

Spatial Interdependencies in Support for Populist Radical Right Parties: Evidence from Slovakia

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Introduction

Populist radical right parties (PRRP), have recently gained increasing electoral support across EU member states (Hainsworth, 2008; Colantone and Staning, 2019; Dijkstra et al., 2020). This rise in discontent is closely linked to geography and reflects economic and cultural disparities (Florida, 2021), particularly in the “places that don’t matter” (Rodríguez-Pose, 2018)—regions marked by economic decline and perceived marginalization. Beyond Western Europe, support for PRRP has also grown in Central and Eastern Europe. This study examines contextual (socioeconomic) and compositional (demographic) determinants of PRRP support in Slovakia, with special attention to spatial dependence and spillover effects (Bourdin, Tai, 2022; Sümeghy, 2024; Maza and Hierro, 2025; Lenzi and Perucca, 2025; Koeppen et al., 2025). Using panel data from the 2016, 2020, and 2023 parliamentary elections across 79 districts, it analyses both local factors and spatial interactions.

Preferences for populist radical right parties (PRRPs) typically exhibit strong spatial variation. Regional differences in PRRP support arise from spatially heterogeneous demographic characteristics (compositional factors) and socioeconomic contexts (contextual factors) (Essletzbichler et al., 2021; van Leeuwen et al., 2021; Crulli and Pinto, 2025). Electoral outcomes cannot be fully accounted for by demographics and socioeconomic conditions alone. Voting behaviour is a complex process embedded in social space, shaped by interactions both within and across regions. Most interactions occur face-to-face among residents of the same region, yet regions are open units, with interregional movement for work, education, leisure, and recreation. Moreover, digital communication, mass media, and social networks enable interactions across distance and subsequently may result in change of voting preferences (Jambrina-Canseco, 2023; McKay et al., 2024). Whether in-person or digital, most exchanges occur among spatially proximate actors (Bastos et al., 2018). Through social interaction, individuals share values, anxieties, and economic experiences (Bicchieri, 2005; Koeppen et al., 2025), potentially adjusting their political preferences, and thereby influencing demand for PRRPs (Golder, 2016). Supply-side factors matter too (Golder, 2016), PRRPs’ opportunities to compete, via local campaign events, billboards, media appearances can extend into neighbouring regions through social media sharing, regional broadcasts, and leader mobility. Demonstration effects may also arise, strong PRRP support in one district may legitimize similar support in adjacent districts over time (Essletzbichler et al., 2021). Wiesehomeier et al. (2024) found that such diffusion is facilitated in areas with similar contextual conditions, as these lower the barriers to adapting populist ideas.

Data

This analysis utilizes data from 79 districts at the LAU2 level in Slovakia, spanning three election periods in 2016, 2020, and 2023, resulting in a panel dataset comprising 237 observations. The dependent variable is the percentage share of votes received by PRRP in parliamentary elections for each respective year. Using 2019 Chapel Hill Expert Survey (CHES) (Jolly et al., 2019) we identified two PRRP parties in Slovakia ĽSNS and its spin off Republika.

We divided independent variables into compositional and contextual factors. The contextual variables capture the economic characteristics of the districts while compositional indicators reflect the demographic structure of the region and its cultural aspects.

Unlike previous research we utilize panel data which allows us to control for unobserved characteristics specific to individual spatial units. After series of tests we estimated SARAR spatial panel model which includes both spatial lag and spatial error dependence with fixed individual effects.

$$y_{it} = \rho \sum_{i \neq j} w_{ij} y_{jt} + x_{it} \beta + \alpha_i + u_{it}$$

$$u_{it} = \lambda \sum_{i \neq j} w_{ij} u_{jt} + \varepsilon_{it}$$

Results

In Table 1 we present the mean effect and its standard deviation, together with 2.5% and 97.5% quantiles for direct, indirect and total effects based on the recommendation of LeSage and Pace (2009).

Table 1 Direct, indirect and total effects

	Direct	Indirect	Total
Voting turnout	-0.006 (0.060)	-0.018 (0.176)	-0.024 (0.235)
Wage	-0.002 (0.001)	-0.005 (0.004)	-0.007 (0.005)
Employment in manufacturing	-0.039 (0.021)	-0.108 (0.071)	-0.147 (0.091)
Unemployment	0.286* (0.081)	0.799* (0.336)	1.085* (0.403)
Migration balance	-0.016 (0.074)	-0.045 (0.216)	-0.061 (0.289)
Pop. in mun. up to 5,000 inh.	0.017 (0.041)	0.048 (0.121)	0.065 (0.161)
Pop. in mun. larger than 20,000 inh.	0.021 (0.015)	0.059 (0.046)	0.080 (0.060)
Hungarian minority	-0.400* (0.137)	-1.115* (0.514)	-1.515* (0.634)
Roma minority	0.221* (0.105)	0.618* (0.358)	0.839* (0.453)
Other minorities	0.027 (0.055)	0.075 (0.161)	0.102 (0.215)
Population 15-29	0.025 (0.171)	0.071 (0.498)	0.096 (0.665)
Population 65+	0.250* (0.123)	0.696* (0.405)	0.946* (0.519)
Catholic	-0.141 (0.099)	-0.393 (0.310)	-0.534 (0.403)
Protestants	-0.258 (0.246)	-0.721 (0.740)	-0.978 (0.976)
Greek catholic	-2.243* (1.070)	-6.250* (3.616)	-8.493* (4.587)

Tertiary education	0.002 (0.112)	0.005 (0.325)	0.007 (0.434)
Primary and lower secondary edu.	-0.011 (0.041)	-0.030 (0.120)	-0.042 (0.160)

*Note: Impact estimates are calculated using splm library in R; * indicates coefficient significantly different from zero. Standard errors are in parentheses.*

First, we describe direct effects. Of the economic contextual variables, the unemployment rate is a significant predictor of PRRP support. Unemployment is commonly associated with feelings of threat and future uncertainty. The average wage was not a significant factor in our study. While changes in wages are connected to shifts in social status, these are not as radical as those induced by unemployment. Manufacturing employment share also lacks significance, indicating limited sectoral influence of PRRP support in Slovakia. Among the compositional variables ethnic composition has strongest effects. Districts with higher proportions of the Hungarian minority exhibit lower PRRP support, whereas those with larger Roma populations show the opposite. Minority presence thus exerts divergent influences, shaped by contact patterns, history, and stereotypes. Additionally, a higher proportion of older residents over 65 is and the proportion of residents with a Greek Catholic religion are statistically significant. Indirect effects include spatial spillovers of other districts.

Indirect spillovers are significant across multiple compositional and contextual factors. For example, unemployment spillovers may reflect regional labour-market structures: commuting across district borders spreads economic insecurity and its effects. Information on poor economic conditions is further shared via media, social networks, and political campaigns, mobilizing voters across the region. Ethnic composition spillovers are also noteworthy. Higher shares of Hungarian minorities in neighbouring districts reduce PRRP support locally, consistent with the “contact hypothesis” (Allport, 1954). The Hungarian minority’s deep-rooted political and cultural institutions facilitate peaceful coexistence in many regions in Slovakia. In contrast, positive spatial spillovers concerning Roma populations may reflect perceived social threats (Blalock, 1967; Blumer, 1958), contributing to higher local PRRP support. While a higher proportion of Roma within a district is associated with increased PRRP support, negative prejudices also spread to neighbouring districts through negative discourse. Religious composition shows similar spatial spillovers: Greek-Catholic presence in neighbouring districts suppresses PRRP support, suggesting shared community and church influences transcending district borders. Age structure also spills over: high shares of older residents in neighbouring areas predict higher PRRP support locally, perhaps due to inter-family influence across borders.

Conclusion

This article aimed to investigate the contextual and compositional determinants of PRRP support in Slovakia, with a specific focus on the role of spatial spillovers. Spatial econometric analysis based on data on district-level election results for three electoral cycles in 2016, 2020 and 2023 has brought about a set of interesting empirical findings that could help to understand the mechanisms behind such processes and may have implications for regional policy recommendations. Our analysis shows that PRRP support is shaped not only by local factors but also by conditions in neighbouring districts, with significant spatial spillovers related to unemployment, ethnic composition, religion, and age structure. These spillovers reflect regional dynamics, such as labour-market connections, social networks, and cross-border interactions between ethnic or religious groups. Neighbouring district characteristics significantly affect local PRRP support, underscoring the interconnected nature of social and political environments. While the study does not establish causality, it contributes valuable

empirical sights to the growing body of literature on spatial political behaviour and suggests that future research and policy interventions should count for the regional diffusion of socioeconomic and cultural influences.

Mostly, the findings underscore the importance of addressing both local and regional drivers of support for populist radical right parties. Policymakers should prioritize reducing economic disparities in structurally disadvantaged regions through targeted investments in employment, education, and public services. Interventions must also consider spatial spillover effects, as grievances and radical-right support often diffuse beyond administrative boundaries. Promoting social cohesion—through inclusive policies, intercultural dialogue, and port for marginalized communities—can mitigate the spread of exclusionary narratives and foster greater regional resilience to extremism. It does not necessarily mean more spending but more effective and targeted policies. Many of the mechanisms behind PRRP support—such as economic grievances or ethnic stereotypes—are amplified by spatial diffusion, policy responses must be coordinated across adjacent districts. Disconnected or fragmented interventions risk leaving "hotspots" of discontent intact. Communicating policy efforts more transparently and visibly in areas with elevated PRRP support, and doing so in cooperation with local actors, may reduce feelings of neglect and political alienation.

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