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Electoral consequences of globalization for social democratic parties across European regions

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Abstract

The paper investigates the influence of regional import shocks from low-wage countries on electoral support for European social democratic parties in 289 NUTS2 regions (2002–2022). The estimates suggest that a one standard deviation increase in the import shock from low-wage countries over an election period may lead to a decline in support for social democratic parties between 0.6 and 1.2 percentage points. Similar results also apply to imports from Asian economies, such as China and India. The negative impact on electoral support for social democratic parties is amplified in moderately industrial and predominantly rural regions. For the former, the decline in industrial employment led to a shift of social democratic voters to the radical right. In contrast, in the latter case, the relatively slower growth of employment in the tertiary and quaternary sectors and the peripheral position of these regions caused a shift to the radical left.

KEYWORDS

economic globalization, electoral geography, import shocks from low-wage countries, level of industrialization, urban–rural typology

1 | INTRODUCTION

In the last two decades, there has been a gradual decline in electoral support for social democratic parties across Europe. While the average electoral support in European regions was 31% in the first decade, it dropped to 24% in the second. The theoretical and empirical literature offers four essential explanations for this gradual decline (Bandau, 2023): sociological (changing social structure, such as the decline of the traditional working class), materialist (changing economic conditions, such as globalization), ideational (ideological differences between the social democratic elites and the original electorate, such as the shift towards centrist policies), and institutional (the organizational transformation led to the alienation of the original voter base, such as the decline of trade unions). In the materialistic view, three phenomena are noticeable: globalization, the European economic and monetary process primarily associated with austerity measures due to the European debt crisis, and structural changes associated with welfare retrenchment due to slower economic growth. Despite agreement regarding the negative impact of the last two phenomena, the effects of economic globalization still need to be clarified.

At the macroeconomic level, the literature does not offer any clear answers (Bandau, 2023; Bergh & Kärnä, 2021; Proaño et al., 2024), so the research in recent years has been concerned with the electoral effects of globalization through import shocks at the regional level (Barone & Kreuter, 2021; Becker et al., 2017; Caselli et al., 2020; Colantone & Stanig, 2018b; Dauth et al., 2014; Dippel et al., 2015; Guiso et al., 2019; Malgouyres, 2017b; Milner, 2021). This research suggests that sudden and significant increases in imports may profoundly affect local economies, which will subsequently be reflected in a change in electoral preferences. The authors explain that adverse import shocks from low-wage countries may lead people to be exposed to higher economic insecurity (Berman, 2021) associated with higher unemployment and lower real incomes (Autor et al., 2016; Barone & Kreuter, 2021; Dippel et al., 2015; Malgouyres, 2017a), higher mortality (Pierce & Schott, 2020), higher mental distress (Colantone et al., 2019), poorer mental health (Lang et al., 2019), and lower public services provided by regional governments (Feler & Senses, 2017) in the most affected regions. At the same time, the inability of central governments to provide compensation to "globalization losers" amplifies these effects (Baccini & Sattler, 2021; Colantone & Stanig, 2018a; Frieden, 2019).

Most of these articles assume that industrial workers are the most affected, leading to their shift from social democracy to populist or radical right parties. However, only a minimal number of papers examine the direct effects on the electoral support of social democratic parties, such as Colantone and Stanig (2018b), Dippel et al. (2015), and Milner (2021). For this reason, the paper aims to explore whether economic globalization in the first two decades of the 21st century influenced electoral support for social democratic parties. The paper's main contribution is that it analyzes the impact of globalization on one of the two prominent political families that have shaped Europe's political environment or economic policy in the last 150 years. At the same time, by focusing on European regions within the European Economic Area, the article offers a broader view of changes on the European continent than most articles that have focused on area analysis either within individual countries (Barone & Kreuter, 2021; Becker et al., 2017; Caselli et al., 2020; Dauth et al., 2014; Malgouyres, 2017b) or in Western Europe (Colantone & Stanig, 2018b; Milner, 2021). Also, the article offers a different perspective on the import shock mechanism, as the articles above analyze the electoral consequences of changes in structural characteristics. In contrast, this article focuses on the distinctions between regions regarding different levels of industrialization and urbanization.

The results suggest that import shocks from low-wage countries have had a statistically significant negative impact on electoral support for social democratic parties, especially in the case of imports from Asian countries, namely, China and India. Also, the negative impact on electoral support for social democratic parties is higher in moderately industrial and predominantly rural regions. The findings likewise indicate that in industrial areas, social democratic voters shifted to the radical right. Contrary to this, rural areas with low industrial shares shifted to the radical left.

Section 2 will describe the relationship between regional import shocks from low-wage countries and electoral support for social democratic parties. Section 3 introduces the data and the estimation strategy. Section 4 presents

the results of the regression analysis. Section 5 summarizes the individual findings and suggests opportunities for further research.

2 | LITERATURE REVIEW

Economic globalization is a long-term phenomenon in which, at the aggregate level, positive effects (higher economic growth, greater trade exchange, greater availability of consumer goods, and higher consumption) prevail over the problems associated with slow adjustment processes in the labor market and with insufficient redistribution within the economic system. In more detail, it is possible to see differing effects on globalization's winners and losers.

The negative impacts on regions vulnerable to trade shocks are significant due to the slow adaptation of regional labor markets; in the United States, this adaptation may take up to 10 years (Autor et al., 2016). Import shocks from low-wage countries decrease labor demand, resulting in lower employment, lower wages, lower lifetime income, higher labor turnover, and a drop in the proportion of high-skilled workers in industrial sectors (Auer et al., 2013; Autor et al., 2016; Diemer, 2024; Dippel et al., 2015; Malgouyres, 2017a). Simultaneously, governments at the regional and central levels are unable to provide sufficient compensation for the losers of globalization and are unable to respond adequately to the effects arising in regional labor markets (Baccini & Sattler, 2021; Barone & Kreuter, 2021; Colantone & Stanig, 2018a). Nevertheless, the adverse effects of import shocks from low-wage countries may have more moderate effects if greater involvement in international trade leads to more industrial jobs in export sectors. In the United States, even 10 years after the impact of the import shock triggered by Chinese production, lost jobs were not sufficiently replaced, leading to adverse effects (Autor et al., 2016). On the contrary, in Germany, the number of jobs increased, which limited the adverse effects (Dauth et al., 2014). Moreover, the economic level gap between regions and metropolitan areas is widening (Broz et al., 2021). Metropolitan areas or large cities are much more productive because they make better use of available production factors or infrastructure, have a higher percentage of educated workers, and have a higher concentration of service-oriented and technology-based firms (Behrens et al., 2014; Puga, 2010), enabling them to better adapt to import shocks (Quintana, 2021).

In industrial and peripheral regions that have failed to adapt effectively to import shocks, industrial workers face higher economic insecurity (Berman, 2021), increased mortality (Pierce & Schott, 2020), poorer mental health (Lang et al., 2019), and higher mental distress (Colantone et al., 2019). These socioeconomic conditions fuel a rise in authoritarian (Ballard-Rosa et al., 2021), anti-immigrant (Hays et al., 2019), and nationalist (Colantone & Stanig, 2018b; Steiner & Harms, 2023) attitudes, contribute to ideological/political polarization (Autor et al., 2020) and diminish membership in organizations through reduced social capital (Diemer, 2024). As a result, regional import shocks lead to a surge in electoral support for the radical right (Colantone & Stanig, 2018b; Dippel et al., 2015; Hays et al., 2019; Malgouyres, 2017b), populist (Baccini & Sattler, 2021; Barone & Kreuter, 2021; Broz et al., 2021; Faggian et al., 2021; Guiso et al., 2019; Guriev & Papaioannou, 2022; Milner, 2021), or nonmainstream parties (Barone & Kreuter, 2021; Guriev & Papaioannou, 2022; Lenzi & Perucca, 2021) parties.

At the same time, two other phenomena are taking place: the global financial crisis has led to a rise in antiglobalization sentiments in European societies (Harms & Schwab, 2020), and there is an increasing divergence of cosmopolitan-nationalist issues between urban and rural populations (Huijsmans et al., 2021). All this together shapes a new cleavage that negatively impacts social democratic parties as a result of the increase in support for both nonmainstream/populist (Berman, 2021; Rodríguez-Pose, 2018) and green/socially liberal (Ford & Jennings, 2020) parties.

While many articles in this field assume that the adverse effects of import shocks primarily affect industrial workers, leading to their shift from social democracy to populist or radical right parties, a small portion of the empirical literature (Colantone & Stanig, 2018b; Dippel et al., 2015; Milner, 2021) explores the direct effects on

electoral support for social democracy. According to Colantone and Stanig (2018b, p. 945), a one standard deviation increase in the import shock leads to a fall in voter support for social democracy (protrade left) by up to two percentage points due to increased economic nationalism in society. On the other hand, the negative effects of import shocks may be minimal if participation in the globalization process has led to the expansion of export-oriented industries (Dippel et al., 2015) or is statistically insignificant (Milner, 2021).

The limited number of empirical articles and the ambiguity of the results open up space for further research to add to the literature on the impact of import shocks from low-wage countries on electoral support for European social democratic parties. This research examines the direct impact and investigates the varying effects across regions with different levels of industrialization or urbanization. Thus, the paper extends the current literature to include mechanisms explaining changes in electoral behavior in response to economic shocks.

3 | METHODOLOGY

This section is divided into two parts. First, regression proxies are introduced. Second, the empirical strategy is presented.

3.1 | Data and variables

This paper analyzes the electoral consequences of economic globalization across European regions. The European economic area encompassed 296 NUTS2 regions (according to the 2016 NUTS classification). The paper abstracts from seven regions, six island regions with specific election results (Guadeloupe, Martinique, Guyane, La Réunion, Mayotte, and Åland) and Northern Ireland (political parties are based only on national/religious principles). To sum up, the impact of import shocks in 289 regions is investigated.

This paper deals with the social democratic parties that won at least 1% of the votes in at least one parliamentary election at the national level. The parties were selected based on the ParlGov database methodology (Döring et al., 2022). Specifically, the 76 parties classified as "Social democracy" are explored (see Table A1).[1] Data on election results come from three sources: the European Election Database (Norwegian Centre for Research Data, 2020), the European NUTS-Level Election Data set (Schraff et al., 2023), and individual statistical offices of the involved countries. The direct election results are used if NUTS2 regions correspond to constituencies (Austria, Belgium, Cyprus, Estonia, Iceland, Latvia, Luxemburg, Malta, the Netherlands, and Spain). In case of differences, the calculation is performed by aggregating the results from individual electoral districts within the NUTS2 region.

Economic globalization is associated with import shocks from selected countries. The expression of import shocks is based on Caselli et al. (2020, p. 8) with inspiration from Caselli et al. (2021, p. 93), Colantone and Stanig (2018b, p. 940) and Dippel et al. (2015, p. 7), with data from Eurostat (2023a, 2023b) and World Bank Group (2023a). The computation process involves three steps. First, the share of import of industrial products (SITC 5-8) with the number of employees in the industry (NACE Rev. 2 B–E) older than 15 years is calculated. This value is then multiplied by the industrial employment rate in the age cohort older than 15 years in each region. Finally, the logarithmic difference between the two levels of imports concerning the situation in the market of industrial workers in the given region is calculated. The levels are calculated for the year preceding the election and for the year of the previous election (or 2001 in the case of elections in the early years of the 21st century).

[1]Social democratic parties whose main electoral motive is regional affiliation (e.g., Latvian Russian Union or Scottish National Party) are classified as regionalist parties.

$$ImportShock_{t-1,jk} = \ln\left(\frac{Industrial\ Workers_{t-1,jk}}{Number\ of\ Employes_{t-1,jk}} \times \frac{IndustrialImport_{t-1,k}}{Industrial\ Workers_{t-1,k}}\right) - \ln\left(\frac{Industrial\ Workers_{t-n,jk}}{Number\ of\ Employes_{t-n,jk}} \times \frac{IndustrialImport_{t-n,k}}{Industrial\ Workers_{t-n,k}}\right), \quad (1)$$

where t indexes the year of the election, n is the year of the previous election or the year 2001, j is the region, and k denotes the country.

The countries or groups of countries selected are of significant importance to the European Union's industrial imports. First, a list of the 30 largest importers of industrial products into the European Union from countries outside the European Economic Area for 2001, 2011, and 2021 (the initial, middle, and final years of the period under review) was compiled. This list selected 28 countries among the largest importers in all 3 years, including 17 low-wage countries. The paper defines low-wage countries as economies whose average gross domestic product (GDP) per capita was less than 50% of the average GDP per capita in the European Union between 2001 and 2021 (World Bank Group, 2023b). An in-depth overview of these selected countries and individual groups of countries is provided in the appendix (Table A2).

The model contains thirteen regional variables. The first five variables, voter turnout (*Turnout*), vote share of the radical left (*RLPs*), green (*Green*), radical right (*RRPs*) and regionalist (*Regionalist*) parties, can be characterized as electoral characteristics.

Voter turnout is the most common control variable, assuming higher turnout is more advantageous for social democratic parties (Finseraas & Vernby, 2014). The second and third variables are based on the premise that some voters alter their preferences only within the left spectrum, that is, a larger share of the remaining two left-wing party families should harm social democratic parties (Blomqvist & Green-Pedersen, 2004; Ladner, 2020; Viatkin, 2020). The fourth variable (*RRPs*) assumes that the working class's original electorate has moved from social democracy to the extreme/populist right (Berman, 2021; Milner, 2021; Oskarson & Demker, 2015). The classification of individual political parties, as in the case of social democratic parties, is carried out according to the ParlGov database methodology (Döring et al., 2022) using the categories "*Communist/Socialist*," "*Green/Ecologist*," and "*Right-wing*." The fifth electoral variable (*Regionalist*) is based on the idea that in regions with strong regionalist or separatist parties, social democracy (as well as other parties) has limited scope for electoral success, especially in economically developed regions (Mazzoleni & Mueller, 2017). Regionalist parties are defined as "*Ethnic and regional parties*" according to the Manifesto Project (Lehmann et al., 2023). The procedure for adjusting the data was the same as for the dependent variable.

The other six variables, representing regional demographic characteristics (Eurostat, 2023b), are *YoungPop* (share of people aged 18–34 in the total population), *ElderlyPop* (share of people over 65 in the total population), *Primary* (share of people with less than primary, primary, and lower secondary education in the age group 25–64), *Tertiary* (share of people with a university degree in the age group 25–64), *PopDensity* (population density per square kilometer in logarithmic functional form), and *Immigration* (share of foreign citizens in 2011 according to Census 2011 round; values for other years are calculated by adjusting the given value by the percentage change in migration, which is the difference between the percentage change in the population and the percentage natural change in the population; see Georgiadou et al., 2018). The paper expects that electoral support increases with increasing age (Berning & Ziller, 2020; Faggian et al., 2021; Polacko, 2022) and higher population density as a representative of the urban population (Benedetto et al., 2020; Berman, 2021), while in the case of education, the literature does not offer a clear answer (Faggian et al., 2021; Milner, 2021; Polacko, 2022). A higher share of immigrants creates new cleavages negatively affecting the social democratic parties (Berman, 2021; Ford & Jennings, 2020).

The third group of control variables consists of two economic variables: *GDP per capita* (current market prices in logarithmic functional form) and *Unempl* (the general unemployment rate is calculated for the age cohort

older than 15 years). The paper assumes that the Social Democrats will be successful in regions with higher living standards and lower unemployment rates (Auberger, 2012; Faggian et al., 2021; Polacko, 2022).

In addition to the control variables, the influence of contextual factors is also analyzed, so the research problem is widened by how regional structural differences amplify the effect of import shocks on electoral support for social democratic parties. The share of industrial workers and the share of urban and rural populations are essential structural characteristics.

In compliance with Hoekstra (2017), the paper divides European regions into three groups according to the scale of the industry (NACE Rev. 2 B–E; Eurostat, 2023a), industrial regions (with a share of industrial employment greater than 25%), moderately industrial regions (with a share of industrial employment between 15% and 25%), and less industrial regions (with a share of industrial employment lower than 15%). This categorization is based on the average share of industrial employment in the initial period (2000 and 2001), ensuring it is not influenced by deindustrialization processes exacerbated by global economic evolution, particularly after 2000. It is possible to assume that the harmful effects of import shocks are more pronounced in regions with a higher share of industry (Autor et al., 2016; Becker et al., 2017; Dippel et al., 2015; Steiner & Harms, 2023).

According to Eurostat (2023c), three types of regions can be identified within the urban–rural typology: predominantly urban (the share of the population living in rural areas is below 20%), intermediate (the share of the population living in rural areas is between 20% and 50%), and predominantly rural (the share of the population living in rural areas is higher than 50%). This typology was created at the NUTS3 level, so data is aggregated at the NUTS2 level according to the predominant type of urbanization in the region. In the case of the same number of different types, the level of urbanization is determined by the type of household that occurs most frequently according to the degree of urbanization (Eurostat, (2023b, 2023c). The paper assumes that negative impacts will be higher in rural areas since urban regions adapt much better to import shocks (Quintana, 2021).

3.2 | Estimation strategy

The paper employs three regression methods: the ordinary least squares (OLS) model with fixed effects, the three-level hierarchical model and the OLS with instrumental variables. The baseline is the first method, which includes the significance of regional and election-year effects. The second method considers the three-stage structure of the data (elections held in a NUTS2 region, a NUT2 region, and a country). It addresses the potential problem of unobserved heterogeneity by adding random effects at the regional and state level. The two-stage least squares method reacts to potential endogeneity and represents a robustness check.

The OLS models contain two types of fixed effects, regional and election-year dummies (see list of parliamentary elections in Table A4). Due to the occurrence of heteroscedasticity, the OLS models include robust standard errors at the state level. The three-level hierarchical model has four econometric characteristics: the regression equations contain random intercepts; the regression estimates are obtained by maximum likelihood; the equal variances for random effects; and all models contain robust standard errors calculated at the state level. The following regression equations can summarize the above description:

OLS with fixed effects:

$$Y_{tjk} = \beta_0 + \beta_1 ImportShock_{t-1jk} + \beta_2 Xa_{tjk} + \beta_3 Xb_{t-1jk} + \beta_4 Xc_{t-1jk} + \varphi_j + \omega_t + \epsilon_{tjk}. \quad (2)$$

Mixed-effects regression model:

$$Y_{tjk} = \beta_0 + \beta_1 ImportShock_{t-1jk} + \beta_2 Xa_{tjk} + \beta_3 Xb_{t-1jk} + \beta_4 Xc_{t-1jk} + \mu_{0\ k} + \omega_t + \epsilon_{tjk}, \quad (3)$$

where t indexes year, j is the region and k denotes the country; Y_{tjk} is the electoral results of the social democratic parties; $ImportShock_{t-1jk}$ represents regional import shocks from selected countries or regions (*LWC*; *AsianLWC*; *China*; *Turkey*; *India*); Xa_{tjk} is set of electoral control proxies (*Turnout*; *RLPs*; *Green*; *RRPs*; *Regionalist*); Xb_{t-1jk} is set of demographic control proxies (*YoungPop*; *ElderlyPop*; *Primary*; *Tertiary*; *PopDensity*; *Immigration*); Xc_{t-1jk} is set of economic control proxies (*GDPpc*; *Unemployment)*; φ_j is set of dummies for regions; ω_t is set of dummies for election years; μ_{0jk} is random intercepts and ϵ_{tjk} represents an unobserved error term.

The results may be affected by endogeneity. For this reason, the paper employs the two-stage least squares method with an instrumental variable, namely, industrial imports from low-wage countries into the US. Empirical literature uses this approach since this instrument enables the capture of the variation in imports from low-wage countries due to exogenous changes in supply conditions in low-wage countries rather than to domestic factors that could be correlated with electoral outcomes (Ballard-Rosa et al., 2021; Colantone & Stanig, 2018a, 2018b; Milner, 2021). The computation for the instrument is the same as that for the import shocks using data from Eurostat (2023a, 2023b), United States Census Bureau (2023), and World Bank Group (2023a).

$$InstrumentforShock_{t-1,jk} = \ln\left(\frac{Industrial\ Workers_{t-1,jk}}{Number\ of\ Employes_{t-1,jk}} \times \frac{IndustrialImporttoUS_{t-1,k}}{Industrial\ Workers_{t-1,k}}\right) - \ln\left(\frac{Industrial\ Workers_{t-n,jk}}{Number\ of\ Employes_{t-n,jk}} \times \frac{IndustrialImporttoUS_{t-n,k}}{Industrial\ Workers_{t-n,k}}\right), \tag{4}$$

where t indexes the year of the election, n is the year of the previous election or the year 2001, j is the region, and k denotes the country.

Two-stage least squares with fixed effects are used to incorporate the instrumental variable, which can formally be written as follows:

$$ImportShock_{t-1jk} = \beta_0 + \beta_1 InstrumentforShock_{t-1jk} + \beta_2 Xa_{tjk} + \beta_3 Xb_{t-1jk} + \beta_4 Xc_{t-1jk} + \varphi_j + \omega_t + \epsilon_{tjk}. \tag{5}$$

Within this method, the Kleibergen–Paap *rk* Wald *F* statistic tests the risk of a weak instrument (Kleibergen & Paap, 2006). For more information on this method, see Baum et al. (2010).

4 | RESULTS

The following section has three parts. First, it presents the effect of import shocks of industrial products from low-wage countries on electoral support for social democratic parties. The second section researches the influence of regional structural differences on the investigated relation. The third part provides a robustness check using instrumental variable regressions.

4.1 | Consequences of import shocks from low-wage countries

Table 1 presents the primary results of the regression analysis. Regarding electoral control variables, the electoral success of social democratic parties might be negatively affected by competition from the RLPs and the RRPs. Thus, the findings indicate that social democratic voters shift within the left-wing political spectrum (Blomqvist & Green-Pedersen, 2004) and towards radical right parties (Milner, 2021; Oskarson & Demker, 2015). These changes likewise suggest the importance of the new cleavage politics (Ford & Jennings, 2020). Social democratic parties also have limited scope for electoral success in regions with strong regionalist parties (Mazzoleni & Mueller, 2017).

TABLE 1 Influence of regional import shocks from low-wage countries on the electoral results of social democratic parties in parliamentary elections.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Import shock from low-wage countries	−2.4* (−2.01)					−2.8** (−2.36)				
Import shock from Asian low-wage countries		−2.6** (−2.16)					−3.0** (−2.45)			
Import shock from China			−1.4* (−1.75)					−1.8** (−2.09)		
Import shock from India				−4.4** (−2.09)					−4.3** (−2.10)	
Import shock from Turkey					−4.2** (−2.67)					−4.2*** (−2.61)
Turnout	0.2 (1.44)	0.2 (1.46)	0.2 (1.51)	0.1 (1.32)	0.1 (1.38)	0.2* (1.96)	0.2** (1.98)	0.2** (2.05)	0.2* (1.88)	0.2* (1.94)
Share of RLPs	−0.6*** (−4.94)	−0.6*** (−5.05)	−0.6*** (−4.84)	−0.6*** (−5.45)	−0.6*** (−5.69)	−0.6*** (−5.02)	−0.6*** (−5.12)	−0.6*** (−5.00)	−0.6*** (−5.52)	−0.6*** (−5.63)
Share of green parties	−0.2 (−0.77)	−0.2 (−0.77)	−0.2 (−0.76)	−0.2 (−0.79)	−0.2 (−0.81)	−0.2 (−1.16)	−0.2 (−1.16)	−0.2 (−1.14)	−0.2 (−1.18)	−0.3 (−1.19)
Share of RRPs	−0.3*** (−2.83)	−0.3*** (−2.81)	−0.3*** (−2.84)	−0.4*** (−2.90)	−0.4*** (−3.03)	−0.4*** (−3.15)	−0.4*** (−3.13)	−0.4*** (−3.19)	−0.4*** (−3.33)	−0.4*** (−3.42)
Share of regionalist parties	−0.3*** (−3.98)	−0.3*** (−4.01)	−0.3*** (−3.94)	−0.3*** (−4.44)	−0.3*** (−4.08)	−0.3*** (−4.96)	−0.3*** (−4.99)	−0.3*** (−4.92)	−0.3*** (−5.10)	−0.3*** (−4.90)
Share of young population	0.7 (1.50)	0.7 (1.49)	0.7 (1.52)	0.7 (1.52)	0.7 (1.52)	0.7* (1.71)	0.7* (1.70)	0.7* (1.75)	0.7* (1.72)	0.7* (1.71)
Share of elderly population	−1.7*** (−4.03)	−1.7*** (−4.02)	−1.6*** (−3.98)	−1.7*** (−4.25)	−1.7*** (−4.10)	−0.2 (−0.74)	−0.2 (−0.78)	−0.2 (−0.71)	−0.2 (−0.87)	−0.2 (−0.81)
Share of population with primary education	−0.1 (−0.81)	−0.1 (−0.78)	−0.1 (−0.83)	−0.2 (−1.00)	−0.2 (−1.16)	−0.0 (−0.14)	−0.0 (−0.12)	−0.0 (−0.11)	−0.0 (−0.32)	−0.1 (−0.53)

TABLE 1 (Continued)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Share of population with tertiary education	0.0 (0.15)	0.0 (0.13)	0.0 (0.11)	−0.0 (−0.05)	−0.0 (−0.22)	−0.1 (−1.36)	−0.1 (−1.36)	−0.2 (−1.42)	−0.2 (−1.47)	−0.2* (−1.66)
log Population density	−5.3 (−0.39)	−5.3 (−0.38)	−5.0 (−0.36)	−3.6 (−0.27)	−5.0 (−0.37)	0.1 (0.05)	0.1 (0.06)	0.0 (0.05)	−0.1 (−0.07)	0.0 (0.01)
Share of immigrants	−1.4* (−1.83)	−1.4* (−1.86)	−1.3* (−1.73)	−1.4* (−1.96)	−1.5** (−2.17)	−0.2 (−1.06)	−0.2 (−1.04)	−0.2 (−1.07)	−0.3 (−1.15)	−0.2 (−1.09)
log GDP per capita	3.3 (0.90)	3.0 (0.81)	3.8 (1.05)	4.5 (1.28)	3.5 (0.95)	1.1 (0.48)	0.8 (0.38)	1.3 (0.58)	1.9 (0.88)	1.5 (0.63)
General unemployment rate	−0.3** (−2.18)	−0.3** (−2.23)	−0.3** (−2.14)	−0.2* (−1.99)	−0.3** (−2.21)	−0.2 (−1.30)	−0.2 (−1.35)	−0.2 (−1.28)	−0.1 (−1.00)	−0.2 (−1.35)
Estimator	OLS	OLS	OLS	OLS	OLS	Mixed	Mixed	Mixed	Mixed	Mixed
Regional FE	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO
Year FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Countries	30	30	30	30	30	30	30	30	30	30
NUTS2	269	269	269	269	269	274	274	274	274	274
Observations	1443	1443	1443	1443	1443	1448	1448	1448	1448	1448
Adjusted R^2 (within)	0.4	0.4	0.4	0.41	0.41	–	–	–	–	–
LR test	–	–	–	–	–	0.00 (1038)	0.00 (1038)	0.00 (1031)	0.00 (1058)	0.00 (1064)
ICC Country	–	–	–	–	–	0.47	0.46	0.46	0.48	0.48
ICC NUTS2|Country	–	–	–	–	–	0.78	0.78	0.78	0.79	0.79

Note: *t* statistics are reported in parentheses; LR test means Likelihood-ratio test; ICC Country means interclass correlation at country level; ICC NUTS2|Country means interclass correlation at region-within-country level; constant, regional, and time (election-year) fixed effects are not reported; all regression models include robust standard errors clustered by state.

Abbreviations: FE, fixed effect; GDP, gross domestic product; OLS, ordinary least squares; RLP, radical left party; RRP, radical right part.

*, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

Regarding demographic regional characteristics, social democratic parties probably achieve a lower election result in regions with a higher proportion of older adults, a higher share of immigrants, and a higher unemployment rate. While the first finding is inconsistent with most of the literature (Berning & Ziller, 2020; Polacko, 2022), the second and third are consistent (Auberger, 2012; Berman, 2021; Ford & Jennings, 2020; Polacko, 2022). It is important to note that if the significance of the random intercept is considered instead of regional fixed effects, only electoral characteristics remain statistically significant.

The findings show that industrial import shocks cause social democratic parties to lose significant electoral support. This impact is observed both generally from low-wage countries (Guiso et al., 2019; Malgouyres, 2017b) and directly from China or India (Barone & Kreuter, 2021; Colantone & Stanig, 2018b; Milner, 2021). It is important to note that the analysis focuses directly on the influence on social democracy, unlike previous studies that examined the influence of populist parties winning votes at the expense of the mainstream left. The estimates suggest that a one standard deviation (0.239) increase in the import shock from low-wage countries over an election period may lead to a decline in support for social democratic parties between 0.6 and 0.7 percentage points, a somewhat smaller estimated impact than Colantone and Stanig (2018b).

Figure 1 shows the effects of import shocks from low-wage countries and China (the leading importer). The import shocks are expressed as the logarithmic difference between the level of the import shock in 2001 and 2021,

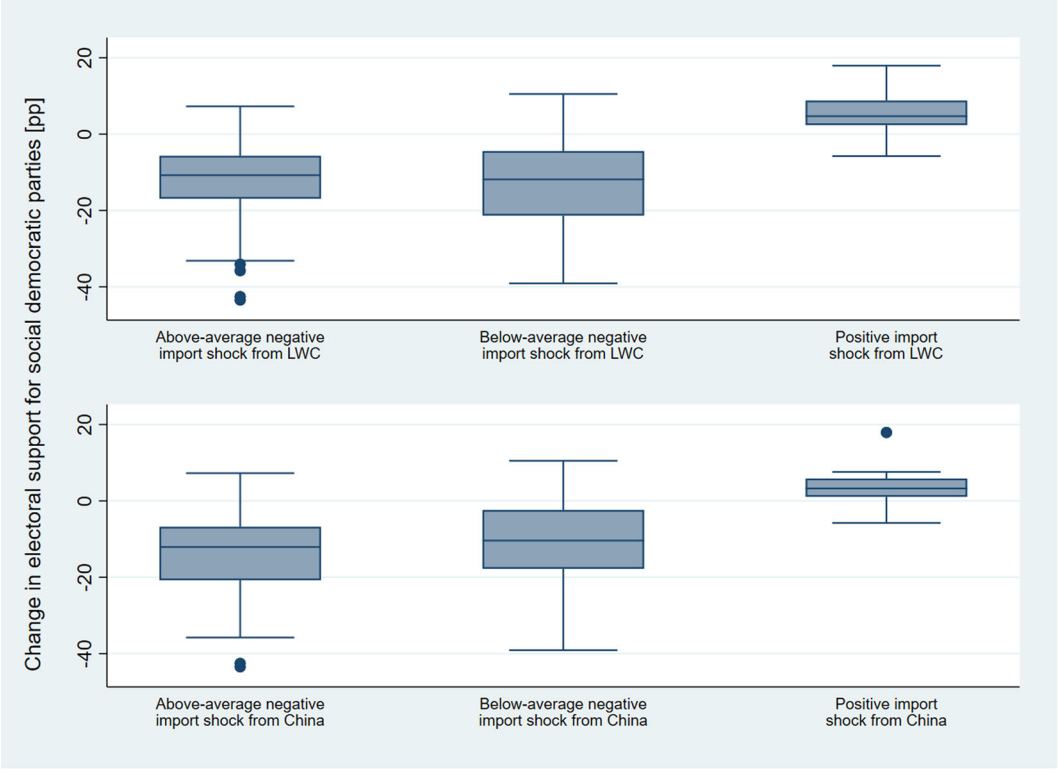

FIGURE 1 Change in electoral support for social democratic parties depends on the size of the import shocks from low-wage countries (LWCs). Regions are divided by the size of the import shocks between 2001 and 2021. The change in electoral support for social democratic parties is expressed as the difference between the last and first elections between 2002 and 2022. *Source*: Own calculation.

while the change in electoral support for social democratic parties shows the difference between the first and last elections between 2002 and 2022. There are three groups of European regions: the most negatively affected regions (above average value), the less negatively affected regions (below average value), and the positively affected regions (Croatia, London, Luxembourg, and Malta). Both graphs demonstrate that regions negatively affected by import shocks from low-wage countries experienced a significant drop in electoral support by an average of 12 percentage points. On the other hand, there is an increase of five percentage points in regions with a positive import shock.

4.2 | Consequences of import shocks from low-wage countries according to the level of industrialization and urbanization

The outputs of the second part of the regression analysis are presented in Tables 2, A5, and A6, which include regional differences according to the level of industrialization and urbanization. Table 2 shows only the effect of import shocks from low-wage countries. In contrast, the effect of control variables is stated in Table A5 (OLS with fixed effects) and A6 (multilevel mixed-effects regression).

The research findings reveal import shocks' statistically significant negative impact on electoral support for social democratic parties in industrial and moderately industrial regions and intermediate areas. The first aligns with the empirical literature, indicating that the most substantial influence is observed in regions with a strong historical industrial base (Autor et al., 2016; Becker et al., 2017; Dippel et al., 2015; Steiner & Harms, 2023). In the second case, a statistically significant negative effect is due to the structural characteristics of these regions, such as smaller cities and industrial centers, which limit their ability to respond to globalization shocks compared to urban regions effectively. Additionally, increased disparities between urban and rural regions (Broz et al., 2021), combined with a lower standard of living (Behrens et al., 2014), cause new political cleavages that negatively affect social democratic parties (Ford & Jennings, 2020). Figures 2 and 3 present a more detailed explanation of these effects.

Figure 2 combines both typologies, that is, divides European regions into nine groups; each of the three levels of industrialization contains individual categories from the urban–rural typology. Each group of regions includes the average change in electoral support for social democratic parties and the average change in import shocks from low-wage countries and China. Additionally, three indicators represent structural changes in economic sectors (change in industrial employment, change in total knowledge-intensive services employment, and change in the percentage of persons with tertiary education employed in science and technology in the labor force).

The research reveals the profound impact of import shocks on industrial and rural regions, particularly in the former, where industrial employment is significantly declining. This decline, in turn, led to reduced potential voters within the traditional voter base and a decline in their mobilization activity (Bandau, 2023). These changes also heightened economic insecurity for workers in these declining industries (Berman, 2021; Malgouyres, 2017a). Interestingly, the most significant decline of social democratic parties occurred in rural regions with a low industry share. The first factor to consider is the composition of the current social democratic voter base, which primarily consists of public sector workers and sociocultural professionals (Benedetto et al., 2020). These voters are employed in the tertiary and quaternary sectors, which have experienced slower growth than in other areas. Second, people living in peripheral areas have a greater sense of economic grievance (Berman, 2021).

Figure 3 has the same structure as Figure 2, except that the change in electoral support for Social Democracy is compared with the change in electoral success for the selected political parties. Several findings emerge from Figure 3. First, the electorate shifted from social democracy to RPPs and RLPs (Blomqvist & Green-Pedersen, 2004; Milner, 2021; Oskarson & Demker, 2015). Second, the most considerable increase may be seen in the case of RRPs, especially in industrial regions regardless of the level of urbanization (from eight to almost 12 percentage points)

TABLE 2 Influence of regional import shocks from low-wage countries on electoral results of social democratic parties in parliamentary elections in different types of regions.

	(1) Industrial	(2) Moderately industrial	(3) Less industrial	(4) Predominantly urban	(5) Intermediate	(6) Predominantly rural
OLS						
Import shock from low-wage countries	−4.9** (−2.86)	−1.8 (−1.69)	−0.9 (−0.63)	−1.7 (−1.06)	−2.5* (−1.99)	−2.9 (−1.26)
Regional FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Countries	19	24	18	19	29	20
NUTS2	72	140	57	65	137	67
Observations	401	736	306	345	749	349
Adjusted R^2 (within)	0.41	0.42	0.63	0.35	0.29	0.57
Mixed						
Import shock from low-wage countries	−5.1** (−2.27)	−2.0** (−2.01)	−0.6 (−0.52)	−1.6 (−1.09)	−2.9** (−1.98)	−3.4 (−1.48)
Regional FE	NO	NO	NO	NO	NO	NO
Year FE	YES	YES	YES	YES	YES	YES
Countries	19	24	18	19	29	20
NUTS2	73	144	57	65	138	71
Observations	402	740	306	345	750	353
LR test	0.00 (206.6)	0.00 (679.4)	0.00 (220.3)	0.00 (287.4)	0.00 (429.6)	0.00 (191.6)
ICC Country	0.53	0.52	0.76	0.19	0.49	0.59
ICC NUTS2|Country	0.75	0.86	0.87	0.65	0.74	0.74

Note: *t* statistics are reported in parentheses; LR test means Likelihood-ratio test; ICC Country means interclass correlation at country level; ICC NUTS2|Country means interclass correlation at region-within-country level; constant, regional, and time (election-year) fixed effects are not reported; all regression models include robust standard errors clustered by state; the results for control proxies are stated in Tables A5 and A6.

Abbreviations: FE, fixed effect; OLS, ordinary least squares.

*, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

and in intermediate (almost 10 percentage points) areas (Di Matteo & Mariotti, 2021; Faggian et al., 2021; Kurer & Palier, 2019). These regions are most affected by import shocks from low-wage countries, so the increasing support for RRPs may also be explained by the intensification of authoritarian (Ballard-Rosa et al., 2021), anti-European (Dijkstra et al., 2020), anti-immigrant (Hays et al., 2019) and nationalist (Steiner & Harms, 2023) attitudes that are antithetical to social democratic values (Frega, 2021; Oskarson & Demker, 2015). Third, the RLPs gained better positions in less industrial and predominantly rural regions, a common characteristic for peripheral regions within individual states (Mádr, 2023).

Fourth, the aforementioned electoral changes indicate increasing political or ideological polarization due to import shocks (Autor et al., 2020), which are exacerbated by increasing urban–rural disparities (Berman, 2021;

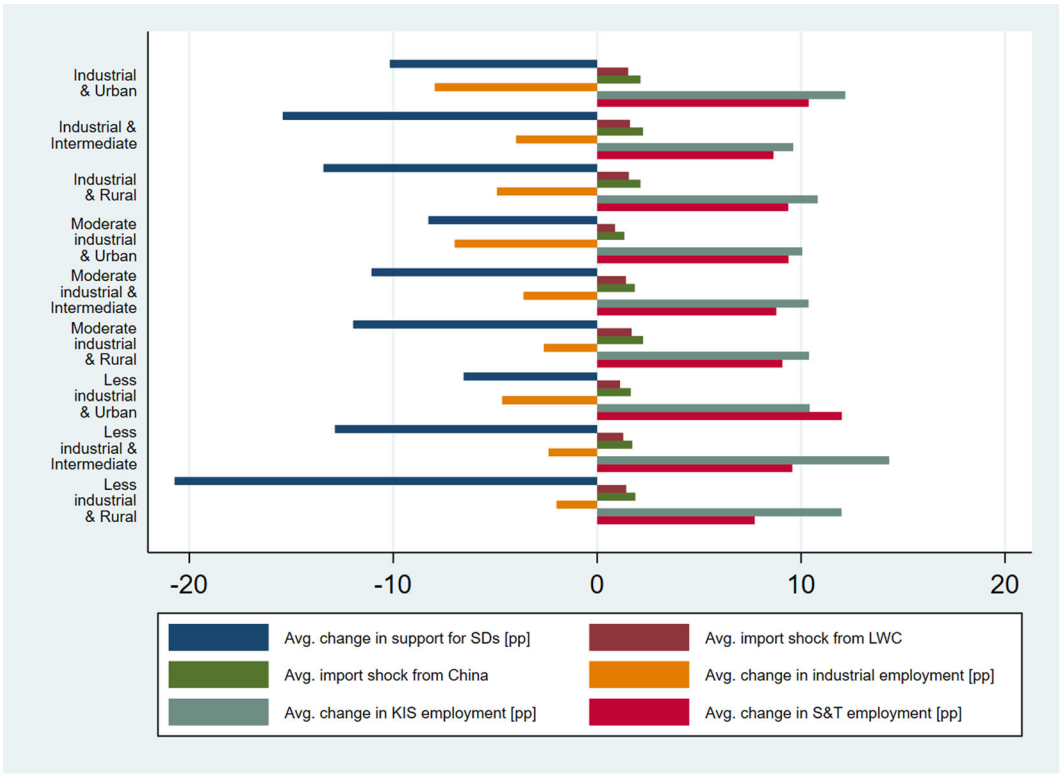

FIGURE 2 Changes in regions according to industrial and urban–rural typology. Regions are divided into nine groups; each of the three levels of industrialization contains individual categories from the urban–rural typology. The change in electoral support for social democratic parties is expressed as the difference between the last and first elections between 2002 and 2022. The other variables represent the change between 2001 and 2021. *Source*: Own calculation. KIS, knowledge-intensive services; LWC, low-wage country; S&T, science and technology.

Ford & Jennings, 2020; Huijsmans et al., 2021). There has been an increase in support for Greens in urban regions, while in rural regions, the RLPs have strengthened. In the case of RRPs, the important increase occurred in intermediate areas. Thus, nonmainstream parties (RLPs and RRPs) are more successful in rural regions (de Dominicis et al., 2022; Gidron & Hall, 2017), while mainstream parties (Greens and Social Democrats) have their main voter base in cities (Faggian et al., 2021; Milner, 2021).

4.3 | Robustness check

The previous regression analysis is supplemented with two-stage least squares with fixed effects as a reaction to possible endogeneity. Using import shocks from low-wage countries to the US, this method is a standard tool in all relevant papers (Ballard-Rosa et al., 2021; Colantone & Stanig, 2018a, 2018a; Milner, 2021). The presentation of the results follows the same order as in the previous two subsections, that is, first, a regression analysis for all European regions (Table 3), and then the differential impact across regions by industrial and urban–rural typology (Table 4).

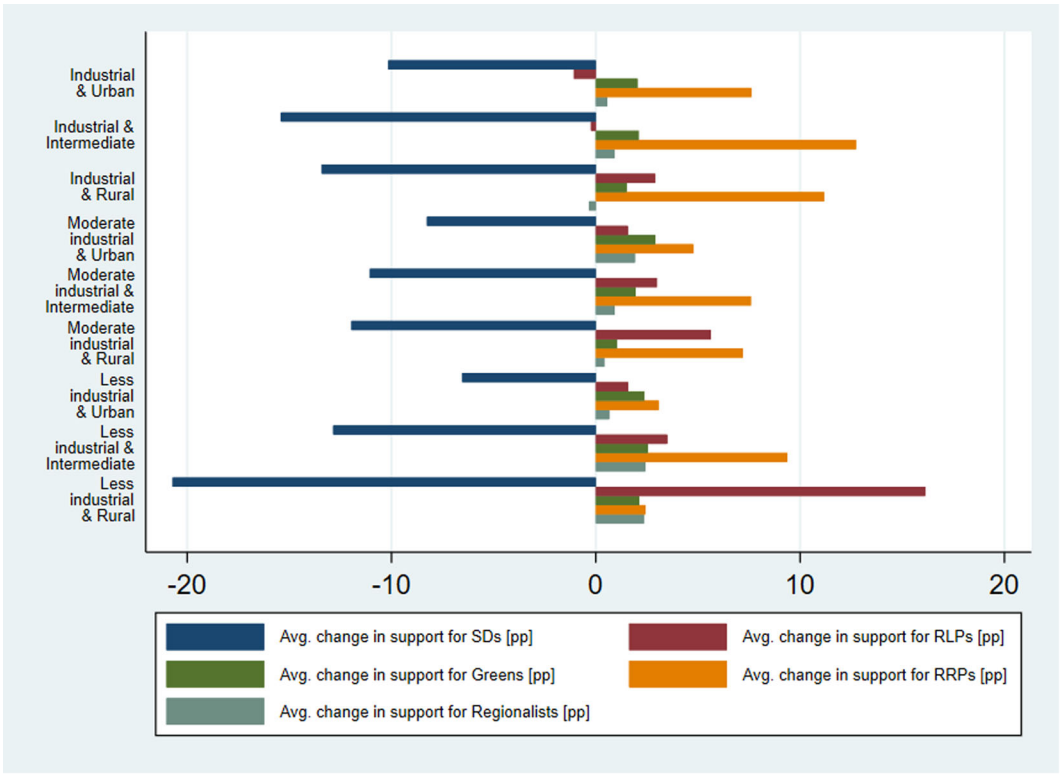

FIGURE 3 Changes in electoral support of selected political parties according to industrial and urban–rural typology. Regions are divided into nine groups; each of the three levels of industrialization contains individual categories from the urban–rural typology. The change in electoral support for political parties is expressed as the difference between the last and first elections between 2002 and 2022. *Source*: Own calculation. RLP, radical left party; RRP, radical right part.

The analysis reaffirms the previous findings, demonstrating the statistically significant effect of import shocks from low-wage countries (except for Turkish imports).[2] The import shocks, coupled with the intense competition of RLPs, RRPs, and regionalist parties, significantly diminish the electoral success of the Social Democrats. Regarding demographic and economic variables, social democratic parties tend to perform worse in regions with a higher proportion of older adults, a higher proportion of immigrants, and a higher proportion of unemployed people. However, the level of education, population density, economic level, or importance of green parties does not significantly influence electoral behavior for these parties.

In the context of industrialization, this method suggests that the negative impact of import shocks is amplified in (moderately) industrial regions. At the same time, in the case of the urban–rural typology, the results are not unambiguous in comparison with previous regressions. As a basic explanation, amplification occurs in industrial regions of intermediate or rural character. In urban regions, these impacts are significantly lower because the higher level of human capital, the concentration of technology companies, and the focus on skill-intensive industries or knowledge-intensive services enable better adaptability to global changes (Quintana, 2021).

[2]With this method, the estimated impact on the Social Democrats is slightly higher; an increase of one standard deviation (0.239) may decrease electoral support by 1.2 percentage points.

TABLE 3 Influence of regional import shocks from low-wage countries on the electoral results of social democratic parties in parliamentary elections (robustness check).

	(1)	(2)	(3)	(4)	(5)
Import shock from low-wage countries	−5.2** (−2.44)				
Import shock from Asian low-wage countries		−6.2*** (−3.20)			
Import shock from China			−6.7*** (−3.50)		
Import shock from India				−3.8* (−1.85)	
Import shock from Turkey					−2.4 (−0.71)
Turnout	0.2 (1.36)	0.2 (1.34)	0.2 (1.28)	0.2 (1.43)	0.2 (1.58)
Share of RLPs	−0.6*** (−5.09)	−0.6*** (−5.32)	−0.6*** (−5.16)	−0.6*** (−5.11)	−0.6*** (−4.67)
Share of green parties	−0.2 (−0.74)	−0.2 (−0.74)	−0.2 (−0.62)	−0.2 (−0.79)	−0.2 (−0.80)
Share of RRPs	−0.3** (−2.74)	−0.3** (−2.66)	−0.3** (−2.42)	−0.4*** (−2.96)	−0.4*** (−3.04)
Share of regionalist parties	−0.3*** (−4.14)	−0.3*** (−4.23)	−0.3*** (−4.16)	−0.3*** (−4.29)	−0.3*** (−3.98)
Share of young population	0.6 (1.45)	0.6 (1.41)	0.6 (1.44)	0.7 (1.51)	0.7 (1.51)
Share of elderly population	−1.7*** (−4.04)	−1.7*** (−3.95)	−1.7*** (−3.59)	−1.7*** (−4.12)	−1.7*** (−4.05)
Share of population with primary education	−0.1 (−0.61)	−0.1 (−0.50)	−0.0 (−0.17)	−0.2 (−0.99)	−0.2 (−1.06)
Share of population with tertiary education	0.0 (0.26)	0.0 (0.25)	0.0 (0.31)	−0.0 (−0.03)	−0.0 (−0.10)
log Population density	−6.1 (−0.44)	−6.0 (−0.44)	−5.9 (−0.41)	−3.8 (−0.28)	−4.9 (−0.36)
Share of immigrants	−1.6** (−2.06)	−1.7** (−2.18)	−1.7** (−2.05)	−1.3* (−1.96)	−1.3* (−2.01)
log GDP per capita	1.4 (0.36)	0.1 (0.03)	−0.7 (−0.17)	4.6 (1.33)	4.2 (1.18)
General unemployment rate	−0.3** (−2.58)	−0.3*** (−2.76)	−0.4** (−2.75)	−0.2* (−1.91)	−0.3** (−2.26)
Estimator	2SLS	2SLS	2SLS	2SLS	2SLS
Regional FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES
Countries	30	30	30	30	30
NUTS2	269	269	269	269	269
Observations	1443	1443	1443	1443	1443
Adjusted R^2 (centered)	0.39	0.38	0.32	0.41	0.41
Kleibergen–Paap F statistic	94.18	88.82	106.22	104.94	29.53

Note: t statistics are reported in parentheses; Kleibergen–Paap F statistic means the Kleibergen–Paap rk Wald F statistic; constant, regional, and time (election-year) fixed effects are not reported; all regression models include robust standard errors clustered by state.

Abbreviations: 2SLS, two-stage least squares; FE, fixed effect; GDP, gross domestic product; RLP, radical left party; RRP, radical right part.

*, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

TABLE 4 Influence of regional import shocks from low-wage countries on electoral results of social democratic parties in parliamentary elections in different types of regions (robustness check).

OLS	(1)	(2)	(3)	(4)	(5)	(6)
Regions	Industrial	Moderately industrial	Less industrial	Predominantly urban	Intermediate	Predominantly rural
Import shock from low-wage countries	−1.9 (−0.54)	−6.7** (−2.48)	−1.1 (−0.74)	−7.8* (−1.96)	−0.7 (−0.22)	−6.4** (−2.23)
Turnout	−0.1 (−0.94)	0.3** (2.32)	0.1 (1.04)	0.3 (1.71)	0.1 (1.12)	0.0 (0.12)
Share of RLPs	−0.2* (−1.86)	−0.6*** (−5.28)	−0.8*** (−10.46)	−0.6*** (−3.42)	−0.5*** (−3.44)	−0.5*** (−3.45)
Share of Green parties	−0.7* (−1.97)	0.2 (0.87)	−0.5** (−2.37)	0.0 (0.05)	−0.1 (−0.33)	−1.0*** (−3.14)
Share of RRPs	−0.3** (−2.21)	−0.3** (−2.29)	−0.4*** (−3.57)	−0.3* (−1.88)	−0.3*** (−3.13)	−0.4** (−2.12)
Share of Regionalist parties	−0.0 (−0.23)	−0.3** (−2.58)	−0.5*** (−5.51)	−0.1 (−1.31)	−0.3*** (−3.50)	−0.3 (−1.52)
Share of young population	2.4*** (4.85)	−0.1 (−0.17)	0.0 (0.03)	0.0 (0.02)	0.9 (1.62)	0.6 (1.00)
Share of elderly population	−0.8 (−1.02)	−1.6*** (−2.95)	−1.6*** (−3.72)	−2.7*** (−3.82)	−1.4** (−2.22)	−1.8** (−2.50)
Share of population with primary education	−0.1 (−0.46)	−0.0 (−0.08)	−0.2 (−1.48)	−0.1 (−0.55)	−0.1 (−0.44)	−0.1 (−0.47)
Share of population with tertiary education	−0.2 (−1.07)	0.2 (0.95)	−0.1 (−0.94)	0.2 (1.39)	0.0 (0.24)	−0.3 (−1.27)
log Population density	6.3 (0.32)	−6.0 (−0.35)	−2.9 (−0.26)	−31.2 (−1.73)	−4.8 (−0.34)	−19.4 (−0.87)
Share of immigrants	0.4 (0.13)	−4.6*** (−3.29)	−0.0 (−0.06)	−4.0*** (−3.56)	−0.7 (−0.95)	−2.3 (−1.58)
log GDP per capita	2.0 (0.49)	−0.0 (−0.01)	7.2 (0.77)	1.9 (0.30)	2.8 (0.70)	6.0 (1.58)
General unemployment rate	−0.6** (−2.46)	−0.2 (−1.14)	−0.2 (−1.24)	−0.1 (−0.53)	−0.2 (−1.64)	−0.6* (−2.06)
Estimator	2SLS	2SLS	2SLS	2SLS	2SLS	2SLS
Regional FE	YES	YES	YES	YES	YES	YES

TABLE 4 (Continued)

OLS	(1)	(2)	(3)	(4)	(5)	(6)
Regions	**Industrial**	**Moderately industrial**	**Less industrial**	**Predominantly urban**	**Intermediate**	**Predominantly rural**
Year FE	YES	YES	YES	YES	YES	YES
Countries	19	24	18	19	29	20
NUTS2	72	140	57	65	137	67
Observations	401	736	306	345	749	349
Adjusted R^2 (centered)	0.4	0.38	0.63	0.28	0.28	0.55
Kleibergen–Paap *F* statistic	26.19	49.16	161.83	36.47	70.91	139.4

Note: *t* statistics are reported in parentheses; Kleibergen–Paap *F* statistic means the Kleibergen–Paap *rk* Wald *F* statistic; constant, regional, and time (election-year) fixed effects are not reported; all regression models include robust standard errors clustered by state.

Abbreviations: 2SLS, two-stage least squares; FE, fixed effect; GDP, gross domestic product; OLS, ordinary least squares; RLP, radical left party; RRP, radical right part.

*, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

5 | CONCLUSIONS

The paper investigates the influence of sudden and significant increases in imports, referred to as "import shocks," from low-wage countries on electoral support for European social democratic parties in 289 NUTS2 regions (2002–2022). The results indicate that one standard deviation (0.239) increase in the import shock from low-wage countries over an election period may lead to a decline in support for social democratic parties between 0.6 and 1.2 percentage points, a somewhat smaller estimated impact than Colantone and Stanig (2018b). The negative impact on electoral support for social democratic parties is higher in moderately industrial and predominantly rural regions since these areas are less adaptable to global changes. At the same time, different regional characteristics lead to variant electoral impacts: an increase in electoral support for the RRPs in industrial regions and intermediate areas and a rise in the RLPs in peripheral/rural areas.

These findings suggest that the electoral decline of social democracy is likely to continue, which may create more uncertainty in implementing economic policy. Nonmainstream parties whose future economic policy actions are difficult to predict may have a more substantial influence on the European political system. At the same time, globalization shocks may increase political polarization (Autor et al., 2020), again limiting the possibilities for responding to the challenges of the 21st century at both regional and national levels. On the other hand, the policy response should not involve restricting international trade because the long-term adverse economic effects outweigh the short-term political points gained. Instead, in the case of industrial or rural areas, the economic policy of not only social democratic parties should use structural policy in combination with active employment policy and educational policy. The findings of this paper also indicate that a regional focus on skill-intensive industries or knowledge-intensive services significantly reduces the adverse effects of import shocks. These measures would also enable a response to robotization and automation of production, which, together with the green transformation of European regions, are other phenomena that will have significant economic and political implications in the coming years. Cohesion policy should also respond to all these phenomena at the European or national level.

Since thematic literature primarily focuses on the electoral success of populist or radical-right parties, the paper's main contribution is analyzing the effects of regional globalization on electoral support for social democratic parties. Moreover, analyzing the parties that gained at least 1% of the votes in at least one parliamentary election is another benefit of the paper, as estimates include all relevant parties. In general, the paper enriches the debate on how economic globalization through regional import shocks affects the evolution of the European political environment, thereby distinguishing it from the empirical literature, which mainly focuses on the importance of area differences within individual countries (Barone & Kreuter, 2021; Becker et al., 2017; Dauth et al., 2014; Malgouyres, 2017b) or Western Europe (Colantone & Stanig, 2018b; Milner, 2021). Also, the paper focuses on the distinction of impacts between regions according to different levels of industrialization and urbanization. In contrast, the articles above describe the electoral impacts of changes in structural characteristics.

At the same time, the mentioned findings face two empirical limitations: the analysis at the level of NUTS2 regions and the unavailability of some regional characteristics. The first limitation is related to the fact that most European countries have constituencies at the NUTS3/LAU2 level; therefore, aggregating the results at a higher regional level partially distorts voting behavior. However, socioeconomic data for most European regions are unavailable at lower levels. The second limitation concerns omitting some regional characteristics due to data availability. These variables are wage polarization, income inequality, exposure to poverty, the ethnic structure of the population, and immigration flows. Regression analysis uses the latter variable but only as an estimate.

As a possible extension of the research, this paper proposes four options. First, the results for social democratic parties should be compared with standard political families (RLPs, RRPs, Regionalist) and with the addition of left-wing and right-wing populist parties. Second, an analysis of the globalization effects on political or ideological polarization, which means supplementing the election results with changes in the cleavage lines, from the standard left-right divide through the social GAL ("Green, Alternative, Liberal")/TAN ("Traditional, Authoritarian, Nationalism") dimension of political competition to attitudes towards pro-anti-EU integration. Third, an extension to include other regional

characteristics that are not available to a sufficient extent in most European regions, such as wage polarization (Kurer & Palier, 2019), income inequality (Harms & Schwab, 2020), level of social capital (Rodríguez-Pose et al., 2021), trust in political institutions (Margalit, 2019) or ethnic structure (Autor et al., 2020). Fourth, carrying out the analysis at lower regional levels (NUTS3 or LAU2), as the availability of socioeconomic data at the NUTS2 level is at the expense of the fact that this level corresponds to constituencies in only a minority of European countries.

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CONFLICT OF INTEREST STATEMENT

The author declares no conflict of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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APPENDIX

See Tables A1–A6.

TABLE A1 List of social democratic parties.

Country	Social democratic parties
Austria	Bürgerforum Österreich—Liste Fritz Dinkhauser (*The Citizens' Forum Austria*)
	Sozialdemokratische Partei Österreichs (*Social Democratic Party of Austria*)
Belgium	Parti Socialiste (*Socialist Party*)
	Socialistische Partij (*Socialist Party*)
Bulgaria	Alternativa za balgarsko vazrazhdane (*Alternative for Bulgarian Revival*)
	Balgarska Sotsialisticheska Partiya (*Bulgarian Socialist Party*)
	Izpravi se.BG! Nieidvame! (*Stand Up.BG! We are coming!*)
	Koalitsiya za Balgariya/Demokratichna Levitsa (*Coalition for Bulgaria/Democratic Left*)
	Koalitsiya na Rozata (*Coalition of the Rose*)
Croatia	Milan Bandić 365—Stranka rada i solidarnosti (*Milan Bandic 365—The Party of Labour and Solidarity*)
	Restart koalicija (*Restart Coalition*)
	Socijaldemokratska partija Hrvatske (*Social Democratic Party of Croatia*)
Cyprus	Kinima Sosialdimokraton EDEK (*Movement for Social Democracy EDEK*)
	Symmaxia (*Citizen's Alliance*)
Czechia	Česká strana sociálně demokratická (*Czech Social Democratic Party*)
	Strana práv občanů—Zemanovci (*Party of Civic Rights—Zemanovci*)
Denmark	Socialdemokraterne (*Social Democrats*)
Estonia	Eesti Keskerakond (*Estonian Centre Party*)
	Konstitutsioonierakond—Eestimaa Ühendatud Rahvapartei (*Constitution Party—Estonian United People's Party*)
	Sotsiaaldemokraatlik Erakond/Mõõdukad (*Social Democratic Party/Moderates*)
Finland	Suomen Sosialidemokraattinen Puolue—Finlands Socialdemokratiska Parti (*Social Democratic Party of Finland*)
France	Divers gauche (*Other left*)
	Génération.s, le movement (*Generation.s, the movement*)
	Parti radical de gauche (*Radical Party of the Left*)
	Parti socialiste (*Socialist Party*)
Germany	Sozialdemokratische Partei Deutschlands (*Social Democratic Party of Germany*)
Greece	Dimokratiki Aristera (*Democratic Left*)
	Dimokratiko Koinoniko Kinima (*Democratic Social Movement*)
	Enosi Kentroon (*Union of Centrists*)
	Kinima Dimokraton Sosialiston (*Movement of Democratic Socialists*)

(Continues)

TABLE A1 (Continued)

Country	Social democratic parties
	Panellinio Sosialistikó Kínima (*Panhellenic Socialist Movement*)
	To Potami (*The River*)
Hungary	Demokratikus Koalíció (*Democratic Coalition*)
	Magyar Szocialista Párt (*Hungarian Socialist Party*)
Iceland	Samfylkingin (*Social Democratic Alliance*)
Ireland	Na Daonlathaithe Sóisialta (*Social Democrats*)
	Páirtí an Lucht Oibre (*Labour Party*)
Italy	Centro-sinistra (*Centre Left*)
	Partito Democratico (*Democratic Party*)
	Radicali (*Radicals*)
Latvia	Latvijas Sociāldemokrātiskā Strādnieku Partija (*Latvian Social Democratic Workers' Party*)
	Par cilvēka tiesībām vienotā Latvijā (*For Human Rights in a United Latvia*)
	Politiskā Partija "Alternative" (*Political Party "Alternative"*)
	Progresīvie (*The Progressive*)
	Republika (*The Republic*)
	Saskaņas (*Harmony*)
	Sociāldemokrātiskā Labklājības partija (*Social Democratic Welfare Party*)
Lithuania	Lietuvos socialdemokratų darbo partija (*Social Democratic Labour Party of Lithuania*)
	Lietuvos socialdemokratų partija (*Lithuanian Social Democratic Party*)
Luxembourg	Lëtzebuerger Sozialistesch Aarbechterpartei (*Luxembourg Socialist Workers' Party*)
Malta	Partit Laburista (*Malta Labour Party*)
The Netherlands	Partij van de Arbeid (*Labour Party*)
Norway	Det norske Arbeiderparti (*Norwegian Labour Party*)
Poland	Lewica i Demokraci (*Left and Democrats*)
	Partia Razem (*Together Party*)
	Socjaldemokracja Polska (*Social Democracy of Poland*)
	Sojusz Lewicy Demokratycznej (*Democratic Left Alliance*)
	Wiosna (*Spring*)
Portugal	Livre—Liberdade, Esquerda, Europa e Ecologia (*Livre*)
	Partido Socialista (*Socialist Party*)
Romania	Partidul Social Democrat (*Social Democratic Party*)
Slovakia	Dobrá voľba (*Good Choice*)
	Smer—sociálna demokracia (*Direction—Social Democracy*)
	Sociálnodemokratická alternatíva (*Social Democratic Alternative*)
	Strana demokratickej ľavice (*Party of the Democratic Left*)

TABLE A1 (Continued)

Country	Social democratic parties
Slovenia	Dobra Drzava (*Good Country*)
	Lista Marjana Šarca (*List of Marjan Sarec*)
	Lista Zorana Jankovića—Pozitivna Slovenija (*Zoran Jankovic's List—Positive Slovenia*)
	Stranka Mira Cerarja (*Party of Miro Cerar*)
	Stranka za trajnostni razvoj Slovenije (*Party for Sustainable Development of Slovenia*)
	Zavezništvo Alenke Bratušek (*Alliance of Alenka Bratusek*)
	Združena lista—Socialni demokrati (*United List—Social Democrats*)
Spain	Partido Socialista Obrero Español (*Spanish Socialist Workers Party*)
Sweden	Socialdemokraterna (*Social Democrats*)
Switzerland	Sozialdemokratische Partei der Schweiz—Parti Socialiste Suisse (*Social Democratic Party of Switzerland*)
United Kingdom	*Labour Party*

TABLE A2 List of low-wage countries.

Low-wage countries	GDP per capita (% EU)	Asian low-wage countries
China	17.4	China
Turkey	29.3	Turkey
India	4.1	India
Vietnam	5.9	Vietnam
Russia	29.7	Malaysia
Malaysia	27.2	Thailand
Mexico	29.6	Bangladesh
Thailand	15.7	Indonesia
Bangladesh	3.4	Philippines
South Africa	20.4	Pakistan
Morocco	8.6	
Indonesia	8.7	
Ukraine	8.8	
Tunisia	12.0	
Brazil	25.6	
Philippines	7.3	
Pakistan	3.5	

Abbreviation: GDP, gross domestic product.

TABLE A3 List of variables.

Proxy	Description	Source
Dependent proxy		
Social Democracy	The share of social democratic parties	Norwegian Centre for Research Data (2020) and Schraff et al. (2023); individual statistical offices of the involved countries
Import shocks		
Import shock from LWC	The import shock is expressed as the logarithmic difference between the two levels of imports in relation to the situation in the market for industrial workers in the given region. The level means the share of the import of industrial products in the number of industry employees multiplied by the industrial employment rate in each region	Eurostat (2023a, 2023b) and World Bank Group (2023a)
Import shock from Asian LWC		
Import shock from China		
Import shock from India		
Import shock from Turkey		
Electoral control proxies		
Turnout	Voter turnout	Norwegian Centre for Research Data (2020) and Schraff et al. (2023); individual statistical offices of the involved countries
RLPs	The share of radical left parties	
Green	The share of green parties	
RRPs	The share of radical right parties	
Regionalist	The share of regionalist parties	
Demographic control proxies		
YoungPop	The share of people aged 18–34 in the total population	Eurostat (2023b)
ElderlyPop	The share of people over 65 in the total population	
Primary	The share of people with less than primary, primary and lower secondary education in the age group 25–64	
Tertiary	The share of people with a university degree in the age group 25–64	
PopDensity	Population density per square kilometer in logarithmic functional form	
Immigration	The share of foreign citizens in 2011 according to Census 2011 round; values for other years are calculated by adjusting the given value by the percentage change in migration, which is the difference between the percentage change in the population and the percentage natural change in the population	

TABLE A3 (Continued)

Proxy	Description	Source
Economic control proxies		
GDPpc	Current market prices in logarithmic functional form	Eurostat (2023b)
Unempl	The general unemployment rate is calculated for the age cohort older than 15 years	
Contextual structural factors		
Industrial regions	The share of industrial employment was higher than 25% in 2001	Eurostat (2023b)
Moderate industrial regions	The share of industrial employment was between 15% and 25% in 2001	
Less industrial regions	The share of industrial employment was lower than 15% in 2001	
Predominantly urban regions	The share of the population living in rural areas is below 20%	Eurostat (2023c)
Intermediate regions	The share of the population living in rural areas is between 20% and 50%	
Predominantly rural regions	The share of the population living in rural areas is higher than 50%	

TABLE A4 List of parliamentary elections.

Country	Parliamentary elections
Austria	2002, 2006, 2008, 2013, 2017, 2019
Belgium	2003, 2007, 2010, 2014, 2019
Bulgaria	2005, 2009, 2013, 2014, 2017, 2021 (April), 2022
Croatia	2003, 2007, 2011, 2015, 2016, 2020
Cyprus	2006, 2011, 2016, 2021
Czechia	2002, 2006, 2010, 2013, 2017, 2021
Denmark	2005, 2007, 2011, 2015, 2019, 2022
Estonia	2003, 2007, 2011, 2015, 2019
Finland	2003, 2007, 2011, 2015, 2019
France	2002, 2007, 2012, 2017, 2022
Germany	2002, 2005, 2009, 2013, 2017, 2021
Greece	2004, 2007, 2009, 2012 (May), 2015 (January), 2019
Hungary	2002, 2006, 2010, 2014, 2018
Iceland	2003, 2007, 2009, 2013, 2016, 2017, 2021
Ireland	2016, 2020

(Continues)

TABLE A4 (Continued)

Country	Parliamentary elections
Italy	2006, 2008, 2013, 2018, 2022
Latvia	2002, 2006, 2010, 2011, 2014, 2018, 2022
Lithuania	2004, 2008, 2012, 2016, 2020
Luxembourg	2004, 2009, 2013, 2018, 2022
Malta	2003, 2008, 2013, 2017
The Netherlands	2002, 2003, 2006, 2010, 2012, 2017, 2021
Norway	2005, 2009, 2013, 2017, 2021
Poland	2005, 2007, 2011, 2015, 2019
Portugal	2002, 2005, 2009, 2011, 2015, 2019, 2022
Romania	2004, 2008, 2012, 2016, 2020
Slovakia	2002, 2006, 2010, 2012, 2016, 2020
Slovenia	2004, 2008, 2011, 2014, 2018, 2022
Spain	2004, 2008, 2011, 2015, 2016, 2019 (April)
Sweden	2002, 2006, 2010, 2014, 2018, 2022
Switzerland	2003, 2007, 2011, 2015, 2019
United Kingdom	2005, 2010, 2015, 2017, 2019

TABLE A5 Influence of regional import shocks from low-wage countries on electoral results of social democratic parties in parliamentary elections in different types of regions (OLS).

OLS	(1)	(2)	(3)	(4)	(5)	(6)
Regions	Industrial	Moderately industrial	Less industrial	Predominantly urban	Intermediate	Predominantly rural
Import shock from low-wage countries	−4.9** (−2.86)	−1.8 (−1.69)	−0.9 (−0.63)	−1.7 (−1.06)	−2.5* (−1.99)	−2.9 (−1.26)
Turnout	−0.2 (−1.06)	0.3** (2.76)	0.1 (1.02)	0.3* (1.97)	0.1 (1.07)	0.0 (0.16)
Share of RLPs	−0.3* (−2.09)	−0.6*** (−5.17)	−0.8*** (−10.44)	−0.5** (−2.62)	−0.5*** (−3.65)	−0.5*** (−3.22)
Share of Green parties	−0.6* (−1.89)	0.1 (0.64)	−0.5** (−2.25)	0.1 (0.37)	−0.1 (−0.26)	−1.0*** (−3.05)
Share of RRPs	−0.3* (−1.96)	−0.3** (−2.48)	−0.4*** (−3.63)	−0.3* (−1.94)	−0.3*** (−2.77)	−0.4** (−2.37)
Share of Regionalist parties	−0.0 (−0.28)	−0.3** (−2.46)	−0.5*** (−5.52)	−0.2 (−1.35)	−0.3*** (−3.67)	−0.3 (−1.68)
Share of young population	2.2*** (5.97)	−0.0 (−0.06)	0.0 (0.03)	0.3 (0.44)	0.9 (1.69)	0.8 (1.39)
Share of elderly population	−0.8 (−0.97)	−1.5** (−2.62)	−1.6*** (−3.67)	−2.3*** (−3.28)	−1.3** (−2.24)	−1.8** (−2.38)
Share of population with primary education	−0.1 (−0.24)	−0.1 (−0.64)	−0.2 (−1.52)	−0.3* (−1.85)	−0.1 (−0.40)	−0.1 (−0.44)
Share of population with tertiary education	−0.2 (−1.18)	0.1 (0.65)	−0.1 (−0.90)	0.0 (0.27)	0.0 (0.25)	−0.2 (−1.20)
log Population density	13.0 (0.73)	1.8 (0.11)	−3.0 (−0.27)	−13.2 (−0.92)	−3.2 (−0.24)	−20.4 (−0.91)
Share of immigrants	−0.5 (−0.20)	−3.8** (−2.58)	−0.0 (−0.03)	−3.2** (−2.28)	−0.9 (−1.29)	−2.7* (−1.75)
log GDP per capita	0.2 (0.06)	4.4 (1.37)	7.2 (0.78)	6.8 (1.12)	1.7 (0.45)	7.0* (1.87)
General unemployment rate	−0.7** (−2.79)	−0.2 (−1.01)	−0.2 (−1.20)	−0.1 (−0.49)	−0.2* (−1.82)	−0.5* (−1.85)
Regional FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES

(Continues)

TABLE A5 (Continued)

OLS	(1)	(2)	(3)	(4)	(5)	(6)
Regions	**Industrial**	**Moderately industrial**	**Less industrial**	**Predominantly urban**	**Intermediate**	**Predominantly rural**
Countries	19	24	18	19	29	20
NUTS2	72	140	57	65	137	67
Observations	401	736	306	345	749	349
Adjusted R^2 (within)	0.41	0.42	0.63	0.35	0.29	0.57

Note: *t* statistics are reported in parentheses; constant, regional, and time (election-year) fixed effects are not reported; all regression models include robust standard errors clustered by state.

Abbreviations: FE, fixed effect; GDP, gross domestic product; OLS, ordinary least squares; RLP, radical left party; RRP, radical right part.

*, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

TABLE A6 Influence of regional import shocks from low-wage countries on electoral results of social democratic parties in parliamentary elections in different types of regions (mixed-effects models).

Mixed-effects	(1)	(2)	(3)	(4)	(5)	(6)
regions	Industrial	Moderately industrial	Less industrial	Predominantly urban	Intermediate	Predominantly rural
Import shock from low-wage countries	−5.1** (−2.27)	−2.0** (−2.01)	−0.6 (−0.52)	−1.6 (−1.09)	−2.9** (−1.98)	−3.4 (−1.48)
Turnout	−0.1 (−0.45)	0.3*** (3.27)	0.2** (1.97)	0.2* (1.70)	0.1* (1.72)	0.2 (1.11)
Share of RLPs	−0.3** (−2.00)	−0.6*** (−6.26)	−0.8*** (−11.27)	−0.5*** (−3.02)	−0.4*** (−3.64)	−0.5*** (−4.11)
Share of Green parties	−0.6* (−1.65)	−0.0 (−0.17)	−0.4** (−2.24)	0.0 (0.01)	−0.2 (−0.75)	−0.9*** (−2.87)
Share of RRPs	−0.3** (−2.07)	−0.4*** (−2.98)	−0.4*** (−4.36)	−0.3** (−2.47)	−0.3*** (−3.07)	−0.4*** (−2.82)
Share of Regionalist parties	−0.2* (−1.70)	−0.4*** (−4.57)	−0.4*** (−5.59)	−0.1 (−1.15)	−0.3*** (−4.55)	−0.5*** (−6.22)
Share of young population	2.2*** (5.94)	0.0 (0.08)	0.0 (0.07)	0.3 (0.51)	0.7* (1.74)	0.5 (0.99)
Share of elderly population	0.9 (1.43)	−0.5 (−1.08)	−0.4 (−1.20)	−0.9* (−1.88)	−0.0 (−0.10)	0.3 (1.04)
Share of population with primary education	0.1 (1.03)	0.0 (0.24)	−0.1 (−0.76)	−0.1 (−1.02)	0.0 (0.46)	−0.1 (−0.48)
Share of population with tertiary education	−0.1 (−0.65)	−0.0 (−0.02)	−0.1 (−0.97)	−0.2* (−1.92)	−0.1 (−0.52)	−0.4** (−2.46)
log Population density	0.9 (0.63)	1.4 (1.00)	−3.0*** (−4.11)	2.8 (1.15)	−2.4** (−2.55)	−2.3 (−1.22)
Share of immigrants	0.2 (0.69)	−0.5 (−1.25)	0.1 (0.61)	−0.7 (−1.48)	−0.2 (−0.79)	0.0 (0.17)
log GDP per capita	0.2 (0.09)	1.3 (0.55)	6.7 (1.44)	5.8 (1.64)	0.7 (0.25)	2.3 (0.92)
General unemployment rate	−0.4* (−1.87)	−0.2 (−0.78)	−0.0 (−0.25)	−0.1 (−0.40)	−0.1 (−0.47)	−0.4* (−1.86)

(Continues)

TABLE A6 (Continued)

Mixed-effects regions	(1) Industrial	(2) Moderately industrial	(3) Less industrial	(4) Predominantly urban	(5) Intermediate	(6) Predominantly rural
Regional FE	NO	NO	NO	NO	NO	NO
Year FE	YES	YES	YES	YES	YES	YES
Countries	19	24	18	19	29	20
NUTS2	73	144	57	65	138	71
Observations	402	740	306	345	750	353
LR test	0.00 (206.6)	0.00 (679.4)	0.00 (220.3)	0.00 (287.4)	0.00 (429.6)	0.00 (191.6)
ICC Country	0.53	0.52	0.76	0.19	0.49	0.59
ICC NUTS2|Country	0.75	0.86	0.87	0.65	0.74	0.74

Note: *t* statistics are reported in parentheses; LR test means Likelihood-ratio test; ICC Country means interclass correlation at country level; ICC NUTS2|Country means interclass correlation at region-within-country level; constant, regional, and time (election-year) fixed effects (FEs) are not reported; all regression models include robust standard errors clustered by state.

Abbreviations: GDP, gross domestic product; RLP, radical left party; RRP, radical right part.

*, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.