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THE MANAGERIAL IMPLICATIONS OF THE LABOR MARKET AND WORKPLACE SHORTAGE IN CENTRAL EASTERN EUROPE

Abstract: In the recent years the labor market of the Central and Eastern European (CEE) countries has changed a lot. One of the main business challenges in the CEE region is the worker shortage. The possible reasons of this phenomenon are the emigration of the labor force from the countries of the former Eastern Bloc to the Western countries, the negative demographic tendencies in the region, the effects of economic crisis and the significant wage differences in the countries of European Union. This paper presents the first results of an international research conducted in six countries from the CEE region (Austria, Czech Republic, Hungary, Romania, Serbia and Slovakia) on the reasons and managerial implications of the current labor force shortage. The research questionnaire was filled out in 797 companies and institutions in the CEE region. In our paper we will show the size, ownership and the sectoral distribution of our sample, as well as the average turnover rate, the average time to fill a position in, the positions hard to fill in, the possible reasons of labor shortage and the successful organizational and governmental programs to deal with labor market shortage. The obtained results may be a useful input for the formulation of human resource management programs in the organizations facing with labor market shortage in Serbia and other CEE countries.

Keywords: labor market, workplace shortage, turnover, HRM, CEE region

1. INTRODUCTION

The labor market is one of the components of the market economy and as such it is an economic institution whereby labor is distributed and redistributed. The exchanges result in the integration of workers with work experience (workplaces) and in their movement between work relations (workplaces). Labor markets are currently in a phase of cyclical recovery and undergoing structural transformation due to globalization, demographic trends, advancing digital technologies and changes in labor market institutions (Briunello&Wruuck, 2019). New technologies, robotization and artificial intelligence will also certainly have an impact on the labor market. Some scholars claim that labor shortages will soon disappear due to a new type of robotization. The global economic downturn resulted in high unemployment in many European countries, which has often been followed by a sharp fall in the unemployment rate. There are already labor shortages in many areas in the labor market, and organizations are currently finding it difficult to fill vacancies, i.e. the number of shortage

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occupations is increasing (McGrath, 2019). Moravcikova and Balaz (2020) claim that labor shortage will increase in the future.
The high employee turnover is one of the biggest challenges for all organizations, since it can bring along economic, psychological and organizational consequences. Nowadays, organizations are paying increasing attention to this issue, as they have become aware of the fact that high employee turnover also has a negative impact on organizational performance (Chen, Lin &Lien, 2010). Complex interpersonal relationships within an organization can increase turnover further, since employees need to put a lot of energy into managing their own relationships with their colleagues (Zhang, 2016). Determining the optimal rate of turnover is not an easy process, as one would think that very low turnover is ideal for organizations. However, this is not entirely true, since too low turnover implies that there is no movement and development within an organization, as everything is constant and the whole organization might be stagnating without any growth. High turnover, on the other hand, indicates wastage and chaos, suggests processes that a given business should eliminate, and measures must be taken to reduce them (Huselid, 1995).
Considering all of the above, the labor market is heading to a future where labor shortages will increase and employee retention will be an ongoing challenge. The reduction of employee turnover is becoming increasingly difficult. In the future, organizations will focus on this issue, and competition for skilled workers will become fierce. Businesses that will be able to retain their valuable employees and decrease turnover will gain a competitive advantage. How? Primarily, by providing a working environment that employees find proper and pleasant (Surji, 2013). It is important to state that current working arrangements focus on employees' new knowledge, skills, and abilities especially in terms of problem solving, critical thinking, creativity, people management, coordinating with others, emotional intelligence, judgment and decision-making (Héder, Szabó &Dajnoki, 2018). Wages and other forms of remuneration are also important, though this tendency is being weakened by other employee needs. In the case of manual staff, another important factor is the way they are treated by their managers. If employees are recognized, appreciated and their needs are taken into account, it motivates them to perform better and to become committed to their organization. In addition to, Szabó-Bálint (2019) emphasizes the importance of career management in employee retaining.
The aim of this paper is to present the results of an international research on the labor shortage in Central and Eastern Europe (CEE). The presented results include the turnover rates, the average time to fill a position in, the positions hard to fill in, the possible reasons of labor shortage and the successful organizational and governmental programs to deal with labor market shortage. The data from Czech Republic, Hungary, Romania, Serbia, Slovakia and Austria may point out on the reasons and managerial implications of the current labor force shortage.

2. THE LABOUR MARKET OF CENTRAL AND EASTERN EUROPE

With exception of Austria, the countries studied in the region are part of the former socialist bloc. Each country was affected by the change of regime in 1989 and by the break-up of the former Soviet Union. These transitions were characterized by political battles, new economic entrants, foreign investors, cross-border businesses, economic policy shifts and constant economic flux. Almost all countries in the region started to develop and have grown into major economic players today. One of the key issues in these countries today is the dramatic increase in labor shortages, which has been influenced by a variety of factors, namely outbound labor migration after the change of regime, unfavorable demographic factors, the economic downturn as well as wage differences within the EU (Brixiova et al., 2009).
The studies of Poór et al (2020) based on longitudinal and international comparisons show that although the Central and Eastern European region and the human resource management practices of single CEE countries have brought about a variety of changes in the first two decades of the 21st century, their deviations from different regions of the world, as well as their solutions, prevailed as well.
At the beginning of 2020s the labor markets of Central and Eastern European countries are facing a number of challenges. The demand for skilled labor is growing rapidly. Excess labor supply has largely become a thing of the past, and it is unusual for job seekers to struggle to find a job. Rather, employers need to make increased efforts to find the right candidates. Consequently, it is not the improvement of selection processes that causes problems for businesses but the problem of not having enough candidates (a recruitment “pool” shortage). New technologies trigger a need for new ways of communication in recruitment. In addition, today's generation has different expectations from the workplace. The members of Generation Y are less loyal to their organization; however, at the same time, they want to be proud of their job and of the company they work for (digitalhungary.hu).
Outbound labor migration has been increasing along with people's willingness to work abroad. The EU accession of post-socialist countries brought along a new wave of migration between member states and generated new developments. The new type of migration is driven by finding new jobs. Thus, skilled labor is leaving Eastern Europe and moving to Western Europe in order to improve individual standards of living. Consequently, labor shortages are becoming frequent in labor exporting countries, and organizations find it increasingly difficult to fill vacancies. To sum it up, migration is one of the most important features of globalization which significantly influences word economy and has a crucial role in tackling the shortage of labor and skills (Maruszewska&Przybylska, 2009).
The Table 1 presents the main labor market indicators of the analyzed six countries.

Table 1: The main labor market indicators of the analyzed countries (2019)

Country	Population	GDP growth (%)	Unemployment (%)
Austria	8 858 775	1,5	8,5
Czech Republic	10 649 800	2,5	2,9
Hungary	9 772 756	5,0	3,5
Romania	19 401 658	3,0	4,0
Serbia	6 963 764	4,8	9,5
Slovakia	5 450 421	1,3	4,9

Source: National statistical institutes, Tradingeconomics, 2020

Among the analyzed countries Romania has the biggest population, almost 20 million. The second in the line is the Czech Republic with more than 10 million people, while Hungary has a little bit less than 10 million inhabitants. Austria has almost 9 million, Serbia almost 7 million, while Slovakia about 5,5 million inhabitants.
There was economic growth in each researched country in 2019. Based on data published by the individual statistical offices, we assert that the most significant GDP growth was in Hungary, amounting to 5%. The GDP of Hungary has grown in the country year on year, with 4.1 and 4.9 percent in 2017 and 2018, respectively. Hungary is followed by Serbia with a 4.8% growth. The Serbian economic performance has been fluctuating in the last few years. There has also been negative growth since 2010, but the country is making extended efforts to meet its targets, in support of its planned EU accession in 2025. The next country is Romania with a 3% quarterly growth according to figures. GDP growth in the country has slowed down over the past two years, while in 2017 there was an 8.9% quarterly growth. The latest data show that due to positive changes Romania has managed to maintain a 3% growth, but according to S&P forecasts, its development will slow down over the next few years and GDP growth will fall under 2%. Since the forecasts indicate a change in trends, it is difficult to make estimates. The next country is the Czech Republic with its 2.5% GDP growth. Its economy is characterized by innovation and efficiency, but similarly to the situation in the previously analyzed countries, the slowing down of the GDP growth has been experienced in comparison with the figures from two or three years ago. Austria has shown a slight GDP growth of between 1.5% and 3% in recent years, with recent results showing an interim growth of 1.5%. With a 1.3% growth, Slovakia is the slowest growing country among the analyzed ones (Tradingeconomics, 2020).
Serbia and Austria have the highest unemployment rates among the surveyed countries. The unemployment rate in 2019 was 9,5%. But from 2012 when the unemployment rate was 25,5% or in January of 2019 when it was 12,9% there is a tendency of decline in this important labor market indicator. There may be several reasons for it. Economic analysts claim that the main cause is emigration of Serbian labor force to Western Europe. The Austrian rate has been increasing over the past few months, and interim data from 2019 suggested a slowing economic growth, bringing about higher unemployment. The forecasts proved to be correct, and the number of people out of work went up accordingly. The Czech Republic and Hungary are the countries with the lowest jobless rates. Since GDP growth has slowed down in Czech Republic, and it is soaring in Hungary, the causes of these low rates are subject to further research (Tradingeconomics, 2020).

3. RESEARCH METHODOLOGY

The aim of our research was to show the situation in the labor markets of the researched countries and to identify the organizational tools for employee retention and the government measures aimed to alleviate labor market tensions based on the answers of our respondents.
The international research project was conducted in 2019 in eight European countries: Czech Republic, Poland, Lithuania, Hungary, Romania, Serbia, Slovakia and Austria, but in this paper we present the results for six countries from the Central and Eastern European region (Czech Republic, Hungary, Romania, Serbia, Slovakia and Austria). For data gathering a standardized on-line questionnaire was used, which consisted of four parts: the main features of the surveyed organizations; questions regarding turnover and labor shortages; organizational (corporate and institutional) and governmental measures and programs aimed at employee retention; and the respondents' opinions and experiences regarding robotization. The respondents were HR managers presenting the company or institution where they work.
In this paper the following research data will be shown: the size, ownership and the sectoral distribution of our sample, as well as the average turnover rate, the average time to fill a position in, the positions hard to fill in, the possible reasons of labor shortage for different employee categories (higher educated professionals, salespeople, administrative staff and blue collar workers) and the successful organizational and governmental programs to deal with labor market shortage. The findings presented in this report are based on general statistical methods (mean, frequency and distribution).
The Table 2 presents data on the research sample, the distribution of respondents by countries.

Table 2: Distribution of responses from different countries (N, %)

Country	N	%
Hungary	277	35
Czech Republic	249	31
Romania	77	10
Slovakia	53	7
Serbia	76	9
Austria	65	8
Total	797	100.0

Source: Primary research results by the authors

The most responses were collected from Hungary (35%) and Czech Republic (31%). The lowest number of respondents was provided by Serbia (9%) and Austria (8%).
The third table shows data on the sample structure, by the company ownership.

Table 3: Distribution of responses by company ownership (%)

	HU	CZ	RO	SK	SR	AT	Total
Domestic private	**43**	**50**	**86**	**56**	34	**73**	**57**
Domestic public	17	16	5	12	7	14	**12**
Foreign owned	37	26	5	26	**50**	3	**24**
Mixed ownership	3	8	4	6	9	10	**7**
Total	100	100	100	100	100	100	100

Source: Primary research results by the authors

The most respondents were in domestic private ownership (57%). The remaining consisted of foreign-owned companies (24%) and of those in mixed ownership (7%). The domestic public sector institutions made up to 12%. It is important to state that the highest proportion of domestic private companies was present in Romania (86%), the highest proportion of domestic public institutions were present in Hungary (17%), the foreign owned companies dominated the Serbian sample (50%), while the proportion of mixed ownership was present in Austria (10%).
The next table presents data on the industrial (sectoral) distribution of our sample.

Table 4: Distribution of responses by industry (sector) (%)

	HU	CZ	RO	SK	SR	AT	Total
Industry	36,1	31,9	20,0	21,6	10,3	8,5	**21,3**
Trade	12,0	18,1	20,0	23,5	37,9	0,0	**18,5**
FMCG	1,2	1,1	1,3	2,0	1,7	1,7	**1,5**
Finance sector	5,6	2,2	5,3	3,9	13,8	11,9	**7,2**
Informatics	4,4	4,4	13,3	2,0	10,4	5,1	**6,6**
Telecommunications	1,6	0,5	2,7	0,0	1,7	1,7	**1,4**
Logistics services	5,6	6,0	2,7	7,8	0	3,4	**4,2**
Energy	0,8	1,6	1,3	7,8	1,7	1,7	**2,5**
Agriculture	1,6	4,9	1,3	2,0	1,7	0	**1,9**
Services	19,1	18,9	22,7	27,4	10,4	44,1	**23,8**
Public administration	3,2	5,5	1,3	2,0	5,2	6,8	**4,0**
Other	8,8	4,9	8,1	0,0	5,2	15,1	**7,1**
Total	100	100	100	100	100	100	100

Source: Primary research results by the authors

The majority of responses were collected from the service sector (23,8%), industry (21,3%), and trade (18,5%).
The Table 5 shows data on the size of the responding organizations, regarding the number of their employees.

Table 5: Distribution of responses by employee number (%)

	HU	CZ	RO	SK	SR	AT	Total
0-1 persons	12,7	2,2	7,9	17,6	0	5,5	**7,6**
2-9 people	17,9	16,0	26,4	25,5	12,0	10,9	**18,1**
10-50 people	9,5	27,6	19,8	19,6	14,0	12,7	**17,2**
51-100 people	15,1	12,7	17,1	5,9	2,0	10,9	**10,6**
101-250 people	0,0	13,3	10,5	11,8	16,0	0,0	**8,6**
251-500 people	9,1	12,2	3,9	3,9	7,0	18,2	**9,1**
501-1000 people	8,3	5,5	3,9	2,0	4,0	10,9	**5,8**
more than 1,000 people	27,4	10,5	10,5	13,7	45,0	30,9	**23,0**
Total	100	100	100	100	100	100	100

Source: Primary research results by the authors

The majority of the respondents (62,1%) belong to small or medium sized organizations, regarding the number of their employees. The micro organizations make the 25,7%, while the small organizations the 42,9% of our sample. The large organizations with more than 250 employees make the 14,9% of the sample, while the very large organizations with more than 1000 employees make a significant proportion of the sample, its 23,0%.
The next table presents data on the annual revenues of the analyzed companies.

Table 6: Distribution of responses by annual revenues (%)

	HU	CZ	RO	SK	SR	AT	Total
Less than 30. 000	5,4	14,0	18,3	14,0	0,0	0	**8,6**
30.001-300.000 EUR	17,1	28,7	31,1	38,0	9,8	10,2	**22,5**
300.001-3.000.000 EUR	17,5	27,0	23,9	18,0	23,5	18,4	**21,4**
3.000.001 -30.000.000 EUR	26,2	14,0	16,9	10,0	23,5	28,6	**19,9**
30.000.001-300.000.000 EUR	13,8	9,6	4,2	14,0	11,8	28,6	**13,7**
More than 300.000.000 EUR	20,0	6,7	5,6	6,0	31,4	14,2	**13,9**
Total	100	100	100	100	100	100	100

Source: Primary research results by the authors

Almost the third (31,1%) of our sample has less than 300 000 EUR annual revenue, while about one fourth (27,6%) of them has more than 30 000 000 EUR annual revenue.

4. RESEARCH RESULTS

Among the research results the turnover rate on organizational level; for upper and middle managers; for higher educated professionals; for salespeople; for administrative staff; and for blue collar worker will be presented in 3 categories: low (below 5%), medium (6-20%) and high (more than 20%).

Table 7: Turnover level (%)

	HU			CZ			RO			SK			SR			AT			Total		
	L	M	H	L	M	H	L	M	H	L	M	H	L	M	H	L	M	H	L	M	H
The whole organization	32	50	18	55	40	5	46	39	15	48	40	12	40	45	15	40	48	12	43	**44**	13
Upper and middle managers	82	14	4	83	13	4	90	8	2	85	15	0	75	19	6	81	16	3	**83**	14	3
Higher educated professionals	65	30	5	82	12	6	67	24	9	81	19	0	51	38	11	64	33	3	**67**	26	7
Salespeople	64	27	9	62	33	5	72	13	15	80	16	4	44	28	28	57	37	6	**63**	26	11
Administrative staff	62	31	7	71	23	6	85	13	2	73	20	7	57	41	2	62	31	7	**68**	27	5
Blue-collar workers	41	40	19	42	45	13	55	24	21	47	36	17	57	20	23	58	28	14	**50**	32	18

L= low turnover rates (0-5 %), M= medium turnover rates (6-20%), High turnover rates (20% and more)

Source: Primary research results by the authors

The analyzed organizations at organizational level face with medium level of employee turnover. The highest turnover rate in all countries except Serbia is for the category of blue-collar workers. In Serbia the highest turnover is present for salespeople. The lowest turnover rate in all countries is present for upper and middle managers.
The next table shows data on the jobs (positions) which are hard to fill in the analyzed countries.

Table 8: Jobs hard to fill (%)

	HU	CZ	RO	SK	SR	AT	Total
Accountant	2,3	2,7	3,2	2,1	4,3	10,0	4,1
Administration	6,5	9,6	6,3	8,5	0	0,0	5,1
Assistant	0,5	3,4	1,6	**0**	0	10,0	2,6
Construction	0,5	0,7	3,2	**0**	0	0	0,7
Consultant	0,5	0	0,0	0,0	4,3	5,0	1,6
Driver	3,7	2,7	4,8	10,6	4,3	0,0	4,3
Engineer	**20,9**	**11,0**	**34,9**	**21,4**	17,4	**15,0**	**20,1**
Finances	3,7	3,4	0,0	0,0	4,3	0,0	1,9
Health care workers	0,5	0,0	0,0	0	0	5,0	0,9
Leader	1,8	2,1	6,3	2,1	4,3	15,0	5,3
Logistics	0,5	0,7	0,0	2,1	0	0,0	0,6
Manager	4,1	6,8	1,6	6,4	4,3	**20,0**	7,2
Manual worker	**36,8**	**36,4**	**28,6**	**29,9**	**26,2**	10,0	**28,0**
Project Manager	1,8	2,7	0,0	0,0	0	5,0	1,6
Salesperson	11,7	8,2	7,9	10,6	**30,6**	5,0	12,3
Technician	2,3	9,6	0,0	2,1	0	0,0	2,4
Other	1,9	0,0	1,6	4,2	0,0	0,0	1,3
Total	100	100	100	100	100	100	100

Source: Primary research results by the authors

The jobs hard to fill in Hungary, Czech Republic, Romania and Slovakia are those of manual workers and engineers. In Serbia the position of salespersons, while in Austria the position of managers is the hardest to fill.
The next data are on the period of time necessary to fill a vacancy in weeks.

Table 9: Time period needed to fill a vacancy (weeks)

	HU	CZ	RO	SK	SR	AT	Total
Weeks	10.032	10,566	6.885	8.245	9.083	10,95	**9,293**

Source: Primary research results by the authors

The average time period needed to fill a vacancy in the analyzed six countries in 9,3 weeks. The shortest time period is needed in Romania (6,9 weeks), while the longest in Austria (10,95 weeks).
The next four tables show data on the causes of labor shortage for different employee categories (higher educated professionals, salespeople, administrative staff and blue collar workers).

Table 10: Causes of labor shortages - higher educated professionals (Rankings: 1=not at all, 5=very typical)

	HU	CZ	RO	SK	SR	AT	Total
Competition between you and competitors	**3,16**	**3,18**	**3,48**	**2,91**	3,04	2,72	**3,08**
Very low wages	2,81	2,92	2,50	2,62	**3,42**	3,21	2,91
Lack of skilled labor	2,90	3,16	3,16	2,74	3,00	**3,22**	**3,03**
Emigration abroad	2,48	2,18	2,91	2,75	3,04	2,33	2,62
Lower unemployment due to economic growth	2,18	2,61	1,84	2,46	2,26	2,5	2,31
Fewer working people available due to population decreases	1,90	2,09	2,24	1,92	2,29	2,17	2,10
Problems of the education system	2,51	2,42	2,65	2,21	3,29	2,39	2,58
Bad working conditions	1,68	1,87	1,52	1,32	2,54	1,83	1,79

Underdeveloped transport infrastructure (difficulties in getting to work)	1,61	2,13	1,74	1,69	1,58	2,44	1,87
Work-life balance problems	2,26	2,59	1,91	1,80	3,33	2,59	2,41

Source: Primary research results by the authors

The main causes of labor shortage for higher educated people in the six analyzed countries are the competition between the employers and the lack of skilled labor.

Table 11: Causes of labor shortages - salespeople (Rankings: 1=not at all, 5=very typical)

	HU	CZ	RO	SK	SR	AT	Total
Competition between you and competitors	**2,6**	**2,97**	**2,86**	**2,81**	3,78	2,59	**2,94**
Very low wages	2,48	2,81	2,40	2,68	**3,91**	**2,71**	**2,83**
Lack of skilled labor	2,38	2,80	2,54	2,50	3,61	2,65	2,75
Emigration abroad	2,05	1,97	2,43	2,46	2,87	1,76	2,26
Lower unemployment due to economic growth	1,88	2,59	1,70	2,48	1,86	2,35	2,14
Fewer working people available due to population decreases	1,88	2,18	1,98	2,39	2,26	2,12	2,14
Problems of the education system	2,05	2,24	2,39	1,96	2,70	2,53	2,31
Bad working conditions	1,71	2,05	1,43	1,79	3,48	2,18	2,11
Underdeveloped transport infrastructure	1,47	2,23	1,79	1,96	2,22	2,24	1,99
Work-life balance problems	2,06	2,56	2,08	1,82	3,17	2,44	2,36

Source: Primary research results by the authors

The main causes of labor shortage for salesperson in the six analyzed countries are the competition between the employers and the very low wages.

Table 12: Causes of labor shortages – administrative staff (Rankings: 1 = not at all, 5 = very typical)

	HU	CZ	RO	SK	SR	AT	Total
Competition between you and competitors	**2,91**	**2,98**	2,70	2,49	2,14	2,79	2,67
Very low wages	2,89	2,76	2,40	**2,80**	**3,52**	**3,64**	**3,00**
Lack of skilled labor	2,48	2,84	**2,72**	2,56	2,24	3,21	**2,68**
Emigration abroad	2,02	1,87	2,30	2,41	2,00	1,64	2,04
Lower unemployment due to economic growth	2,26	2,52	1,95	2,61	1,80	2,62	2,29
Fewer working people available due to population decreases	1,90	2,05	2,17	2,31	1,81	1,86	2,02
Problems of the education system	2,32	2,47	2,67	2,36	2,33	2,5	2,44
Bad working conditions	1,77	1,81	1,59	1,74	2,67	2,46	2,01
Underdeveloped transport infrastructure	1,72	2,16	1,77	1,94	2,43	2	2,00
Work-life balance problems	2,12	2,34	2,14	2,06	2,90	2,64	2,37

Source: Primary research results by the authors

The main causes of labor shortage for administrative staff in the 797 analyzed organizations are the very low wages and the lack of skilled labor.

Table 13: Causes of labor shortages – blue collar workers (Rankings: 1 = not at all, 5 = very typical)

	HU	CZ	RO	SK	SR	AT	Total
Competition between you and competitors	**3,17**	**3,24**	3,12	3,00	2,63	2,58	**2,96**
Very low wages	3,26	3,14	2,63	3,08	**3,84**	**3,67**	**3,27**
Lack of skilled labor	3,08	2,81	3,24	**3,39**	2,42	2,83	**2,96**
Emigration abroad	2,74	2,18	**3,33**	3,16	3,05	1,67	2,69
Lower unemployment due to economic growth	2,53	2,70	2,39	2,59	2,00	2,36	2,43
Fewer working people available due to population decreases	2,32	2,26	2,60	2,54	2,16	2	2,31
Problems of the education system	2,52	2,19	2,67	2,46	2,42	2,67	2,49
Bad working conditions	2,22	2,27	2,02	2,21	3,05	3,08	2,48
Underdeveloped transport infrastructure (difficulties in getting to work)	1,91	2,29	2,42	2,46	2,37	2,08	2,26
Work-life balance problems	2,49	2,38	2,49	2,62	2,74	2,67	2,57

Source: Primary research results by the authors

The main causes of labor shortage for blue collar workers in the analyzed organizations are the very low wages, the lack of skilled labor and the competition between the employers. In Romania the main cause is the emigration abroad.
The next table shows the five most efficient organizational tools which may be used to facilitate employee retention.

Table 14: The five efficient organizational tools for employee retention (1=not efficient, 5 = the most efficient)

	HU	CZ	RO	SK	SR	AT	Total
Atypical forms of employment		2		1		4	1,2
Business car allowance					3		0,5
Competitive salary and remuneration system	5	5	5	5	5	1	**4,3**
Employee satisfaction and commitment programs					2		0,3
Flexible working hours	3	3		3	4	3	**2,7**
General competence assessment and development programs						2	0,3
Health insurance programs			3				0,5
Improvement of working conditions	2	1		2	1		1,0
Key man retention program	1						0,2
Life insurance			2				0,3
Pension insurance programs			1				0,2
Performance evaluation and bonus system	4	4	4	4		5	**3,5**

Source: Primary research results by the authors

The obtained data clearly indicate that competitive salaries and efficient performance management system (performance evaluation and bonus system) are among the most important organizational tools applied to improve retention.
The last table shows data on the respondents' opinion about the most efficient governmental measures to solve the problem of labor shortage.

Table 15: The five efficient governmental measures to alleviate labor shortages (1=not efficient, 5 = the most efficient)

	HU	CZ	RO	SK	SR	AT	Total
Atypical forms of employment (part-time work, distributed job and telecommuting)	1	1	1	2	1	4	1,7
Corporate nursery and kindergarten support	2			1		3	1,0
Encouragement and supporting of training programs (dual training, special training programs)		4	2	3	2	5	**2,7**
Extension of the wage subsidizing system	5	5	5	5	5	2	**4,5**
Housing subsidies (construction, workers' hostels, etc.)	4	2	4	4	4		**3,0**
Language teaching for foreign workers					3	1	0,7
Transport development, commuting contribution	3	3	3				1,5

Source: Primary research results by the authors

The extension of wage and housing subsidizing systems and the support of various training programs are the most important governmental measures to reduce labor shortage, by the opinion of the interviewed HR managers.

5. CONCLUSIONS

The results of the research on labor market situation and labor shortage in Hungary, Czech Republic, Romania, Serbia, Slovakia and Austria conducted in 2019 on the sample of 797 HR managers who filled out the on-line questionnaires for their company show that the analyzed organizations at organizational level face with medium level (6-20%) of employee turnover. The positions of manual workers and engineers are the hardest to fill in. The average time period needed to fill a vacancy in the analyzed six countries is 9,3 weeks. The main causes of labor shortage for higher educated people are the competition between the employers and the lack of skilled labor. For salesperson these are the competition between the employers and the very low wages. The main causes of labor shortage for administrative staff are the very low wages and the lack of skilled labor, while for the blue-collar workers these are the very low wages, the lack of skilled labor and the competition between the employers. Among the organizational tools applied to improve retention the most effective are competitive salaries and efficient performance management systems, while among the governmental measures to solve labor shortage the most effective are wage subsidizing and housing subsidizing systems and the support of various training programs. The obtained results may be a useful input for the formulation of human resource management programs in the organizations facing with labor market shortage in CEE region.

The topic of labor shortage in Central and Eastern Europe, as a complex issue can be researched and explored from many different aspects. Consequently, there are several research limitations that need to be mentioned here. Data collection in six countries is a rather complex task. The different number of responses in each analyzed country is the result of the different opportunities and data collection experiences of research partners. Since the research was basically conducted as a benchmarking (Evans, 1977), the responses collected in the analyzed countries are not representative. We plan to extend the data analysis, and conduct multivariate statistical analyses, too.

Since we have completed the primary analysis of the research data, in the spring of 2020 the global Corona virus epidemic has appeared, and created a significantly different labor market situation. Now, in April of 2020, it seems that in Central and Eastern Europe the biggest labor market challenge is not the labor shortage, but the economic paralysis, unemployment, job shortages, and sheltering at home. The economic and social crisis and unemployment have reappeared in the six countries studied, just like at other parts of the world. This situation makes it more important to continue the research on the labor market situation and its effects on employees and employers, too.

REFERENCES

Brixiova, Z., Li, W. & Yousef, T. (2009). Skill shortages and labor market outcomes in Central Europe. Economic Systems, 33 (1.), 45–59.

Brunello, G., & Wruuck, P. (2019). Skill shortages and skill mismatch in Europe: A review of the literature. IZA-Institute of Labour Economics, 12346, 4-34

Chen, M. F., Lin, C. P. & Lien, G. Y. (2011). Modeling job stress as a mediating role in predicting turnover intention. The Service Industries Journal, 31 (8), 1327-1345.

DigitalHungary.hu (2019). Új korszakba lépett be a munkaerőpiac. https://www.digitalhungary.hu/e-volution/uj-korszakba-lepett-be-a-munkaeropiac/4410/. (Accessed: 29/11/2019)

Héder, M., Szabó, S., & Dajnoki, K. (2018). Effect of labour market changes on HR functions. Anali Ekonomskog fakulteta u Subotici, (39), 123-138.

Huselid, M. A. (1995). The impact of human resource management practices on turnover, productivity, and corporate financial performance. Academy of Management Journal, 38 (3), 635-672.

Maruszewska, K., & Przybylska, J. (2009). International Migration as a Factor of Labour Market Competitiveness. Stimulating of Competitiveness of Labour Market, Economics & Competition Policy, (15), 32-46.

McGrath,J. (2019). Analysis of shortage and surplus occupations based on national and Eurostat Labour Force Survey data Shortages and surpluses 2019. Brussels: European Commission Directorate-General for Employment Social Affairs and Inclusion Directorate.

Moravcikova, K., & Balaz, V. (2020). Active labour market policies, the business cycle and labour force shortages. Economic and Social Development: Book of Proceedings, 14-27.

Poór, J., Slavić, A., Katalin, T., Berber, N., Kerekes, K., & Karoliny, Z. (2020). Benchmarking in human resource management in focus of Central and Eastern Europe in the light of CRANET research. Strategic Management, 25(1), 21-28.

Surji, K.M. (2013). The Negative Effect and Consequences of Employee Turnover and Retention on the Organization and its Staff. European Journal of Business and Management, 5 (25), 52-65.

Szabó-Bálint, B. (2019). Organizational career development versus employees' career needs in Hungary. Strategic Management, 24(4), 3-12.

Tradingeconomics (2020). www.tradingeconomics.com (Accessed: 2020.01.05.)

Zhang, Y.J. (2016). A Review of Employee Turnover Influence Factor and Countermeasure. Journal of Human Resource and Sustainability Studies, 4, 85-91.