

# **Spatial Interdependencies Between Active Labor Market Policies and Labor Market Outcomes: The Case Study of Czechia**

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*A draft version of the article (extended abstract). The article will be uploaded in June.*

## **Introduction**

Socioeconomic phenomena naturally produce spatial patterns (Coe, Kelly, Yeung 2019), and unemployment is of course no exception. Unemployment is a phenomenon that creates clusters of above-average and below-average values in space (Netrdová, Nosek 2016; Sauerová 2023). These clusters show some stability over time, even in times of economic crises (Sauerová 2023). Understanding the causes of spatial clusters of above-average values is then one of the key questions in the unemployment topic. Regular assessment of regional unemployment trends is important because high unemployment rates in the long run condition. Other related threats, such as increased social pathologies (Yang and Lester 1994). Also, unemployment feeds back into the family environment (Nichols, Mitchell, Lindner 2013), where work habits are transmitted from generation to generation. Regions that are burdened by high unemployment in the long term impose significant costs on national and regional policies (Grinevica and Rivza 2017). This issue is also relevant for Czechia, which has a long-term below-average unemployment rate compared to other European countries. However, there are above-average differences in the labour market among regions of Czechia (Eurostat 2024). The spatial patterns of unemployment at the Czech level have already received attention in the literature in recent years (Netrdová and Nosek 2016; Sauerová 2023), but not enough attention has been paid to the complex causes of these patterns in the Czech environment (the underlying factors and mechanisms acting on unemployment). In Czechia, structural and long-term unemployment is heavily concentrated in structurally affected regions, which are defined as three NUTS III regions – the Moravskoslezský Region, the Ústecký Region and the Karlovarský Region. These localities need mainly the Active Employment Policy to cope with the negative aspects of unemployment and eliminate the problem of high unemployment.

This paper examines the relationship between the resources spent on active employment policy and labour market outcomes in Czechia. It attempts to assess whether the resources spent on active employment policy have an impact on the unemployment rate with a special focus on structurally affected regions of Czechia. Furthermore, the paper aims to identify other factors that influence the unemployment rate in Czechia in general and specifically in structurally affected regions. The paper addresses the problem in a fully quantitative perspective but presents further possibilities for follow-up qualitative research. The two main research questions are: Are unemployment rates and the funding provided for active employment policy related? Does the investment have a significant positive impact on reducing unemployment? What other factors affect the unemployment rate?

## **Data and methodology**

The research focuses on analysing unemployment trends and financial allocations at the level of municipalities with extended power (MEPs), which are detailed regional units with an average population of 51,000. The analysis covered unemployment data provided by the Ministry of Labour and Social Affairs from 2014 to 2023.

The unemployment rate is based on a calculation used by the Ministry of Labour and Social Affairs. It is calculated as the number of jobseekers in a unit divided by the population aged 15-64 of that unit. Data on the number of job seekers and population in the months from 2014 to 2023 was provided by the Ministry of Labour and Social Affairs. This data was set in the territorial structure of municipalities. Each municipality was assigned to a municipality with extended power according to the Register of Census Districts and Buildings (2023). Subsequently, the data was aggregated to the level of municipalities with extended power. The annual data on the number of job seekers was calculated from monthly data as an average, and due to the unavailability of data for January and February 2014, the year 2014 was calculated on the basis of 10 months only. The unemployment rate was then calculated as the number of job seekers divided by population aged 15-64. The annual unemployment rate for each MEP region and also its relative position to the national average were calculated, which allowed us to compare the unemployment rate of the MEP region with the national average. Subsequently, the change in the relative position of each MEP region was calculated, comparing the data for 2023 against 2014. The result is a map visualisation showing for each MEP region how its unemployment rate has changed over the period under review.

Data on the funding provided were obtained from the Outcome evaluation of the benefits of European funds at the regional level by the Ministry for Regional Development of the Czech Republic. The funds of the operational programme Employment and operational programme Prague – Growth Pole of the Czech Republic were considered because according to the evaluation document, employment is funded through the two above-mentioned operational programmes. Only projects with the status of ‘completed’ and ‘paid’ were addressed, because only those were already funded at the time of performing analyses. The research selected funding with an impact on unemployment in two definitions. The broad definition corresponds to the objectives addressed in the document ‘Outcome Thematic Evaluation of the Partnership Agreement 2014-2020’, but on closer examination, it can be seen that in addition to the labour market, it also addresses poverty and social inclusion. For this reason, a narrow definition has been used to reflect directly the thematic objectives dealing with the labour market. Thus, only employment-targeted thematic objectives were included in the narrow definition, thereby better following the purpose of the analyses. The Active Employment Policy was supported by EU funds in 2014-2020. Spatial quantitative methods are applied to uncover the relationship between the funds spent and the evolution of the unemployment rate. Specifically, the relationship is measured using data for the unemployment rate and the amount of funding provided for employment policy, namely the data for active employment policy from the European Social Fund for the period 2014-2020. In order to reveal the causal relationship, cross-regional sequencing is used, which allows to better separate the actual impact of the selected phenomenon on the outcome, and the impact that spontaneous change has. Furthermore, the spatial regression method is used in order to reveal other variables (population structure, geographical location, economic structure and condition of the region) that affect the value of unemployment in the regions.

### **Addressing Labour Market Inequalities**

The active employment policy generally targets vulnerable social groups in particular, but also provides opportunities to create new jobs in structurally affected regions. While Czechia maintains a relatively low overall unemployment rate (ranging from 3.5% to 7.4% during the study period) (*Figure 1*), significant structural challenges persist (*Figure 2*).

Figure 1 – Unemployment rate in Czechia (2014–2023)

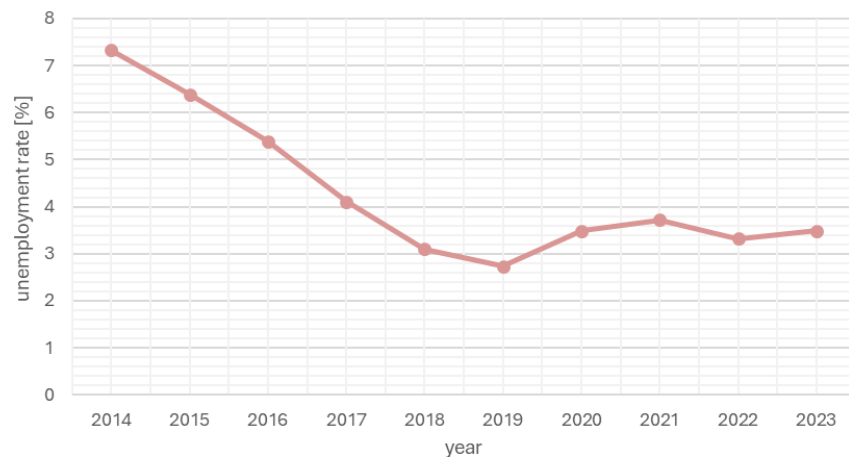
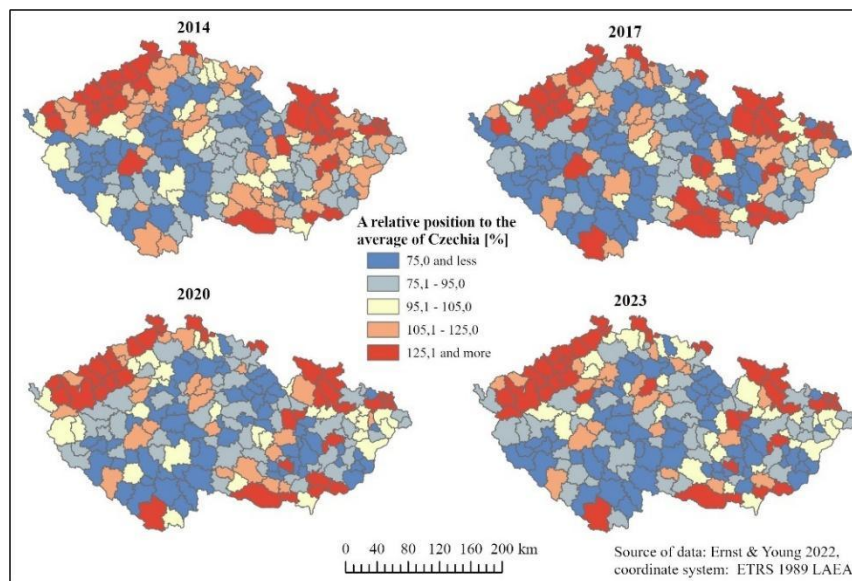


Figure 2 – Unemployment rate in Czechia in selected years



In terms of spatial patterns, we can see the stability of spatial patterns over time (*Figure 3*). This stability can be seen in terms of the relative position of the unit to the national average as documented also by Netrdová and Nosek (2016). It can be seen that the dark red areas, which represent places with higher-than-average unemployment, show significant stability over time. Even though the unemployment rate has been decreasing on average due to economic performance, the economically underperforming MEP have still experienced elevated unemployment rates relative to other municipalities with extended power, similarly to Eurostat (2024).

A very specific position in the labour market is held by the so-called coal regions in the northwest of Czechia (the Ústí nad Labem and the Karlovy Vary regions) and in the northeast (Moravskoslezský region). These regions are undergoing a transformation of their economic base, with mining activities gradually being phased out. However, many people are still expected to be laid off in the coming years, which will likely exacerbate labour market issues. Structural unemployment is therefore typical in these structurally affected regions, as there is a persistent mismatch between labour demand and supply. Moreover, the figures clearly show that these regions have consistently above-average unemployment rates. According to the EU's

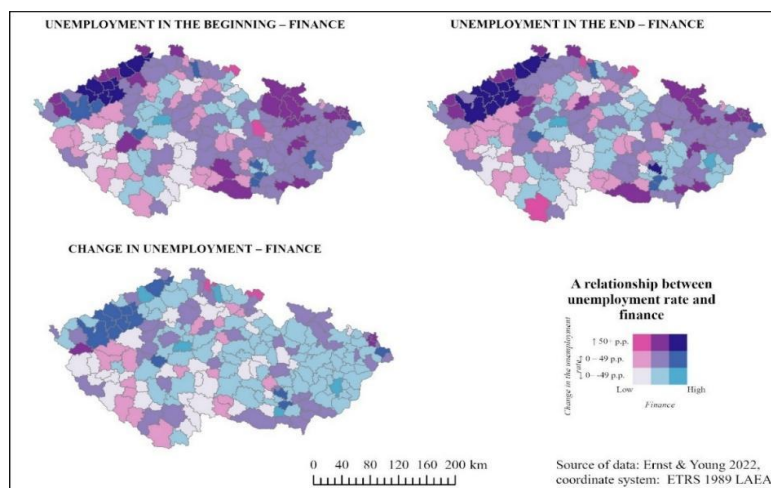
9th Cohesion Report, these regions are also the closest to falling into what is known as a ‘development trap’. In the current programming period 2021–2027, specific support has been allocated from the Just Transition Fund. The aim is to enable a smooth transition and transformation of these regions, including addressing labour market issues. However, the results will only be measurable over time. Another specific group of regions in terms of unemployment and the labour market are the economically and socially vulnerable areas in Czechia. Unlike the coal regions, these areas do not face significant structural problems but instead suffer from long-term selective migration, a weakening of human capital, and generally lower economic activity (with a lack of businesses and employers). These are typical inner and outer peripheries in Czechia. In the Regional Development Strategy of the Czech Republic, these regions are specifically labelled, with recommendations that they should receive targeted development support.

### Interdependencies between Active Labor Market Policies and Labor Market Outcomes

The spatial relationship between active labour market policies and labour market outcomes can be seen in *Figure 4*. A fragmented structure can be noticed and also a cross-regional sequence analysis showed that there is no direct relationship between active employment policy and labour market outcomes. In some structurally affected regions, unemployment even worsened despite high funding allocations.

It cannot be said that finance is primarily targeted to areas with higher-than-average unemployment rates. This relationship remained unchanged both at the beginning and at the end of the programming period. *Figure 3* shows that there are spatial clusters of the MEP regions to which a large amount of funding has gone and yet their position has deteriorated. It is also visible, how finance and unemployment rates are spatially related. The visualization categorizes the units into a total of 9 categories in terms of the change in the unemployment rate through interest and the amount of finance provided. The darker the pink colour, the more the unemployment rate in the unit has worsened and the darker the blue colour, the more finance has been provided to the unit. It can be seen that in the structurally affected regions of Czechia (North-West - Ústí nad Labem Region and North-East - Moravian-Silesian Region) they receive a higher amount of funding, yet their unemployment rate has worsened. Beyond that, however, no significant pattern is observable in the analyses.

*Figure 3 – The relationship between unemployment rate and funding*



## **Factors affecting the unemployment rate**

*The chapter will be added in the final version of the article.*

## **Conclusion and Policy Implications**

*The chapter will be added in the final version of the article.*

This article focused on the relationship between active employment policy spending and unemployment in Czechia, with a special focus on structurally affected regions. The results showed that although some regions with high unemployment rates receive significant funding, the labour market situation does not always improve. Spatial patterns of unemployment show considerable stability over time, with the coal regions in the north-west and north-east of the country remaining the most affected.

The results of this study underline the need for more targeted and comprehensive measures combining financial support with other strategies such as human capital development, promoting investment in new sectors and improving access to jobs. Future research should focus on a deeper understanding of the mechanisms that influence the effectiveness of employment policies and identify other factors that could contribute to a sustainable reduction of unemployment in the most vulnerable regions.

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