



OPEN ACCESS

EDITED BY

Maria Ferreira,
University of Lisbon, Portugal

REVIEWED BY

Gwendoline De Oliveira Neves,
Pablo de Olavide University, Spain
Ricardo Iglesias-Pascual,
Pablo de Olavide University, Spain

*CORRESPONDENCE

Jose M. Pavia
✉ pavia@uv.es

RECEIVED 02 October 2025

REVISED 11 November 2025

ACCEPTED 17 November 2025

PUBLISHED 11 December 2025

CITATION

Roig R, Espinosa P and Pavia JM (2025) Who votes for vox? Socioeconomic profiles and electoral shifts in the region of Madrid. *Front. Polit. Sci.* 7:1717586. doi: 10.3389/fpos.2025.1717586

COPYRIGHT

© 2025 Roig, Espinosa and Pavia. This is an open-access article distributed under the terms of the [Creative Commons Attribution License \(CC BY\)](#). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.

Who votes for vox? Socioeconomic profiles and electoral shifts in the region of Madrid

Rosa Roig, Priscila Espinosa and Jose M. Pavia*

Department of Applied Economics, Universitat de Valencia, Valencia, Spain

Introduction: The rise of the radical right in Europe is frequently interpreted through the “modernization losers” framework. This study examines whether this theory explains Vox’s electoral breakthrough in the Region of Madrid (RoM).

Methods: Using a comprehensive database combining income variables and electoral results at the census-section level, the analysis estimates vote-transfer matrices through ecological inference to identify the sociodemographic profile of Vox voters in both general and regional elections from 2016 to 2023.

Results: Findings show that Vox’s emergence and initial expansion in the RoM were primarily driven by the upper-middle and right-middle classes, contradicting the modernization-losers hypothesis. Only later—after the COVID-19 outbreak and the imposition of mobility restrictions in 2020—did modernization losers begin to join its electorate.

Discussion: Although the study focuses mainly on electoral supply, it also incorporates demand-side dynamics. The interaction between these dimensions, together with contextual conditions, helps explain the evolution of Vox’s support over time. Moreover, this support is strongly conditioned by the characteristics and discourse of the competing candidate from the traditional right.

KEYWORDS

radical right, extreme right, ecological inference, voter transitions, elections

1 Introduction

Despite the lack of a general consensus on whether far-right parties should be referred to as extreme-right (Ignazi, 2003), radical-right (Mudde, 2010), or populist-right parties (Fennema, 2005), the rise of far-right voting across Western democracies in the 21st century has generated a substantial body of scientific literature.

Acha Ugarte (1997) develops a theoretical framework for their analysis. Arzheimer (2018) focuses on understanding their popularity. Delle Donne (2022) examines the threat they pose to liberal democracy. Goodwin (2007) emphasizes their fascist roots. Mudde (2007) investigates their rise in Europe, as well as their normalization during the so-called fourth wave (Mudde, 2019). Ziller and Schübel (2015) explore how political corruption and levels of political trust impact on their rise. Akkerman et al. (2017) note that in the Netherlands the primary motivations of their voters are cultural and identity-based. Mayer (2015) identifies the closing of the gender gap among voters of the Front National (FN) in France. Neiwert (2017) examines how white supremacy, American militarism, and other elements of traditional American identity emerge as explanatory factors for the success of the radical right in US elections.

Complementing these macro-level analyses, a growing strand of the literature has adopted a local perspective. Recent cross-national research shows that the effect of local

context on support for the populist radical right (PRR) operates through mediated and moderated relationships (Arzheimer et al., 2024). A territorial synthesis defines “left-behind places” and explains why long-term local disadvantage matters for political outcomes (Fiorentino et al., 2024). Urban political geography further illustrates how specific city configurations—for instance, municipal housing in “Red Vienna”—relate to the rise of the populist right (Essletzbichler and Forcher, 2022). Furthermore, from a psychosocial and informational standpoint, loneliness (Floyd, 2017; Langenkamp and Stepanova, 2024)—distinct from social isolation and linked to political attitudes—and the contextual prevalence of single-person households (Iglesias-Pascual et al., 2025) have been related to political preferences and electoral behavior, while the local information environment—via newspaper reporting—has been associated with support for the radical right (Jambrina-Canseco, 2023). In the Spanish case, these perspectives call for attention to territorial trajectories and local media narratives alongside identity-based and economic explanations.

Initially, the growth of far-right parties in Spain was considered an unlikely scenario (Alonso and Rovira Kaltwasser, 2014; Turnbull-Dugarte et al., 2020). However, since the Catalan political crisis of 2017, known as “*el procés independentista*,” the Spanish political system has undergone significant change. Following this turning point, a new radical far-right formation has emerged in Spain. This political force, named Vox, has been steadily gaining support. Currently, Vox has sufficient influence to shape the formation and dynamics of some local and regional governments, even without directly assuming governing responsibilities.

A significant proportion of the scientific literature on the Spanish case has explored the relationship between *el procés* and the emergence of Vox (García Lupato et al., 2020; Simón, 2020; Turnbull-Dugarte et al., 2020; Vampa, 2020); while other studies examine the link between economic income and voting for Vox (Rama et al., 2021a; Sánchez-García and Llamazares, 2025), suggesting that dissatisfaction and economic insecurity stemming from globalization drive certain voters to support Vox as a form of protest or a search for solutions to their perceived problems (Arzheimer and Carter, 2006; Inglehart and Norris, 2017). Recently, Marcos-Marne et al. (2024) have argued that Vox’s success and rhetoric is rooted in traditional and nationalist aspects, with populism playing a complementary role. This aligns with the results reported in Iglesias-Pascual et al. (2021) and Iglesias-Pascual et al. (2022), which also challenge the traditional explanations proposed for other European countries that associate foreign immigration with the rise of support for far-right parties.

In this research, we explore the profile of Vox voters from a fresh perspective. This study aims to expand the existing literature by analyzing the evolution of electoral behavior using vote transfer matrices, obtained through ecological inference. This study identifies the characteristics of Vox voters focusing on their previous voting behavior and income levels, employing the most advanced techniques of ecological inference (Pavía and Romero, 2024) within the context of the Community of Madrid (Region of Madrid, RoM). Constrained to this electoral market, our first hypothesis (H1) is that Vox voters are mainly former PP and Ciudadanos (Cs) voters; our second hypothesis (H2) is that the probability of voting for Vox

grows with income. This study investigates the relationship between contextual wealth and voting, using the variable average per capita income at the census tract level. This research answers questions such as: Do Vox voters primarily come from the traditional Popular Party’s (PP) electorate? Do far right voters predominantly come from socioeconomically disadvantaged classes?

The central premise of this research is that Vox, as a reactionary right-wing party, operates as a challenger party, successfully attracting voters by introducing new issues that set it apart from traditional parties (De Vries and Hobolt, 2020; Kollberg, 2024). The main dependent variable is the origin of votes for Vox, which we analyze by examining which candidates its voters supported in previous elections, and their income levels. Examining both these variables will help us understand the growth of the radical right in RoM, from both demand and supply perspectives (Mols and Jetten, 2020), “*recognizing the inherent interaction between supply-side and demand-side factors*” (Golder, 2016).

We focus on the Region of Madrid (RoM), one of Vox’s key electoral strongholds (see Section 4), where the right-wing bloc has maintained uninterrupted power since 1995, supported by Vox during the 2019–2023 period. The choice of this region is justified by its political, economic, and social relevance, serving as the epicenter of liberal democracy and a national benchmark in these domains. Madrid is home to Spain’s capital, hosting the main state institutions of the executive, legislative, and judicial branches of power. In addition to its political importance, Madrid stands out economically, leading the regional ranking for contribution to the national GDP since 2020, rising from 17.7% in 2020 to 19.4% in 2023 (CaixaBank, 2024). The region is home to 39% of the multinational companies operating in Spain and is the third-largest in population, with approximately 7 million people, making it one of the most densely populated and demographically diverse regions of Spain.

Our study period spans from 2016 to 2023, with 2016 as reference year. Note that Vox is a relatively young party, debuting in the 2014 European elections. We analyze the evolution of its support based on voter profiles in the 2019 (April and November) and 2023 general elections, as well as the regional elections of May 2019, 2021, and 2023, always using 2016 as the reference year. The study period is divided into three stages to facilitate analysis. The first stage begins with the 2016 general elections and ends with the April 2019 general elections and the regional elections in spring 2019. The second stage concerns the November 2019 general elections, which were a repeat of the April elections of the same year due to the inability of political parties to form a government. The third stage begins in the post-COVID period with the regional elections of May 2021 and ends with the general elections of July 2023.

A key contribution of this study lies in its alternative methodological approach. While research on electoral change has traditionally relied on individual-level surveys (e.g., Mayer, 2015; Martín-Cubas et al., 2018; Milosav et al., 2025), statistical modeling (e.g., Akkerman et al., 2017; Vampa, 2020; Iglesias-Pascual et al., 2021), or qualitative analysis (e.g., Rodríguez-Pose, 2020; Schwörer and Fernández-García, 2022; Fiorentino et al., 2024), this study relies on ecological inference—a statistical technique aimed at

inferring the unobserved behavior of individuals from observed aggregate data (King, 1997)

Although not without limitations, the ecological inference framework adopted here provides both a distinct analytical perspective and a means to infer individual-level voter transitions within small areas from aggregate electoral data, yielding internally consistent estimates across the entire electorate and over time. The main advantage of estimating voter transitions is that it enables the identification of specific flows of support between parties across elections, rather than merely capturing aggregate changes in vote shares, whereas the use of small geographical units (census tracts) substantially reduces the risk of ecological fallacy. Altogether, this approach allows for a more fine-grained understanding of electoral dynamics than alternative (non-survey) approaches—such as aggregate trend analyses or ecological-based (spatial) regression models—can offer.

The rest of the paper begins with a brief analysis of Vox within the radical right, exploring its ideological character and providing a historical overview of the radical right in Spain. Next, the methodology and research design are outlined. Subsequently, empirical data are examined to confirm or refute the proposed hypotheses. Finally, the conclusions summarize the findings and explore their broader implications.

2 A theoretical approach: Vox, a challenger party of the radical right in Spain

Vox is a relatively young party, making its debut in the 2014 European elections with 1.57% of the valid vote. Its first participation in general elections was in 2015, where it secured just 0.23% of the votes. Its breakthrough came in the 2018 Andalusian regional elections (the first elections held in Spain following the start of the *procés*). After these elections, the far right (Vox) became an established political actor in the Spanish party system, in contrast to other European democracies, where the far right gained prominence much earlier (Arzheimer, 2009; Mudde, 2013; Norris, 2005).

Vox not only entered the Andalusian Parliament but also played a pivotal role in forming the first center-right government of the region, between PP and Cs, after nearly 40 years of PSOE rule. This established Vox as a political force capable of shifting governments from left to right, earning national prominence. In fact, in the 2019 and 2021 regional elections in Madrid, PP retained power with Vox's support. To understand voter flows toward Vox, it is essential to contextualize the party and its evolution as a challenger party of the radical right.

2.1 Vox, a challenger party

The theory of challenger parties refers to those parties that have not had the opportunity to control policies or govern, in contrast to dominant parties, which have governing experience and influence over policy implementation (De Vries and Hobolt, 2020). This unique dynamic allows challenger parties to be innovative

and boldly challenge dominant parties with new political agendas, while the latter focus on maintaining their position. Being outside government and with little to lose, challenger parties are strongly incentivized to introduce innovations and highlight new issues within the party system.

A challenger party implements a strategy of “issue entrepreneurship,” mobilizing conflict in a new dimension of issues to reshape the basis on which voters make political decisions, thereby potentially improving its electoral prospects (De Vries and Hobolt, 2020). A challenger party is not defined by its ideology; it can belong to the far right/radical right (Fratelli d'Italia, FdI), far left/radical left (Podemos in Spain), or even be liberal, such as La République en Marche in France. This category is based on whether a party has previously held political office. The focus is not on the party family but on issue entrepreneurship. These parties introduce new issues previously ignored by traditional parties, attracting new voters by offering innovative responses to their demands and reshaping the political identification map. They engage directly with citizens, addressing their needs with innovative approaches grounded in “original ideological references and political visions distant” from traditional parties, along with an “Internet-prone internal structure and way of functioning” in the digital era (Ignazi, 2021).

The challenger party appeal lies in rejecting the societal model championed by traditional dominant parties, presenting an alternative (De Vries and Hobolt, 2012). These proposals attract protest votes, which, depending on their basis—economic issues, minority rights, etc.—can come from traditional right-wing or left-wing voters. In summary, challenger parties introduce new issues that become new dimensions within the political system, leading a shift in electoral preferences and power structures. This study considers Vox a successful radical-right challenger party. For instance, it transforms the Catalan identity crisis into a broader Spanish identity crisis. Vox innovates by introducing the political dimension of Spanish identity into the party system, arguing that it is “at risk,” and positioning itself as the sole defender of Spain's unity and its traditional values.

2.2 Vox, a radical-right party

Within the framework of the far right, numerous political groups have emerged that challenge the core principles of liberal democracy, including minority rights and gender equality. Despite this, they engage with the democratic system by participating in elections to gain governmental power. Mudde (2007) classifies far-right parties into two major families: radical and extreme right. A terminology commonly used in contemporary scientific literature (Arzheimer, 2018; Ferreira, 2019; Ziller and Schübel, 2015). For Goodwin (2007), the key difference between the two strands of the far right is the traditional extreme right's opposition to the fundamental principle of popular sovereignty. The extreme right rejects the pillars of liberal democracy and criticizes the radical right for accepting the establishment and taking public office. It fights against democracy by any means, including violence (Acha Ugarte, 1997). According to Mudde (2007), the correct term for the radical

right is populist radical right due to its nativism, authoritarianism, and populism.

Nativism is defined as a combination of nationalism and xenophobia, advocating that the state should serve the native population, considering anything non-native (people, culture, language, etc.) as a threat to a homogeneous nation-state. For example, Vox views immigration as a threat, much like FdI in Italy or Chega in Portugal. Authoritarianism is understood in terms of order, interpreting most problems as issues of disorder that can be solved by resorting to authority to punish any infractions. For example, Vox has always advocated for a more authoritarian state response to the Catalan crisis, rejecting any form of political dialogue. As for populism, it is seen as a worldview that divides society into two antagonistic and homogeneous groups: the pure people and the corrupt elites who marginalize the people. The populist party positions itself as the voice of the people against this elite. For example, Vox presents itself as the voice of the Spanish people against elites who, according to them, do not adequately defend Spain's interests. A concrete example of this narrative is Vox's stance on the Catalan crisis. Vox argues that traditional parties, PP and PSOE, have been too accommodating toward Catalan separatists, accusing them of having "betrayed" Spain. Consequently, Vox presents itself as the only party that truly defends Spanish traditions and its territorial integrity.

3 Methods and data

Understanding voter transitions is crucial to unraveling the complexities of electoral behavior and its implications. Analyzing how and why voters switch between parties or candidates not only reveals current preferences but also identifies emerging trends in the political landscape (Abou-Chadi and Stotzer, 2020; Penadés and Pavia, 2024). Traditionally, surveys have been used to construct global transfer matrices, tracking shifts in voter support across electoral cycles. However, this approach has important limitations: poll data often lack representativeness and exhibit high variance when estimating smaller rows of the transfer matrix (Sandoval and Ojeda, 2023), particularly for new or emerging parties like Vox. Moreover, polls provide insufficient resolution to study transitions at small-unit levels, which are required to account for the influence of the local environment on voters' switching (Arzheimer et al., 2024). In this context, ecological inference emerges as a powerful alternative tool by estimating voter transitions at the census tract level.

Working with small spatial units, such as census tracts, offers several analytical advantages over more aggregated levels like municipalities. First, smaller units tend to be more internally homogeneous in their demographic and socioeconomic composition (Mazorra Rodríguez, 2024), reducing the risk of aggregation bias and allowing for a more precise identification of behavioral patterns (Gnaldi et al., 2018). Second, they enable the detection of local heterogeneities and contextual effects that would otherwise be blurred at higher levels of aggregation. Third, using finer spatial units improves the accuracy of ecological inference estimates (Pavia and Romero, 2023), as the assumptions underlying these models—such as internal homogeneity—are more likely to hold. Finally, census tracts provide a closer approximation to

the environments in which voters interact and make decisions, facilitating a better understanding of how local contexts shape electoral behavior.

3.1 Ecological inference

Ecological inference (EI) uses aggregated group-level data to infer individual electoral behavior patterns. EI provides a practical alternative to survey-based approaches, although it also faces some challenges, primarily the risk of ecological fallacy (Robinson, 1950). Ecological fallacy is especially pronounced in heterogeneous populations with respect to political preferences, socioeconomic status, or other characteristics. Nevertheless, these limitations can be mitigated by focusing on small, politically homogeneous areas, where within-unit variation is reduced (Forcina and Pavia, 2025). In such contexts, group-level statistics better approximate individual behavior, increasing the reliability of EI estimates and reducing bias due to internal heterogeneity. Using census tracts as the unit of analysis, therefore, contributes to minimizing the risk of ecological fallacy, as it allows for finer spatial granularity and greater internal homogeneity within units.

Building on this approach, we study the rise of Vox using a recently developed ecological inference algorithm, `rs1phom`, included in the R-package `lphom` (Pavia and Romero, 2024). This algorithm is specifically designed to maximize the accuracy of unit-level (census tract) transfer matrix estimates. Unlike conventional top-down approaches, the `rs1phom` bottom-up method mitigates the effects of unit-level data inaccuracies and heterogeneities, resulting in more accurate and consistent estimates for both specific areas and the entire electoral space. This is a particularly relevant issue in a region like Madrid, which has a high presence of immigrant population, diverse both in terms of nationality and income levels, and very unevenly distributed across the territory.

Furthermore, compared to traditional ecological regression—widely criticized for its high error rates (Freedman et al., 1991)—`rs1phom` achieves error levels below 8% in vote transfer studies, substantially improving on the over 25% errors typical of standard ecological regression. By focusing on small, homogeneous areas and applying this algorithm, we obtain robust estimates of voter transitions that reveal the origins of Vox support by analyzing composition matrices.

When analyzing changes in voter support, researchers often utilize two primary tools: transition probability matrices (which represent the likelihood of voters switching their support between parties across elections) and composition matrices (which show a party's ability to attract voters from various origins). Each serves a distinct purpose and provides unique insights. In this paper, we focus on analyzing composition (or origin) matrices at small-areas and by income groups.

3.2 Data

To estimate voter transitions by income level from the 2016 general elections in RoM (where Vox gained 0.49% of the votes) to the 2019 April (13.95%) and November (18.49%) and 2023

TABLE 1 Summary of electoral results (in percentage of valid votes) recorded in selected elections held in Spain from 2014 to 2023 for relevant parties in RoM.

Year	Election	Political parties						
		Vox	PP	PSOE	Cs	Podemos	UPyD	MM
2014	European	1.57	26.09	23.01	3.16	7.98	6.51	
2015	General	0.23	28.71	22.00	13.94	12.69	0.62	Más Madrid
	Andalusia	0.20	29.10	31.53	13.77	6.86	1.93	has not
	RoM	1.19	33.45	25.71	12.29	18.84	2.06	been
2016	General	0.20	33.01	22.63	13.06	13.42	0.21	created
2018	Andalusia	10.97	20.75	27.95	18.27	16.18	0.18	yet
2019	General–April	10.26	16.69	28.67	15.86	11.06		
	RoM	8.88	22.23	27.31	19.46	5.60	UPyD	14.69
	General–November	15.08	20.81	28.00	6.80	9.82	does not	1.36
2021	RoM	9.13	44.73	16.85	3.57	7.21	exist any	16.97
2022	Andalusia	13.46	43.13	24.09	3.29	4.58	more	–
2023	RoM	7.35	47.32	18.18	1.57	4.76		18.36
	General	12.38	21.78	20.87	–	–		12.33

Source: Own elaboration using data from the Spanish Electoral Archive (SEA) database (Pérez et al., 2021). The figures corresponding to 2014, 2015–General, 2019–General, and 2023–General refer to the entire country, whereas the remaining figures refer to either Andalusia or the Region of Madrid. In 2023 General elections, Cs did not compete and Podemos and MM competed as part of the Sumar coalition.

(14.14%) general elections, and the May 2019 (8.88%), 2021 (9.13%), and 2023 (7.35%) regional elections, we utilize official electoral outcome records at the census tract level from the Spanish Electoral Archive (SEA) database (Pérez et al., 2021). The SEA database provides harmonized official results for all elections held in Spain, compiled from the Ministry of the Interior and the various regional authorities, offering disaggregated information ranging from the census tract to the national/regional level, including turnout figures and vote counts for each political party.

These data are combined with average per capita income statistics at the census tract level, obtained from the Spanish Atlas of Household Income Distribution, which is freely available on the INE (official Spanish statistical office) website (INE, 2023). Census tracts, the smallest spatial unit for both population and electoral statistics in Spain, serve as administrative and electoral divisions. They are generally designed to include up to around 1,500 eligible voters in general elections, although the total number of residents can be considerably higher in areas with a large foreign population without voting rights, and considerably smaller in sparsely populated rural areas.

The inferential process begins by aligning census tracts across different time points (Pavía and López-Quílez, 2013; Pavía and Cantarino, 2017). We then apply the `rslphom` function with default settings, using the 2016 election results as the origin and subsequent election results as the destination. This procedure provides estimates of the origin of Vox votes in each census tract for the target elections, with 2016 serving as the baseline. Finally, census tracts are grouped into four income categories based on average per capita net income, measured in euros, in four groups using as limits $< 10,000$, $(10,000, 15,000)$, $(15,000–25,000)$ and $> 25,000$, and transfer matrices constructed by group.

This approach is particularly well suited to the present study, given the completeness and territorial granularity of official electoral data, and provides a coherent means of quantifying aggregate voting changes by income group that would otherwise remain inaccessible. Nonetheless, its results must be interpreted with caution, as all ecological approaches depend on the quality of the aggregation units and the plausibility of the homogeneity assumptions within them.

4 A brief background

The main electoral results achieved by Vox as a radical-right challenger party are presented in this section, with a primary focus on RoM. While all subsequent statistical analyses are conducted at the census tract level, this section includes comparisons with broader territorial scales—such as other autonomous communities and the national level—to better contextualize and situate Vox's electoral patterns in RoM within the wider political landscape. The case of Andalusia is specifically examined because it was the first region where Vox obtained seats in an autonomous parliament; a milestone that marked the party's institutional breakthrough and serves as a relevant historical benchmark for understanding its later expansion in Madrid and across Spain.

Table 1 provides a historical summary of the percentages of valid votes obtained in selected elections by the main Spanish national parties that secured parliamentary representation in the Spanish Assembly (Cs, MM, Podemos, PP, PSOE, Sumar, UPyD, and Vox) from 2014 to 2023. This allows for a quick overview of Vox's rise from the margins of the political system to its position as the third political force. Note also the different levels of support

Vox has gained in Spain as a whole (see [Table 1](#)) and in RoM (see Section 3.2) in national elections.

[Table 1](#) reveals a significant evolution in the percentage of valid votes secured by Vox over the years. In the 2014 European elections, Vox barely reached 1.57% of the valid votes, while traditional parties such as PP and PSOE dominated with 26.09 and 23.01%, respectively. However, in the 2018 Andalusian regional elections, Vox saw a notable surge, achieving 10.97% of the votes. Vox's growth continued in the April 2019 general elections, where it secured 10.26% of the votes. In Madrid regional elections later that year, it achieved 8.88%, establishing itself as a significant force in the region. By the November 2019 general elections, Vox's support rose to 15.08%. In subsequent regional elections, it maintained notable support: 9.13% in Madrid (2021), 13.46% in Andalusia (2022), and 7.35% in Madrid (2023), where PP led with 47.32%.

There is clearly an upward trend in support for Vox, indicating growing acceptance of its political platform. We analyze the ideological and economic origins of Vox's electorate by combining electoral data with ecological inference techniques, following the political approach of [Mols and Jetten \(2020\)](#). While our focus is on the electoral supply, we also consider demand-side factors. The interaction between these factors, along with contextual influences, helps explain Vox's electoral growth which, as we will see, evolves throughout the study period.

5 From national elections in 2016 to national elections in April 2019

5.1 Ideological origin

According to [Table 2](#), in the April 2019 general and regional elections, around 70% of Vox voters were former PP supporters. The PP origin of Vox's votes can be explained by various contextual factors that shape the political offer represented by Vox. First, Vox emerged as a splinter party from PP. It was founded by former PP politicians such as Aleix Vidal-Quadras and Santiago Abascal, who opposed the party's counterterrorism policies and its rapprochement with Basque and Catalan nationalists under the government of Mariano Rajoy. As a result, Vox attracts both former PP politicians and voters.

Second, PP contested the April 2019 general elections following the May 2018 ruling by the *Audiencia Nacional*, which found the party guilty of involvement in the Gürtel corruption network. In this context, Vox, a new party with no prior governing experience, positioned itself as a guarantor of "the integrity of political leaders" ([Vox, 2014](#)). This appeal benefited Vox among conservative voters disillusioned with PP over corruption and set it apart from traditional parties.

Third, PP entered the April 2019 general elections with a new leader, Pablo Casado, who took over after Mariano Rajoy resigned. Rajoy's resignation followed PP's loss of a no-confidence motion by PSOE in 2018, prompted by the *Audiencia Nacional's* corruption conviction. Upon assuming leadership, Casado adopted a discourse aligned with the radical right to attract voters and unify the conservative electorate.

As a challenger party, Vox introduced new issues into the political system, forcing traditional parties to take a stance or adopt

TABLE 2 Origin (previous vote in the 2016 general elections) of Vox's voters in RoM in elections from 2019 to 2023.

Party voted in the 2016 elections (Turnout: 70.83%)	National April 2019 (Turnout: 75.45%)		Regional May 2019 (Turnout: 64.27%)		National Nov. 2019 (Turnout: 70.58%)		Regional May 2021 (Turnout: 71.74%)		Regional May 2023 (Turnout: 65.50%)		National July 2023 (Turnout: 74.50%)	
	Votes	%	Votes	%	Votes	%	Votes	%	Votes	%	Votes	%
PP	362,594	69.67	202,171	70.28	332,675	50.91	153,278	46.36	94,242	37.94	232,374	46.48
Cs	54,561	10.48	43,047	14.96	169,005	25.86	43,336	13.11	5,0699	20.41	118,100	23.62
Vox	6,091	1.17	5,827	2.03	4,606	0.70	7,035	2.13	5,519	2.22	5,801	1.16
PSOE	1,915	0.37	2,511	0.87	9,784	1.50	14,870	4.50	18,246	7.35	9,956	1.99
Podemos	4,189	0.80	4,654	1.62	17,627	2.70	11,093	3.35	14,571	5.87	13,057	2.61
Others	8,275	1.58	6,387	2.22	21,807	3.34	15,865	4.80	13,639	5.49	15,735	3.15
Abstainers	49,550	9.52	6,095	2.12	56,935	8.71	61,185	18.50	30,513	12.28	61,264	12.25
New voters	33,277	6.39	16,976	5.90	41,036	6.28	23,997	7.26	20,951	8.44	43,625	8.73
Total	524,176	13.95	287,667	8.88	653,476	18.49	330,660	9.13	248,379	7.35	499,912	10.65

Source: Own elaboration using election results and income statistics from RoM at the census tract level. Election results are taken from the Spanish Electoral Archive (SEA) database ([Pérez et al., 2021](#)), and income figures from the INE's Household Income Distribution Atlas ([INE, 2023](#)). The percentages in the last row correspond to the share of valid votes gained by Vox in each election. A more detailed partition of "Others" can be found in [Supplementary Table S1](#).

its position, thereby reshaping political competition (De Vries and Hobolt, 2012). Indeed, Vox's entry into the Spanish parliament in 2019 split the right vote among three parties—Cs, PP, and Vox—whereas in 2016, it was divided between only two, Cs and PP (Table 2). Indeed, among Vox supporters are former Cs voters, with just over 10% of Vox supporters in April 2019 coming from Cs. This voter shift from Cs to Vox must be understood within the context of the Catalan crisis, which has loomed over Spanish politics since 2017. Like Vox, Cs entered the Spanish political system as a challenger party, introducing the debate on Catalan identity with a discourse centered on defending Spain's unity within a constitutionalist framework and advocating for political renewal, echoing the Spanish crisis of 1898.

However, the flow of votes from Cs to Vox in the April 2019 general and regional elections was significantly smaller than the transfer of votes from PP. This is primarily due to Cs anti-Catalanist and regenerationist discourse, which was novel in the Spanish political system and competed not only with PP but also with Vox. While Cs rejects a distinct Catalan cultural identity—an aspect it shares with Vox—it does not advocate dismantling the autonomous community system or define itself as anti-feminist, as Vox does (Roig, 2020).

In this initial stage, Cs actually limited Vox's growth. In these elections, Cs established itself as the main center-right force in Spain and virtually the leading party within the right-wing ideological bloc, although it remained the third-largest party in the *Congreso de los Diputados*, behind PSOE and PP. PP's shift to the right under its new leadership with Casado at the helm, aiming to attract Vox voters, led to a loss of its more moderate supporters, who turned to Cs (Rama et al., 2021a). In the 2016 national elections, Cs won 32 seats with 13.06% of the vote, while in April 2019, it secured 57 seats with 15.86%, achieving its best electoral result and positioning itself as the third-largest party, close behind PP.

In RoM, Cs increased its support from 17.79% of the vote (six seats) in 2016 to 20.95% (eight seats) in April 2019, surpassing PP, which obtained 18.64% (seven seats), and solidifying its position as the leading force within the right-wing bloc. This electoral success from the center-right gave Cs a crucial role in government formation. In fact, both PP and PSOE required Cs support for the investiture, which ultimately went to PP.

The influence of the main left-wing parties, Podemos and PSOE, on Vox's rise in terms of vote transfers was minimal at this stage. In the spring 2019 general elections, only 0.37% of Vox's electoral base came from former PSOE voters, and 0.8% from former Podemos voters.

Table 2 also sheds light on Vox's ability to attract abstentionist voters. Just under 10% of Vox's 2019 voters were former abstentionists. Hanna (2009) argues that abstention should not simply be interpreted as a refusal to influence government; rather, it can be a way to attempt to shape the electoral process or attitudes toward it through alternative means, outside the traditional confines of electoral participation.

In terms of new voters (*NET_ENTRIES*) in 2019, only 6% of the radical right's votes came from this group. Since new voters in census tracts are typically young individuals who have just turned 18 and are casting their ballots for the first time, this

suggests that youth support for Vox was relatively low, contrasting with the conclusions of previous studies (Coffé and Voorpotel, 2010). Indeed, an analysis of the transfer matrices reveals that only around 15% of *NET_ENTRIES* voted for Vox. In any case, as *NET_ENTRIES* are estimated as net differences between entries and exits at the census tract level, we should not rule out the nuisance effect of residential variations.

5.2 Economic origin

The inclusion of income in the analysis reveals a clear pattern in the April 2019 general elections: the support for Vox increases as income levels rise (see last row in Table 3), with the percentage of Vox voters coming from former PP supporters also increasing as income rises. In contrast, Cs voters become a less significant source of Vox support as income levels increase. Specifically, among the group of voters with the highest average net per capita income (over €25,000), 84.27% of Vox voters in the 2019 elections had voted for PP in the previous general elections, while only 5.17% were former Cs voters, whereas within the medium-high per capita income group (€15,000 to €25,000), over 72% had voted for PP in the 2016 elections and 9.32% had supported Cs. The share of former PP voters within Vox's support is lower among the lower-middle and lower-income populations, reaching 64 and 65%, respectively. In contrast, the relative weight of former Cs voters among Vox voters with lower-middle (12.79%) and lower (12.72%) incomes increases. While the share of former PP voters received by Vox increases with income, the opposite occurs with abstentionists, whose share of the vote decreases as income level rises. Among new voters, the situation follows an inverted U-shape, with their highest relative share occurring in the more numerous middle-income levels. In short, as income rises, Vox gains more support, with a higher relative proportion of former PP voters.

These data contradict the “modernization losers” theory, which posits that far-right parties gain votes from individuals marginalized by the socioeconomic effects of globalization (Inglehart and Norris, 2017). In this initial phase of the radical right's entry into the Spanish Parliament, no negative relationship is observed between income and far-right support, as seen in the typical European pattern (Arzheimer, 2009). Economic anxiety does not necessarily translate into support for far-right parties. According to the “Wealth Paradox” (Mols and Jetten, 2017), the opposite occurs. Voters from the middle and upper-middle classes tend to be drawn to radical parties, as confirmed by Fritz (1987) in his study of voters for Hitler's NSDAP.

Following Mutz (2018), we suggest interpreting the status threat experienced by individuals traditionally of high status in Spain—namely, white, Catholic, high-income, middle-educated, and male voters. These individuals, while not experiencing a decline in their socioeconomic status, fear that it could happen (Engler and Weisstanner, 2021). Rama et al. (2021b) empirically demonstrate that social status and economic wealth are crucial aspects of Vox voters' identity.

TABLE 3 Origin (previous vote in the 2016 general elections) of Vox's voters in RoM in April 2019 national elections by income group.

Party voted in the 2016 Elections (Turnout: 70.83%)	All Voters (Turnout: 75.45%)		Low Income voters (Turnout: 68.94%)		Middle-low Income voters (Turnout: 78.12%)		Middle-right Income voters (Turnout: 83.88%)		High Income voters (Turnout: 85.51%)	
	Votes	%	Votes	%	Votes	%	Votes	%	Votes	%
PP	362,594	69.67	24,711	64.85	139,372	63.62	144,141	72.28	56,965	84.27
Cs	54,561	10.48	4,847	12.72	28,015	12.79	18,593	9.32	3,496	5.17
Vox	6,091	1.17	408	1.07	2,300	1.05	2,436	1.22	990	1.46
PSOE	1,915	0.37	288	0.76	1,199	0.55	417	0.21	25	0.04
Podemos	4,189	0.80	959	2.52	2,363	1.08	877	0.44	20	0.03
Others	8,275	1.58	1,100	0.38	4,667	0.71	2,227	0.67	340	0.14
Abstainers	49,550	9.52	4,735	12.43	26,446	12.07	16,153	8.10	2,571	3.80
New voters	33,277	6.39	1,055	2.77	14,708	6.71	14,562	7.30	3,189	4.72
Total	524,176	13.95	38,103	10.83	219,070	12.88	199,406	14.26	67,596	20.35

Source: Own elaboration using election results and income statistics from RoM at the census tract level. Election results are taken from the Spanish Electoral Archive (SEA) database (Pérez et al., 2021), and income figures from the INE's Household Income Distribution Atlas (INE, 2023). The percentages in the last row correspond to the party share of valid votes gained by Vox in each group. A more detailed partition of "Others" can be found in Supplementary Table S2.

It is important to remember that the April 2019 elections were held under Spain's first potential left-wing coalition government—Podemos and PSOE—since the Second Republic, prior to the 1936 coup that led to the Spanish Civil War. Podemos, situated on the far-left of the ideological spectrum, emerged in the context of the 2009 subprime mortgage crisis that affected Spain, with a populist anti-establishment discourse and a stance against the traditional elites who had governed the country since the onset of the current democracy. Podemos thrived on protest votes against the economic and social management of the 2009 Great Crisis within the left-wing ideological bloc. Podemos's final entry into the Spanish government led by PSOE in 2020—after having supported the PSOE since the 2018 no-confidence motion—created a sense of status threat within the traditional elite, as Podemos identifies this elite as one of the country's main problems, dismissing it as the "caste to combat".

In the regional elections of May 2019, the same dynamics of electoral behavior according to income level are observed (see Supplementary Table S3). As income increases, support for Vox grows, along with the share of former PP voters within this support, reaching 80.99% among the high-income electorate, compared to 64.85% among the low-income electorate. In contrast, the highest share of Cs voters within Vox's support comes from the lower-middle (17.83%) and low-income (16.30%) groups.

In summary, analysis of the April 2019 general elections reveals that the ideological and economic profile of Vox voters is predominantly made up of former PP voters with higher incomes, with the share of former Cs voters being higher among the middle and lower-middle classes. Analysis of transfer probabilities draws the same conclusions. Indeed, when examining the correlations between income level and the probability of shifting support to Vox based on prior voting behavior, we observe that the transfer of votes from PP increases with income, while the flow of voters from Cs encompasses individuals with diverse income levels more typical of the upper-middle and lower-middle classes. The flow of votes from Podemos to Vox is low, although it is more likely among

lower-income voters, showing a negative correlation between income level and support for the radical right. In this sense, it could be described as a class-based vote. However, a negative correlation is observed between the ideological and economic origins of the vote in the May 2019 regional elections, where Vox saw its support decrease from 13.95 to 8.88%. In general, in RoM, support for Vox is significantly higher in the general elections than in the regional elections, possibly due to a leader effect and because PP voters feel more comfortable with the regionally more right-wing policies of PP than with its national policies, leading them to shift their vote to Vox to push PP further to the right.

6 November 2019 national elections

6.1 Ideological origin

In November 2019, general elections were held after the failure to form a government following the April elections. This electoral repetition led to a decline in voter turnout, with abstention rising from 28.24 to 34.00%. Additionally, although PSOE remained the leading party in both elections, it lost electoral support, dropping from 28.67 to 28.00%. In RoM, its share of the vote also declined, from 27.27 to 26.87%. Similarly, electoral support for Podemos decreased from 11.06 to 9.82% nationwide, and from 16.23 to 13.01% in RoM (see Table 1). Overall, the two main parties of the left-wing bloc, PSOE and Podemos, faced electoral setbacks.

In contrast, the right-wing bloc, led by Vox, clearly benefited from the electoral repetition. In RoM, Vox rose from being the fifth-largest political force in April 2019, with 13.86% of valid votes, to the third-largest in November 2019, securing 18.34%. Nationally, the radical right achieved its best result to date, establishing itself as the third-largest party with the potential to act as a kingmaker. While in April 2019, Vox entered the Spanish Parliament with 10.26% of the vote, by November 2019, its electoral support had increased to 15.08%, translating into a gain of 28 seats. PP also experienced a significant improvement in its results. Its electoral

TABLE 4 Origin (previous vote in the 2016 general elections) of Vox's voters in RoM in November 2019 national elections by income group.

Party voted in the 2016 elections (Turnout: 70.83%)	All Voters (Turnout: 70.58%)		Low Income voters (Turnout: 62.53%)		Middle-low Income voters (Turnout: 72.42%)		Middle-right Income voters (Turnout: 79.31%)		High Income voters (Turnout: 81.85%)	
	Votes	%	Votes	%	Votes	%	Votes	%	Votes	%
PP	332,675	50.91	26,344	50.51	132,601	45.24	129,129	54.31	44,601	63.34
Cs	169,005	25.86	10,687	20.49	80,433	27.44	60,124	25.29	17,760	25.22
Vox	4,606	0.70	306	0.59	1,753	0.60	1,744	0.73	803	1.14
PSOE	9,784	1.50	1,988	3.81	4,628	1.58	2,939	1.24	229	0.33
Podemos	17,627	2.70	3,969	7.61	8,728	2.98	4,685	1.97	245	0.35
Others	21,807	4.16	2,633	0.92	11,594	1.77	6,655	2.01	925	0.37
Abstainers	56,935	8.71	4,668	8.95	33,827	11.54	15,917	6.69	2,523	3.58
New voters	41,036	6.28	1,561	2.99	19,564	6.67	16,584	6.97	3,327	4.73
Total	653,476	18.49	52,156	16.26	293,128	18.49	237,777	17.84	70,413	22.00

Source: Own elaboration using election results and income statistics from RoM at the census tract level. Election results are taken from the Spanish Electoral Archive (SEA) database (Pérez et al., 2021), and income figures from the INE's Household Income Distribution Atlas (INE, 2023). The percentages in the last row correspond to the share of valid votes gained by Vox in each group. A more detailed partition of "Others" can be found in Supplementary Table S4.

base grew from 16.69 to 20.81% nationwide and from 18.64 to 24.91% in RoM. This rise of PP and Vox came at the expense of Cs, which saw its vote share collapse from 15.86 to 6.80% nationwide and from 20.95 to 9.07% in RoM. This marked the beginning of its decline and eventual disappearance. While in April 2019, Cs was the third-largest party with a chance to enter government, by November 2019, it had fallen to fifth place, losing its influence. In RoM, Cs dropped from second to fifth position.

From the perspective of Mols and Jetten (2020), which emphasizes electoral supply while considering electoral demand factors, Cs failure can be attributed to its inability to prevent the formation of a Spanish government between socialists and communists—PSOE and Podemos, respectively—which is rejected by right-wing voters. Additionally, its strategy of imitating PP in an attempt to replace it led to the loss of its status as a challenger party, benefiting Vox as the only challenger party within this ideological spectrum.

Given this reality, the question arises regarding the origin of Vox's votes in November 2019, particularly whether they came from former PP or Cs voters. Additionally, we examine what happened to PP voters from 2016 who had switched to Vox in April 2019. The data in Table 4 reveal a more diverse composition among Vox voters than in April elections, with over 25% having been former Cs voters in 2016. This figure contrasts with the slightly over 10% of Vox voters in April who had previously supported Cs. The significantly increased transfer of votes from Cs—more than tripling compared to April 2019—reduced the relative weight of former PP voters within Vox's electorate. Similarly, the relative weight of former abstainers and new voters within Vox's electorate declined slightly, despite Vox managing to attract a greater number of them. When comparing the absolute numbers of former PP voters in both elections, it appears that Vox retained nearly all PP voters it had attracted in April 2019.

Vox also expanded at the expense of other parties. Analysis of the electoral behavior of left-wing voters in relation to Vox's rise highlights a shifting trend in Spanish politics, where ideological blocs had previously functioned almost as sealed groups (Pavía and

Aybar, 2020). Vote transfers between blocs became evident, with Vox capitalizing on this shift. In the spring of 2019, former PSOE voters accounted for just 0.37% of Vox's electorate, but by autumn of the same year this share had risen to 1.50%, and this in a context of Vox's overall growth. This trend was even more pronounced among former Podemos voters, increasing its relative weight from 0.80 to 2.70%.

The voting dynamics in the context of the November 2019 elections reflect a complexity that goes beyond mere party loyalty, signaling a shift in the ideological composition of Vox's support. The data suggest that contextual and situational factors—such as the Catalan crisis and the left's inability to form a stable government—played a crucial role in voter realignment, significantly benefiting Vox while harming Cs, Podemos, and PSOE.

6.2 Economic origin

When incorporating income level into the analysis, a somewhat different scenario emerges compared to the initial stage (see Tables 3, 4). Although support for Vox also tends to increase with income, the disparities between income groups in terms of the likelihood of voting for Vox become less pronounced. This is partially consistent with findings from other studies on this election that focus on urban areas. According to Sánchez-García and Llamazares (2025), metropolitan evidence indicates that Vox's support increased in suburban census tracts experiencing population growth, and that this effect was stronger where local incomes are lower and unemployment higher—that is, in "left-behind" urban areas. Read through this territorial lens, our positive income gradient coexists with a geography in which local decline and sprawl pressures help structure radical-right voting beyond individual resources (Rodríguez-Pose, 2020; Rodríguez-Pose et al., 2023).

In terms of the ideological composition of Vox's electorate by income levels, the data in [Table 4](#) present a pattern similar to that observed for the overall population in [Table 2](#). Nevertheless, while the flow of votes from Cs to Vox rises significantly across all income levels, the highest relative increase occurs among high-income voters. In absolute and distributional terms, however, middle-income groups stand out. The share of former Cs voters in Vox's electorate is larger among lower-middle and upper-middle income groups than among high-income voters. This is particularly notable given that it is precisely in high-income (and upper-middle-income) groups where Vox faces relatively greater challenges in retaining all those PP voters it had attracted in the previous general elections.

Despite this, former PP voters remain the majority among high-income Vox supporters. The key difference in this electoral cycle is that the weight of former PP voters within Vox's high-income electorate follows a downward trend, declining from 84.27% in the spring of 2019 to 63.34% in the autumn general elections. Conversely, the share of former Cs voters within Vox's high-income electorate increases from 5.17 to 25.22%. This pattern indicates a growing presence of right-wing voters—both former PP and Cs supporters—among Vox's high-income base, aligning with the “Wealth Paradox” ([Mols and Jetten, 2017](#)).

The analysis of [Table 4](#) also reveals that the increase in former left-wing voters supporting Vox originates primarily from lower-income voters. Among Vox's low-income electorate, former PSOE voters grew from an insignificant 0.76% in the spring general elections to 3.81% in the autumn elections of 2019, while the share of former Podemos voters rose from 2.52 to 7.61%. This suggests that Vox is attracting votes from so-called “modernization losers,” who are more affected by the socioeconomic consequences of globalization ([Arzheimer and Carter, 2006](#)). However, the novelty in these elections lies in Vox's permeability to Cs voters, who now represent a significant proportion of Vox's electorate.

7 Third stage. From 2021 regional elections to 2023 national elections

7.1 Regional elections in 2021

Until now, the analysis has primarily focused on general elections. In this section, the focus shifts to regional elections. In early 2021, the president of the Madrid regional government, Isabel Díaz Ayuso, dissolved the Madrid Assembly and called elections for May in response to the imminent filing of a motion of no-confidence by her governing partner, Ciudadanos (Cs), and the main opposition party, PSOE. This exceptional context allowed PP to redefine the political landscape at the regional level.

First, it is important to highlight that since the beginning of the COVID-19 crisis, the Madrid PP president opposed the mobility restrictions recommended by the WHO and implemented by the Spanish government to curb infections. In line with the global radical right, Díaz Ayuso championed the cause against economic paralysis, allowing, for example, bars and restaurants to remain open despite the pandemic. This confrontation with the Spanish government gave her significant public visibility, establishing her as the leading voice of PP with a discourse centered on the

opposition against restrictions ([Schwörer and Fernández-García, 2022](#)). The elections ultimately became a sort of referendum on the management of the pandemic crisis, in which PP secured a resounding victory with 44.73% of the valid vote, achieving an absolute majority.

This electoral success cannot be understood without considering the “candidate effect”. In contrast, Cs, in the midst of an internal crisis, ran with a new and less well-known candidate, Edmundo Bal. As a result, the party lost its parliamentary representation, obtaining only 3.57% of the vote. With a discourse similar to that of Vox, PP's electoral success reduced the weight of former Cs voters within Vox's electorate to 13.11%. Most former Cs voters shifted to PP, whose candidate consolidated the right-wing vote, also reclaiming a significant share of former PP voters. As a consequence, while Vox slightly increased its share of the vote in the regional elections, rising from 8.88 to 9.13%, it remained far from the 15.08% it had achieved in the November 2019 general elections ([Table 1](#)). Moreover, it was pushed to the political side-lines of the region, as PP, thanks to its absolute majority, was able to govern alone.

The analysis of Vox's vote by income level reveals both similarities and differences compared to the November 2019 elections. On the one hand, the probability pattern of voting for Vox as a function of income remains similar, albeit with lower numbers due to its weaker electoral performance. On the other hand, the share of former Cs voters declines significantly, while the weight of former PP voters remains stable, and the proportion of former abstainers grows notably, along with a smaller increase in former left-wing bloc voters (see [Tables 4, 5](#)). Once again, the rising presence of former Podemos and PSOE voters within Vox's electorate is confirmed, particularly among lower-income groups. In fact, combined, they account for over 23% of Vox's vote in the lowest income interval. These inflows from the lower-income left are compatible with a “left-behind” territorial channel—local economic stagnation and limited prospects shifting votes toward Vox in specific places, not uniformly across social classes ([Rodríguez-Pose, 2020](#); [Rodríguez-Pose et al., 2023](#)).

These data reinforce a shift in electoral behavior within the left-wing ideological bloc, contributing to the rise of the radical right with its anti-modernity rhetoric and challenging the class-voting thesis, which posits that the working class primarily supports left-wing political parties ([Minkenberg, 2000](#)). Consequently, hypothesis H1 (Vox voters are mainly former PP and Cs voters), which was strongly supported by previous election data, comes into question, particularly among lower-income voters.

7.2 Regional elections in 2023

In the 2023 regional elections, PP once again secured an absolute majority. Its leader, Isabel Díaz Ayuso, who had presided over the regional government since 2019 as an outspoken dissident within the party with significant public visibility, managed to consolidate right-wing support around her figure and further increase electoral backing. PP rose from 44.73% of the vote in the 2021 regional elections to 47.32% in 2023. Meanwhile, Cs continued its electoral decline, dropping to just 1.57%. For the first

TABLE 5 Origin (previous vote in the 2016 general elections) of Vox's voters in RoM in May 2021 regional elections by income group.

Party voted in the 2016 elections (Turnout: 70.83%)	All Voters (Turnout: 71.74%)		Low Income voters (Turnout: 63.11%)		Middle-low Income voters (Turnout: 73.78%)		Middle-right Income voters (Turnout: 81.40%)		High Income voters (Turnout: 84.83%)	
	Votes	%	Votes	%	Votes	%	Votes	%	Votes	%
PP	153,278	46.36	10,706	38.27	59,710	40.67	59,619	50.25	11,628	62.44
Cs	43,336	13.11	2,879	10.29	20,741	14.13	14,506	12.23	7,372	14.00
Vox	7,035	2.13	479	1.71	2,451	1.67	2,804	2.36	984	3.50
PSOE	14,870	4.50	3,757	13.43	6,761	4.60	3,997	3.37	664	0.95
Podemos	11,093	3.35	2,792	9.98	5,772	3.93	2,466	2.08	93	0.17
Others	15,865	4.80	1,911	6.82	8,111	5.52	5,074	4.28	631	2.06
Abstainers	61,185	18.50	4,789	17.12	32,590	22.20	19,822	16.71	1,009	10.70
New voters	23,997	7.26	665	2.38	10,690	7.28	10,345	8.72	1,256	6.17
Total	330,660	9.13	27,978	8.82	146,826	9.15	118,633	8.65	23,637	11.29

Source: Own elaboration using election results and income statistics from RoM at the census tract level. Election results are taken from the Spanish Electoral Archive (SEA) database (Pérez et al., 2021), and income figures from the INE's Household Income Distribution Atlas (INE, 2023). The percentages in the last row correspond to the share of valid votes gained by Vox in each group. A more detailed partition of "Others" can be found in Supplementary Table S5.

time, Vox also experienced a loss of electoral support, falling from 9.13 to 7.35% of the vote. These results confirm the realignment of right-wing voting around PP and its leader in RoM. In this context, the proportion of former PP voters within Vox's electoral base declined to 37.94% (see Table 6). The data indicate that voters who had switched from PP to Vox in previous elections are now returning to PP, which, in turn, increases the relative weight of former voters from other parties within Vox's electorate.

For the first time, the probability of voting for Vox appears to be independent of income level, as the party's vote share remains similar across all income groups (Table 6). However, the trend persists that higher income levels correspond to a greater proportion of former conservative party voters within Vox's electorate and that the share of former left-wing voters within Vox's electoral base continues to grow, particularly among lower-income voters. The near income-independence of Vox voting in 2023 is coherent with place-based explanations: where territorial decline is salient and the spatial context mediates individual income effects (Rodríguez-Pose, 2020; Rodríguez-Pose et al., 2023).

Overall, 7.35% of Vox voters are former PSOE supporters, while 5.67% previously voted for Podemos. These results align with the "modernization losers" theory and reinforce the electoral shift observed in the 2021 regional elections, where the growing presence of former left-wing voters—especially those with lower incomes—within Vox's electorate mirrors trends seen in other European countries, such as the Netherlands (Akkerman et al., 2017). It is worth noting that in these regional elections, Podemos lost electoral support and failed to secure representation in the regional parliament.

7.3 General elections in 2023

The regional elections of May 2023 were held in 10 autonomous communities, not just in Madrid. As a result, PSOE lost control of six regional governments. In this context, Spain's Prime Minister,

the socialist Pedro Sánchez, unexpectedly called for early general elections in July 2023. PP entered these elections under a new leader, Alberto Núñez Feijóo, the former president of Galicia (one of Spain's 17 autonomous regions). Meanwhile, Vox had already established itself as a consolidated radical right-wing party with representation at all territorial levels, whereas the two initial challenger parties that emerged from the subprime mortgage crisis, Cs and Podemos, had virtually disappeared. Additionally, the parties to the left of the PSOE ran under the electoral platform Sumar, which later became part of the national government.

From the perspective of parliamentary representation and electoral supply, the analysis focuses on the following parties: PP, PSOE, Sumar, and Vox. PP emerged as the leading political force, securing 21.78% of the vote, improving its November 2019 results by nearly one percentage point. PSOE lost more than 7% of its electoral base, dropping to 20.87%. Vox also experienced a decline, losing nearly three percentage points and obtaining 12.38% of the vote. Meanwhile, Sumar, which included Podemos among its members, secured 12.33% of the vote.

In these elections, despite the decline in the number of votes received by Vox, the relative situation remains similar to that of the November 2019 general elections (see Tables 4, 7). The probability of voting for Vox increases with income level, with former PP and Cs voters being its primary electoral base. Compared to the regional elections, the weight of voters from the left-wing bloc decreases, although it rises slightly compared to the previous general elections. In terms of correlation, higher income is associated with a greater likelihood of switching to Vox from the right-wing bloc and a lower probability of doing so from the left-wing bloc, reflecting both the "wealth paradox" and the "modernization losers" effect.

8 Final remarks

In conclusion, during the first stage, from 2016 to April 2019 elections, Vox experienced a rapid electoral growth, transitioning from political marginality to the core of the political system. This

TABLE 6 Origin (previous vote in the 2016 general elections) of Vox' voters in RoM in May 2023 regional elections by income group.

Party voted in the 2016 elections (Turnout: 70.83%)	All Voters (Turnout: 65.50%)		Low Income voters (Turnout: 56.53%)		Middle-low Income voters (Turnout: 68.11%)		Middle-right Income voters (Turnout: 75.80%)		High Income voters (Turnout: 79.05%)	
	Votes	%	Votes	%	Votes	%	Votes	%	Votes	%
PP	94,242	37.94	7,490	32.32	37,184	32.46	37,571	43.56	11,997	49.19
Cs	50,699	20.41	2,550	11.01	23,715	20.70	16,828	19.51	7,606	31.19
Vox	5,519	2.22	349	1.50	1,915	1.67	2,240	2.60	1,015	4.16
PSOE	18,246	7.35	3,254	14.04	8,803	7.68	5,504	6.38	685	2.81
Podemos	14,571	5.87	3,988	17.21	7,135	6.23	3,352	3.89	96	0.39
Others	13,639	5.49	1,676	7.23	7,209	6.31	4,102	4.75	650	2.67
Abstainers	30,513	12.28	2,888	12.46	18,075	15.78	8,510	9.86	1,041	4.27
New voters	20,951	8.44	978	4.22	10,524	9.19	8,153	9.45	1,296	5.31
Total	248,379	7.35	23,173	7.94	114,560	7.33	86,260	6.48	24,386	7.82

Source: Own elaboration using election results and income statistics from RoM at the census tract level. Election results are taken from the Spanish. Electoral Archive (SEA) database (Pérez et al., 2021), and income figures from the INE's Household Income Distribution Atlas (INE, 2023). The percentages in the last row correspond to the share of valid votes gained by Vox in each group. A more detailed partition of "Others" can be found in Supplementary Table S6.

TABLE 7 Origin (previous vote in the 2016 general elections) of Vox' voters in RoM in July 2023 national elections by income group.

Party voted in the 2016 elections (Turnout: 70.83%)	All Voters (Turnout: 74.50%)		Low Income voters (Turnout: 61.43%)		Middle-low Income voters (Turnout: 71.80%)		Middle-right Income voters (Turnout: 79.03%)		High Income voters (Turnout: 82.92%)	
	Votes	%	Votes	%	Votes	%	Votes	%	Votes	%
PP	232,374	46.48	17,449	43.08	90,930	40.64	90,721	50.44	33,273	59.61
Cs	118,100	23.62	7,864	19.41	55,192	24.67	41,232	22.92	13,812	24.74
Vox	5,801	1.16	356	0.88	2,183	0.98	2,235	1.24	1,027	1.84
PSOE	9,956	1.99	2,315	5.72	4,709	2.10	2,667	1.48	264	0.47
Podemos	13,057	2.61	3,440	8.49	6,760	3.02	2,791	1.55	67	0.12
Others	15,735	3.16	1,847	4.56	8,546	3.81	4,651	2.59	694	1.25
Abstainers	61,264	12.25	5,750	14.20	33,898	15.15	18,506	10.29	3,109	5.57
New voters	43,625	8.73	1,484	3.66	21,513	9.62	17,054	9.48	3,573	6.40
Total	499,912	10.65	40,505	8.23	223,731	10.30	179,857	10.94	55,819	14.58

Source: Own elaboration using election results and income statistics from RoM at the census tract level. Election results are taken from the Spanish. Electoral Archive (SEA) database (Pérez et al., 2021), and income figures from the INE's Household Income Distribution Atlas (INE, 2023). The percentages in the last row correspond to the share of valid votes gained by Vox in each group. A more detailed partition of "Others" can be found in Supplementary Table S7.

expansion was primarily fuelled by a flow of voters from PP. As a challenger party, Vox capitalized on both the Catalan crisis and the internal crisis within PP at the time to establish itself in the political landscape by introducing new issues.

During the second and third stage, from the November 2019 general elections onward, the gradual disappearance of Cs provided Vox with a new pool of voters, effectively eliminating a direct competitor. The 2021 regional elections, held amid the COVID-19 crisis, allowed Vox to bring its opposition to mobility restrictions to the forefront of the public agenda. However, this narrative was adopted by the charismatic Madrid PP candidate, Isabel Díaz Ayuso, enabling her to secure an absolute majority in the 2021 regional elections, pushing Vox out of the political center in the region. PP successfully consolidated the right-wing vote around her candidacy. The candidate factor is thus crucial in explaining the different electoral dynamics between regional and general elections

in RoM. In this context, a shift in Vox's electoral base becomes evident. Gradually, its growth within the right-wing ideological spectrum slows, while its support from the left-wing spectrum increases. Hypothesis H1, which states that Vox's electoral base consists mainly of former Cs and PP voters, therefore comes into question, as former Podemos and PSOE voters increasingly join its ranks.

When introducing the income level variable into the analysis, it becomes evident that the ideological origin of Vox voters is directly related to their income level. However, this relationship varies depending on the ideological background of the voter and the electoral context. Among Vox voters, the higher the income, the greater the proportion of former PP voters. In the case of Cs, two distinct phases can be observed. Initially, former Cs voters within Vox's electorate were concentrated mainly in the middle-income brackets (lower-middle and upper-middle). However, from

the 2021 regional elections onward, the proportion of former Cs voters within Vox's electorate increases with income level.

Conversely, the presence of former voters from the left-wing ideological bloc within Vox's electorate gains significance following the first regional elections after the COVID-19 pandemic in 2021. In this case, the proportion of former Podemos and PSOE voters increases as income levels decrease. Consequently, hypothesis H2 (the probability of voting for Vox grows with income) comes into question, as the data indicate that Vox's electoral base includes both low- and lower-middle-income voters. In summary, the growth of the radical right in Spain through Vox cannot be attributed to a single factor. Its growth must be considered within each electoral context and its specific circumstances, acknowledging that Vox is a radical-right challenger party.

Nevertheless, although our conclusions align with those of Iglesias-Pascual et al. (2021) and Iglesias-Pascual et al. (2022)—who, using a different methodological approach based on spatial econometric techniques, had already argued that the traditional explanations for the rise of extreme right-wing parties in Europe cannot be directly extrapolated to Spain (and particularly to Andalusia)—our research is not entirely free from limitations. Indeed, although the ecological inference model employed here, *rslphom*, substantially mitigates bias by estimating voter transitions separately for each census tract, as with any ecological inference method, the validity of the results ultimately depends on the soundness of the underlying assumptions and remains subject to the risk of ecological fallacy.

These limitations, however, do not undermine the robustness of the findings; rather, they delineate the scope within which the results should be interpreted and suggest promising directions for future research. For instance, the strong correlation between income and inequality (measured by the Gini index) across census tracts (0.47, p -value < 0.0001) could suggest—as an alternative to our central interpretation that the higher support for the far right in wealthier census tracts is driven by higher-income residents—that this pattern may instead reflect stronger backing from lower-income segments within those tracts, where locally perceived disparities are more salient. Although this alternative seems less plausible—given that income is also negatively correlated with the share of foreign residents (−0.48, p -value < 0.0001)—its mere possibility opens avenues for further research, particularly by also incorporating explicit measures of inequality alongside income to disentangle their respective effects. Future studies could also benefit from spatial statistical and econometric tools that account for the characteristics of neighboring census tracts, enabling a deeper understanding of whether support for Vox in Madrid is driven by symbolic values or by perceived socioeconomic disadvantage—either locally or in surrounding “left-behind” areas.

Data availability statement

The datasets presented in this study can be found in online repositories. The electoral data can be found at <https://dataverse.harvard.edu/dataverse/SEA>, whereas the income data is available at <https://www.ine.es/experimental/atlas/>.

Ethics statement

Ethical approval was not required for the study involving humans in accordance with the local legislation and institutional requirements. Written informed consent to participate in this study was not required from the participants or the participants' legal guardians/next of kin in accordance with the national legislation and the institutional requirements.

Author contributions

RR: Conceptualization, Investigation, Methodology, Project administration, Supervision, Validation, Writing – original draft, Writing – review & editing. PE: Writing – original draft, Writing – review & editing, Conceptualization, Data curation, Formal analysis, Investigation, Methodology. JP: Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Resources, Software, Supervision, Validation, Writing – review & editing.

Funding

The author(s) declare that financial support was received for the research and/or publication of this article. This research has been supported by Generalitat Valenciana (Conselleria de Educació, Cultura, Universidades y Empleo), grant CIACIO/2023/031, and Ministerio de Ciencia e Innovación, grant PID2021-128228NB-I00. In addition, Rosa Roig would like to thank Generalitat Valenciana for providing a Postdoctoral Research Stay at Sapienza Università di Roma, grant CIBEST/2023/104, and European Commission for providing a Postdoctoral Research Stay at Università degli Studi di Palermo, grant EU's Erasmus+ 2023.

Acknowledgments

We thank two reviewers for valuable comments and suggestions, and Marie Hodkinson for revising the English of the paper. We sincerely thank all participants in the ECPR General Conference, September 2023, for their valuable feedback on an earlier version of this paper. Their remarks significantly contributed to reshape the development of this work. The usual disclaimers apply.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

The author(s) declared that they were an editorial board member of *Frontiers*, at the time of submission. This had no impact on the peer review process and the final decision.

Generative AI statement

The author(s) declare that no Gen AI was used in the creation of this manuscript.

Any alternative text (alt text) provided alongside figures in this article has been generated by Frontiers with the support of artificial intelligence and reasonable efforts have been made to ensure accuracy, including review by the authors wherever possible. If you identify any issues, please contact us.

Publisher's note

All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated

organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

Supplementary material

The Supplementary Material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/fpos.2025.1717586/full#supplementary-material>

References

- Abou-Chadi, T., and Stoetzer, L. (2020). How parties react to voter transitions. *Am. Polit. Sci. Rev.* 114, 940–945. doi: 10.1017/S0003055420000155
- Acha Ugarte, B. (1997). Partidos políticos de extrema derecha en Europa. Hacia un marco teórico para el análisis de nuevos partidos. *Estud. Deusto* 45, 11–44. doi: 10.18543/ed-45(2)-1997pp11-43
- Akkerman, A., Zaslove, A., and Spruyt, B. (2017). “We the people” or “We the peoples”? A comparison of support for the populist radical right and populist left in the Netherlands. *Swiss Polit. Sci. Rev.* 23, 377–403. doi: 10.1111/spr.12275
- Alonso, S., and Rovira Kaltwasser, C. (2014). Spain: no country for the populist radical right? *South Eur. Soc. Politics* 20, 21–45. doi: 10.1080/13608746.2014.985448
- Arzheimer, K. (2009). Contextual factors and the extreme right vote in Western Europe, 1980–2002. *Am. J. Pol. Sci.* 53, 259–275. doi: 10.1111/j.1540-5907.2009.00369.x
- Arzheimer, K. (2018). “Explaining electoral support for radical right,” in *The Oxford Handbook of the Radical Right*, ed. J. Rydgren (Oxford: Oxford University Press), 143–165. doi: 10.1093/oxfordhb/9780190274559.013.8
- Arzheimer, K., Berning, C., de Lange, S., Dutozia, J., Evans, J., Gould, M., et al. (2024). How local context affects populist radical right support: a cross-national investigation into mediated and moderated relationships. *Br. J. Polit. Sci.* 54, 1133–1158. doi: 10.1017/S0007123424000085
- Arzheimer, K., and Carter, E. (2006). Political opportunity structures and right-wing extremist party success. *Eur. J. Polit. Res.* 45, 419–443. doi: 10.1111/j.1475-6765.2006.00304.x
- CaixaBank (2024). *Comunidad de Madrid. Fichas Comunidades Autónomas*. Barcelona: CaixaBank Research.
- Coffé, H., and Voorpotel, M. (2010). Young people, parents and radical right voting: the case of the Swiss People's party. *Elect. Stud.* 29, 435–445. doi: 10.1016/j.electstud.2010.03.015
- De Vries, C., and Hobolt, S. (2012). When dimensions collide: the electoral success of issue entrepreneurs. *Eur. Union Polit.* 13, 246–268. doi: 10.1177/1465116511434788
- De Vries, C., and Hobolt, S. (2020). *The Rise of Challenger Parties in Europe*. Princeton, NJ: Princeton University Press. doi: 10.23943/princeton/9780691194752.003.0002
- Delle Donne, F. (2022). La derecha radical populista: un enemigo interior de la democracia liberal. *Astrolabio* 25, 51–60. Available online at: <https://raco.cat/index.php/Astrolabio/article/view/402876/496554> (Accessed August 20, 2025).
- Engler, S., and Weissstanner, D. (2021). The threat of social decline: Income inequality and radical right support. *J. Eur. Public Policy* 28, 1–21. doi: 10.1080/13501763.2020.1733636
- Essletzbichler, J., and Forcher, J. (2022). “Red Vienna” and the rise of the populist right. *Eur. Urban Reg. Stud.* 29, 126–141. doi: 10.1177/09697764211031622
- Fennema, M. (2005). “Populist parties of the right,” in *Movements of Exclusion: Radical Right-Wing Populism*, ed. J. Rydgren (New York, NY: Nova Science Publishers), 1–24.
- Ferreira, C. (2019). Vox como representante de la derecha radical en España: un estudio sobre su ideología. *Rev. Esp. Cienc. Polít.* 51, 73–98. doi: 10.21308/recp.51.03
- Fiorentino, S., Glasmeier, A. K., Lobao, L., Martin, R., and Tyler, P. (2024). ‘Left behind places’: What are they and why do they matter? *Camb. J. Reg. Econ. Soc.* 17, 1–16. doi: 10.1093/cjres/rsad044
- Floyd, K. (2017). Loneliness corresponds with politically conservative thought. *Res. Psychol. Behav. Sci.* 5, 13–21. doi: 10.12691/rpbs-5-1-3
- Forcina, A., and Pavia, J. (2025). From Corrado Gini's early contributions to overdispersion to modern models of voting behaviour. *Stat. Sci.* Forthcoming.
- Freedman, D., Klein, S., Sacks, J., Smyth, C., and Everett, C. (1991). Ecological regression and voting rights. *Eval. Rev.* 15, 673–711. doi: 10.1177/0193841X9101500602
- Fritz, S. (1987). The NSDAP as Volkspartei? A look at the social basis of the nazi voter. *Hist. Teacher* 20, 379–399. doi: 10.2307/493126
- García Lupato, F., Ruíz Rodríguez, L., and Sánchez-Medero, G. (2020). La derecha española dividida: posiciones ideológicas y clivaje territorial. *Polít. Soc.* 57, 719–745. doi: 10.5209/poso.69207
- Gnaldi, M., Tomaselli, V., and Forcina, A. (2018). Ecological fallacy and covariates: new insights based on multilevel modelling of individual data. *Int. Stat. Rev.* 86, 119–135. doi: 10.1111/insr.12244
- Golder, M. (2016). Far right parties in Europe. *Ann. Rev. Polit. Sci.* 19, 477–497. doi: 10.1146/annurev-polisci-042814-012441
- Goodwin, M. (2007). Grandpa's fascism and the new kids on the block: contemporary approaches to the dark side of Europe. *Ethnopolitics* 6, 163–178. doi: 10.1080/17449050701281113
- Hanna, N. (2009). An argument for voting abstention. *Public Aff. Q.* 23, 275–286. Available online at: <https://www.jstor.org/stable/40441535> (Accessed August 21, 2025).
- Iglesias-Pascual, R., Alcántara-Dormido, T., and Lagonigro, R. (2025). Living alone and electoral behavior. A contextual approach looking at single-person households in southern Europe. *Appl. Geograp.* 179:103639. doi: 10.1016/j.apgeog.2025.103639
- Iglesias-Pascual, R., Benassi, F., Paloma, V. (2022). A spatial approach to the study of the electoral resurgence of the extreme right in southern Spain. *Spat. Demogr.* 10, 117–141. doi: 10.1007/s40980-022-00105-1
- Iglesias-Pascual, R., Paloma, V., and Benítez, I. (2021). The role of contextual factors in the electoral resurgence of extreme right-wing forces in Spain: the case of Andalusia. *Polit. Geogr.* 86:102356. doi: 10.1016/j.polgeo.2021.102356
- Ignazi, P. (2003). *Extreme Right Parties in Western Europe*. New York, NY: Oxford University Press. doi: 10.1093/0198293259.001.0001
- Ignazi, P. (2021). The failure of mainstream parties and the impact on new challenger parties in France, Italy and Spain. *Ital. Polit. Sci. Rev.* 51, 100–116. doi: 10.1017/ipo.2020.26
- INE (2023). *Household Income Distribution Atlas*. Available online at: <https://www.ine.es/experimental/atlas/> (Accessed September 14, 2024).
- Inglehart, R., and Norris, P. (2017). Trump and populist-authoritarian parties: the silent revolution in reverse. *Perspect. Politics* 15, 443–454. doi: 10.1017/S1537592717000111
- Jambrina-Canseco, B. (2023). The stories we tell ourselves: local newspaper reporting and support for the radical right. *Polit. Geogr.* 100:102778. doi: 10.1016/j.polgeo.2022.102778
- King, G. (1997). *A Solution to the Ecological Inference Problem: Reconstructing Individual Behavior from Aggregate Data*. Princeton, NJ: Princeton University Press. doi: 10.3886/ICPSR01132.v1
- Kollberg, M. (2024). The challenger advantage-how challenger parties disrupt mainstream party dominance in the European Parliament. *J. Eur. Public Policy* 32, 2252–2281. doi: 10.1080/13501763.2024.2391510
- Langenkamp, A., and Stepanova, E. (2024). “Loneliness, societal preferences and political attitudes,” in *Loneliness in Europe, Population Economics*, eds. S. Schnepf, B. d'Hombres, and C. Mauri (Cham: Springer), 117–136. doi: 10.1007/978-3-031-66582-0_6

- Marcos-Marne, H., Plaza-Colodro, C., and O'Flynn, C. (2024). Populism and new radical-right parties: the case of vox. *Politics* 44, 337–351. doi: 10.1177/02633957211019587
- Martín-Cubas, J., Bodoque, A., Pavía, J. M., Tasa, V., and Veres-Ferrer, E. (2018). The “big bang” of the populist parties in the European Union: The 2014 European Parliament election. *Innovation Eur. J. Soc. Sci. Res.* 32, 168–190. doi: 10.1080/13511610.2018.1523711
- Mayer, N. (2015). The closing of the radical right gender gap in France? *French Politics* 13, 391–414. doi: 10.1057/fp.2015.18
- Mazorra Rodríguez, Á. (2024). Social inequality and residential segregation trends in Spanish global cities: a comparative analysis of Madrid, Barcelona, and Valencia (2001–2021). *Cities* 149:104935. doi: 10.1016/j.cities.2024.104935
- Milosav, D., Dickson, Z., Hobolt, S. B., Klüver, H., Kuhn, T., and Rodon, T. (2025). The youth gender gap in support for the far right. *J. Eur. Public Policy* 1–25. doi: 10.1080/13501763.2025.2481181
- Minkenberg, M. (2000). The renewal of the radical right: between modernity and anti-modernity. *Gov. Oppos.* 35, 170–188. doi: 10.1111/1477-7053.00022
- Mols, F., and Jetten, J. (2017). *The Wealth Paradox: Economic Prosperity and the Hardening of Attitudes*. Cambridge: Cambridge University Press. doi: 10.1017/9781139942171
- Mols, F., and Jetten, J. (2020). Understanding support for populist radical right parties: toward a model that captures both demand- and supply-side factors. *Front. Commun.* 5:557561. doi: 10.3389/fcomm.2020.557561
- Mudde, C. (2007). *Populist Radical Right Parties in Europe*. Cambridge: Cambridge University Press. doi: 10.1017/CBO9780511492037
- Mudde, C. (2010). The populist radical right: a pathological normalcy. *West Eur. Polit.* 33, 1167–1186. doi: 10.1080/01402382.2010.508901
- Mudde, C. (2013). Three decades of populist radical right parties in Western Europe: so what? *Eur. J. Polit. Res.* 52, 1–19. doi: 10.1111/j.1475-6765.2012.02065.x
- Mudde, C. (2019). *The Far Right Today*. Cambridge: Polity Press.
- Mutz, D. (2018). Status threat, not economic hardship, explains the 2016 presidential vote. *Proc. Natl. Acad. Sci. USA.* 115, E4330–E4339. doi: 10.1073/pnas.1718155115
- Neiwert, D. (2017). *Alt-America: The Rise of the Radical Right in the Age of Trump*. New York, NY: Verso Books.
- Norris, P. (2005). *Radical Right. Voters and Parties in the Electoral Market*. Cambridge: Cambridge University Press. doi: 10.1017/CBO9780511615955
- Pavía, J. M., and Aybar, C. (2020). La movilidad electoral en las elecciones de 2019 en la Comunitat Valenciana. *Debats. Rev. Cult. Poder Soc.* 134, 27–51. doi: 10.28939/iam.debats.134-1.3
- Pavía, J. M., and Cantarino, I. (2017). Dasymetric distribution of votes in a dense city. *Appl. Geograp.* 86, 22–31. doi: 10.1016/j.apgeog.2017.06.021
- Pavía, J. M., and López-Quílez, A. (2013). Spatial vote redistribution in redrawn polling units. *J. R. Stat. Soc. A Stat. Soc.* 176, 655–678. doi: 10.1111/j.1467-985X.2012.01055.x
- Pavía, J. M., and Romero, R. (2023). Data wrangling, computational burden, automation, robustness and accuracy in ecological inference forecasting of R×C tables. *Stat. Operation Res. Trans.* 47, 151–186. doi: 10.57645/20.8080.02.4
- Pavía, J. M., and Romero, R. (2024). Improving estimates accuracy of voter transitions. two new algorithms for ecological inference based on linear programming. *Sociol. Methods Res.* 53, 1491–1533. doi: 10.1177/00491241221092725
- Penadés, A., and Pavía, J. M. (2024). An ecological inference approach to the origins of proportional representation. *Soc. Sci. Inf.* 63, 168–192. doi: 10.1177/05390184241250179
- Pérez, V., Aybar, C., and Pavía, J. (2021). Spanish electoral archive. SEA database. *Sci. Data* 8:193. doi: 10.1038/s41597-021-00975-y
- Rama, J., Cordero, G., and Zagörski, P. (2021a). Three is a crowd? Podemos, ciudadanos, and vox: the end of bipartisanship in Spain. *Front. Polit. Sci.* 3:688130. doi: 10.3389/fpos.2021.688130
- Rama, J., Zanotti, L., Turnbull-Dugarte, S., and Santana, A. (2021b). *Vox. The Rise of the Spanish Populist Radical Right*. New York, NY: Routledge. doi: 10.4324/9781003049227
- Robinson, W. (1950). Ecological correlations and the behavior of individuals. *Am. Sociol. Rev.* 15, 351–357. doi: 10.2307/2087176
- Rodríguez-Pose, A. (2020). The rise of populism and the revenge of the places that don't matter. *LSE Public Policy Rev.* 1:4. doi: 10.31389/lseppr.4
- Rodríguez-Pose, A., Terrero-Dávila, J., and Lee, N. (2023). Left-behind versus unequal places: interpersonal inequality, economic decline and the rise of populism in the USA and Europe. *J. Econ. Geogr.* 23, 951–977. doi: 10.1093/jeg/lbad005
- Roig, R. (2020). Un gobierno de coalición a la valenciana: el Botànic. *Debats. Rev. Cult. Poder Soc.* 134, 155–169. doi: 10.28939/iam.debats.134-1.9
- Sánchez-García, Á., and Llamazares, I. (2025). Urban jungle, radical roar: sprawl, economic decline and the success of the populist radical right in metropolitan Spain. *Contemp. Polit.* 1–19. doi: 10.1080/13569775.2025.2573484
- Sandoval, P., and Ojeda, S. (2023). Estimation of electoral volatility parameters employing ecological inference methods. *Qual. Quant.* 57, 405–426. doi: 10.1007/s11135-022-01367-z
- Schwörer, J., and Fernández-García, B. (2022). Populist radical right parties and discursive opportunities during COVID-19. Blame attribution in times of crisis. *German J. Comp. Polit.* 16, 545–570. doi: 10.1007/s12286-022-00540-w
- Simón, P. (2020). The multiple Spanish elections of April and May 2019: the impact of territorial and left-right polarisation. *South Eur. Soc. Polit.* 25, 441–474. doi: 10.1080/13608746.2020.1756612
- Turnbull-Dugarte, S., Rama, J., and Santana, A. (2020). The Baskerville's dog suddenly started barking: voting for Vox in the 2019 Spanish General elections. *Polit. Res. Exch.* 2, 1–21. doi: 10.1080/2474736X.2020.1781543
- Vampa, D. (2020). Competing forms of populism and territorial politics: the cases of Vox and Podemos in Spain. *J. Contemp. Eur. Stud.* 28, 304–321. doi: 10.1080/14782804.2020.1727866
- Vox (2014). *Manifiesto Fundacional Vox*. Available online at: <https://www.voxespana.es/espana/manifiesto-fundacional-vox> (accessed December 5, 2024).
- Ziller, C., and Schübel, T. (2015). The “pure people” versus “the corrupt elite”? Political corruption, political trust and the success of radical right parties in Europe. *J. Elect. Public Opin. Parties* 25, 368–386. doi: 10.1080/17457289.2014.1002792