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INITIAL FINDINGS FOR LABOUR MARKETS IN THE CZECH REPUBLIC, HUNGARY, POLAND AND SLOVAKIA

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Abstract

The purpose of this article is to present a picture of labour shortages in the V4 countries. Through a sample of regional organizations, the authors outline and analyse the data obtained in two research samples. The paper begins with a general overview of the current situation of four countries in terms of labour shortages and the pattern of labour shortages among countries. By studying two regional samples, the authors outlined what economic sectors and job families have the greatest levels of labour shortage. An analysis follows and details are provided for patterns and activities in four focal countries (the Czech Republic, Hungary, Poland and Slovakia) describing the elements and forces that lead to national workforce deficits and also providing information on the practices organizations are implementing to mitigate this problem. Finally, we summarize the results and draw a series of conclusions.

Key words: labour shortages, turnover, robotization

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Introduction

Today, the labour market is in a state of constant changes. The global economic downturn resulted in high unemployment in many European countries, which has often been followed by a sharp fall in unemployment rate. There are already Labour shortages in many areas in the labour market, and organizations are currently finding it difficult to fill vacancies, i.e. the number of shortage occupations is increasing (McGrath, 2019).

Today's modern economy shares a growing problem of labour shortages and maintaining a sufficient work force (Kovács, 2012). Most of the industries and firms are dealing with this issue. Regional companies are facing serious challenges. There is an increasing pressure faced by the human resources managers and technical experts. They need to respond to these patterns. In the case of labour shortage, the companies have to increase salaries, because competition for recruitment of skilled workers is increasing as labour markets become regional and not merely national. Increasingly we find a deficit in a capable work force within the population, a contributing factor to critical labour shortages. In such situations, one potential future solution to the deficit could be the robotization. These technological changes result in lower value added work, and the form of work that lends itself to automation can be pursued via automation and robotization. This strategy will decrease demand for the unskilled workers and thereby eliminate job vacancies. Automation at the same time increases demand for highly skilled employees (Harari, 2018).

An adjacent problem for regional firms is the presence of greater turnover. Traditionally, employee turnover is an important performance index of human resource effectiveness. According to Gartenstein (2018), an optimal turnover rate should be around 10%. However, rising rates of turnover can lead to planning problems and performance errors, which can – in turn - inhibit companies' future success and effective operation. Therefore, it is essential to take immediate action and apply practical methods in order to handle dysfunctional levels of turnover (Boudreau, 2010).

Labour markets in the countries of the former Eastern bloc have changed significantly over the past few decades along with workers' attitudes to employers. Two or three decades ago, life-long employment at companies or organizations was typical. This is a thing of past nowadays.

Theoretical background

1. General situation of the labour shortage in V4

The unemployment has changed significantly in the Central European countries in the previous years (OECD, 2018). The development of unemployment and its ratio of the past nine years is visible in the following countries: Poland, Hungary, Slovakia and Czech Republic. As we have indicated that following the global financial crisis of 2008, the unemployment rate grew significantly, significant changes had been detected in this field in the past four years. The unemployment has fallen dramatically in the chosen countries. Slovakia was consistently characterized by a higher unemployment level than the EU 28 during the entire focal period. Hungary's unemployment rate was high until 2012, following this year it had decreased beyond the Polish rate of unemployment.

The number of vacant positions, i.e. the percentage ratio of the labour market tightness indicator, in the European Union is 2 percent, while in the Eurozone is 1,9 percent. The highest rate is in the Czech Republic, but Hungary is above the EU rate (Eurostat, 2017).

Many factors can be listed as a cause of labour shortage, so we are outlining the typical set of factors that have the greatest impact on this region.

The labour shortage is related to a fundamental lack of employees. The situation can be caused by low salaries and low level of corporate productivity (Tóth and Nyírő, 2018).

1.1. Poland

In Poland, the rate of unemployment was 6,2% in 2016 and 4.9% in 2017 (Eurostat, 2019) It is lower than the EU28 average . Additionally, some 8% of the Polish population is working abroad, while a “shrinking” generation is entering the labour market, a generation characterized by a low birth rate. The nation’s fertility rate was 1.32 in 2016 (Statista, 2019).

By far the largest percentage of employees (around 58 %) works in services (Statista, 2018). This percent slowly increased from 55% in 2018. Around 31% of the Polish employees were employed in industry and almost 11% in agriculture. These numbers slightly changed in 2016-2017. The total number of employees increased from 12,728.3 thousand in the third quarter of 2016 to 12,886.0 thousand in the fourth quarter of 2017 (Eurostat, 2019). Moreover, Poland has almost the biggest percent of long working hours in the EU. It was 12.7% (9.9% in EU28) in 2016 and 11.8% (9.6% in EU28) in 2017 (Eurostat, 2019). This percent has been decreasing since 2012, but still higher than the EU average and other V4 countries.

As a long time being a target country of immigrants and losing its qualified employees, Poland started to benefit from foreign employees, as a number of remigration is low. A recent study of Polish migrants in Germany indicated that 37.0% of the respondents intended to stay in Germany. Some 23.6% – plan to stay 10 years, 4.6 % were willing to stay 11 to 50 years, and a final 34.8 percent have not decided yet (Teney, 2019). According to Eurostat (2019), 0.3% of the total Polish population was made up of foreigners in 2016, as well as foreigners made up 0.4% of the population in 2017. Similar numbers were detected in the Czech Republic, while this ratio was 0.2% in Hungary and 0.1% in Slovakia. Around 2 million of these imported workers in Poland are from the Ukraine and Belarus.

1.2. Slovakia

As different sources indicate, Slovakia has always experienced the highest regional unemployment rate. However, the situation has improved, the difference still remains (Olšovská et al,2016; Vlacseková, Mura, 2017). The Slovak unemployment rate is still exceeding both the average unemployment rate of the European Union and the average rate of Visegrad countries. In the analyses of Kureková (2010) prepared less than ten years ago, the main problem mentioned is the high unemployment rate of Slovakia, both in the era of economic boom and during the recession this rate used to be extremely high. Pongrácz (2018) explained this problem by citing the following factors:

- there are big differences in the regional level of unemployment,
- the unemployment rate of young people is exceptionally high,
- a great proportion of long-lasting unemployed remains an issue

- the proportion of low qualified workforce is high,
- in certain sectors there is a lack of qualified workforce,
- unemployment rate of the Roma minority is extremely high

One of the most important problems of Slovak employment market is the existence of the so called „famine valleys”. These regions are mostly situated on the southern and eastern part of Slovakia, where the unemployment rate is exceeding the country average twofold. In December 2017, the unemployment rate was extremely high in 14 out of the 72 small administrative units (11.88%).

The labour shortage in Slovakia is a quite new phenomenon. In 2010, Sipos emphasized that behind the success of the Slovak automotive industry was the surplus of skilled workers. Similarly to other states, Slovakia also needs more IT specialists, but the lack of professionals is much more typical in the economic sectors of real estate, health care, logistics, and in some particular occupations, such as driver, confectioner, electrical operator or kitchen staff. The situation is quite similar in every region of the state. Both the unemployment and the labour shortage simultaneously affect the country. In the Western part of the country, close to capital, there is a lack of skilled workers and labour shortage, while in the eastern region a high level of unemployment can be observed. This is an issue to be addressed.

Significant changes on the Slovak labour market started in 2014, when the number of job opportunities began to grow and the number of unemployed began to decrease. While in 2012 Slovakia had 425 thousand unemployed people, in the end of 2017 their number fell under 200 thousand (Karšay 2018).

According to an analysis by the Ministry of Labour, Social Affairs and Family of Slovakia (2018), the labour shortage is caused by high economic growth (around 4%) and low ratio of labour force entering the market (demographic reason). The analysis predicts further labour shortage in the years 2018-2023.

The second major reason for labour shortfall is the migration of Slovak workers abroad. In 2018 approximately 300 thousand Slovak citizens were working in member states of the European Union. According to research prepared by the Confederations of Trade Unions the following factors are behind the motivation of people to leave Slovakia, presented in order of occurrence: higher payment abroad, corruption in home country, political situation in Slovakia, family, better career opportunities and unemployment.

The labour shortage became visible mainly in the automotive industry. If these companies decide to establish a new plant, they immediately hire workforce with similar qualification and in high volume. . The number of car manufacturing companies has risen so much that these companies are absorbing the trained workers and attracting them from competitors. Foreign labour force has also been employed in these companies since 2018. The number of foreign workers in June 2018 was 12,600 – mainly men.

The labour shortage is at the top in Slovakia with its 1% but it is still much lower than the other V4 countries. Some 6% of the population is working abroad.

1.3. Czech Republic

Traditionally the most Westernized country of the region. The country has always been the most economically developed state of the former socialist block. Czech Republic retained its historical economic heritage even after the fall of the iron curtain. The country avoided most of the problems experienced by rest of the Central Europe. The Czech Republic has never experienced deep economic crises, high indebtedness or significant increase in unemployment rate. According to analysts (Železník, 2018), the Czech labour market is considered the most efficient labour market in Europe for the last couple of years, enjoying the lowest unemployment rate.

Currently there are 215 000 - 220 000 vacancies in the country, although only 1.8% of the population is working abroad. According to the world economy survey and data, the Czech Republic has the highest the labour market tightness indicator (4,1%) in the EU (Eurostat, 2018).

One of the Czech government's objectives and aspirations is to make easier entering the Czech labour market for the foreign workforce in order to lower the labour shortage. However, company executives warn that this process could be a major barrier to robotization. The Czech Ministry of Labour and Social Affairs (2014) summarized four strategical aims: promoting access to employment, especially for groups at risk on the labour market; promoting gender equality within the labour market, promoting adaptation of businesses and employees to changing labour market needs, and the development of public employment services.

Employing foreign labour force has been a part of national employment pattern for a long time. Based on the Czech Statistical Office, some 78 thousand visiting residents lived in the country in 1993, while this number has increased to 524 thousand in 2017. . We cannot avoid the fact that there are differences in unemployment rate across the country. The best situation is detected in the capital and the southern part of the country (under 2%). The worst results are in the far eastern and the far western regions (above 4%).

The lack of education and work experience of the unemployed makes active employment policy ineffective in short-term, and changes in secondary technical and tertiary education are suggested to promote smart investment in human capital (Novák et al. 2016).

The Czech labour market has similar problems as the other labour markets of Central Europe - namely the lack of technically educated graduates (Nováková 2018).

1.4. Hungary

Since Hungary has joined the European Union, the willingness and motivation of domestic workers to work abroad in order to improve their financial situation is much easier. This process has been accelerated since the Hungarian salaries have been lagging behind the regional wages in the past 15 years, also compared to the rest of CEE countries. The employees have become aware of this issue and were trying to find a job matching their qualification in other parts of the country or abroad, where they can get higher salaries and experience higher living standard. Without qualified and available work force, the country's economic future and the competitiveness of the business sector is endangered. The labour

shortage may be indirectly linked to national tax policies (Makrogazdaság, 2018; Cseh et al., 2018).

The Labour shortage in Hungary is similar to the situation in the other V4 countries. The industry representatives believe that the labour shortage can be relieved by attracting 200-300 thousand foreign workers. Some 20 percent of foreign workers – thousands of people - stay in Hungary for a short period of time using this country as a springboard to get into other Western European countries. The opportunities offered by the country are attractive mostly among the unskilled or manual workers (Tóth and Nyírő, 2018).

Material and methods

The survey was conducted based on a previous study completed by Poor et al. (2019) and included three main parts:

- Employee turnover;
- The most difficult job positions to fill;
- The most effective methods for labour shortage fulfil.

We present the related set of problematic areas of our empirical research. The results in this section are based on surveys of 1035 organizations sample in 2016 and 2017 (see Table 1).

Table 1: The data of the 1st and 2nd survey (2016-2017)

1st survey	2nd. survey
Period 2016	Period 2017
328 respondent organization	707 respondent organization
Electronic questionnaire	Electronic questionnaire
Non-profit, benchmarking research	Non-profit, benchmarking research
Sponsored by: Pivot Co.	Sponsored bytes Co.
Professional support: Am Cham, BKIK, OHE and HSZOSZ	Professional support: OHE, HSZOSZ, BKIK, NKE

Source: Author's own research

In 2016, there were 328 respondent organizations. The questionnaire was submitted as an e-questionnaire. In 2017, the number of respondent organizations had nearly doubled compared to the previous year, (i.e. 707 respondents were questioned) via an electronic questionnaire.

The research in both periods was benchmarking and non-profit (self-funded). In 2016 the survey was sponsored by Pivot, while in 2017 it was sponsored by TESK. The professional support during the first survey was AmCham, BKIK, OHE and HSZOSZ, while in the second period it was also accompanied by NKE.

Results and discussion

The service sector comprises some 25 percent of the sample, but industry is also a significant part of it, with close to 25%. We also see results from the financial sector, trade and IT. The research conducted in 2017 shows respondents from public administration (50%). The industry and the service sector were represented by 10-10 %, and the remaining sector was below 10%. (Note: This result is related to the fact that in 2017 our research was propagated mostly in the public administration and public services sectors.)

The other question was related to the form of ownership of firms in the sample. More than half of the surveyed organizations in 2016 were of foreign or mixed ownership (50,38%), the private domestic form of ownership was represented by 40,84% of respondents and the rest were classified as public domestic organizations. The survey conducted in 2017 shows different results. In 2017, the domestic public organizations were dominant with 57,5%, the private domestic organization's ratio was 28,6%, the private foreign 8,9% and the mixed was 5,6%.

In the following section, we will analyse the gained data based on the number of employees in different organizations. The survey conducted in 2016 lists 328 organizations. 55% of the organizations had less than 250 employees, 20 % had 251-1000 employees, and 25 percent had more than 1000 employees. The survey from 2017 reached 707 organizations - 57 % had less than 250 employees, 14,2% had between 250 and 1000 employees, and nearly 30% had more than 1000 employees.

In 2016 some 44% of the firms could record a revenue under 1 billion Hungarian forints. While in 2016 the ratio of organizations with revenue between 1 and 10 billion Hungarian forints was 22,45% , this figure had decreased to 14,5% in 2017. The ratio of organizations between 10-100 billion Hungarian forints revenue was 20, 82% in 2016, while in 2017 it was 15, 4%. In 2016 some 12, 65% of sampled firms had a revenue more than 100 billion Forints, in 2017 some 6, 6% of the organizations had more than 100 billion in revenues.

2.2. Employee turnover

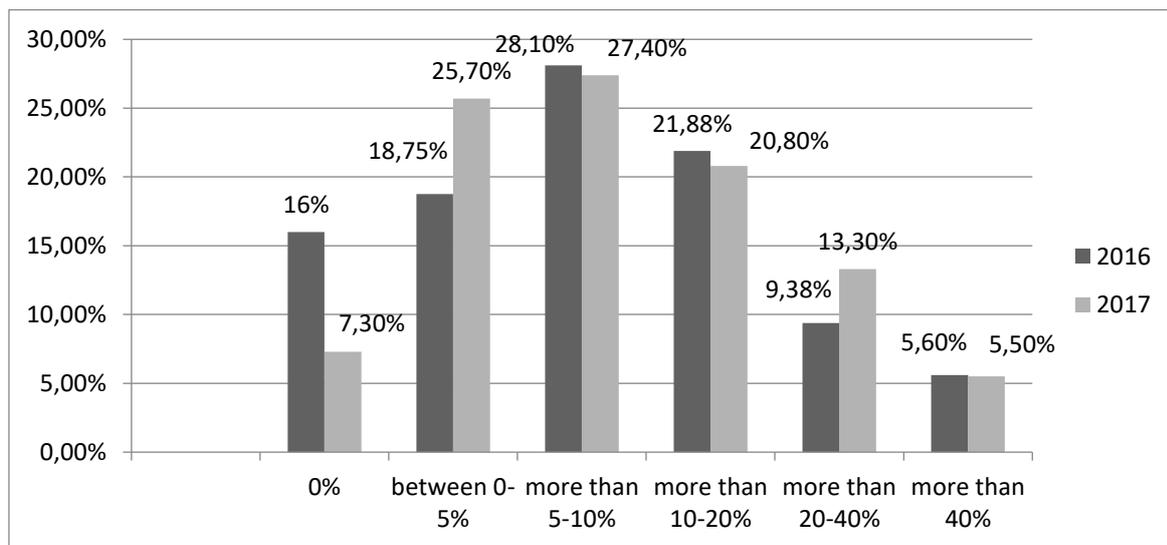
The number of employees is a constantly changing parameter, one that can be modified according to the current conditions. Employee turnover is expressing the increase or redundancy of the employees, when they are dismissed or leave the company. The employee turnover in studied countries is presented in Figure 1.

As it was mentioned before, the oft-cited optimal yearly ratio of turnover is around 10% in practice (Gartenstein, 2018). If it is too low or too high, it has to be investigated why the

number of employees is not changing as it should (Karriervadász, 2018). The organizations have to keep in mind that it is beneficial to consider the employee need. More functional turnover starts with the employees' satisfaction, and driven by the right motivational tools (Tóth and Nyíró, 2018).

More and more organizations (private and public organizations) recognize that replacement of an average employee costs approximately 1 million Hungarian forints, but replacement of an employee in higher position with creative mind could cost up to 0,5-1 or even 2 years' salary (Boudreau, 2010).

Figure 1: Changes in the employee turnover (2016-2017)



Source: Authors' own research

Within this complex topic area, we compare employee turnover within two different periods of time and different job levels. It is clearly seen that the employee turnover changes. We divided the job levels into five groups. The first group is the top and middle management, second group is formed by the professionals at higher level, third are the salesmen, fourth group is made up of the administrative workers and finally the fifth group is the manual workers.

It can be observed that at top management level the employee turnover is low and not significant, while at subordinate levels the turnover is higher. To summarize briefly, the employee turnover was higher in 2017 than in 2016. The research samples are from very different patterns of industries and institutional backgrounds. Our research was extended to investigation of the HR. The motivation system of the company is elaborated by the HR and applied by the manager, who can use the properly implemented motivation system even the employee decides to terminate and leave the company (Kovács, 2012).

In the private sector, there are 55 employees per HR worker, while in the public sector this number is 70 employees per HR specialist. According to the research, we can conclude that this number did not increase or change. Growing employee turnover encourages the organizations to introduce leaders new ways of motivation, for example if an employee has lost interest in his/her position, and it does not feel motivated in fulfilling tasks is provided a

possibility to change position. The importance of community building and the teamwork has grown. Thinking about the future, the development of replenishment programmers has become important (Kővári, 2013).

2.3. The most difficult positions to fill

Further we have investigated which positions are the most difficult to fill in for the organizations in our samples. As a first sector, industry was checked. The research sample shows a wide variety of positions difficult to fulfil. In 2016, the most difficult positions to fill in were the following: 1) technical manager positions, 2) specialized engineers, 3) mechanical engineers. According to 2017 survey results, the most difficult positions to fill were the construction worker, engineer and IT specialist. Based on the results examined during these two years, we can observe that the biggest problems in the field of fulfilling the engineer positions. Both surveys conducted show shortage in the profession of administrator and quality assurance inspector. On average, it took 11 weeks in 2016, and 20 weeks in 2017 to fill these positions in the surveyed organizations. Below we can review the most difficult positions to fill in the public sector. The most affected area is the healthcare. Positions requiring administrative and technical skills were also difficult to fill. The first three positions most difficult to fill were the doctors, vets, public healthcare workers and administrative staff. Problematic fields to find qualified employees were proved the blue-collar workers, IT specialists and engineers, jobs in construction industry.

2.4. Labour dynamics and program solutions

In 2016 and 2017 there were several underlying problems causing the labour shortage, but during both periods of time only the order of the first three places were different. The first main reason, what causes the labour shortage in the organizations was the increased competition between local labour competitors. Organizations are trying to attract each other's skilled professionals, and use different motivation tools to attract them. The next main reason is the lack of skilled employees present on the labour market; so many organizations have difficulties to fill those empty positions. The third reason is the low salary that discourages the skilled workers working in their home country when they can find well-paid positions abroad. 2016 was characterized by lack of skilled workers and low salaries, while in 2017 the priorities shifted to low salaries, tough competition between the industry players and the lack of skilled workers. The issue can be clearly demonstrated by statistics on net average monthly salaries in the EU. It was 742 Euro in Hungary, 873 Euro in Poland, 877 Euro in Slovakia and 1003 Euro in the Czech Republic in comparison to 2350 Euro in the UK, 2360 Euro in Germany and 2225 Euro in France.

Apart from the main reasons outlined above, we also note the additional problems in the educational system, unhealthy work-life balance, less unemployed and decreasing number of active workforce resulting from declining birth rates.

Problems can also be detected within the company. Some organizations are lack of efficient management and experienced leaders to have adequate knowledge about the company

operations and employees. Workers get frustrated and leave for better managed firms, sometimes in different countries.

The programs offered by the companies to solve the labour shortage can be classified as wage based and non-wage based. .

The wage- based programs are the following:

- development of performance evaluation and bonus system;
- transformation of the existing payment system;
- employee's shareholding
- incorporating the experience into the remuneration system;
- Redesigning the system of fringe benefits.

Non-wage based programs to handle labour shortages include the following:

- survey regarding the employee's satisfaction and commitment;
- improvement of the working conditions;
- flexible working hours;
- Introduction and application of atypical forms of employment.

2.5. Effective methods to fulfil labour shortage

Change in the payment system and providing competitive salaries would be the most efficient way to overcome the labour deficit issue. The payment system solution is followed by performance evaluation and bonus system. An equally effective method is the application of flexible working time, so everyone can manage the worktime individually. The third most effective method can be the introduction of several employee friendly measures e.g. Long-term incentive scheme for employees, shareholding or cash plans. The next most efficient method for the employees is the introduction of program increasing employee satisfaction and commitment. Such an approach might incorporate an attractive vision, outlining the vision, involving the employees into company's life and involve them in providing suggestions. Providing an employee-friendly work environment and the appropriate work conditions are essential steps to make the work in the company more effective. Beside the improvement of the working conditions and creating the appropriate work

On the fourth place were the employee-tailored training and individual development plans. The organization guarantees the opportunity for the employee to progress and develop. The fifth most effective method was the development of the recruiting methods. The development of the recruiting methods can be achieved by built-in databases, workforce channels and other specialized tools. The most effective non-fringe benefits are company cars, pension and life insurance programs, extra days of paid holidays, cooperation with educational institutions robotization.

2.6. Situation in the neighbouring countries

According to our survey in 2017 (202 respondents), the labour shortage has also increased in the surrounding countries, and it is becoming more difficult to keep the employees in these

focal organizations. The reduction of the fluctuation gives the organizations more and more tasks. We can observe that fluctuation is very low and not significant among the leaders, while among the employees in low positions the fluctuation became high.

The biggest problems are in the industry, the most problematic area in the organizations is to fill the engineer's positions. It is worth to mention those positions that have occurred during both surveys, like administrative positions and quality assurance positions.

The most difficult positions to fill in the public sector are a doctor or vet, administrative staff and the public health experts. Problematic areas can also be found in the blue-collar worker segment, IT leaders, engineers technical and construction engineers.

Filling positions takes 8.4 weeks on average in the surveyed four countries. The longest average periods have been observed in the Czech Republic (10.6 weeks), Hungary (10 weeks), and Slovakia (8 weeks) and in Poland (5 weeks).

The three main reasons that results in labour shortage in the organizations are the increased competition among the business in attracting skilled workforce. The next main reason is simply the lack of skilled workers so the organizations find difficult to fill the required positions. The third reason is the low salary discouraging skilled staff to stay in the country and rather leave for better offer abroad.

Changing the payment system, providing competitive salary could be the most efficient way to deal with this issue. The payment system is followed by performance evaluation and bonus system. An equally effective method can be the introduction of flexitime to make time management easier for the employee. The third most effective method can be the long-term incentive schemes or cash plan.

Conclusion

According to the research in 2016 and 2017 the labour shortage phenomenon causes an increasing and a real problem in regional organizations. Therefore, more attention has to be addressed to the labour shortage and looking for the most effective solutions to eliminate it. Programs should be developed and introduced to keep employees satisfied and motivate them to stay with the company.

According to the research in V4 countries, the results regarding the labour shortage are very similar across organizations. According to the research of the World Economy (2017), the labour market tightness ratio (4, 1%) is the highest in the Czech Republic. In Hungary, the labour market tightness indicator is 2, 4%, while more than 5% of the population is working abroad. In Slovakia, the labour shortage is at the top with its 1%, but it is still much lower than the other V4 countries. 6% of the Slovak population is working abroad. Meanwhile, 8% of the Polish population works in foreign countries, while generations are entering the labour market, where the birth rate was low. The proportion of foreign workers in the country is high, accounting for close 2 million Ukrainian and Belarusian workers (Eurostat, 2017).

According to the results of our empirical research, the employee turnover ratio was not significantly low among the leaders, while in lower positions, the turnover ratio was high. The employee turnover has increased compared to our research in 2016, and the turnover ratio was higher in 2017. We have also measured which positions are the most difficult to fill in

the industry and in the public sector. Based on the results obtained over the two years, we could observe the biggest problem in filling engineer vacancies in the industry sector. Administrative positions and quality assurance positions were on the list of both surveys. Comparing the two periods in the public sector we can clearly state, that the biggest problem is in the health care. According to the results, the first three places on the list are the doctors, the vets, administrative jobs and the public health care specialists.

The three main reasons that result in labour shortage in organizations are the intense competition of the employers to attract the skilled workforce. The next main reason is simply the lack of skilled workers as a general phenomenon. As a third reason might be mentioned the low remuneration system that discourages the skilled workers from working in home country and they rather leave for better conditions and higher salaries abroad (Seitz, 2017).

The organizations introduce programs and new methods to reduce the labour shortage and to keep the existing workforce. Changing the remuneration system and competitive salaries can be an efficient tool to address the issue. The performance evaluation and bonus system is an appropriate tool to retain the skilled workforce. An equally effective method is the introduction of flexitime to create convenient conditions. Long-term incentive schemes and cash plan can be the third most effective method to introduce.

Overall, we can conclude that the labour shortage has increased also in the surrounding countries, and it is more difficult to maintain the workforces in the researched organizations. The increasing employee turnover puts the organizations to an increasing number of tasks. The employee turnover is very low and not significant among the leaders, while among the employees in low positions the turnover became high.

The organizations face increased competition for the skilled workforce. Businesses successful to hire and maintain skilled workforce will be able to manage the employee fluctuation and will gain advantage in competition. The organizations showing an ability to innovate and gain benefit from the market trends will be also brave enough to utilize advantage from robotization and automation.

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