

The economic impact of the COVID-19 crisis on multiple levels – from European regions to Hungarian settlements

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In Europe, the socio-economic development that had defined earlier decades came under increasing strain in the 2020s. Long-standing pressures, such as climate change, demographic challenges, and geopolitical realignments intensified, while new shocks also emerged. Among the most significant was the COVID-19 pandemic, which had a profound impact across the entire continent. At the same time, the crisis affected countries and regions unevenly, with notable differences in its social and economic consequences. Sudden shocks and long-term pressures, which have intensified and become more frequent in recent years, have brought resilience research to the forefront of disciplines concerned with the spatial and territorial dimensions of environmental, social, and economic processes, including regional science (Cumming 2011; Csizovszky & Buzási 2023; Xanthos & Dulufakis 2023; ESPON 2025).

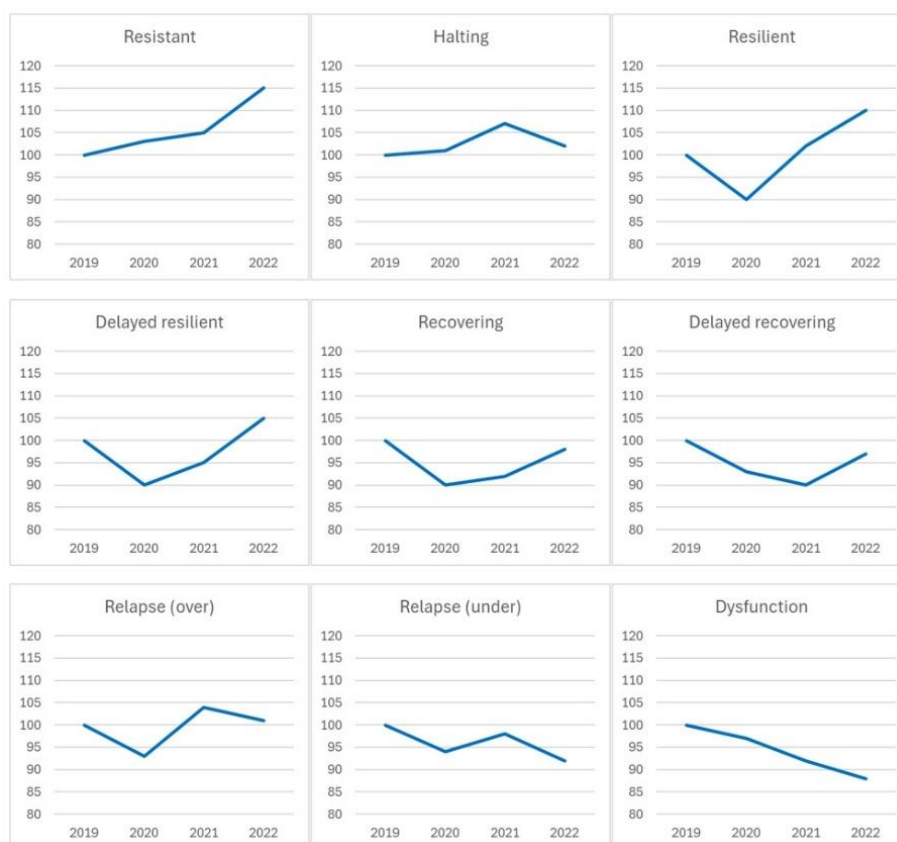
The Coronavirus pandemic and the response (including both containment and proactive measures to mitigate the negative effects of the crisis) have had a wide range of economic impacts around the world, but the extent and modalities of these have varied. The crisis has both had short-term impacts and caused structural changes and has also affected many aspects of territorial structures: the economic structure, the enterprises and the labour market. This presentation attempts to explore, based on different interpretations of the concept of resilience, how differently the trajectories of economic and labour market development of European regions have been changed as a result of the shock caused by the COVID-19 pandemic. The aim of this presentation is to highlight the territorial inequalities of the various economic impacts of the COVID-19 pandemic in multiple scales: at regional level in Europe, and at municipal and district level in Hungary.

To do this, I have collected and analysed NUTS3-level data (GDP, employment) for European regions, and settlement-level data (net sales revenue of economic organisations, SMEs, job seekers, employees by occupation) for Hungary. I have also collected literature to explore the processes that may have contributed to the economic and labour market downturn, restructure and bouncing-back. First, I have analysed the impact of the COVID-19 pandemic on economic and labour market trends based on descriptive statistics about the trends of the previous period (2015-2019), the pandemic period (2020-2021) and the following period. Second, I have examined the spatial patterns of these indicators and their changes during this period. To do this, regions were classified broadly following the resilience categories proposed by Norris, Tracey & Galea (2009) and Tóth (2012), resulting in the identification of the main types of regional resilience, while also introducing several new or modified categories. The resulting typology is based on changes in GDP and employment volumes, leading to the classification of regions into the categories presented in Figure 1. Third, I have run regression analyses (multivariate linear regression models) to examine which social, economic, infrastructural, governance, and environmental factors may have influenced the extent of the shock effect. As a first step, I have examined the distribution of each indicator, based on which I applied logarithmic and quadratic transformations to several indicators, then the correlation and multicollinearity of these transformed

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data. Finally, I compared the results of the two studies so that I could examine the economic and labour market impact of the pandemic from the European to the local level.

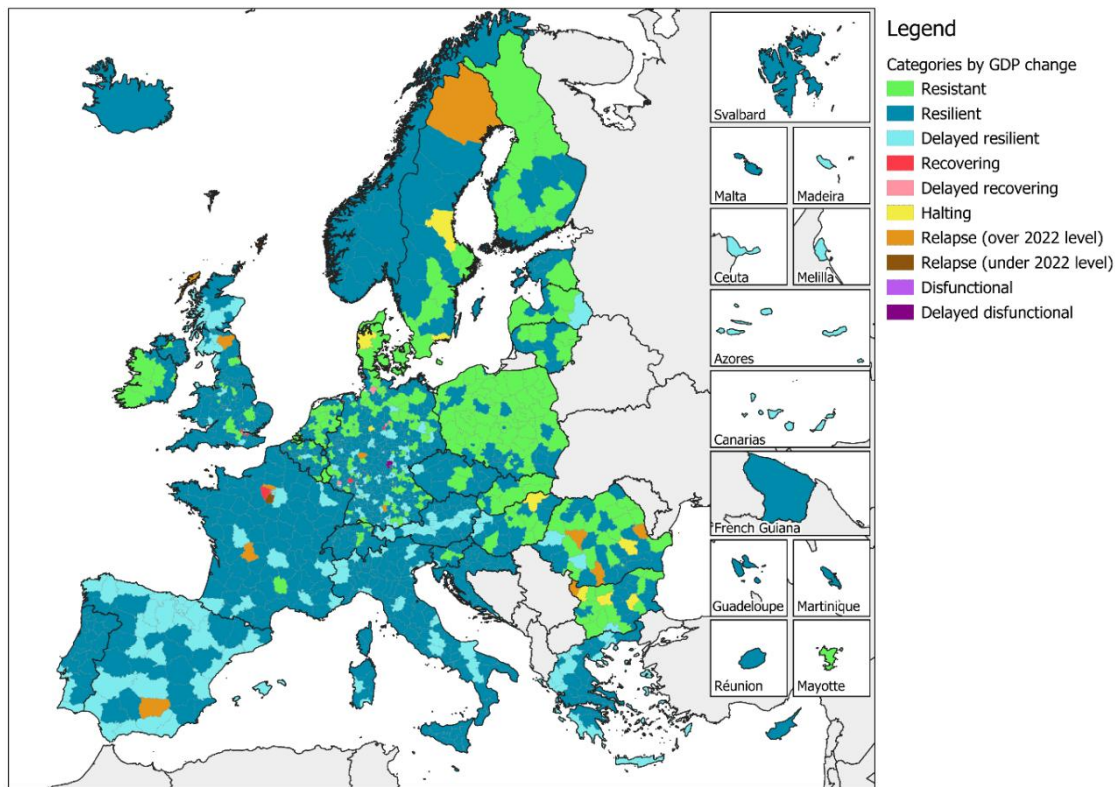
Figure 1: Categories of GDP and employment curves (own edited)



As a result, I have got that the different crisis effects showed various spatial patterns. In European context, the macroeconomic and labour market disruptions caused by the COVID-19 crisis were significant in Europe in 2020, but they were followed by a rapid rebound. Most regions in Europe were economically resilient during the COVID-19 crisis, while in some areas (Mediterranean, Alps) the economy bounced-back only up to 2022, while in others (Ireland, Poland) the economies were resistant. By contrast, classifications based on changes in employment present a far more heterogeneous pattern. The recovery in employment was also much slower, however with significant territorial inequalities (e.g. France – resistant, resilient; East-Central-Europe – dysfunctioning). Furthermore, the crisis had special effects in certain areas: youth employment, new forms of work, and the transformation of certain sectors of the tourism industry.

All in all, the crisis hit mainly the economy and labour market of tourist regions (Southern Europe, Alpine region) and East-Central Europe, in relation to the economic structure of the regions, excess mortality caused by COVID-19, and the quality of governance. Further examination of structural aspects therefore seems justified. The overall sectoral composition of GDP and employment in Europe indicates that the sectors most severely affected by the crisis were those classified under G-I (wholesale and retail trade, transport, accommodation and food service activities) and R-U (arts, entertainment and recreation; other service activities; activities of household and extra-territorial organizations and bodies). There were also minor disruptions in the manufacturing industry (sector C), both in terms of economic production and employment. By contrast, the IT sector, financial and insurance activities and the O-Q sectors (public administration, education, human health and social work) continued to expand even during the crisis in 2020.

Figure 2: European regions by resilience categories (based on GDP change between 2019-2022, own edited)



In Hungarian context, Budapest, tourist areas, and the relatively developed western border region with its manufacturing-based economy suffered the most in the short term. The economies of those regions that depended on the performance of a single large manufacturing or construction company suffered particularly badly. By 2020, even the exceptionally high employment rate had fallen and the proportion of job seekers had increased. Since then, unemployment has fallen back to pre-COVID-19 levels in many regions (and has even fallen to lower levels in the agglomeration of Budapest and in the central part of the country), but the proportion of long-term job seekers remains high in the already most problematic northeastern periphery. All in all, in the longer term, the relatively developed western border region and the least developed southwestern and eastern peripheries proved to be the most vulnerable in terms of the economy and the labour market in Hungary. Some settlements with centres of large manufacturing enterprises still haven't been able to get back on their feet economically, while in some peripheral areas, the proportion of people who have been looking for work for more than 180 days repeatedly exceeds 10%.

In Hungary, the processes were similar to those in the other parts of Europe, but the (semi-)peripheral position of the country contributed to the prolongation of the crisis. In the long term, the stagnation of the western part of the country (which region is focused on manufacturing and caught in the 'middle-income trap') is striking, while significant and growing unemployment is a challenge in the poorest peripheral areas. In contrast, the economy of the Budapest agglomeration has grown remarkably, similar to other metropolitan regions in Europe. As in the rest of Europe, the prolonged crisis in the tourism sector was also evident: among European countries, Hungary saw the slowest recovery in the number of guest nights, and among its regions, Budapest's decline and slow rebound are striking (Gólián, Szabó & Jakobi 2025).

However, Hungary was hit not only by the complex crisis caused by the COVID-19 pandemic, but also by the effects of the Russian-Ukrainian war. Similar processes took place in other East-Central European countries, but in Hungary, the effects of the inflationary crisis and economic stagnation caused by the war are still being felt until now. Although the country's real economic performance quickly rebounded after the COVID-19 crisis, it has been stagnating since 2022. Unemployment is slowly declining, although it has not yet reached pre-COVID-19 levels. The series of crises that have plagued Hungary for half a decade now pose a serious challenge to local communities. Similar processes have taken place in other parts of Europe, but their combined impact has been much more moderate. In the future, I will focus on exploring the reasons for the differences in the resilience of European countries and regions to various crises.

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