

# TRENDS AND TENDENCIES IN LABOR MARKETS OF V4 COUNTRIES - PAST PRESENT AND FUTURE

Zsuzsanna Szeiner – Imrich Antalík – Péter Karácsony – Norbert Gyurián  
– Ádám Kovács – Dávid Szabó – József Poór

---

## Abstract

The global pandemic has affected various actors in the labor market in many different ways. Certain sectors were able to benefit from the situation without significant disruption. Other sectors have experienced significant declines. In our article, we describe the most important trends that influence the labor markets. Among others, we address automation, digitization, robotization, fluctuation and labor retention, labor shortages, migration, atypical employment opportunities and as a new challenge, Covid 19. The labor market in the region has been shaped and characterized by several important and decisive changes. The examples are technological changes, or the emergence of atypical forms of work. Labor market issues, fluctuation and labor retention are important as well in terms of costs. Employment peaked in the pre-Covid period, eased during the pandemics, but the problems caused by labor shortages in certain sectors are now increasing again. In the period of 2020-2021, the employers of the region faced quite a lot of challenges, but at the same time - perhaps learning from the experience of the crisis in 2008 - they tried to maintain the number of human resources. Typically, alternative solutions have been used in the choice of working methods. The aim of the paper is to summarize the tendencies of the V4's labor market and the trends that have effect it.

**Key words:** labor market, labor market indicators, coronavirus, trends, V4 countries

**JEL Code:** J01, J21, J23

---

## Introduction

In recent years, the labor market has changed significantly at global, regional and local levels. The indicated transformations are examined and analyzed from a wide variety of perspectives by various professionals. Based on different sources, it can be stated that, as a result of technological development in the last 250 years, the output of production as well as incomes have increased significantly (Graetz, 2019). However, it can also be stated that the unfolding 4.0 and 5.0 industrial revolutions (digitization, robotics and artificial intelligence) significantly

threaten the job positions of monotonous and mechanical workers. Most analysts think that „within a decade or two, two billion people will become economically redundant’ unless our world 's growth is disrupted, although others point out that the aforementioned transition would produce a lot of new employment forms (Harari, 2018, 29). Before the emergence of the pandemic, there were 5.7 billion working age people in the world, nearly 60 percent of whom (3.4 billion people) were working (ILO, 2020a).

The described situation was triggered by the Covid-19 global pandemic in early 2020. What followed next was significantly different from previous world crises (e.g. 2008 or 1929-33) in many respects e.g. global lockdown; certain sectors were able to benefit from the pandemic, the situation did not cause them significant financial disruption, etc. (Lazáry, 2020). At the same time, the comparison shows similarities in many respects (e.g. employment opportunities for the low-skilled workers have become very difficult, income inequalities have continued to rise, etc.) (Paget, 2021). According to studies by the International Labor Organization, 255 million (7.2%) of the 3.3 billion people employed lost their jobs during the pandemic, and 7.7% of the overall working hours have been lost so far (ILO, 2020b).

The pandemic has had a significant impact on the socio-economic development of our world. It could not stop the technological trends mentioned earlier, and even accelerated them in some areas. In this context, it is worth summarizing the four main forecasts of the Swiss World Economic Forum, which is celebrating its 51st anniversary this year. (WEF, 2021:5):

- „The pace of technology adoption is expected to remain unabated and may accelerate in some areas.
- Automation, in tandem with the COVID-19 recession, is creating a ‘double-disruption’ scenario for workers.
- Skills gaps continue to be high as in demand skills across jobs change in the next five years.
- Despite the current economic downturn, the large majority of employers recognize the value of human capital investment”.

It is important to note that many countries have experienced significant labor shortages around the world in the previous years for a variety of reasons. The reasons are explained by several factors (Strack et al., 2014). One of them is the decline of the working age population; the birth rates in the developed West as well as in Japan have fallen significantly in recent years. This trend will probably be typical as well as in China and India in the coming years. Due to work mobility, this problem mainly affects developing and transition countries. Mostly high-

skilled workers leave these countries. Based on various sources, we can mention several reasons that have contributed to this situation (Leitzing, 2021; Horowitz, 2021):

- The Covid-19 crisis has made some jobs dangerous, or affected by overwork and overload (e.g. healthcare). Because of this, many people prefer to leave these jobs.
- Some relatively high subsidies provided during the pandemic (e.g., wage supplements) can also slow down the return to the labor market.
- It is also an important experience that, despite wage increases, it is not easy to find new labor in many sectors. The wellbeing and well work attitude is starting to gain ground on employers. They are beginning to realize that wages are not enough to get and retain the workforce (Rosenbaum, 2021).
- For many employers, work has become more flexible. The home office, originally used in a state of emergency, highlighted significant benefits for both employees and employers.
- Due to the complete cessation of tourism and hospitality, the workers have moved to other occupations and many have not returned to their former jobs after the reopening.

In our study, we describe the approach by which we examine the labor market and its characteristics. Next, we present the general and labor market characteristics of the four V4 countries examined. Finally, we make some general suggestions.

## **1 Main labor market trends in the past decade**

In the following we summarize the main trends that have influenced the development and evolution of labor markets:

- One of the defining trends of the last decade is digitization. There is a large-scale IT and technology explosion today that can have unpredictable consequences for our lives and we cannot even imagine how this process will develop and what hitherto unknown boundaries we will cross tomorrow (Harari, 2018). Full automation in some professions and possible partial automation in others are expected to result in the cessation of a significant proportion of currently human work tasks. A 2018 study by the McKinsey Global Institute predicts that 45 percent of jobs will disappear during the next decade (Chuni, Manyika and Miremadi, 2015).
- The issue of fluctuation and labor retention has been at the heart of corporate employment policy over the last decade. Retention is a voluntary step by an organization to create an environment that will help retain existing employees or attract new ones in the long run. According to Samuel and Chipunza (2009), the primary goal of retention is finding ways

to prevent employees from leaving the organization, as this can have a negative impact on the productivity and profitability of organizations. Humphrey, Morgenson, and Mannor (2009) also share the view that the main goal within retention is to achieve organizational benefits. The focus of their retention concept has been lying on the adequacy of working hours. High fluctuation levels often impose significant costs on organizations. The increase in the number of jobseekers during the economic boom cannot catch up with the growth rate of vacancies. The costs associated with fluctuations (e.g. resources spent on training, and perhaps most importantly, the costs of losing human capital) place a heavy burden on organizations (Grissom, Crotty and Keiser, 2012).

- Although the corporate sector was affected by labor retention and fluctuation issues, labor shortages also had to be addressed. As indicated earlier, labor shortages have become a common phenomenon in both domestic and international labor markets and pose increasing challenges on corporate leaders. However, the manifestations, causes, and consequences of labor shortages often differ in geographical or sectoral comparisons. In recent years, especially since labor shortages became more widespread, more empirical research has been conducted on the topic, with an emphasis on exploring the nature of labor shortages and related problems (Kureková, 2013). Labor shortages can occur in the labor market for several reasons. One such reason is the declining working age population in a given country. Emigration or employment abroad also exacerbates the labor market situation of a country with an already declining population (Roóz, 2010).

- Another central phenomenon of the labor market is migration, which today shows two distinct manifestations. One is labor mobility, which is also defined as „brain drain”, (the migration of professionals from lower income countries to higher income countries). The other is illegal mass immigration from the Middle East and third world countries to countries that provide high social benefits. An important difference between the two types is that while the first type has a positive impact on labor markets (in both higher and lower income countries), the second one has no impact on the labor market, but imposes a significant burden on host countries, that are already facing serious problems (aging population, increasing number of pensioners, significant decrease in the working age population, soaring growth in the number of people entitled to social benefits due to the migration wave begun in 2015). The cultural integration of such migrants also fails, culminating in the deterioration of public security. This requires fair debates on the pros and cons of migration and the general demographic problems of the Visegrad Four and other European countries, as dependency rates continue to rise (Steenland, 2018).

- Labor market conditions, resp. social needs and changes in the external environment have turned the attention to atypical employment opportunities. In the context of the current crisis, it is worth thinking further about the issue of labor retention for the present and the future. Organizations should lighten the burden and keep the workload under review, i.e. they should use less regulation, and introduced less strict rules. Furthermore, the importance of communication is coming to the fore even more. Communication should be regular, empathic and transparent. Colleagues should be kept up to date within the organization – there needs to be continuous feedback from both sides. The proliferation of mentor-type leaders is expected in the future (Csaposs, 2021).

## 2 General and labor market characteristics of the V4 countries

Important indicators of the labor market include the development of employment data. One of the most important figures in this regard is the number of employees. In the case of the examined countries, it can be stated that the number of employed people aged 15 and over has increased significantly compared to 2010. It should be mentioned here, of course, that employment data in the region peaked before the outbreak of the 2008 global financial and economic crisis, but by 2020 the employment data had exceeded the outbreak of before the crisis period (see data in Table 1).

**Tab. 1 Changes in the number of employed (million persons) and change (%) in the V4 countries in the period 2008-2020**

Country	Number of employed (million persons)			Change (%)	
	2008	2010	2020	2020/2008	2020/2010
Czechia	5,003	4,885	5,235	4,6%	7,2%
Hungary	3,848	3,732	4,460	15,9%	19,5%
Poland	15,799	15,473	16,441	4,1%	6,3%
Slovakia	2,434	2,318	2,531	4,0%	9,2%

Source: OECD, 2021

Compared to the previous peak of 2008, the number of employees has increased the most in Hungary, by almost 16%, which means approximately 612,000 new jobs. The number of employees has also increased in the other V4 countries, by about 4-5% compared to 2008. 642,000 new jobs were created in Poland, 232,000 new jobs in the Czech Republic and 97,000 new jobs in Slovakia. The labor market situation has been significantly affected in recent years by employment-related migration (inward and outward). The data in Table 2 clearly show that before and during the Covid crisis, the number of immigrants was higher than that of emigrants.

**Tab. 2 Development of migration in the V4 countries**

Country	2019		2020-2021	
	Immigration (person)	Migration (person)	Immigration (person)	Migration (person)
Czechia	600,000	500,000	650,000	250,000
Poland	2,000,000	2,500,000	1,800,000	1,420,000
Hungary	78,000	339,000	50,000	300,000
Slovakia	60,000	250,000	65,000	300,000

Source: Estimates based on various sources

## 2.1 Unemployment trends

The development of the number of registered unemployed between 2010 and 2020 shows similar trends in the V4 countries. Following the outbreak of the financial and economic crisis in 2008, the number of unemployed increased. From 2013 onwards, the effects of a gradual recovery from the crisis could already be felt. The number of unemployed among the economically active population decreased by about 68% in Poland, by 65% in the Czech Republic, by about 59% in Hungary, and by 54% in Slovakia.

The shock caused by the coronavirus pandemic in the labor market in 2020 reversed the unemployment rate of the countries in the region again. The highest unemployment rate (14.4%) was in Slovakia at the beginning of the studied period (in 2010), then dropped to 5.8% by 2019 and returned to 8% due to the emergence of the pandemic. The year 2019 was already characterized by very low unemployment rates (e.g. 2% in the Czech Republic), which can be defined as a labor shortage situation.

## 2.2 Labor market effects of the coronavirus

The coronavirus pandemic has so far had an unpredictable impact on society and the economy worldwide. Measures to prevent the spread of the virus, such as the introduction of border closures, restrictions on traffic, reductions in public transport capacity, mandatory quarantine on entry, restrictions on mass events and greater personal distance, have posed significant challenges for individuals and organizations alike (Sipos et al., 2021).

Unlike the previous (2008-09) financial crisis, the current crisis does not affect all economic sectors in the same way. There are winners and losers alike. The year 2020 has resulted in significant profit growth for tech and IT companies worldwide. At the same time, border restrictions and anti-virus measures have had an immediate and a lasting negative impact on tourism and hospitality. The coronavirus pandemic emerged in late February - early March

2020 and has had a serious impact on the labor market, not only in terms of the unemployment rate, but also in other employment aspects.

The unemployment rate has been between 0.4 and 1.3% recently, higher than in the period before the outbreak of the coronavirus. In the case of Hungary, which has the highest growth (1.6%), the smallest remaining change is still present (0.4%), while in the case of the Czech Republic, the figures moving in unfavorable direction have not decreased so far (about 1.3% higher today than before the pandemic).

## **Conclusion**

The last decade has put the labor markets of the V4 countries on a kind of a “roller coaster”. Following the financial and economic crisis of 2008, the period of recovery from the shock was followed by another shock, caused by the coronavirus pandemic. The labor market indicators of these countries, - affected by similar demographic problems (aging population, migration effects, etc.) – reflect that regional decision-makers have sought to activate the working-age population and expand the workforce. This is also a key issue for the sustainable functioning of society and economic performance. The activity rate, therefore, increased in all countries studied. With regard to the gender approach to economic activity, it should be noted that the activity of female workers still lags behind that of men. The number of employees in the region has increased in the last decade (most significantly in Hungary and in Poland): 1.5 million more people work in the region than a decade ago. The number of unemployed has decreased significantly in all V4 countries compared to what was experienced at the beginning of the decade, but has risen somewhat again following the outbreak of the coronavirus pandemic.

The labor market of the region has been shaped by several important and decisive changes and trends. The employment rates peaked in the pre-pandemic period, decreased during the pandemic, but today the problems caused by labor shortages in certain sectors are increasing again. In the case of the CEE region, the most important phenomenon of the last two decades, generating significant socio-economic impacts and changes, has been labor migration (both internal and external). At the same time, there are still significant regional disparities within countries in terms of the labor market. During the period of 2020-2021, the employers of the region faced quite a lot of challenges, and - perhaps learning from the experience of the crisis in 2008 - tried to maintain the number of employees. Typically, alternative solutions have been used in the choice of working methods, on the one hand to minimize physical contact (e.g. home office) and on the other hand due to lost turnover and revenue (e.g. reduced working hours).

However, in some sectors there has been an increase in the number of employees and revenues (e.g. in Slovakia IT and tech companies and the public sector). The latest data report a recovery in all industries. It can also be said that digitization of the economic sectors has accelerated significantly as a result of the coronavirus situation.

## **Acknowledgement**

The Authors gratefully acknowledge the contribution of the Scientific Grant Agency of the Slovak Republic under the grant 1/0688/21.

## **References**

- Bah, M. E., Brada, C. J. (2014). Labor Markets in the Transition Economies: An Overview. *The European Journal of Comparative Economics*, 11(1), 3-53.
- Barr, N., Harbison, W. W. (1994). Overview, hopes, tears and transformation. In Barr, N. (Ed.) *Labor markets and social policy in Central and Eastern Europe*. New York: Oxford University Press. 1-29.
- Bednarzik, W. R., Sorrentino, C. (2012). *30 years of the OECD employment outlook*. Paris: OECD.
- Csaposs, N. (2021). New challenges of HR: maintaining and rebuilding employee loyalty. 2021. *Labor market trends - 2021. A year of new interpretation of work*. (In Hungarian) Budapest: PP-conference. <https://ppkonferencia.hu/konferenciakozpont/munkaero-piaci-trendek-2021/> (Accessed: 6 May, 2021).
- Graetz, G. (2019). *Labor Demand in the Past, Present, and Future*. Luxembourg: Publications Office of the European Union.
- Grissom, J. A., Crotty, N. J., Keiser, L. (2012). *Does My Boss's Gender Matter? Explaining Job Satisfaction and Employee Turnover in the Public Sector*. In *Journal of Public Administration Research and Theory*, 22(4), 649–673.
- Harari, N. Y. (2018). *21 Lessons for the 21st century*. London: Johnatan Cape.
- HCSO (2018). *Main indicators of the Visegrád Group countries*. Budapest: Hungarian Central Statistical Office (HCSO).
- Horowitz, J. (2021). Millions of jobs and a shortage of applicants. Welcome to the new economy. <https://cnn.com> (Accessed: 15 September, 2021).



- Humphrey, S. E., Morgenson, F. P., Mannor, M. J. (2009). Developing a Theory of the Strategic Core of Teams: A Role Composition Model of Team Performance, *Journal of Applied Psychology*, 94, 48–61.
- Chuni, M., Manyika, J. & Miremadi, M. (2015). *Four fundamentals of workplace automation*. McKinsey and Company. (Accessed 27 August 2021).
- ILO (2020a). *World Employment and Social Outlook Trends 2020*. Geneva: International Labour Organization (ILO).
- ILO (2020b). International Labour Organization (ILO): *ILO Monitor: COVID-19 and the World of Work. Third Edition. Updated Estimates and Analysis, 2020a*. Online: [http://oit.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/briefingnote/wcms\\_743146.pdf](http://oit.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/briefingnote/wcms_743146.pdf) (Accessed: 30 July 2021).
- Kureková, L. (2013). Zamestnanosť a pracovná sila. [http://alianciapas.sk/wpcontent/uploads/2013/03/sspp\\_2010\\_01a\\_zamestnanost.pdf](http://alianciapas.sk/wpcontent/uploads/2013/03/sspp_2010_01a_zamestnanost.pdf). (Accessed: May 5, 2021).
- Lakner, Ch. (2020). *How Much Does Reducing Inequality Matter for Global Poverty?* working paper. Washington: World Bank Group.
- Lazáry, J. (2020). Acute effects of the COVID-19 pandemic on mental status in the first phase of the epidemic”, *Neuropsychopharmacologia Hungarica*, 22(2), 172-177.
- Lehmann, H. & Muravyev, H. (2011). Labor Markets and Labor Market Institutions in Transition *Economies IZA DP*, 5905, 1-24.
- Leitzing, J. (2021). Solving the mystery of the ‘worker shortage. <https://www.weforum.org/agenda/2021/05/solving-the-mystery-of-the-worker-shortage/> (Accessed: 15 September, 2021).
- Lewis, P.C. (2005). *How the East Was Won*. New York: Palgrave.
- OECD (2021). Stats: <https://stats.oecd.org/index.aspx?queryid=35253> (accessed 12 August 2021)
- Paget, Z.D. (2021). *COVID-19 and its impact on society*. <https://www.openaccessgovernment.org/covid-19-and-its-impact-on-society/110928/> (Accessed: 26 June 2021).
- Poor, J., Karoliny, Z., Alas, R., Vatchkova, E. K. (2011). Comparative international human resource management (CIHRM) in the light of the Cranet Regional Research Survey in Transitional Economies. *Employee Relations*, 33(4), 428-443.
- Roóz, J. (2010). *Human and labour market management*. (In Hungarian) Budapest: Budapest Economic School.

Rosenbaum, E. (2021). Pandemic unemployment benefits are ending, but for big companies, labor shortage worries aren't. <https://www.cnbc.com/2021/09/01/unemployment-benefits-are-ending-job-market-hiring-worries-arent.html> (Accessed: 15 September, 2021).

Samuel, O. M., Chipunza, C. (2009). Employee retention and turnover: Using motivational variables as a panacea. *African Journal of Business Management*. 3 (8), 410-415.

Sipos, N., Jarjabka, A., Kuráth, G., Venczel-Szakó, T. (2021). Higher education in the grip of COVID-19: 10 years in 10 days? Quick report on the effects of the digital switchover at work at the University of Pécs. (In Hungarian) *Civic Review*, Special Issue, 1, 71-90.

Steenland, R. (2018). *The Visegrad Four's Migration Dilemma: Reason versus Populism*. Warszawa: Centre for International Relations.

Strack, R., Baier, I., Marchingo, M. & Sharda, S. (2014). *The Global workforce crisis \$ 10 trillion at risk*. Boston: Boston Consulting Group.

Szabó Sz. (2020). *Transition to Industry 4.0 in the Visegrád Countries*. Luxembourg: Publications Office of the European Union.

WEF (2020). *The Future of Jobs Report 2020*. Geneva: World Economic Forum (WEF).

Wolf, M. (2021). The global labor shortage. How COVID-19 has changed the labor market. <https://www2.deloitte.com/x/en/insights/economy/global-labor-shortage.html> (Accessed: 15 September, 2021)

## Contact

Zsuzsanna Szeiner  
J. Selye University  
Bratislavská cesta 3322,  
SK 94501 Komárno  
szeinerzs@uj.sk

Norbert Gyurián  
J. Selye University  
Bratislavská cesta 3322,  
SK 94501 Komárno  
gyuriann@uj.sk

József Poór  
J. Selye University  
Bratislavská cesta 3322,  
SK 94501 Komárno  
poorjf@uj.sk

Imrich Antalík  
J. Selye University  
Bratislavská cesta 3322,  
SK 94501 Komárno  
antaliki@uj.sk

Ádám Kovács  
J. Selye University  
Bratislavská cesta 3322,  
SK 94501 Komárno  
adamkovacs0823@gmail.com

Péter Karácsony  
J. Selye University  
Bratislavská cesta 3322,  
SK 94501 Komárno  
karacsonyp@uj.sk

Dávid Szabó  
J. Selye University  
Bratislavská cesta 3322,  
SK 94501 Komárno  
szabod@uj.sk