The emergence of the radical right on the Spanish political scene: Towards a spatial perspective

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ARTICLE INFO

ABSTRACT

This paper unveils the reasons behind the irruption of the radical right-wing populist party VOX in the region of Andalusia, breaking the immunity to that political trend in Spain. The empirical analysis is based on data from the 2018 Regional Election at municipal level (778 municipalities), revealing that geographical location matters from two perspectives: because VOX outcome in a municipality is closely related to that in its neighbors (spatial dependence) and since the influence of the main explanatory factors varies between municipalities (spatial non-stationarity). Furthermore, it uncovers that the share of votes won in the previous regional election by the most important right-wing party (namely PP) is the most decisive factor explaining the new support for VOX, closely followed by the percentage of the foreign population. Other important explanatory variables are age, income and size. Finally, the results reveal the existence of some geographical clusters characterized by different spatial patterns.

1. Introduction

The 2018 regional election was a turning point in the electoral history of Andalusia (a region in the south of Spain). Besides other considerations, the radical right-wing populist party VOX (that takes its name from a Latin word meaning 'VOICE') gained support for its distinct policy stance, with very far-reaching positions on immigration, gender violence, Spain's identity, and so on. Far from being an exception, a little research clearly shows that the Andalusian case is rather representative of what could even be considered one of the main trends in recent elections in Europe: the unprecedented success of various populist (in many cases right-wing) parties.

Under this new political reality, one fact is particularly important for understanding the significance of the present paper: the role of radical right-wing populist parties in Spain had been, until then, almost negligible (Turnbull-Dugarte, 2019). In the Andalusian regional election of December 2018, VOX became the first such party, since the advent of democracy in Spain in the late 1970s, to achieve significant success. Not only that but, in terms of governance, VOX also held the key to the

formation of a government composed of the two main right parties at this time in Spain (*Partido Popular* (PP) and *Ciudadanos* (C's)).

Consequently, the importance of studying the Andalusian election is beyond any doubt. The fact that the radical right emerged in Andalusia was related to a very important aspect in Spain: territorial politics (Vampa, 2020). Within the so-called 'center-periphery cleavage', and as a response to a radical left that had positioned itself in favor of pro-federalist and pro-independence demands at the sub-state level (specifically, advocating for increased regionalism within the country's multi-level system), we argue that VOX found its niche at the opposite end of the spectrum. Consequently, VOX had its first electoral success in a territory where such demands had no place; in other words, in a region where sub-state political territorial mobilization is not a priority nowadays.[3] As indicated by Vampa (2020), these territorial issues now play a stronger role in Spain than in other countries, so the study of Andalusia, as a prototype territory where the radical right could cast its nets, is constructive.

In addition, Andalusia, one of the seven Spanish regions (out of 17) with the highest level of delegated competencies as defined by the

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[3] We should not, however, forget that the origin of Andalusian autonomy lies in an important regionalist (soft-nationalist) movement, although regionalist parties ceased to be relevant in the 2000s.

Spanish Constitution, has some idiosyncratic factors that make this study worthwhile. It is the most important region in Spain in terms of potential voters, which led, as repeatedly indicated in media, to national leaders of the political parties taking the Andalusian election as the first round of the upcoming national election. The Andalusian elections of December 2018 carried a national significance, more so than in previous instances, as they marked the beginning of a presumably short electoral cycle, with regional, municipal, European, and general elections scheduled within a matter of months. Additionally, these were the first elections that Pedro Sánchez, president of the national government, faced since he abruptly took office only six months prior. Another factor supporting this view was the intense involvement of all party leaders in the electoral campaign.

Andalusia has been considered in many spheres as a good example of multilevel governance in which, suddenly, a new and rather significant party shows up, which is very remarkable not only for regional but also for national governance (Field and Alonso, 2024). As Oxford Analytica (2019): 1) states referring to the governance agreement in Andalusia between PP, C's and VOX, 'If this governing arrangement proves stable and effective, it could represent the launchpad for Spain's three right-wing parties to form the next national government'. Besides, and mainly because of its geographical location, Andalusia is a region that has to deal with a lot of immigration, a crucial factor when trying to explain the results of radical right-wing populist parties. Finally, Andalusia has always been left-wing from a political point of view, since the *Partido Socialista Obrero Español* (PSOE) was in power 38 years in a row, so we believe that understanding the rise of a party like VOX in this historically adverse scenario could provide valuable insights.

Hence, the main aim of this paper is to address the onset of the radical right in Andalusia. Specifically, the paper, avoiding the usual use of bivariate relationships, estimates a multivariate model, as this is the best approach to assess the explanatory power of different variables in understanding any electoral result. A key point here lies in the type of data employed. The ideal would be individual data, for which we could use elections' surveys published on a rolling basis by the *Centro de Investigaciones Sociológicas* (CIS), an independent entity of the Ministry of the Presidency of Spain. However, we decided not to take these data because lately the discrepancies between the expected outcome according to pre-election polls and the actual one have been too strong (Maza et al., 2019). Indeed, problems associated with the use of surveys are recently detailed in Cox and Morales-Quiroga (2022). For this reason, we opted for employing data coming directly from the election outcome and, for the sake of accuracy in the analysis, at the highest possible level of disaggregation (the municipal one, a total of 778 municipalities), in line with studies such as those by Fernández-García et al. (2025), Di Matteo and Mariotti (2021), Faggian et al. (2021) and Rehák et al. (2021). Although some recent papers have attempted to explain the results of different elections at a more aggregated level,[4] the use of the smallest unit of analysis is no doubt the best option when it comes to minimizing the so-called 'ecological fallacy' — erroneous conclusions are inferred from aggregated data on individual phenomena — and one of its most important problems, the 'Modifiable Areal Unit Problem (MAUP)' effect. In detail, the dependent variable of our model is the share of votes won by VOX per municipality. As for the explanatory variables, a battery of them is included, in accordance with the main theories and provided that data are available.

To our knowledge, this is one of the first papers to model the outcome of the 2018 Andalusian elections. Although other important studies have already been published, such as the pioneering work by Turnbull-Dugarte (2019) and, subsequently, Iglesias-Pascual et al. (2021), along with those by Turnbull-Dugarte et al. (2020) and Rama

et al. (2021), which adopt a broader perspective, our approach differs significantly from all of them. First, the use of such a small geographic unit of analysis introduces a critical econometric problem often overlooked: the presence of 'spatial dependence.' Applied to our sample, this means that the VOX results for each municipality are linked to those of its neighbors. As these concerns are confirmed, we address this issue using spatial econometric techniques, as standard estimation methods could lead to misleading results. Furthermore, we avoid a common mistake in interpreting coefficients in a spatial context. Second, this is the first paper in the literature on voter behavior, regardless of the case study, to address the explanatory power of the variables included in the model, allowing us to establish a ranking among them. Third, once the variables with the highest explanatory power have been identified, the paper delves deeper into them by assessing differences across municipalities using a geographically weighted regression (GWR) approach. This allows us to reveal significant variations in the determinants of the vote across the territory.

The article is structured as follows. As a backdrop of the paper but at the same time including important references to our case in point, the next section deals briefly with differences between different political phenomena (extremism, radicalism and populism) as well as the rise of radical right-wing populism in Europe. The third section presents, in a concise manner, VOX results in the 2018 Andalusian elections. We then propose a spatial model trying to uncover the key factors behind them; after carrying out pertinent tests, a spatial lag (or spatial autoregressive) model is estimated. Subsequently we report, on the one side, the main findings of the model and, on the other, the explanatory power of each variable. To delve into the existence of remarkable differences in the key variables between municipalities, namely spatial non-stationarity, Section 6 estimates a GWR model that allows the identification of some spatial clusters. The paper concludes by summarizing its main findings.

2. Radical right-wing populism: meaning and main roots

The rise of right-wing extremist, radical, and populist parties in Europe has sparked extensive academic research into these phenomena. While the literature on the topic is vast, key studies like those by Wodak et al. (2013), Kriesi and Pappas (2015), Akkerman et al. (2016), and Mudde (2016), (2019) provide valuable insights from which important conclusions can be drawn. This section aims to clarify the meaning of these terms and explore some of the factors contributing to the growth of this kind of parties, with reference to our case study where relevant.

Right-wing extremism, while not aiming to restore dictatorial regimes, is characterized by at least 'five features (…): nationalism, racism, xenophobia, anti-democracy and the strong state' (Mudde, 2000: 11). Radical right-wing parties share some anti-system elements but are not necessarily anti-democratic. These values are still behind many right-wing populist parties, but these parties differ in their communication style. Populism is often seen more as a communicative trait than an ideology. For instance, on immigration, right-wing populist parties often present clear opposition, advocating for the expulsion of illegal immigrants, the deportation of legal immigrants who commit crimes, the restriction of immigration without a work contract or who cannot demonstrate a clear economic purpose, and the construction of border walls, all framed under the guise of managing immigration more efficiently. Thus, within 'such a more lenient' modus operandi, Mudde and Rovira Kaltwasser (2013) provide a minimum definition of populism, which includes three core characteristics: attacking 'the elite', defending the interests of 'the common people', and asserting popular sovereignty as the only legitimate source of political power.

Where does VOX fit within this spectrum? VOX's electoral program includes the following central points: 1. Unity of Spain with a single government and parliament; 2. Banning any party, NGO, or organization aiming to undermine Spain's territorial unity (targeting Catalan separatist parties); 3. Repealing the Law of Historical Memory, which grants rights to victims of the civil war and dictatorship; 4. Deporting

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[4] For instance, Crescenzi et al. (2018) used regional data to study Brexit determinants, while Maza et al. (2019) employed county data to address the independence process in Catalonia.

immigrants, both legal (if they commit crimes) and illegal; 5. Reducing taxes for individuals and businesses; 6. Abolishing public funding for sex changes and abortion; 7. Repealing the Gender Violence Act; 8. Fighting political corruption, particularly in relation to scandals in Andalusia (such as the fraudulent Employment Regulation Files) and nationally. A clear idea emerges from VOX's program: it embraces the communication traits of populism (as seen in studies like Norris, 2020), offering simple solutions to complex issues.[5] However, it goes beyond right-wing populism, with an ideology based on pillars such as 'Nativism' (opposing immigration, especially from Africa in Andalusia), 'Nationalism' (defending national unity and identity), 'Authoritarianism' (promoting centralized government and traditional values), and 'Neoliberalism' (minimizing government intervention).[6] For these reasons, VOX should be considered a radical right-wing populist party, part of the broader group of such parties in Western Europe (Otjes et al., 2018).

Concerning the roots of radical right-wing populism, we focus on the most relevant factors for our study and, more broadly, those that explain why Spain is no longer immune to this trend, especially considering the repeated significance of VOX in various types of elections, such as regional, municipal, and national contests. One key conclusion from the literature is that economic downturns, such as the 2008 crisis and its aftermath, create a fertile ground for these parties (see e.g. Funke et al., 2016; Gozgor, 2022). This could, to some extent, help explain the rise of radical right-wing populism in Andalusia and Spain, as both the region and the country were severely affected by the economic crisis. In this regard, economic downturns foster the geography of discontent and extreme voting, as the title of this special issue alludes. Rodríguez-Pose (2018) states that politicians, in the recent economic downturn, overlooked the situation of the worst-performing areas and the consequent increase in inequality between rich and poor territories, so the inhabitants of the poor ones felt abandoned and took revenge through the voting ballot, casting their votes for populist parties. In fact, the body of work related to 'left-behind' places has been extensive in recent years, with some of the most important papers being, to name just a few, those of Lenzi and Perucca (2021), Kurt Özman et al. (2023), Storti et al. (2023) and Fiorentino et al. (2024).

The literature also suggests that populism thrives in fragile political contexts, especially when traditional parties face leadership crises or political scandals. Widespread corruption, regardless of party affiliation, and the Catalonian crisis significantly contributed to the rise of VOX, particularly in Andalusia, and later nationwide (Turnbull-Dugarte, 2019; Rama et al., 2021). The general perception was that 'traditional' parties were unable to address these issues, prompting citizens to seek alternatives. VOX capitalized on this by offering clear, authoritarian solutions to resolve Catalonian nationalism.[7]

Another key factor in the popularity of radical right-wing parties is immigration. Mudde (2008) notes that these parties shift the focus from socio-economic issues, such as unemployment, to socio-cultural ones, like immigration. They promote anti-immigration sentiments, portraying foreigners as a threat to national identity, and numerous studies link immigration to the rise of radical right-wing parties in Europe. This strategy seems to align with the success of VOX in Andalusia (as outlined in the electoral program above), making it a significant case study for examining whether the patterns observed in other contexts are replicated in the Spanish region where the radical right was unleashed. Some articles, such as Iglesias-Pascual et al. (2019), suggest this, although there is no consensus on the matter.

3. The 2018 regional election in Andalusia: a quick look at the outcome of VOX

The main aim of this section is to inform the reader about the results of VOX in the 2018 regional election in Andalusia (for a more general view see Turnbull-Dugarte, 2019). VOX won 11 % of the votes, which accounted for 12 out of 109 seats in the regional Parliament. Although, as we have already mentioned, the political party has undergone significant changes since then, to gain perspective and really understand the relevance of this outcome, it is necessary to remark that VOX got a negligible 0.45 % in the previous election (in 2015). As indicated, nothing like this had ever happened before in any regional election in Spain, let alone in the national ones, so after this striking episode, Spain can no longer be said to be immune to the wave of populist right-wingers sweeping Europe.

The distribution of votes was far from homogeneous. The share was over 15 % in 44 out of the 778 municipalities, between 10 % and 15 % in 201 municipalities, between 5 % and 10 % in 356, and lower than 5 % in the remaining 177. The highest percentage was reported in Balanegra (over 30 %), while the lowest was registered in Gorafe (0.44 %). Discrepancies in the degree of support for VOX were, then, remarkable.

Concerning the geographical distribution of votes, Fig. 1 shows, as a rule, that VOX outcome tended to be higher in the south (coastal area) than in the north of the region, as well as in the east compared to the west. Moreover, it seems that the outcome in one municipality was quite similar to the outcome in the neighboring ones, which is technically called spatial autocorrelation/spatial dependence. This visual impression is confirmed by computing the well-known Moran's I statistic:

$$I = \frac{N}{\sum_{i=1}^{N}\sum_{j=1}^{N} w_{ij}} \frac{\sum_{i=1}^{N}\sum_{j=1}^{N} w_{ij}(VOX_i - VOX)(VOX_j - VOX)}{\sum_{i=1}^{N}(VOX_i - VOX)^2}, \text{for } i \neq j. \quad (1)$$

where $VOX_i(VOX_j)$ is the share of votes for VOX at municipality $i(j)$, VOX refers to the sample mean, w_{ij} is an element of the spatial weight matrix W between each pair of municipalities, $\sum_{i=1}^{N}\sum_{j=1}^{N} w_{ij}$ is a standardization factor that corresponds to the sum of all the weights, and N is the total number of municipalities (778). Using the (standardized) binary contiguity matrix for our spatial weights, the analysis reveals that there was strong spatial dependence in the vote distribution: the Moran's I statistic equals 0.6477, with an associated p-value of 0.000.

Fig. 1. Election Outcome. Percentage of Votes Won by VOX.

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[5] VOX's discourse has evolved significantly, and before 2016, it was more of a nationalist conservative party with liberal economic views, rather than a populist one.

[6] Regarding 'neoliberalism', VOX's position is nuanced. While advocating for tax reductions and less government intervention, it has occasionally supported state subsidies to promote family and traditional values. As a result, their discourse can be inconsistent or more complex on this issue.

[7] VOX is not an extreme right party aiming to subvert Spain's liberal democratic system, but a radical right party that operates within it and supports the Spanish Constitution. While its proposal for the recentralization of powers and the elimination of regional governments is radical, it could, in theory (though quite unlikely), be carried out within the rule of law.

Results are roughly the same (positive and statistically significant at 1 %) when using different versions of a distance weight matrix − such as the inverse of the distance, the inverse of the square of the distance, or matrices considering diverse cut-offs − as well as matrices only considering a different number of neighboring municipalities − from 10 to 15.

4. Main factors behind the irruption of VOX: our proposed model

Now, we are going to propose a model to track down the main factors behind the outcome of VOX. As indicated before, the novel features of our proposed model will have to do with the treatment of spatial dependence across territories (municipalities on this occasion). Apart from this, it incorporates a comprehensive set of explicative variables according to leading theories and, above all, to data availability.

Therefore, this paper uses a place-based approach, grounded on a careful consideration of the territory, the geographical situation of each unit of analysis and its interdependencies. To do so, we employ geographical data rather than individual data because, as indicated by Iglesias-Pascual et al. (2021), they allow us to get a complete sample of the territory (Andalusia region) and not a reduced one, to include in the analysis contextual factors and to pay attention to the spatial distribution of voters. Indeed, Iglesias-Pascual et al. (2021) should be considered the first attempt to provide a complementary approach to articles using individual data from a contextual and analytical point of view. However, their approach, while praiseworthy, does not fully achieve this aim since the use of aspatial models and standard techniques is not recommended when such spatial interrelationships are detected.

As for the theoretical roots on which the model specification should be based, several approaches have been developed when explaining voting results. Antunes (2010) splits them into three categories: the sociological model, the psychological model, and the rational choice theory. However, when applied, empirical studies tend to integrate all these approaches in some way. This is what we do in this paper, paying attention to the sociological model and the rational choice theory − also known as the model of economic voting –, since they are more appropriate for our case study.

The sociological model highlights the importance of the social group to which each individual belongs. Indeed, as indicated by Černý (2019): 5), 'the connection between the voting behavior and the social group is so significant that it might be possible to use only socio-economic status, religion and the area where the person lives in order to be able to describe his or her electoral choice'. This is ultimately what is done in this paper since we consider as a unit of analysis the smallest area (municipality) in which an elector lives, as well as variables capturing the socio-economic status.[8] The rational choice theory consists basically of the application of the idea about rational choice, in markets, to political functioning. As Antunes (2010): 157) indicates, 'voters seek to maximize the utility of their vote as the parties act to maximize electoral gains obtained from their political proposals'. Rational choice theory easily explains, for example, the rise of far-right parties in an era of uncertainty − triggered, for instance, by economic crisis times − , since it leads to the emergence of new ideologies that may be useful in winning votes; that is to say, novel parties trying to differentiate their proposals from those of the 'traditional' ones.

Bearing these considerations in mind, with features of both approaches and considering data availability, we go on to set out some hypotheses and propose a model to test them. Data were collected from the Official Statistics Website of Andalusia, and the definition of each of the variables included in the model, along with its descriptive statistics, is detailed in Table 1.

As potential explanatory factors, due to the presence of spatial dependence in the dependent variable, we first include its spatial lag ($\sum_j w_{ij} VOX_j$), where w_{ij} are elements of the (standardized) contiguity distance matrix W. Although the importance of space is a quite common result on electoral geography, the existence of these spatial interrelations has been almost completely ignored when studying radical right-wing political parties (Van Wijk et al., 2019), making this approach highly relevant. Accordingly, our first hypothesis is:

H1. (geographical proximity premise): VOX outcome in a municipality is directly related to VOX outcome in neighboring municipalities even when the influence of other potential factors is included.

Apart from this geographical aspect, we consider variables to a greater or lesser extent related to the socio-economic status of electors. We are referring to socio-demographic variables, such as gender (computed as the share of women, denoted by *wom*), age (computed as the mean age, denoted by *age*), education (proxied by illiteracy, since no other homogeneous information exists at a municipal level, and denoted by *lit*), and population (including two variables in this case, such as total population (*pop*) and density of population (*den*)), along with economic variables such as unemployment (unemployment rate (*ur*)) and wealth (per capita income (*inc*)).

This choice of variables partly coincides with that of Arzheimer (2012), who concludes that the typical voter of extreme/radical right-wing political parties in Western Europe can be classified, among other factors, as male, young and with a low/moderate level of education. Indeed, a gender bias is usually found when researching the profile of a radical right-wing voter (see Stockemer et al., 2018 for a meta-analysis on this topic). Regarding age, some studies conclude that younger voters are more volatile and do not have strong political preferences, so that they can 'try' voting for the radical right (e.g. Han, 2016; Feischmidt, 2020). This will be our hypothesis, although it is the most controversial aspect among those presented, as other studies (e. g., Norris and Inglehart, 2019) argue that as societies adopt more liberal values, older, more conservative voters perceive a weakening of their beliefs and, as a result, are more likely to support parties associated with the radical right, which advocate traditional values and resist social change.[9] About education, the most common idea supports the existence of a negative link between level of schooling and the backing for this kind of party (Van Hauwaert and Van Kessel, 2018). Finally, most papers conclude that support for the radical right is higher in rural areas than in urban areas (Fitzgerald, 2018). According to these prevalent patterns, our second hypothesis can be set as follows:

H2. (socio-demographic premise): Men (women), young (older), poorly educated (highly educated) and living in sparsely populated (highly populated) areas are more (less) likely to cast a vote for VOX.

Concerning economic variables, the mainstream says, as concluded by Han (2016), that poor people are more prone to vote for radical right-wing parties, occurring the same for those who, being unemployed, perceive the economy to be performing poorly (Mols and Jetten, 2017). Consequently, this premise should be tested, as geographical inequality − depicted as a consequence of the different accessibility to labor and consumer markets and captured here as the differences

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[8] Religion is not such an important topic in a region as Andalusia, in which most people are catholic.

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[9] For these ambivalent results, in addition to being the variable available in our data source, we chose to use the 'mean age' variable in the model. We believe this approach is effectively able to capture the overall or majority trend in a single variable, as we intend to do in all cases to maintain the simplicity of the analysis. Moreover, it helps us avoid the randomness inherent in distinguishing between young and old individuals. In any case, we will discuss this hypothesis and its proxy variable(s) in more detail when analyzing the results, as we also tested it using two separate variables representing youth and maturity.

Table 1

Data definitions and descriptive statistics.

Variable	Definition	Min	Max	Mean	Coeff. of Variation
VOX share (*VOX*)	Votes for VOX party (%)	0.44 (Gorafe)	30.13 (Balanegra)	8.22	0.51
Women (*wom*)	Female population (%)	40.00 (Turón)	56.30 (Alcudia de Monteagud)	49.22	0.04
Age (*age*)	Average age of population	34.58 (Huércal de Almería)	60.56 (Benitagla)	44.40	0.10
Literacy (*lit*)	Illiterate or uneducated population (%)	2.48 (Castilleja de Guzmán)	39.59 (Huélago)	18.94	0.36
Population (*pop*)	Inhabitants (in logs)	57 / 4.04 (Cumbres de Enmedio)*	688,711 / 13.44 (Seville)*	10,777 / 7.92	3.67 / 0.19
Density of population (*den*)	Inhabitants per km2	2.44 (Zufre)	9510.49 (Cadiz)	217.27	3.49
Unemployment rate (*ur*)	Unemployment rate	7.75 (Alcudia de Monteagud)	43.10 (Belmez)	23.50	0.23
Income (*inc*)	Average net income (in logs)	3389/ 8.13 (Lobras)*	26,599/ 10.19 (Tomares)*	11,172 / 9.28	0.30 / 0.03
Foreign population (*forp*)	Foreign population (%)	0.00 (*several*)**	67.30 (Partaloa)	6.31	1.40
Foreign employment (*foremp*)	Employment contracts to foreigners (%)	0.00 (*several*)**	70.65 (Játar)	10.23	1.19
PP (*pp*)	Votes for PP in previous election (%)	2.86 (El Borge)	75.34 (Turón)	26.19	0.38
Industry (*ind*)	Employment in industry (%)	0.00 (*several*)**	79.31 (Cóbdar)	15.32	0.84
Construction (*con*)	Employment in construction (%)	0.00 (*several*)**	100.00 (Cumbres de Enmedio)	10.00	0.88
Tourism (*tou*)	Employment in tourism (%)	0.00 (*several*)**	100.00 (Olula de Castro)	13.67	0.66

Note: (*) First figure using raw data; second in logs; (**) Several municipalities with this value. Data were collected from the Official Statistics Website of Andalusia and the Andalusian Government for the year 2018. If there is no information for that year, we collected information on the latest available year prior to 2018. In brackets is the municipality with the highest and lowest value.

between municipalities – is quite high in Andalusia. The third hypothesis reads:[10]

H3. (economic premise): Those who live in a poor (rich) and with high (low) unemployment municipality, are more (less) likely to cast a vote for VOX.

Moving on to identity-related issues, the paper by Arzheimer (2012) adds, as a feature of common voters, their incipient concern for immigration and immigrants (a comprehensive study on this point, for the Netherlands and Germany, is offered by Berning and Schlueter, 2016). In light of this, we have further included two additional independent variables that capture different aspects: the share of the foreign population (*forp*) and the share of new registered jobs held by foreigners (*foremp*). In our view, the inclusion of the second variable provides additional information, since it allows us to know whether the foreign population, regardless of its size, represents a significant part of the workforce. We hypothesize that the attitude towards migration, ambivalent per se, is influenced not only by its perceived importance but also by the situation of foreigners in the labor market: whether they are working or covered by social insurance, including unemployment benefits and other types of income replacement benefits and social assistance. Related to it, and according to the common view of the radical right, which holds that immigrants are the main beneficiaries of social benefits and that this trend should be cut (Ennser-Jedenastik, 2018; Alesina et al., 2021),[11] the fourth hypothesis can be formulated as follows:

H4. (nativism premise): Those living in a territory with many (few) immigrants, most of them receiving social benefits (most of them working under legal labor contracts), are more (less) likely to cast a vote for VOX.

Moreover, we want to include a variable to capture the political party from which, in principle, most new VOX voters should come. Thus, we take into account the share of votes won by the PP (*pp*) in the 2015 regional election. The reason is threefold. First, the PP was by far the best-performing right-wing party and the appeal of radical right-wing parties stems from the same concepts as traditional right-wing parties. Second, because according to the rational-choice theory, the coherence of the political system implies that voters have several interconnected options to choose from, ranking them from the most to the least favorable, with the preference of individuals being transitory; on that scale of ideological alienation, the party closest to VOX is the PP, so the inclusion of the share of votes won by this party in the previous election can be interpreted as an extrapolation of the 'ideology' variable at the individual level. Third, we cannot forget that VOX, as the most radical right-wing party, sends a strong message about the unity of Spain and the mismanagement of the PP in relation to the growing regionalism and/or independence movements in order to gain part of its electorate. So, another hypothesis we are testing is:

H5. (ideology premise): Those who live in a territory with good (poor) PP results in previous elections, are more (less) likely to cast a vote for VOX.

Besides, as control variables (the literature on this issue is quite scarce) we use information on the industry-mix. The reason is that there might be differences depending on which is the main sector in each municipality. More specifically, we consider the share of industry (*ind*), construction (*con*), and tourism (*tou*). It has been argued that deindustrialization or the crisis in the construction sector in certain areas have contributed to the rise of the radical right (see e.g. Broz et al., 2021). On the other hand, the social and cultural effects of tourism are exploited by these movements to fuel narratives about the loss of identity, the threat of immigration, and globalization, which has popularized the term

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[10] We must acknowledge that issues with data availability hinder the testing of this hypothesis regarding income levels. Specifically, we lack a municipal-level variable that would enable us to use income ranges, so we are forced to rely on the average income of the municipality (as shown in Table 1). In any case, it is likely that municipalities with a large population of low-income individuals tend to have a low average income.

[11] As indicated in a recent paper by Jeannet (2024, p. 304), 'The literature has documented a rise of welfare chauvinism, whereby natives wish to restrict benefits to foreigners or ethnic minorities'.

'tourism-phobia' (Screti, 2021).

Hence, our spatial autoregressive model reads:

$$VOX_i = \alpha + \rho \sum_j w_{ij} VOX_j + \beta_1 wom_i + \beta_2 age_i + \beta_3 lit_i + \beta_4 pop_i +$$

$$\beta_5 den_i + \beta_6 ur_i + \beta_7 inc_i + \beta_8 forp_i + \beta_9 foremp_i + \beta_{10} pp_i +$$

$$\beta_{11} ind_i + \beta_{12} con_i + \beta_{13} tou_i + \varepsilon_i \qquad (2)$$

where $i(j)$ denotes the municipality.

As a final point, some comments regarding the interpretation of the estimated coefficients are mandatory, since the common practice in political science is wrong (Whitten et al., 2021). Unlike a standard non-spatial model, these point estimates cannot be interpreted as partial derivatives (in terms of marginal effects) since the presence of spatial dependence provokes that changes in an independent variable for a single municipality may affect the dependent variable in all others. To capture these potential feedback effects and get a good interpretation of the results, the average direct and indirect effects (being the total effect the sum of these two) have to be computed (LeSage and Pace, 2009). In a spatial autoregressive model, the so-called matrix of effect estimates $S_r(W)$, which provides the actual marginal effect of any host variable rth on, in this case, the VOX outcome, is $S_r(W) = (I_n - \rho W)^{-1}[I_n \beta_r]$, being ρ the spatial autoregressive coefficient (see Eq. 2), $(I_n - \rho W)^{-1}$ the so-called spatial multiplier effect, β_r the coefficient linked to the rth independent variable, and I_n the identity matrix.

In this context, the direct effect captures the impact of a change in the corresponding independent variable in a municipality i on the share of votes won by VOX in that municipality. The indirect effect measures the impact on the VOX result of any specific municipality caused by a change in the corresponding independent variable in the neighboring ones.

5. Results

5.1. Main results

Table 2 shows the point estimates of the proposed model under three alternative estimation methods, presenting the first column the 'standard' spatial autoregressive model estimates. As expected, we see the coefficient linked to the spatial lag of the dependent variable turns out to be positive and statistically significant, which confirms the existence of spatial dependence even after including in the equation additional explanatory factors. That is to say, hypothesis H1 is verified, so that space matters when it comes to understanding the outcome of radical right-wing political parties. Results when computing total, direct and indirect effects also reinforce the importance of the location of each territory and the linkages between them (see below). As indicated, this is the first paper conveying the message, as a straight interpretation of our findings, that this type of party can spread its message quickly, especially under certain circumstances such as those happened in Andalusia: namely, economic crisis, high immigration figures, backlash to the growing trend towards regionalism and independence, and so on. As Caiani and Padoan (2020) indicate, in order to spread the message, these new parties mobilize individuals, and to do so, 'frames' and cognitive schemes must generalize a given problem, showing its connections to individual life experiences. In VOX's case, the demand for the independence of Catalonia was in 2018 Regional Election the main breeding ground, since its leaders emphasize that, with the maladministration of the government, the rest of Spain is harmed. To this is added the problem of immigration, sold as a waste of resources that could be used for Spanish citizenship. In this context, VOX's political opinions have been disseminated through personal networks, and their reach exceeds that of municipalities. Territorial interdependencies become, hence, one of the primary driving forces behind the diffusion processes of political ideas.

As for the rest of independent variables, the coefficients associated with six of them are significantly different from zero. As can be seen, there is a positive relationship between the support for VOX in each municipality and a) the size of the population, b) the share of foreigners in its population, c) the level of income, and d) the percentage of votes won by PP in the previous election. On the contrary, there is an inverse relationship with e) the mean age and f) the proportion of contracts given to foreigners.

In the remaining columns of Table 2, we show the results obtained when we rely on estimation methods that are not likelihood-based. On the one hand, a Bayesian spatial autoregressive model based on Gibbs' sampling and, on the other hand, a generalized moments estimation of the spatial autoregressive model. As can be seen, the results are in line with the above findings, which demonstrates their reliability.

Hence, for simplicity reasons, we shall work only with the spatial autoregressive model. As indicated in the previous section, in order to assure proper interpretation we should no longer rely on point estimates. So, not to make this too common mistake (Whitten et al., 2021), we compute the direct, indirect and total effects (Table 3). As a general conclusion, anyway, we can state there are no important differences with Table 2 as for the statistically significant variables. Nevertheless, Table 3 gives us additional information. In all cases, the indirect effect (influence on VOX share of changes in the corresponding independent variables in neighboring municipalities) is almost as high as the direct one (provoked by changes in the same municipality), highlighting the importance of feedback effects and, obviously, increasing the total effect. As stated above, it reinforces H1.

Delving into these more accurate results on the VOX support, we can conclude, only paying attention now to the variables that are significant, several key points. First, it has been stronger the larger the size of the municipality in terms of population, which, at least from this point of view, rejects H2. In the case of Andalusia, unlike in many European countries, rural areas are not being particularly supporters of the radical right, just the opposite. One reason that could explain this result is that VOX does not attach great importance in its political message to the fight against an 'elite' seeking their own benefit rather than the wellbeing of ordinary people. Moreover, what is known as 'agrarian populism', which is present in other radical right parties, does not even play a residual role in VOX's manifesto. Combining both points, it is clear that the VOX's anti-elite discourse was at this time not focused on agrarianism. This movement is primarily opposed to what it perceives as the globalist and progressive elite, which, according to its leaders, promotes policies that harm regional interests. In short, the cause of the peasants is not a cornerstone of its political program.[12]

Another important finding, continuing with the second hypothesis, has to do with age. According to estimates, VOX outcome in Andalusia does, from this point of view, comply with H2. In other words, youth are more prone to right-wing populism than the adult population, which is in accord with a specific feature valid for any VOX meeting: the low average age of the attendees.[13] There are several potential explanations,

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[12] It is not even mentioned under any of the sections of the party's manifesto: Spain, unity and sovereignty; electoral law and transparency; immigration; defense, security and borders; economy and resources; health; education and culture; life and family; freedoms and justice; or Europe and international affairs.

[13] In line with the comments of the previous section, we sought to test the robustness of this result using the continuous census data from a different data source, specifically the National Institute of Statistics. This enabled us to construct two variables with age brackets: the first representing the proportion of individuals aged 20–34, and the second, the proportion of individuals over 65. The results were consistent with those presented in the text, with the coefficients being significant and positive for the first variable (youth), and negative for the second (maturity). Moreover, and perhaps more importantly, the change in the model specification did not affect the conclusions drawn regarding the other hypotheses. Therefore, the findings are insensitive to variations in the model setup.

Table 2

VOX results. Some explanatory factors.

Dependent variable: VOX$_i$	Spatial autoregressive model estimates		Bayesian Spatial autoregressive model		Generalized Moments estimation of spatial autoregressive model	
	Coeff.	t-student	Coeff.	t-student	Coeff.	t-student
α	−11.572*	−1.79	−11.594*	−1.77	−11.695*	−1.79
W * VOX$_j$	0.503***	139.44	0.496***	13.93	0.540***	8.47
wom$_i$	−0.059	−0.83	−0.058	−0.83	−0.052	−0.73
age$_i$	−0.099***	−3.72	−0.100***	−3.69	−0.095***	−3.44
lit$_i$	−0.019	−0.73	−0.019	−0.71	−0.019	−0.73
pop$_i$	0.263**	2.29	0.256**	2.20	0.267**	2.31
den$_i$	0.000	−1.45	0.000	−1.37	0.000	−1.55
ur$_i$	−0.005	−0.22	−0.005	−0.24	−0.004	−0.19
inc$_i$	1.692***	2.66	1.708***	2.63	1.630**	2.54
forp$_i$	0.087***	5.73	0.088***	5.51	0.085***	5.40
foremp$_i$	−0.023**	−2.15	−0.023**	−2.07	−0.024**	−2.19
pp$_i$	0.130***	10.62	0.131***	10.48	0.128***	9.87
ind$_i$	−0.011	−1.30	−0.012	−1.28	−0.011	−1.21
con$_i$	−0.018	−1.45	−0.018	−1.46	−0.019	−1.48
tou$_i$	0.000	−0.01	0.000	0.03	0.000	−0.04
R squared	0.41		0.41		0.55	

Notes: p values in parentheses:
* Significant at 10 %.
** Significant at 5 %;
*** Significant at 1 %;

Table 3

VOX results. Decomposition.

Dependent variable: VOX$_i$	Spatial autoregressive model estimates					
	Direct effects		Indirect effects		Total effects	
	Coeff.	t-student	Coeff.	t-student	Coeff.	t-student
wom$_i$	−0.060	−0.80	−0.054	−0.80	−0.115	−0.80
age$_i$	−0.105***	−3.80	−0.095***	−3.80	−0.200***	−3.80
lit$_i$	−0.019	−0.73	−0.018	−0.73	−0.037	−0.73
pop$_i$	0.276**	2.26	0.250**	2.26	0.525**	2.26
den$_i$	0.000	−1.47	0.000	−1.47	0.000	−1.47
ur$_i$	−0.005	−0.22	−0.005	−0.22	−0.010	−0.22
inc$_i$	1.787***	2.69	1.617***	2.69	3.405***	2.69
forp$_i$	0.092***	5.77	0.083***	5.74	0.176***	5.76
foremp$_i$	−0.024**	−2.09	−0.022**	−2.09	−0.047**	−2.09
pp$_i$	0.138***	10.67	0.125***	10.54	0.262***	10.63
ind$_i$	−0.012	−1.30	−0.011	−1.30	−0.023	−1.30
con$_i$	−0.019	−1.41	−0.017	−1.41	−0.036	−1.41
tou$_i$	0.000	−0.01	0.000	−0.01	0.000	−0.01

Notes: p values in parentheses: *Significant at 10 %. **Significant at 5 %; ***Significant at 1 %;

some of them related, in a sense, to our previous comments concerning turnout and the capacity of mobilizing citizens. Thus, the role played by social networks as a means of communication (Schaub and Morisi, 2020), more intense among youth, could be behind this result. In like manner, it can also be connected with the recent economic crisis and its aftermath, with unsatisfied voters increasing and turnout getting lower. In this setting, quite a few young voters, due mainly to the precariousness of the youth labor market, had not voted lately since they were quite disappointed not only with the traditional parties (PP and PSOE) but also with the alternatives (C's and Podemos (We Can)). There is a consensus among the experts that some of these voters, along with a significant portion of those voting for the first time, have recently given their support to VOX. Finally, we want to emphasize that the national feeling, very affected by the Transition (passage from the Franco dictatorship to democracy), has been revived by the independence crusade in Catalonia, especially among young people. Growing tensions between sub-state nationalisms and the state-wide nationalism represented by VOX could, hence, partially explain our results.

As for the economic premise (H3), income emerges as a crucial explanatory factor but, as opposed to H3 and the outcome of quite a few radical right populist parties in Europe, the richer the municipality, the higher the percentage of votes in favor of VOX.[14] This somewhat startling result, admits different interpretations. According to Eatwell and Goodwin (2018), one of the roots of far-right populism is the perception of deprivation, which seems to be greater among rich people; they become fearful about the future, which leads them to re-evaluate their views on issues such as immigration and identity. Besides, as a right-wing party, it was partially expected since there is a common belief that rich voters oppose leftist tax and transfer parties. This is linked to one of the VOX proposals: the creation of a single income tax rate, at 22 %, which would put an end to fiscal progressiveness. Only the part of the annual salaries above 60,000 euros would be taxed at 30 %, 15 % less than at present. No other party has ever dared to give that blow to the redistribution of income in the country, which on the other hand seems unsustainable and intimately linked to a clear populist discourse. It is true that this point was not one of the most discussed issues in VOX's

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[14] Our result contrasts with that obtained by Turnbull-Dugarte (2019), where income is not significant, but it is in line with Rama et al. (2021), who in studying the Spanish case state that 'VOX is the party of Spain's wealthy' (p. 142).

electoral campaign, but probably, according to our findings, it was considered one the most important for the stratum of the wealthiest voters.

Additionally, if the percentage of foreigners in a municipality is high, it seems that the share of votes won by the populist party increases, a result that is in sync with those of Iglesias-Pascual et al. (2021) but contrary to that found by Turnbull-Dugarte (2019).[15] Be that as it may, our finding is in harmony with one of the key points used in the VOX's campaign: the deportation of undocumented migrants and the control of migration flows from Africa. At the same time, there is an inverse link between the support for VOX and the proportion of new job contracts for foreigners. In summary, our findings support the nativism premise (H4). One plausible interpretation of this result is that whilst voters probably do not fear the effects of immigration on the labor market, they are not comfortable with the idea of the government providing them with unemployment and other social benefits.[16] This is in concordance with Rico et al. (2017), who claim that anger rather than fear arises as an emotional underpinning of populism. In the same vein, Otjes et al. (2018: 286) point to nativism and the fact that radical right-wing parties 'let foreigners pay for the crisis by cutting expenditures that would benefit these groups'.

As expected, the last hypothesis (H5) is satisfied. Hence, the share of the PP party in the previous election seems to be critical to understanding the results. So far, the PP had been nourished by the votes of different social strata from the center to the right, but not anymore. As in other European countries, there is a growing fragmentation of the party landscape, being VOX the core new character. As a rule, what seems to be happening in Andalusia is that there is a movement from left to right across the political spectrum, so that in municipalities in which the main conservative party (PP) already had a quite significant position a powerful new actor has appeared (VOX). Therefore, using the PP variable as a proxy for the municipality's ideology appears to have been appropriate.

But why the movement from PP to VOX? We believe a single word depicts the situation: dissatisfaction. Former PP voters could be disappointed for several reasons, including the attempts at independence from Catalonia. There are many links between these two regions, and now the debate about Catalonia is constantly appearing. VOX, in its populist discourse, has taken advantage of the distrust in the PP party and has set itself up as the only party that can 'solve the problem'. Let us not forget that distrust is often associated with a preference for radical right-wing parties (e.g. Hooghe et al., 2011). Another factor that causes the rejection of traditional parties is corruption, and the PP is continually plagued by problems of this nature. Besides, some former PP voters might think that the party, always in the opposition, has never achieved anything substantial, which, along with the fact that C's supported PSOE in the last process of government formation, made them think of VOX as the only alternative within the right-wing scene. Finally, another reason behind this apparent transfer of voters could be the hardening of the speech of Pablo Casado (leader of the PP) during the Andalusian election, which in many cases resembled VOX; in this context, some voters decided for the 'original'.[17]

As a final point, we want to stress that, unlike other papers such as Turnbull-Dugarte (2019) for the same case-study, we do not find any influence of the unemployment rate variable which, along with the result for income, invalidates the economic hypothesis (H3). Another

somewhat unexpected result has to do with the control variables representing the industry-mix, as its effect is, for all sectors, negligible. Finally, despite some postulates of the VOX campaign, and the fact that radical right-wing populist parties tend to be rather anti-feminist in their ideology, the share of women population does not turn out to be significant either (partially against the socio-demographic premise (H2)). This finding, perhaps because of the aggregated data used, is rather different to those obtained in several European countries, in which gender seems to have a notable effect on the rise of radical right-wing parties.

5.2. Explanatory power of each variable

This sub-section aims to move a step forward by providing a ranking measure of the importance of each explanatory factor to the goodness-of-fit of the model in probability terms. Which one is more important? What is the difference between them?

To do so, we employ the Monte Carlo Markov chain model composition (MC3) methodology for spatial models developed by LeSage and Parent (2007). This analysis, as indicated by Rios et al. (2017): 246) 'aims to compute the posterior inclusion probability (PIP) for the different variables in order to generate a probabilistic ranking of relevance for the various' VOX electoral outcome determinants. It involves specifying prior probabilities for each model as well as prior distributions for the regression parameters, the results, in our case, being really robust regardless of the prior assumptions. The algorithm works recursively, replacing a candidate model with a new one if the posterior probability goes up. If we start with an initial model M (the current state of the chain), a new model M′ is proposed using a neighborhood *NBD* (M), which consists of the model itself and a model containing one variable more than M (the so-called birth step), or one variable less than M (death step). The new model M′ is then compared with the current model state M using the acceptance probability: $P = \min\left[1, \frac{prob(M'|y)}{prob(M|y)}\right]$, being *y* the corresponding observation. Subsequently, we replace randomly variables in the vector of explanatory factors with variables not included currently in the model, which leaves the model proposal M′ with the same dimension as M. Finally, the PIPs are computed as the sum of probabilities of models including a given variable *k*, reflecting the probability that a particular regressor *j* will be included in the true model (for a detailed explanation see LeSage and Parent, 2007).

As can be seen in Table 4, all explanatory variables are ranked according to their importance regarding the marginal contribution to the goodness-of-fit of the model. Our analysis tilts the scales in favor of the variable capturing the share of votes won by the PP in the previous election (PIP equals 91.8 %). Consequently, to properly understand VOX results we must pay close attention to municipalities where the conservative position was already sizeable, although represented by the PP. The spatial lag of the VOX outcome variable and the percentage of the foreign population (PIPs slightly over 87 %) are in the second position in the ranking, very close to the first anyway. Therefore, a remarkable effect stems from the geographical situation of each municipality, as areas where radical-right sentiment is important are often concentrated in space; once again, the importance of the territory is demonstrated. Furthermore, immigration arises as likely the main socio-economic factor that has led to the rise of right-wing populism in Andalusia, which is to be expected for a political party that is building walls in its electoral program. Another quite determining factor turns out to be the mean age of each municipality (84.2 %).

At a distance, in what we could refer to as the moderate influence group, there are two variables: population (56.5 %) and the share of contracts to foreign population (52.2 %). As can be seen, this analysis establishes a clear difference between the factors mentioned in the previous paragraph and these two, which, in the standard regression, also emerged as significant factors behind the VOX outcome. No doubt,

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[15] For the case of Greece, evidence also supports the link between immigration and far-right vote (Artelaris and Mavrommatis, 2021).

[16] A recent paper written by Gutiérrez-Portilla et al. (2020) shows that, indeed, the effect of immigration – at country level, not only of the Andalusian region – on wages is almost negligible, which agrees well with the previous tentative explanation.

[17] Everybody remembers what happened in France with Le Pen and the Minister of the Interior Charles Pasqua.

they are also quite remarkable, but to a much lesser degree. The value of this analysis lies in its ability to distinguish the varying levels of influence across factors, providing a more detailed understanding of regional differences and the dynamics behind the rise of radical-right parties.

6. Are there important differences between municipalities? A GWR regression

We finish our study by analyzing the differences that surely exist in the effect of the key explanatory factors depending on the municipality, circumstance that is masked by an average coefficient (such as those shown above) or, put in another way, by fixed regression coefficients over space (spatial stationarity). This section follows the well-established tradition of research that attempts to uncover differences in electoral outcomes at different sub-levels, be it regional or, as in this case, municipal (see e.g. Vampa, 2020).

We have already indicated the importance of 'social contagion', and in this sense, although for different reasons, both the well-known socialization mechanism and the reference group approach assume that the social network will exert a greater influence if it is more homogeneous (e.g. Burt, 1987). Therefore, we believe the study of spatial differences in support for the radical right is, whatever the case study, fundamental if we are to have a comprehensive understanding of the electoral process. More precisely, once the main drivers of the radical right vote in Andalusia have been identified, it is relevant to figure out whether their distribution in space is homogeneous or whether, on the contrary, it is varied and, consequently, their impact depends on the territory. The reason is that, by doing it, additional conclusions can be drawn about how strongly the idea has taken root, how it has permeated the political message of the radical right.

From this perspective, given the ideology of these parties, in our view a homogeneous distribution of the driving factors in space is rather unlikely. We conjecture that, although due to the small size of our unit of analysis the determinants of the VOX vote will be very similar between nearby municipalities, they will be far from similar throughout the territory. The reason is that these parties tend to gather momentum only under certain specific conditions, and these are not the same across the territory. Accordingly, our sixth hypothesis reads as follows:

H6. (lack of territorial cohesion premise): Lack of ideological cohesion within the territory with regard to the factors that nurture the rise of the radical right.

Whether, on the other hand, we were wrong and the results were homogeneous in space, we should think that VOX's general message would have caught on regardless of the specific situation of the determining factors in each municipality (group of neighboring municipalities).

Checking H6 requires a change of approach: the geographically

Table 4
VOX Results. Ranking of explanatory factors.

Dependent variable: VOX_i	Spatial autoregressive model estimates *Posterior Inclusion Probability (PIP)*
pp_i	0.918
$W * VOX_j$	0.878
$forp_i$	0.873
age_i	0.846
inc_i	0.628
pop_i	0.564
$foremp_i$	0.522
den_i	0.212
lit_i	0.198
wom_i	0.158
con_i	0.141
tou_i	0.137
ur_i	0.127
ind_i	0.127

weighted regression (GWR) models. This technique accounts for spatial non-stationarity between dependent and independent variables. Here, we are focusing only on the six own factors that, according to previous findings, are instrumental when it comes to explaining the VOX outcome; i.e. the results of VOX in neighboring municipalities and the rest of explanatory variables included in Eq. (2) are set aside. Fig. 2 proves that the factors that moved voters to cast ballots for VOX varied significantly across municipalities, which confirms the presence of spatial non-stationarity in the model. In other words, place-specific links between the VOX electoral outcome and its potential determinants are found. Therefore, our last hypothesis is confirmed, in line with the literature that shows how local socio-economic trajectories can explain different levels of appeal and electoral success of populist parties and how certain political messages and frames come become prominent in certain spatially determined areas (e.g. Huckfeldt and Sprague, 1987; Cramer and Toff, 2017, McQuarrie, 2017; Fitzgerald, 2018; Olivas-Osuna et al., 2021).

Further elaborating on this outcome, it is also important to note that the relevance of each factor is, as we also conjectured, clearly polarized geographically (goes beyond municipal boundaries). This result reinforces the idea that, by and large, the VOX's message spreads among citizens who have similar traits (although in some areas they are characterized by being former PP voters, in others by their anti-immigration ideas, by being of the same age group, and so on).

Going deeper into the previous fact, we see that the share of PP votes in the previous election becomes a strong predictor of radical right-wing populist voting intention in the center-south of Andalusia, but this relationship is wholly irrelevant in other parts of the region, mainly in the east, as well as partly in the north (Fig. 2a). Regarding the percentage of the foreign population (Fig. 2b), in short, its influence is much stronger in the north than in the south. In contrast, the dissemination of the VOX message among young people stands out mainly in the south, but only marginally in the east, as well as in some parts of the center and west (Fig. 2c). Quite similar are the results concerning income variable, with the south featuring a strong effect and the east having a meagre one (Fig. 2d). Population (Fig. 2e) is especially relevant (irrelevant) in the center-south (east) and, finally, the share of contracts to foreigners (Fig. 2f) plays an important role in the center, from north to south, but a feeble one in western Andalusia.

Accordingly, Fig. 3 shows, tentatively, the areas in which Andalusia could be divided. We distinguish among five areas: a) East, with municipalities in which VOX outcome is primarily explained by some population-based factors such as population and the percentage of the foreigners; b) South, characterized by the effect of the share of PP votes in the previous election, age, income and foreign employment; c) West, in which the effect of the foreign population share clearly stands out; d) Center, with the PP share, income and foreign employment and, finally, e) North, featured by the influence of the 'immigrant factor' (percentage of foreign population and recruitment of immigrant workers). Therefore, our findings underpin the idea of spatial proximity as the best approach to define the system of territorial connections through which the diffusion of political ideas between individuals unfolds.

7. Conclusions

This work explores the main factors behind VOX's unexpected success in the November 2018 regional election in Andalusia. To do so, it poses a series of hypotheses that are tested by means of different econometric techniques which, as a novelty in this branch of knowledge, pay attention to the geographical location of the territory. More precisely, a spatial model at the municipal scale is specified and estimated.

In this line, our findings point to the influence of the interrelationship between units of analysis when trying to explain the increase in support for the radical right. Moreover, they signalize that previous support for right-wing parties (exemplified in this case by the share of votes won by the PP in the previous election) is also a quite important
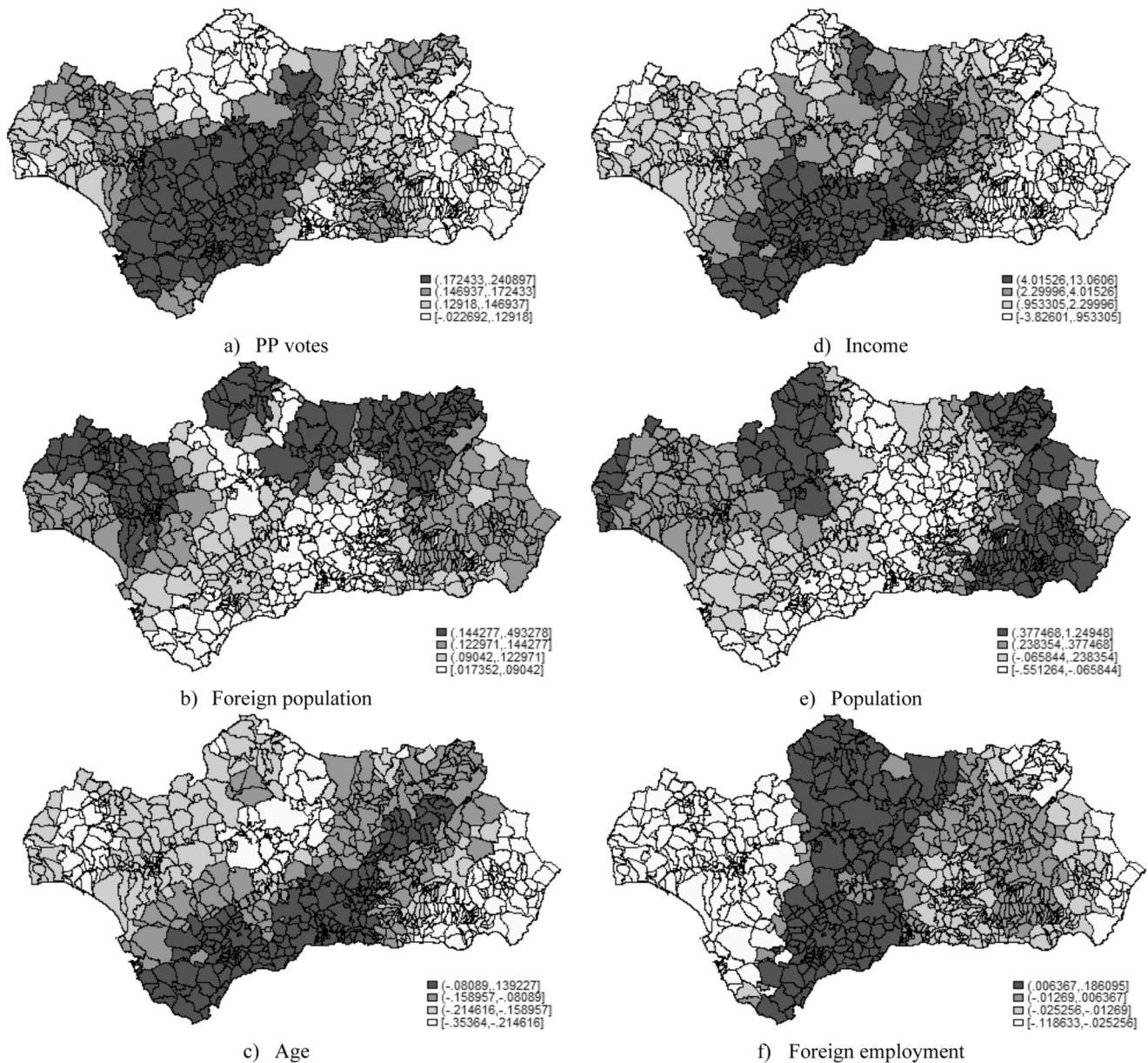
Fig. 2. Main explanatory factors. Differences among municipalities.

factor, endorsing our ideology hypothesis. In this context, there may be a lack of economic policies aimed at restoring confidence in democratic institutions, which could help prevent extremist voting as a response to what some might perceive as a lack of representation or fairness. This can be achieved through political system reforms that promote citizen participation in local economic decision-making and policy implementation, ensuring that the voices of diverse social groups are heard.

Additionally, it seems that immigration, in line with the nativism hypothesis, is emerging as one of the crucial roots of the radical right-wing populist movement. As a result, policies that favor the integration of immigrant communities would be highly relevant. From the point of view of the socio-demographic premise, our findings also suggest that young people are more prone to it than older people are. To address this, and to alleviate the economic and employment concerns of young people, economic policies could focus on creating youth employment and fostering youth entrepreneurship through microcredit, business skills training, and business start-up facilities. The size of each municipality, as captured by its population, also stands out as another factor favoring the VOX outcome. Finally, on the economic perspective, our results are

Fig. 3. Main explanatory factors. A summary of different areas.

opposite of the premise of poverty as a spur to radical right-wing vote, since the wealthier the population of the municipality, the higher the percentage of votes accrued by VOX is.

As for the spatial non-stationarity in the main explanatory factors, this paper shows that municipal differences are, indeed, startling. Based on our analysis, we mapped five geographical areas, each one featured by the influence of some of these factors. Hence, our findings do not depict a cohesive territory, which can be interpreted from different perspectives. On one hand, it could undermine VOX's future results by making it more difficult to design a specific message that 'leads to success'. On the other hand, and in line with Fiorentino et al. (2024) when referring to left behind places, it seems clear that different situations call from different responses to the rise of the radical right, 'making a one-size-fits-all approach impossible to enact' (Fiorentino et al. 2024: 270).

Given our findings, one is tempted to think ahead. Here, it is important to acknowledge that it is quite difficult to foresee whether the radical right-wing populist movement will become stronger or, on the contrary, slow down. There are many forces at play, some of them out of the sphere of the region of Andalusia, such as the Catalonian independence affair (which supports the identity discourse of ultraconservative parties, and Andalusia is one of the regions in Spain where the 'Spanish sentiment' is more entrenched), the growing importance of radical right parties around the world (so that Andalusian/Spanish people think, why not here too?), and several political corruption scandals involving the two traditional parties (PP and PSOE) at the national and regional sphere. Nevertheless, our findings regarding foreign population, which seemed to indicate that, as a rule, people voted for VOX as a response to the existence of a high portion of foreigners who did not work but received subsidies, make us foresee the maintenance of the right-wing populist movement because the COVID-19 crisis is affecting foreigners in particular. We have to admit, in any case, that this is highly speculative. In fact, the role played by age, with youth more prone to right-wing populism than the adult population, could curb the populist movement because of the ageing of the average population.

At any rate, it seems clear that the irruption of VOX in the Andalusian political scene (and it can also be applied to the Spanish one) could be a hard blow in terms of, at least, both democracy and governance. In terms of the quality of democracy, because several of the main ideas of VOX are against some of the basic democratic values. As for governance, we are referring to the fact that the capacity for political negotiation might be severely constrained. Recent experience, from both the Andalusian and Spanish parliaments, shows that VOX, in line with what has been happening in some other countries with this right-wing populist movement, is only willing to reach agreements when it can play an important role in the formation of coalition governments through which it gets some of its demands met. It goes without saying that if VOX were part of the resulting coalition government, its availability would be even greater. The recent COVID-19 crisis is another example, since VOX has proved to be an uncooperative party from the very beginning. In short, reaching agreements and avoiding confrontation is clearly not, to put it this way, second nature to radical right-wing populist parties, let alone to VOX. Not only this, but the irruption of this new party has also limited the PP's ability to deal with left-wing parties, as it now has to be careful not to lose votes from the right-wing electorate. This is undoubtedly going to have a significant effect on both Andalusian and Spanish politics in the future.

Finally, we would like to point out that new elections have been held in Andalusia (June, 2022), where the results of the radical right-wing party VOX have been similar to the previous ones. A future line of research in this paper could be the precise comparison of these results, for which, however, the model should be modified to include the results of VOX in the December 2018 elections, so that the comparison would not be straightforward. At any event, a priori and given that the changes in terms of the radical right have not been significant (both in percentage of votes and in their distribution by municipality), it is to be

expected that the determinants will continue to be basically the same. Therefore, in a future paper, and once the causes of the rise of the radical right movement have been analyzed in this article, what we will do is to move on to a complete study of the electoral results, considering different political parties and possible coalitions, and not just VOX. We believe this approach to be more pertinent once the radical right's move to the forefront of regional and national politics in Spain is considered, after the results of the Andalusian elections discussed here, to be a fact.

CRediT authorship contribution statement

Hierro Maria: Formal analysis, Data curation, Conceptualization. **Maza Adolfo:** Writing – review & editing, Writing – original draft, Software, Methodology, Investigation, Formal analysis, Data curation, Conceptualization.

Declaration of Competing Interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article

Data availability statement

Regarding data repository, the information is as follows: Authors: Maza, Hierro, Title: Datos right-wing populism in Andalucia (Spain), Publisher: Figshare, Identifier: https://figshare.com/articles/dataset/Datos_right-wing_populism_in_Andalucia_Spain_xlsx/12687722

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