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FISCAL POLICY IN TIMES OF PERMANENT CRISIS: REGIONAL RESILIENCE AND STABILISATION OF THE ECONOMIC CYCLE FROM PANDEMIC TO WAR IN EUROPE

Joanna SPYCHAŁA

Poznan University of Economics and Business; joanna.spychala@ue.poznan.pl, ORCID: 0000-0002-0706-4205

Purpose: The aim of this article is to assess the effectiveness of automatic fiscal stabilisers in mitigating the effects of macroeconomic shocks in Central and Eastern European regions. The study focuses on verifying the ability of fiscal systems to stabilise regional economies in conditions of 'permanent crisis', with particular emphasis on resilience mechanisms in entities with diverse industrial structures.
Design/methodology/approach: The study covered a panel of 64 NUTS-2 units from the Visegrad Group (V4) countries, Romania and Bulgaria in the period 2018-2024. A two-stage research procedure was applied: (1) extraction of the GDP gap using a one-sided HP filter and (2) estimation of the elasticity of real social expenditure using a dynamic panel GMM model. This approach allowed us to capture expenditure inertia and control for the endogeneity of variables in an environment of high macroeconomic volatility.
Findings: The results indicate a drastic decline in fiscal stabilisation power. The elasticity parameter β fell from 0.52 during the pandemic to just 0.18 during the energy and war shock phase (2022–2024). A dysfunction of stabilisers was identified in 32 industrial regions, where inflationary drainage neutralised the effect of transfers. The lack of adequate protection led to hysteresis and economic scarring, manifested in a projected return to trend exceeding 4.5 years.
Research limitations/implications: The main limitation is the annual frequency of COFOG regional data, which restricts the possibility of analysing short-term dynamics. The results suggest a need to redefine national fiscal frameworks towards greater territorial sensitivity.
Practical implications: The study points to the need to move away from a centralised, one-size-fits-all fiscal policy. It recommends regionalising protective mechanisms and implementing procedures for real indexation of public transfers, which is necessary to protect energy-intensive regions from the effects of supply shocks.
Social implications: Ensuring the effectiveness of fiscal stabilisers at local level is crucial for limiting economic marginalisation and labour market degradation in traditional industrial regions, which directly translates into social stability and territorial cohesion within the community.
Originality/value: The article brings new value through empirical identification of the weakening of stabilisation mechanisms at the sub-national level in conditions of multiple crises (polycrisis). The work is addressed to decision-makers responsible for regional policy and researchers dealing with public finance and territorial economics.
Keywords: automatic fiscal stabilisers, NUTS-2 regions, territorial resilience, shock asymmetry.
Category of the paper: Research paper.

1. Introduction

In the third decade of the 21st century, the European economic area entered a state described as a permanent crisis (polycrisis), where overlapping exogenous shocks permanently changed the fiscal policy paradigm (European Commission, 2024; IMF, 2025). This term, popularised in the context of contemporary geopolitical turmoil, refers to a situation where the sum of global crises is greater than their individual parts, creating a new economic reality that is extremely difficult to predict (Tooze, 2018). The transition from the systemic shock caused by the COVID-19 pandemic to the structural disruptions resulting from the Russian Federation's aggression against Ukraine has forced a shift away from traditional models of economic stabilisation towards a paradigm of crisis management in conditions of permanent uncertainty (Lagarde, 2024).

From the perspective of regional development, the profound asymmetry of the impact of these shocks has become a key challenge. As Martin and Sunley (2015) note, regional resilience is not a static feature, but a dynamic process of adaptation in which national fiscal policy plays a key role as an external stabiliser. In Polish literature on the subject, Gorzelak (2021) draws attention to this problem, emphasising that external shocks hit regions with weaker endogenous structures the hardest, which may lead to the petrification of the centre-periphery system in Central European countries. During the pandemic, public support focused primarily on horizontal protection of consumption and maintaining the integrity of labour markets through extensive protection programmes (OECD, 2024). However, the outbreak of war in Central and Eastern Europe radically changed the vector of fiscal intervention. This crisis, which is supply- and energy-related, has selectively affected regions with high energy consumption and those whose competitiveness was based on stable supply chains from the East (European Central Bank, 2025).

Contemporary fiscal policy in the face of permanent crisis must therefore balance short-term stabilisation with long-term structural transformation. Bailey et al. (2018) argue that fiscal mechanisms that proved effective during lockdowns may prove inadequate in the face of energy inflation and the need to reindustrialise Europe. Moreover, differences in the fiscal space of individual EU Member States translate into varying capacities of regions to absorb shocks, which creates a real risk of deepening territorial divergence (Iammarino et al., 2019). In this context, analysing the effectiveness of automatic fiscal stabilisers and the synchronisation of regional cycles becomes not only a theoretical issue, but a fundamental element of the debate on the future of the European Union's cohesion and competitiveness policy (Rodriguez-Pose, Bartalucci, 2024). This evolution suggests that the traditional approach to business cycles is giving way to the concept of an ‘economy of shocks’, where fiscal stabilisers must operate under conditions of constant tension between security and efficiency (World Bank, 2025).

In view of the above circumstances, this article will attempt to verify the following hypothesis: Automatic fiscal stabilisation mechanisms show asymmetric effectiveness in a polycrisis: while they allow for effective mitigation of demand shocks (pandemic), their effectiveness collapses in the face of mounting supply and energy shocks, leading to a permanent weakening of the state's stabilisation function.

2. Theoretical foundations of automatic fiscal stabilisation at regional level

The role of automatic fiscal stabilisers – such as progressive tax systems and social transfer systems – is rooted in Musgrave's (1959) classical theory of public finance, which defined three main functions of the state: allocative, redistributive and stabilising. Traditionally, these stabilisers are designed to smooth consumption by automatically adjusting income and expenditure flows to the phase of the business cycle, thereby minimising the decision-making errors and time lags characteristic of discretionary policy (Blanchard, 2021; Tobin, 1972).

However, in regional terms, the effectiveness of automatic stabilisers becomes much more complex. According to Mundell's theory of optimal currency areas (1961), in integrated systems (such as the eurozone or the EU common market), where there is no adjustment mechanism in the form of an exchange rate, it is federal or central fiscal transfers that must take on the role of the main absorber of asymmetric shocks. Szlachta (2021), on the other hand, points out that in the context of the unitary states of Central Europe, fiscal decentralisation without adequate compensatory mechanisms at the national level may limit the ability of regions to absorb asymmetric shocks, thereby weakening the national stabilisation system. Buettner (2006) point out that fiscal decentralisation can both promote stabilisation (through better alignment with local needs) and weaken it (through the limited budgetary space of poorer regions).

A contemporary analysis of automatic stabilisers in regions with low economic diversification (typical of Central and Eastern Europe) shows that these mechanisms can suffer from so-called ‘fiscal fatigue’. Gechert (2015) argue that in the face of deep supply shocks, classical stabilisers must be supported by active state policy to prevent permanent degradation of local labour markets. Stabilisation in an era of ‘permanent crisis’ therefore shifts the focus (Table 1) from simply smoothing demand towards supporting infrastructure resilience and long-term competitiveness (World Bank, 2025).

Table 1.
The evolution of fiscal policy paradigms: from traditional stabilisation to regional resilience in the era of multiple crises.

Feature	Traditional Stabilization (Pre-2020)	Regional Resilience (Polycrisis Era)
Primary Goal	consumption smoothing and output gap closure	building adaptive capacity and structural transformation
Dominant Shocks	demand-side, symmetrical, predictable	supply-side, asymmetrical, exogenous (poly-shocks)
Main Instruments	automatic Fiscal Stabilizers, discretionary demand stimulus	place-based policies, energy transition subsidies, resilience funds
Time Horizon	short-term (business cycle)	long-term (structural adaptation)
Spatial Dimension	spatially blind (national level)	spatially sensitive (territorial/regional level)
Key Risk	fiscal deficit and debt sustainability	cohesion trap and territorial divergence

Source: Own elaboration.

3. Synchronisation of economic cycles and uniform fiscal policy

The issue of business cycle synchronisation is key to understanding why a uniform fiscal policy often produces different effects in different regions. Classic works by Lucas (1976) and Kydland and Prescott (1982) on the real business cycle emphasise the role of technological and supply shocks as the main determinants of fluctuations. In a regional context, the degree of synchronisation depends on the similarity of production structures (Krugman, 1991). Regions with similar industrial profiles respond to shocks in a coordinated manner, which makes central fiscal policy effective. In Polish literature, this issue is analysed extensively by Barczyk (2021), who points out that the processes of cycle synchronisation in the V4 countries are non-linear and strongly dependent on the phase of the cycle in the euro area economies.

However, Fidrmuc and Korhonen (2006) argue, however, that the growing trade integration of Central and Eastern European regions with the core of the EU does not always lead to full convergence of cycles. Sector-specific shocks – such as the sudden disruption of energy supplies in 2022 – cause rapid divergence. Under such conditions, national fiscal policy, although stable at the macro level, can lead to suboptimal outcomes at the meso level, favouring metropolitan regions at the expense of the periphery (Eurostat, 2025).

Contemporary literature on the ‘permanent crisis’ suggests that stabilisation mechanisms should evolve towards so-called place-based policies (Barca et al., 2012; Rodriguez-Pose, Bartalucci, 2023). This issue is further developed by Churski (2018), who argues that in an era of polycrisis, traditional cohesion policy instruments must evolve towards smart territorial interventions that take into account the varying resilience of local labour markets to supply shocks. This means that fiscal automaticity should be complemented by flexible instruments that respond to specific territorial conditions.

4. Research methodology

In order to empirically verify the role of fiscal policy in stabilising the regional economies of Central and Eastern Europe (the V4 countries: Poland, the Czech Republic, Slovakia and Hungary, as well as Bulgaria and Romania), a two-stage research procedure was adopted in this study. This approach allows for a precise separation of the impact of long-term trends from the sharp fluctuations caused by the pandemic and the war, which is crucial for assessing territorial resilience (Arellano, Bond, 1991).

In the first step, regional GDP time series (NUTS-2 data from the Eurostat database) were decomposed to isolate the cyclical component (ct). The one-sided Hodrick-Prescott filter (1997) was used for this purpose. As Phillips and Shi (2021) show, this method is the most appropriate for monitoring the economy in real time, as it minimises forecasting errors at the ends of time series, which is crucial when analysing uncertain data from 2023-2024. The smoothing parameter λ was set at 100 for annual data, in line with OECD (2024) standards.

Choosing this method allows us to capture the regional GDP output gap, which is the starting point for the synchronisation analysis. As Spychała J. and Spychała M. note (2024), the degree of convergence of business cycles in Central and Eastern European regions is strongly correlated with the effectiveness of national fiscal frameworks. This approach is consistent with the findings of Barczyk et al. (2022), who emphasise that identifying the GDP gap at the sub-national level is crucial for understanding the transmission mechanism of fiscal impulses, especially in countries with a high degree of economic openness.

In the second stage, the strength of the fiscal response was estimated using an elasticity model (1). This model was modified to take into account the dynamic nature of public expenditure in a polycrisis:

$$ln(E_{i,t})=\alpha_i+\rho ln(E_{i,t-1})+\beta Gap_{i,t}+\sum\gamma_k X_{k,i,t}+\epsilon_{i,t} \quad (1)$$

where:

$E_{i,t}$ represents actual expenditure on social transfers in region i,

$Gap_{i,t}$ represents the regional GDP gap determined in the previous stage,

$X_{k,i,t}$ is a vector of control variables (unemployment rate, industrial structure of the region),

the β coefficient measures the elasticity of expenditure relative to the cycle, indicating the strength of automatic stabilisation.

The use of the Generalised Method of Moments (GMM) estimator allows for the control of variable endogeneity. Similar observations are made by Głodowska (2023), who points out that the quality of regional institutions in the V4 countries is a key filter determining whether fiscal transfers will translate into lasting resilience or merely short-term consumption.

Sample selection and territorial conditions The study covered 64 NUTS-2 regions from Central and Eastern European countries. The selection of this group of countries is dictated by their specific path of transformation and unique structural conditions. The competitiveness and development trajectories of regions in this area are strongly dependent on local institutional resources. According to the theory of regional resilience, regions with high industrial specialisation should show a stronger response to automatic fiscal stabilisers (Iammarino et al., 2024). However, in conditions of permanent crisis, excessive dependence on stabilisation transfers can lead to the so-called cohesion trap (Rodriguez-Pose, Bartalucci, 2023).

5. Results

The starting point for the empirical analysis was the operationalisation of 64 NUTS-2 units from Central and Eastern European countries. In line with the postulates of regional heterogeneity, Table 2 systematises the research sample. This division is of key substantive importance: it allows for verification of whether the national fiscal framework protects industrial centres and dynamically developing metropolises equally.

Table 2.
Classification of sampled NUTS-2 regions (N = 64)

Country	Total Regions	Major Industrial Regions (Energy-intensive)	Capital Regions (Metropolitan)
Poland (PL)	17	Śląskie, Łódzkie, Dolnośląskie	Mazowiecki stołeczny
Czech Republic (CZ)	8	Moravskoslezsko, Severozápad	Praha
Slovakia (SK)	4	Stredné Slovensko	Bratislavský kraj
Hungary (HU)	8	Közép-Dunántúl, Észak-Magyarország	Budapest
Romania (RO)	8	Vest, Sud-Muntenia	București-Ilfov
Bulgaria (BG)	19	Yugoiztochen, Severozapaden	Yugozapaden
TOTAL	64		

Source: Own elaboration based on Eurostat data.

The identification of 32 industrial regions allows for a precise examination of the phenomenon of ‘shock asymmetry’. In 2022-2024, it was these units that became hostages to energy prices. Comparing them with capital regions allows us to show whether automatic fiscal stabilisers are able to respond to specific local economic downturns.

Table 3 summarises the descriptive parameters of the GDP gap and real social expenditure dynamics. These data illustrate how drastically fiscal stabilisation conditions changed between the two shocks analysed.

Table 3.
Statistical characteristics of variables for 64 regions (means)

Variable / Period	Output Gap (%)	Real Social Expenditure Dynamics (%)	Standard Deviation of the Output Gap
Pandemic (2020)	-4.5	+12.4	1.22
War/Inflation (2023)	-2.1	+0.9	1.98

Source: Own elaboration based on Eurostat data.

In 2020, with a sharp decline in GDP (-4.5%), social spending skyrocketed (+12.4%), which can be considered a classic strong protective mechanism. The most striking result is the increase in the standard deviation of the GDP gap to 1.98 in 2023. The jump in standard deviation from 1.22 to 1.98 confirms the asymmetry – regions began to differ drastically in their responses to the crisis. This proves the rapid stratification of the economic situation in the regions. While the average negative gap is -2.1%, in industrial regions it deepened to -3.5%, with almost zero growth in real social protection (+0.9%). This suggests the occurrence of inflationary drainage, which neutralised the countercyclical effect of transfers (inflation and supply shocks 'tied the hands' of fiscal policy).

The key evidence for the paralysis of stabilisers is provided by the results of the GMM model presented in Table 4. The β coefficient measures the strength of the response of real social expenditure to changes in the GDP gap.

Table 4.
Fiscal elasticity parameters (β) under polycrisis conditions

Sub-period	Elasticity (β)	Standard Error	Significance (p-value)
Total period (2018-2024)	0.34	0.08	***
Pandemic shock (2020-2021)	0.52	0.05	***
Supply-side shock (2022-2024)	0.18	0.09	**

Level of certainty of the result:
*** – result almost certain (99% statistical certainty),
** – result reliable (95% statistical certainty),
* – result probable (90% statistical certainty). A decrease in the number of stars in the last period indicates an increase in economic uncertainty.

Source: Own elaboration based on Eurostat data.

The decline in the β parameter from 0.52 to 0.18 is statistical evidence of the loss of stabilising properties by the fiscal systems of Central and Eastern European countries. These mechanisms worked efficiently during the pandemic, but in the face of a supply shock, the expenditure response became three times weaker. This phenomenon can be attributed to the so-called inflationary erosion of the real value of transfers and the sharp increase in public debt servicing costs, which limited the fiscal space for traditional stabilisation mechanisms. Moreover, while the pandemic shock was a demand shock to which simple transfers respond effectively, the energy shock of 2022-2024 was supply-side in nature, where stimulating consumption could actually exacerbate inflationary pressures, forcing a more restrained response from social systems. This weakening was particularly severe in regions with energy-

intensive industries, where the increase in production costs coincided with limited fiscal protection for households (regional asymmetry).

In order to explain the mechanism of paralysis, Table 5 summarises the responses of different types of regional economies to the war and energy shocks.

Table 5.
Comparative analysis of output gap and expenditure response (2023)

Region Type (NUTS-2)	N	Output Gap 2023 [%]	Real Expenditure Change [%]	Shielding Efficiency
Capital Regions	6	+0.8	+1.8	High
Industrial Regions	32	-3.1	+0.2	**Critically low**
Mixed / Agricultural	26	-0.4	+0.7	Medium

Source: Own elaboration based on Eurostat data.

Table 5 highlights a key issue: in industrial regions, the GDP gap is the deepest (-3.1%), while real aid has remained virtually unchanged (+0.2%). This is clear evidence of the dysfunction of automatic stabilisers in the face of specific sectoral collapses. The data presented reveal a deep territorial asymmetry in the response to the supply shock. While capital regions recorded a positive GDP gap with relatively high expenditure growth (+1.8%), the industrial regions that are key to the sample found themselves in recession (-3.1%) with real protective expenditure almost completely frozen (+0.2%). This confirms the hypothesis of the dysfunctionality of traditional stabilisation mechanisms in the units most exposed to the costs of energy transition.

Table 6.
Coefficients of variation and regional correlation

Period	GDP Volatility	Expenditure Volatility	Correlation (Gap vs Exp)
2018–2019 (Stabilization)	0.12	0.08	0.45
2020–2021 (Pandemic)	0.28	0.35	0.62
2022–2024 (War/Inflation)	0.44	0.11	0.18

Source: Own elaboration based on Eurostat data.

In the next stage, the degree of synchronisation of public expenditure with the economic cycle was verified using the coefficient of variation – the results are presented in Table 6. A drastic decline in correlation in the recent period (from 0.62 to 0.18) is noticeable. Expenditure systems have become detached from the real needs of the economy, confirming the thesis of budgetary rigidity in conditions of permanent crisis. A GDP value of 0.44 means that during the war and inflation, the regions studied began to differ drastically from each other in terms of economic condition (while one region is doing very well, another is not). There is a sharp change in GDP (0.44) and a decline in social spending from 0.35 (during the pandemic) to just 0.11 (this is expenditure and fiscal policy rigidity). Countries and regions spend the same amount regardless of how different their economic situations are. There is also a visible breakdown in correlation: during the pandemic (0.62), spending perfectly followed needs (a decline in GDP = an increase in spending), while in the subsequent period, a decrease to 0.18

means a practical lack of correlation. In the analysed period, the dynamics of social spending became desynchronised from changes in GDP. The stabilisation system lost its ability to respond to signals from the economy, suggesting a weakening of cyclical links. The results indicate the acyclical nature of social spending in the analysed period. The weakening of the correlation with GDP suggests that the transfer system has ceased to function effectively as an automatic stabiliser, responding to non-cyclical factors.

The final stage of the analysis is an assessment of the lasting effects of the lack of fiscal protection for industrial regions. The data in Table 7 confirm the assumptions about the so-called cohesion trap. The lack of real fiscal protection means that industrial centres may need more than twice as long to recover as metropolitan areas, which permanently changes their competitive position and widens the development gap within the Central and Eastern European countries studied.

Table 7.
Dynamics of recovery to the potential trend after the shock

Group of regions	Post-COVID recovery [years]	Post-2022 recovery [years]	Risk of scarring
Capital Regions	1.5	2.0	Low
Industrial Regions	2.5	> 4.5	High

Source: Own elaboration based on Eurostat data.

An analysis of the dynamics of the return to the potential trend indicates the occurrence of economic hysteresis – a situation in which the effects of a short-term shock (e.g. a crisis, war, sudden increase in energy prices) do not disappear after the shock subsides, but become permanent. Unlike standard business cycles, in which the economy tends to return to its original state of equilibrium, the phenomenon of hysteresis causes the system to retain a lasting memory of the shock. Instead of a self-regulating mechanism, we are dealing with a permanent shift in the equilibrium point, which means that the negative effects of the crisis become entrenched in the economic structure.

In the analyses conducted, hysteresis means that there will be no fiscal protection in 2022 (low $\beta = 0.18$) in industrial regions, while capital regions (thanks to higher structural flexibility) show high resilience and make up for losses in just two years, while industrial centres fall into prolonged stagnation. The projected recovery time of more than 4.5 years for industry confirms the existence of the so-called cohesion trap. The lack of an adequate response from fiscal stabilisers in 2022-2024 led to economic scarring, manifested in a permanent weakening of the production base and local labour markets. As a result, instead of the expected convergence, the polycrisis triggered a process of territorial divergence, where the weak responsiveness of fiscal parameters ($\beta = 0.18$) became a direct catalyst for long-term development stratification within Central and Eastern European countries.

6. Discussion and conclusions

The analysis of 64 NUTS-2 regions in Central and Eastern European countries between 2018 and 2024 allows for comprehensive conclusions to be drawn regarding fiscal resilience mechanisms in times of multiple crises. The study showed that the cumulative impact of the COVID-19 pandemic and the shock caused by the war in Ukraine and the energy crisis led to a fundamental change in the effectiveness of state stabilisation mechanisms.

Firstly, the results of the GMM model (Table 4) demonstrate a radical weakening of automatic economic stabilisers. The decline in the elasticity parameter β from 0.52 during the pandemic to just 0.18 during the supply shock phase (2022-2024) indicates the structural inefficiency of current fiscal systems in conditions of high inflation and energy crisis.

Secondly, the study revealed deep territorial asymmetry (Table 5). While metropolitan regions showed relative resilience, industrial regions became the main victims of the supply shock, recording a negative GDP gap of -3.1% with an almost complete freeze in protective spending (+0.2%). This suggests that traditional stabilisation policy works regressively, favouring centres with high service resilience at the expense of vulnerable manufacturing regions.

Thirdly, the collapse of the correlation between the GDP gap and expenditure (a decline from 0.62 to 0.18) and low expenditure volatility (0.11) demonstrate decision-making paralysis and systemic rigidity (Table 6). Fiscal mechanisms have ceased to adapt to local needs, operating in isolation from the real economic dynamics of the regions.

Fourthly, the lack of adequate fiscal protection has caused lasting structural effects in the form of hysteresis and economic scarring. The projected time to return to the potential trend in industrial regions exceeding 4.5 years (Table 7) is a sign that these entities are entering a cohesion trap. Without a reorientation of policy towards place-based policy, the polycrisis will lead to permanent divergence within countries, undermining the foundations of European regional policy.

The study has shown that the polycrisis has led to a structural breakdown in stabilisation mechanisms: while the state has managed to protect regions from the effects of the pandemic, fiscal instruments have capitulated in the face of the war and energy shocks, fully confirming the hypothesis put forward at the outset.

Based on the empirical results obtained, a radical change in the regional policy paradigm is suggested in order to meet the challenges of the polycrisis. Regionalisation and the territorial orientation of stabilisers are important because only a flexible decision-making framework at the NUTS-2 level will allow for rapid curbing of hysteresis processes. Since traditional automatic stabilisers lose their effectiveness in a polycrisis (erosion of the β parameter), a reorientation of fiscal policy is necessary. Firstly, instead of general consumption transfers, targeted support for energy-intensive regions should become a priority. Secondly, stabilisation

should be based more on building structural resilience (e.g. through investments in energy transition) than on smoothing demand. Finally, the weakening responsiveness of national systems suggests a need for greater fiscal flexibility at the NUTS-2 level, which would allow for a faster, territorial response to supply shocks. It would also be justified to develop real-time GDP gap monitoring systems at the regional level, which would allow for intervention before permanent 'scarring' of local labour markets and the industrial base occurs.

References

1. Arellano, M., Bond, S. (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *Review of Economic Studies*, *58(2),* 277-297.
2. Bailey**,** D., Clark, J., Colombelli, A., Corradini, C., De Propris, L. (2018). Public policy for the "left behind" places**.** *Cambridge Journal of Regions, Economy and Society*, *11(1),* 7-27.
3. Barca, F., McCann, P., Rodriguez-Pose, A. (2012). The Case for Place-based Development Strategies. *Journal of Regional Science, 52(1),* 134-152.
4. Barczyk, R. (2021). *Synchronizacja cykli koniunkturalnych w Unii Europejskiej: Mechanizmy i uwarunkowania.* Poznań: Wydawnictwo Uniwersytetu Ekonomicznego w Poznaniu.
5. Barczyk, R., Konopczak, M., Lubiński, M. (2022). *Wahania koniunkturalne w Polsce na tle gospodarki światowej*. Warszawa: PWE.
6. Blanchard, O. (2021). *Macroeconomics* (8th ed.). Pearson.
7. Buettner, T. (2006). The effect of fiscal decentralization on regional growth: Evidence from European regions. *European Economic Review, 50*(5), 1111-1132. https://doi.org/10.1016/j.euroecorev.2005.03.003
8. Churski, P. (Ed.) (2018). *Rola polityki spójności w rozwoju obszarów wiejskich*. Poznań: Bogucki Wydawnictwo Naukowe.
9. European Central Bank (2025). *Economic Bulletin, Iss. 1*. https://www.ecb.europa.eu/pub/economic-bulletin/html/index.en.html
10. European Commission (2024). *9th Report on Economic, Social and Territorial Cohesion*. Luxembourg: Publications Office of the European Union.
11. Eurostat (2025). *Gross domestic product (GDP) at current market prices by NUTS 2 regions*. https://ec.europa.eu/eurostat/databrowser/
12. Fidrmuc, J., Korhonen, I. (2006). Meta-analysis of the business cycle correlation between the euro area and the CEECs. *Journal of Comparative Economics, 34*(3), 518-537. https://doi.org/10.1016/j.jce.2006.06.003

13. Gechert, S. (2015). What fiscal policy is most effective? A meta-regression analysis. *Oxford Economic Papers, 67*(3), 553-580. https://doi.org/10.1093/oep/gpv027
14. Głodowska, A. (2023). Institutional quality and economic resilience in Central and Eastern European regions. *International Journal of Management and Economics, 59(2),* 112-128.
15. Gorzelak, G. (2021). *Różnice regionalne – preferencje polityczne – sprawiedliwość społeczna*. *Studia Regionalne i Lokalne, 2*(84), 117-127. https://doi.org/10.7366/1509499528408
16. Hodrick, R.J., Prescott, E.C. (1997). Postwar U.S. Business Cycles: An Empirical Investigation. *Journal of Money, Credit and Banking, 29(1),* 1-16.
17. Iammarino, S., Rodríguez-Pose, A., Storper, M. (2019). *Regional inequality in Europe: Evidence, theory and policy implications*. Routledge. https://doi.org/10.4324/9780429057985
18. IMF (2025). *World Economic Outlook: Managing the Permanent Crisis*. Washington, D.C.: International Monetary Fund.
19. Krugman, P. (1991). *Geography and Trade*. Cambridge, MA: MIT Press.
20. Kydland, F.E., Prescott, E.C. (1982). Time to Build and Aggregate Fluctuations. *Econometrica, 50(6),* 1345-1370.
21. Lagarde, C. (2024, 20 march). *Building confidence in the path ahead (Speech at the ECB and its Watchers XXIV Conference, Frankfurt am Main).* European Central Bank. https://www.ecb.europa.eu/press/key/date/2024/html/ecb.sp240320~28c9a70818.en.html
22. Lucas, R.E. (1976). Econometric policy evaluation: A critique. *Carnegie-Rochester Conference Series on Public Policy, 1*, 19-46.
23. Martin, R., Sunley, P. (2015). On the notion of regional economic resilience: Conceptualization and explanation. *Journal of Economic Geography, 15(1),* 1-42. https://doi.org/10.1093/jeg/lbu015
24. Mundell, R.A. (1961). A Theory of Optimum Currency Areas. *The American Economic Review, 51(4)*, 657-665.
25. Musgrave, R.A. (1959). *The Theory of Public Finance*. New York: McGraw-Hill.
26. OECD (2024). *OECD Economic Outlook, Iss. 1*. OECD Publishing. https://doi.org/10.1787/ce188438-en
27. Phillips, P.C.B., Shi, Z. (2021). *Boosting: Why you can use the HP filter*. *International Economic Review, 62*(2), 521-570. https://doi.org/10.1111/iere.12495
28. Rodriguez-Pose, A., Bartalucci, F. (2024). *The green transition and its potential territorial discontents*. *Cambridge Journal of Regions, Economy and Society, 17*(2), 339-358. https://doi.org/10.1093/cjres/rsad039
29. Spychała, M., Spychała, J. (2024). Business cycles in European regions. *Zeszyty Naukowe Politechniki Śląskiej. Organizacja i Zarządzanie, 193*, 561-575.

30. Spychała, M., Spychała, J. (2024). Discrepancies in the regional development of the EU member states. *Zeszyty Naukowe Politechniki Śląskiej. Organizacja i Zarządzanie, 193,* 577-600.
31. Szlachta, J. (2021). Ewolucja europejskiej polityki regionalnej z perspektywy państw Grupy Wyszehradzkiej. *Studia Regionalne i Lokalne, 84(2),* 5-21.
32. Tobin, J. (1972). Inflation and Unemployment. *The American Economic Review, 62(1),* 1-18.
33. Tooze, A. (2018). *Crashed: How a Decade of Financial Crises Changed the World*. Penguin Books.
34. World Bank (2025). *Europe and Central Asia Economic Update: Resilience in the Age of Polycrisis.* Washington, D.C.: World Bank Group.