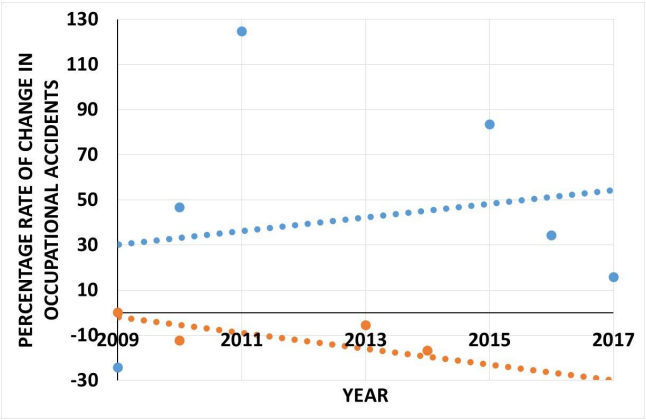

Fig. 2b Trend of occupational accidents of employees from Moldova according to [3], [4] and [6].

2.5. Mongolia

In the case of employees from Mongolia in the Czech Republic, one can observe a rising trend in occupational accidents. During the measured timeframe, the rate of occupational accidents of Mongolians varied between 1,24 to 0,43%. The trend of occupational accidents in Mongolia cannot be described due to the data not being available. This can be observed in Fig 3a.

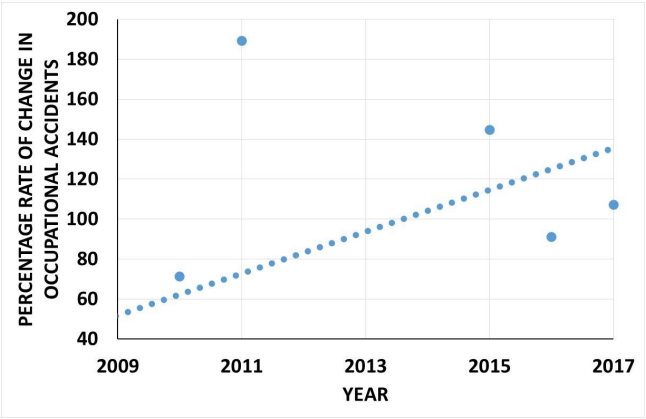

Fig. 3a Trend of occupational accidents of employees from Mongolia according to [3], [4].

2.6. Germany

In the case of employees from Germany in the Czech Republic, one can observe a falling trend in occupational accidents. During the measured timeframe, the rate of occupational accidents of Germans varied between 0,16 to 0,05%. A falling trend in terms of the number of occupation accidents can be observed in Germany as well. This can be observed in Fig 3b.

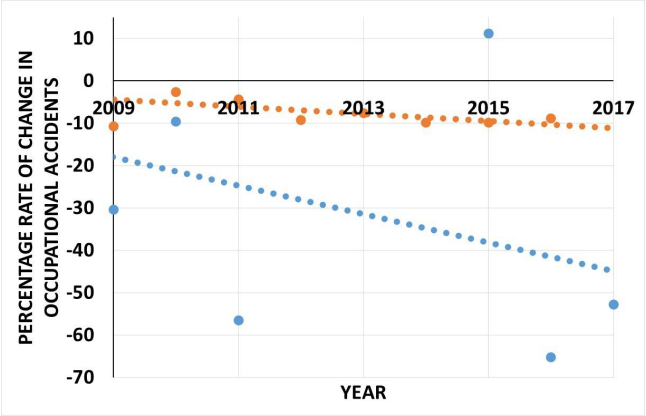

Fig. 3b Trend of occupational accidents of employees from Germany according to [3], [4] and [5].

2.7. Poland

In the case of employees from Poland in the Czech Republic, one can observe a falling trend in occupational accidents. During the measured timeframe, the rate of occupational accidents of Polish employees varied between 1,29 to 0,55%. A falling trend in terms of the number of occupation accidents can be observed in Poland as well. This can be observed in Fig 4a.

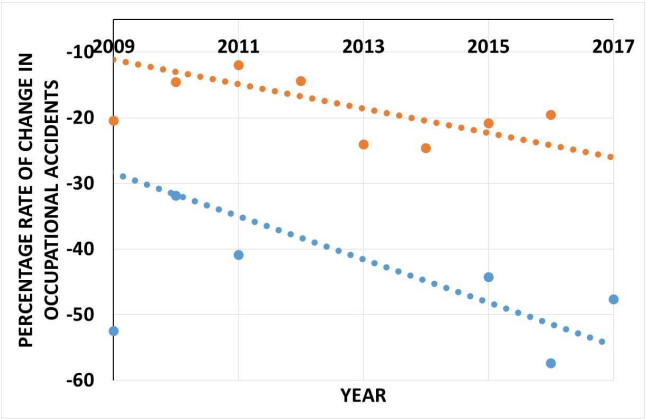

Fig. 4a Trend of occupational accidents of employees from Poland according to [3], [4] and [5].

2.8. Russia

In the case of employees from Russia in the Czech Republic, one can observe a falling trend in occupational accidents. During the measured timeframe, the rate of

occupational accidents of Russian employees varied between 0,48 to 0,08%. A falling trend in terms of the number of occupation accidents can be observed in Russia as well. This can be observed in Fig 4b.

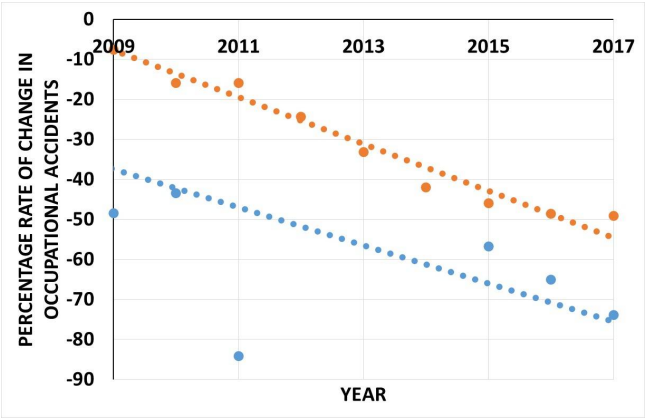

Fig. 4b Trend of occupational accidents of employees from Russia according to [3], [4] and [6].

2.9. Slovakia

In the case of employees from Slovakia in the Czech Republic, one can observe a falling trend in occupational accidents. During the measured timeframe, the rate of occupational accidents of Slovak employees varied between 0,67 to 0,27%. A falling trend in terms of the number of occupation accidents can be observed in Slovakia as well. This can be observed in Fig 5a.

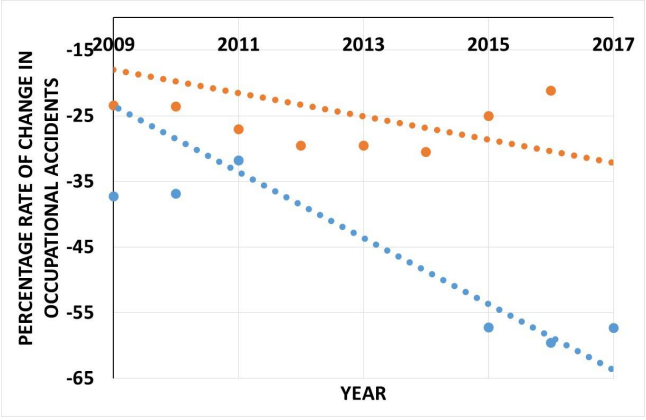

Fig. 5a Trend of occupational accidents of employees from Slovakia according to [3], [4] and [5].

2.10. Ukraine

In the case of employees from the Ukraine in the Czech Republic, one can observe a stagnating trend in occupational accidents. During the measured timeframe, the rate of occupational accidents of Ukrainian employees varied between 0,52 to 0,29%. However, a falling trend in terms of the number of occupation accidents can be observed in the Ukraine. This can be observed in Fig 5b.

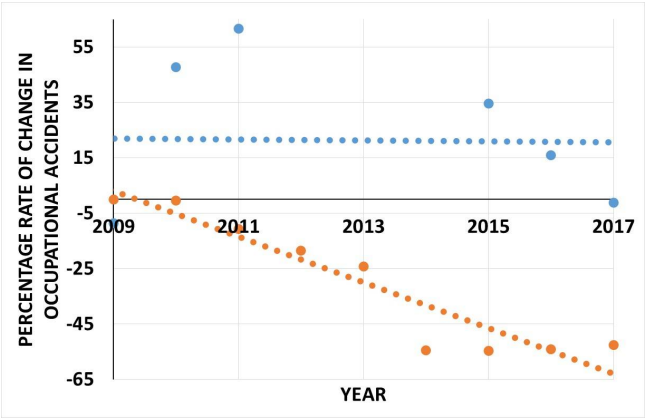

Fig. 5b Trend of occupational accidents of employees from the Ukraine according to [3], [4] and [6].

2.11. Comparison in the accident rates in chosen groups of foreigners

The change in the trend of occupational accidents in selected groups is depicted on the following Fig 6. One can deduce that in case of employees from Mongolia (2009 until 2017) and Moldova (2008 until 2017) shows a rising trend in terms of occupational accidents. A stagnating trend can be observed with the Ukrainians. Even in this example however, the rate is higher than at the beginning of the measured timeframe (2008). An improvement can be observed in the case of employees from Belarus. However, the situation is still worse than at the beginning of the measured timeframe. In all other cases, there was an improvement in the situation when compared to 2008.

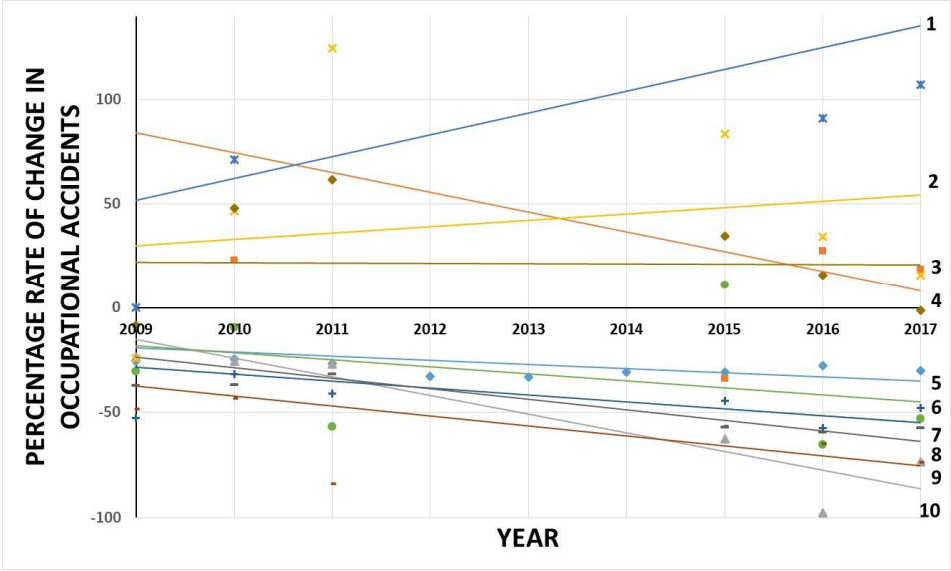

Fig. 6 Trend of occupational accidents in selected groups of foreigners working in the Czech Republic (Colors of the points and trend lines are visualized according to this key: 1 – Mongolians, 2 – Moldovans, 3 – Ukrainians, 4 – Belarusians, 5 – Czechs, 6 – Germans, 7 – Polish, 8 – Slovaks, 9 – Russians and 10 - Bulgarians)

3. Discussion

The overall falling trend of occupational accidents as can be observed in the graphs earlier is further reinforced by international studies [7, 8]. Hämäläin [8] states that despite the number of economically-active people slowly rising and unemployment falling, the overall rate of occupational accidents has fallen. The above mentioned statement most probably relates to the qualification levels of the work being carried out. In the case of highly-qualified work, Europe has seen a decrease in occupational accidents. This probably also has to do with an increasing share of employees in the services industry, namely the financial sector, information and communication services, consultancy, legal and expert services, public administration and in the field of controlling [8].

In research papers, migrating workers are divided among other things into the following groups: highly-educated and qualified workers from developed or developing countries and lowly-qualified workers mostly from developing countries. Occupational accidents are most commonly found with lowly-qualified workers than those who are qualified. Developed countries are also places where a certain group of foreigners work illegally. In these cases, health risks at the workplace are considerably higher [7, 9].

This will also be applicable to foreigners working in the Czech Republic. While employees from Germany will carry out primarily highly-qualified work and their occupational accident rates will continue falling like in Germany, employees from Moldova are hired in the Czech Republic primarily to carry out work requiring only

low qualifications which is associated with increased occupational accident rates. The rate of occupational accidents for Moldovans in the Czech Republic is logically higher than the occupational accident rate of its citizens in Moldova. The same could be said of Mongolians. The requirements for highly-qualified work which is carried out by Germans in the Czech Republic and lowly-qualified work in the case of Moldovans and Mongolians is further reinforced by the average monthly salaries sorted by nationality. German citizens have average salaries of 105 332 CZK, Czechs 29 504 CZK and Mongolians 22 969 CZK [10].

Europe has also seen a decline in the rate of occupational accidents in the construction sector [11]. The same is reflected in the Czech Republic [4]. A general problem in the construction sector lies predominantly in small companies of up to 50 employees [11]. It can be deduced that this, to some extent, correlates with employees from Ukraine who are known to work in the construction sector in the Czech Republic. They will most commonly be employed in smaller companies where there is an increased employee turnover.

It can be assumed that not all occupational accidents of foreigners working in the Czech Republic are documented. There are always a number of cases which are not found in the official records of injuries [8]. This same assumption also applies to Czech employees.

Yet another group of nonregistered occupational accidents is represented by employees that are working illegally. From the countries that were covered in this paper, illegal employment most commonly concerns those from Slovakia, Bulgaria, Ukraine, Moldova and Russia. These employees most often work in the construction sector or in the manufacturing sector [12]. In these cases, the situation is likely to be worse than in the results presented in this paper. It can be reasonably predicted that the difference could be multiple times worse. The problem of illegally employed foreigners is in the fact that they are entirely dependent on their employer and fall outside of any of the formal structures of the host country. Also, it can be said that the freedom of movement in the EU can lead to a change in occupational accident numbers in individual countries; it does lead changes in EU-wide statistics. For example, in cases where companies from ex-Soviet countries accepted projects at the developed markets of Western Europe, occupational accidents are recorded in the company's home country and not in the country where those accidents occurred [4].

Ex-Soviet countries and their economies have occupational death rates at 13 per 100,000 employees (0.013 %) and the occupational accident rates at 10%, i.e. 10,000 of 100,000 employees. This means that every year, every tenth employee there is involved in an occupational accident. The amount of cases reported by the International Labour Organization (ILO) from which part of our data is sourced is claimed by [13] to account to only 3.6% of the expected number of occupational accidents. This finding is relatively good news in terms of the Mongolians working in the Czech Republic. In their case, only occupational accidents are known to have been recorded (no deaths and no severe injuries). The general occupational accident rate of this group is lower than that which Europeans are subjected to on a general level. However, it remains a question whether such values can be compared at all.

The rate of occupation accidents appears to be higher in the eastern regions of the European region. The occupational death rates range between 14 to 18 deaths per

100,000 employees (0.014 to 0.018 %), while most post-communist countries have values below 12 per 100,000 employees (0.012 %). The same could be said of the occupational accident rates in this European region [13]. This trend is apparent even in our graphs based on current data sets (until 2017). This could mirror the level of occupational health culture in these countries. It could also point to difficulties in practice where low-quality but also high-quality employers do not require proper occupational health and safety measures from their employees, not just from foreign workers [4].

Conclusion

The analysis of data obtained from the countries in question, one can observe a falling rate of occupational accidents across all countries with the exception of Mongolia, where there is no data available to make an assessment. Much like in the countries of origin of the foreign workers, there is a general decline in occupational accident rates and therefore improved level of occupational health and safety measures. This also applies to the Czech Republic. However, on the other hand, it is important to place greater emphasis on the occupational health and safety of employees from Mongolia and Moldova where the rates have increased in the Czech Republic. Greater emphasis should also be placed on Ukrainians which saw a stagnation in the rate of occupational accidents. It can be assumed that these employees, as well as illegal employees from these countries, work in predominantly lowly-qualified jobs in the construction and manufacturing sectors. These are sectors that should have the greatest priority in terms of occupational health and safety efforts.

Acknowledgement

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