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Unveiling the Real Madrid effect: the impact of football-related acrimony on elections

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Abstract

Contributing to the literature on so-called irrelevant events, this article aims to investigate the existence of a relation between football results and voters' behaviour. There are indeed reasons to believe that football-related acrimony could influence electoral behaviour. More precisely, does the rank of a rival team and the distance between it and local teams influence the behaviour of the electorate? Spain seems to be the perfect case for study of this relationship, since the presence of football teams representing both local (*comunidad*) and central authorities (the Spanish Crown) allows us to study the effect of an important cleavage: the centre-periphery. This means that sport disputes may be reflected in voting preferences for ethno-regionalist parties. Following this reasoning, the better Real Madrid (the team representing the Crown) performs, and the closer the local team is to it (and thus actually competing), the stronger local supporters' sense of acrimony and desire for payback will be. By means of a quantitative approach, using data on election results and Spanish *Liga* rankings, our analysis confirms the existence of a negative correlation between Real Madrid's ranking and distance from local teams, and the share of votes in ethno-regionalist parties.

Keywords Football · Politics · Localism · Ethno-regionalism · Elections · Irrelevant events · Political conflict

JEL code s: D72 · P48

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1 Introduction

It is a well-established finding that people's decision-making processes are affected by several behavioural factors, by individual-level idiosyncrasies, and also by cultural, physical and social features that characterize the places in which they live. This phenomenon has received much attention for many years in the social sciences and is of particular interest to economists concerned with how incentives can affect an individual's decision-making (Alfano and Capasso, 2020; Caruso et al., 2017; Alfano et al., 2023). Following Altman (2012), individuals can be described as “decision-makers driven by both passion and reason”. In this view, passion is thus an important piece of the decision-making process, and at the same time one that has often been overlooked in the scholarly literature, due in part to the intrinsic difficulties of studying it.

According to Moore (2019), sport provides an environment in which individuals experience a “strong variety of emotions” based on partisan interests rather than personal ones. The question is how these “artificial” emotions overlap with those experienced in real life. Accordingly, Huizinga (1955, p. 8) suggests that in general play is something removed from real life, able to generate “a temporary sphere of activity with a disposition all its own”, where individuals experience a kind of double consciousness between reality and make-believe.

Both the psychological and sociological literatures have attempted to investigate the rationale behind the emotions generated through sports. Adopting a Freudian approach, the contribution of Elias and Dunning (1986) suggests that sport is one of the possible transmission channels through which people in modern society may publicly exhibit strong emotions. But are these emotions able to affect other spaces in real life? On the one hand, it is possible to assume that sports emotions are specific to the ritual contest where they are formed, and are unable to transcend this space (Collins, 2004). On the other hand, it is also possible to assume that sports are able to generate emotional energy even in non-sports-specific environments (Alfano et al., 2023; Cottingham, 2012). The latter effect may be detected by looking at the process through which citizens select their representatives in elections. Indeed, in addition to the classical retrospective vote model, which is based mainly on the hypothesis of a punish-reward mechanism (Kramer, 1971), more recent contributions to the literature have underlined the possibility of various effects brought about by the electorate's mood, generated by emotional environments. On the basis of this mechanism, over the last few years a growing body of literature has emerged suggesting that seemingly irrelevant events can also affect citizens' political opinions.

Inspired by the relations between sport and emotions suggested by sociological literature (Elias & Dunning, 1986; Cottingham, 2012; Alfano et al., 2023), the present article aims to contribute to this emerging literature on irrelevant events (Healy et al., 2010; Busby et al., 2017; Achen and Bartler, 2002; 2012; 2018) by investigating whether the football “faith” can generate enough emotional energy to be able to influence public opinion, and thereby affect final electoral results through an “acrimony” effect.

Thus, with respect to previous contributions in the irrelevant events literature, the present article tries to highlight an original mechanism, and is potentially able

to shed some new light on explanations of individuals' decision-making processes, where such events may have some effect on political outcomes. Indeed, as pointed out by Graham et al. (2023), this strand of literature mainly suggests the traditional model of punish-reward effect, based this time on irrelevant events. The present contribution aims to clarify some aspects of the latent mechanism behind the punish-reward effect, which have been proved to be able to shape political outcomes on the basis of (apparently) irrelevant events. More specifically, overcoming what has been defined as the incumbency-oriented approach (Kramer, 1971), the main mechanism we assume to be in place is that acrimony generated in the sports context may shape voting behaviour. Hence, our main hypothesis is that people who support local teams may reflect disputes that have their origins in sport even in their voting preferences. In very general terms, it is then possible to formulate our main research question as follows: do the results in sporting competitions, triggering an acrimony effect, influence voting behaviour?

In the case of democratic countries, elections are recognized as a key moment for society, when each individual's decision-making process influences the path of future collective choices. Indeed, this is the moment in which a community of citizens chooses its own leadership, expressing preferences about who should rule them in representative institutions, and in this way delegating a very important share of power to a small group of political leaders. The literature suggests that voting power varies across different groups, and so do immaterial rewards for voting (Griffin & Newman, 2013). In this article we suggest that it could be interesting to look at the fragmentation of these groups not only according to the conventional cleavage lines (often already investigated by the scientific literature, e.g.: age, income and education, as highlighted by Orviska et al., 2005, as well as gender and ethnic differences), but also unconventional ones, such as the football "faith" of citizens and the acrimony that results from it.

After this introduction, the rest of the article is organised as follows. In the next section we briefly report the main literature to which the present article aims to contribute; Sect. 3 details the operationalization of the research question; in Sect. 4 the data and methodology used in the study are presented; Sect. 5 reports the main results of the econometric estimations and some further results; while the last section, as usual, concludes.

2 Background

Political scientists, as well as economists interested in public choice theory, have suggested that in representative democracies citizens tend to punish or reward incumbents on the basis of their evaluation of specific outcomes able to affect their well-being. More specifically, these findings underline the positive effect on re-election of good economic performance (Alesina et al., 1993) and reduction in crime rates (Cummins, 2009), and the negative effect of war intervention (Hibbs, 2000). This mechanism has also been defined as a retrospective voting model, defined by Kramer (1971) in terms of the electorate's response to economic concerns characterized as retrospective, incumbency-oriented and based on economic outcomes. On the other

hand, an important (and more recent) contribution to this debate is that of Achen and Bartels (2012), which highlights how retrospection can be partially blinded by the incapacity of citizens to distinguish between effects triggered by political choices and those triggered by chance. This suggestion has important implications regarding the intrinsic limitations of democratic accountability.

Following the incapacity of such voting models to fully explain the mechanism through which outcomes are transmitted to vote choices, Miller (2013) detects two possible alternative mechanisms: (i) the appraisal model and (ii) the prosperity model. The first is based on an explicit correlation between voting choice and outcomes (Key, 1966; Fiorina, 1981; Boyne et al., 2009), and tends to reward politicians on the basis of their good performance (or, in a specular way, to punish them for bad performances). The second model, meanwhile, is based on the mood of the electors, and according to Miller (2013) there is a tendency to vote for the incumbent when the electors feel happy. The reason behind this choice may be the incapacity of the voters to correctly evaluate complex political outcomes (Lau & Redlawsk, 1997; Boyne et al., 2009). Both explanations can be at work at once in some conditions, as for instance when a prosperous economic period is positively correlated both to good political performances and a general feeling of happiness among the electorate. At the same time it is important to underline that the two mechanisms are and have to be considered distinct, and hence can shed light on different parts of the voters' psychology, electoral predictions, and the set of incentives for candidates (Miller, 2013). More specifically, according to the psychological literature, mood is able to affect individuals' evaluations, increasing the preference for the status quo (Yen & Chuang, 2008), influencing the process through which electors can obtain information, favouring the memory of "mood-congruent events" (Schwarz & Clore, 1983), and/or dampening the desire to have new information about the competitors in the elections (Marcus et al., 2000).

Following the mechanism based on the prosperity model as described by Miller (2013), over the last few years a recent strand of literature has suggested that irrelevant events may have an impact on elections. This emerging literature has tried to add new interpretations to the classical models of voting behaviour, based mainly on the rational choice between different political platforms, judged on the basis of the expected results. As pointed out by Müller and Kneafsey (2023), the strand of literature based on the effect of irrelevant events on voting behaviour shows that sports events (Healy et al., 2010; Busby et al., 2017; Goerres et al., 2019), weather calamities and natural disasters (Achen & Bartels, 2017), and other apparently uncorrelated events like shark attacks (Achen & Bartels, 2002), or even lotteries (Bagues & Esteve-Volart, 2016), can play a role in individuals' choices.

The seminal contribution to this "irrelevant events literature" is probably that made by Healy et al. (2010), who studied the links between the US 2009 National Collegiate Athletic Association (NCAA) football tournament, which occurs in the fall, and American presidential elections. The authors found evidence that a win in the ten days before election day causes the incumbent candidate to receive an additional 1.61% points in the vote. According to the authors, this could be "evidence that decisions are influenced by irrelevant events that have nothing to do with the competence or effectiveness of incumbent government". They also examine the effects of

the NCAA basketball tournament, which occurs in the spring, although the outcome, in this case, is a change in presidential approval ratings. These findings seem to suggest that in spite of the argument that “sport and politics shouldn’t mix”, the two are actually inextricably entwined. Indeed, sport intrinsically involves conflict and competition, explicitly among participants, and implicitly among spectators insofar as they identify with one of the competing parties (Holmes, 1994).

Looking at natural disasters, Achen and Bartels (2017), analysing drought and floods in twenty-six presidential elections in the USA during the twentieth century, suggest that such calamities may be correlated with a punishment mechanism with respect to the incumbent candidate. The same authors found a similar punishment mechanism when looking at the effects of shark attacks that occurred in New Jersey in 1916 before the presidential elections. These events caused a growing panic around the beaches in New Jersey, with a consequent economic loss generated by the cancellation of many bookings. As a result, the authors found a negative effect on the vote for the incumbent President, Woodrow Wilson (Achen & Bartels, 2012; 2017). It is worth noting that natural disasters, as well as shark attacks, generate both emotional and financial stress. As suggested by Graham et al. (2023), the literature studying irrelevant events often adds some interpretation to the punish-reward mechanism rather than wholly confuting it. If we look at the contribution of Healy and Malhora (2010), which focuses on the effects of tornados, the authors find that voters are more influenced by economic damage than emotions triggered by deaths caused by the tornado.

In this perspective, as pointed out by Miller (2013), tragic and emotional events may be capable of nudging voters towards evaluating the perception of government response; for this reason, it can be difficult to distinguish between the existence of a mechanism based on the appraisal model rather than on the prosperity model. Accordingly, Miller (2013) suggests that sports outcomes alone can be considered a “clear proxy for average happiness disconnected from political causation” (p. 62).

It is important at the same time to highlight that some of these findings have been questioned. While has been highlighted that voters are affected by several biases (Huber et al., 2012), Fowler and Hall (2018) argue that some irrelevant events do not really matter for voting behaviour, contrarily to what has previously been suggested by the literature (Achen & Bartler, 2002 and 2012). A great effort in this direction has been made by Graham et al. (2023); their replication study, by means of an observational open science approach based on: (i) multiple simultaneous replications of separate studies, (ii) independent data collection, (iii) the extension of time series, (iv) pre-registration of analyses, and (v) a collaboration between authors with different incentives, found mixed evidence for the irrelevant events hypothesis. According to the authors, “the strength of the evidence for the electoral effects of irrelevant events is weaker than was originally reported”. Nevertheless, the same authors underline that their replication is not able to fully confirm or overcome the original findings of each study.

For this reason, we consider it very important to continue to investigate the latent mechanism through which voters tend to translate their evaluation, or their mood, into electoral choices. In this perspective, our paper contributes to the literature on irrelevant events by adding fresh interpretations to a possible transmission channel in

voting preferences, based on the effect of mood. This is not entirely new; with reference to sport, Busby et al. (2017), analysing college football results, have highlighted the existence of a mechanism that affects political outcomes through an impact on the mood of the agents. The logic of their article is that the game generates either a positive or a negative mood, which then spreads to (i.e. contaminates) unrelated status quo evaluations. In the present contribution, we propose to shed further light on the subject by adding another piece to the puzzle: the existence of an acrimony effect, which translates from football results into citizens' evaluations of politicians. This acrimony effect may be able to shape voting behaviour in a very peculiar way. Specifically, analysing the electoral results in Spain from 1993 to 2019, we assume that football results may contribute to explaining the success of localist, ethno-regionalist parties. The intuition behind this is that people supporting local teams may tend to reflect sport-based disputes in their voting preferences, and thus give more credit to these parties if at the country level there exists a dual configuration in sports disputes between a central team and local teams able to stoke partisan interests.

To the best of our knowledge, the so-called irrelevant events literature has mostly correlated the effect of such apparently unrelated events with either a change in turnout (e.g., increased turnout if the “home” team wins), or a change in vote share for the incumbent (e.g., more votes for the incumbent if the “home” team wins). Although we assume a different mechanism, we believe that the present research belongs to this literature. Nonetheless, at the same time we have to admit that our argument is more complex, and our hypothesis regards the impact of football-related acrimony on electoral behaviour, rather than the simple effect on turnout typically highlighted by this strand of the literature. More specifically, the present article aims to clarify the effect of “mood” in the opinion-formation process (Busby et al., 2017), investigating whether acrimony could be an effective transmission channel between irrelevant events and political outcomes. In other words: does the rivalry between a local team and the team embodying central power affect the decision to vote for an ethno-regionalist party? We believe that from a theoretical perspective this may in fact be the case, and that it is worth investigating this relationship in an empirical framework.

Furthermore, our study also tries to link to some extent the irrelevant events literature with the recent literature that connects football results to the national sense of identity and animosity (Di Domizio & Caruso, 2015; Caruso et al., 2017). These contributions highlight the centrality of behavioural factors and individual-level idiosyncrasy in how humans take their decisions. In this perspective individuals' mood, driven by emotions, is an important factor in explaining human behaviour (Altman, 2012). Caruso et al. (2017), following this reasoning, suggest that national identity may have an impact on the level of conflict among individuals belonging to different nationalities. This identity contributes to shaping behaviours, pushing individuals “to choose the actions that match the prescriptions of that social group” (Caruso et al., 2017, p. 514). Thus, for some groups, football represents more than a sports dispute, and for this reason it may interact with group identity. Adopting such a framework, and using the peculiarities of the Spanish case, which is characterized by strong regional identities, our paper contributes to this literature by integrating this view with a more localist perspective. More specifically, using football disputes as a setting in which group identity is at work, we try to detect whether this sense of localist

identity, affecting mood by means of the acrimony effect, is able to influence voting behaviour with regard to ethno-regionalist parties.

3 Research question and operationalization

In order to address our research question, this study relies on a quantitative analysis based on data from the principal Spanish football (i.e. soccer) championship (*la Liga*). The Spanish case is very peculiar and seems to be a perfect framework for the application of our analysis, for two principal reasons. On the one hand, Spain is a good case because of the importance of football as a sport in the country, and the existence in the *Liga* of several teams of international importance. Many of these are culturally very close to (or, more boldly, we could go so far as to state that they are one of the symbols of) certain Spanish regions. We might think, for example, of how representative the FC Barcelona team is of Catalonia, or Athletic Club Bilbao of the Basque Country; other examples might include Deportivo de la Coruña, or in more recent years RC Celta and its representativeness of Galicia. The relationship between the citizens of the *comunidad* and their teams is usually very strong. As anecdotal evidence that is symptomatic of this relationship, we might consider the attention paid by Spanish newspapers to the region of provenance of Real Madrid players; the criticism directed at Gerard Piqué, a Catalan-born player, for playing in the national football as a representative of Spain;¹ or the Catalan national representative, a special team which each year plays a match over the Christmas season, and which in time has increasingly become a political event, rather than a merely sporting one. All these examples indicate how football in Spain is not “just a sport”, but represents an important piece of shared culture and personal identity. Moreover, political content is often explicit and widespread in Spanish stadiums. Take for instance the cheer for “*Independencia*” at the seventeenth minute of each match played by FC Barcelona at Camp Nou, as well the banner shown during the same team’s Champions League matches with the message “Welcome to the Catalan Republic”.

On the other hand, while such localism in the most popular national sport is common all over the world, Spain has a characteristic that is unique. Unlike other countries in which this regional effect is present, Spain has a football team, namely Real Madrid, which represents Spain as a nation, the unity of the country, its central power and centralist attitude, and which is furthermore also linked explicitly to the Spanish Crown. In Spain the word *Real* (which means “royal” in Spanish) cannot be used in the name of a legal entity without the explicit permission of the Crown; as in many monarchies, the word *Real* can only be used with the consent of the Royal House, which may allow some organizations and associations to use it. While Real Madrid is not the only football team allowed to use the word, it has enjoyed the right since 1920, when it was renamed by King Alfonso XIII.² Most notably, it is the only

¹ <https://www.marca.com/en/football/spanish-football/2017/10/04/59d4c625468aebd85a8b466a.html> (accessed on 20/7/2019).

² On 29 June, 1920, *Madrid Club de Football* was renamed *Real Madrid Club de Football*, following a communication from the Head of the Royal House, signed by King Alfonso XIII. <https://www.defensacn->

team that does not lose its “royal” connotation in everyday speech. Several clubs are entitled to use the word *Real* in their name, such as Real Club Deportivo Espanyol, though in everyday speech it is usually referred to only as Espanyol. The same happens for Real Club Celta de Vigo, commonly known as Celta de Vigo, or Real Club Deportivo Mallorca, commonly known as Mallorca. Real Madrid, on the other hand, is always Real, and when referred to in shorthand loses the name of the city, rather than the reference to royalty. The team, incidentally, was also the favourite of Francisco Franco, the long-ruling Spanish dictator, who expressed his interest in it several times, a fact that suggests once again the strong connection between football and politics.

Based on the peculiar characteristics of the Spanish case, we believe that it is possible to better formulate our research question by applying it to this specific case, asking: does the ranking in the league table of Real Madrid, and the distance between each regional Spanish football team from Real Madrid, i.e. the football team that represents Spain as a united nation, contribute to explaining the support for local parties in political elections? Or, in simpler terms: *Do voters who support teams competing with Real Madrid in the Liga, or who are exhausted by the predominance of Real Madrid in the league ranking, transform their acrimony towards the team that reifies the Spanish Crown and unity into an increased support for ethno-regionalist parties?*

More specifically, by means of a quantitative analysis based on Fractional Probit (FP) estimators, the research hypotheses that will be empirically tested are the following: *the better the position* (i.e. the lower the number in the ranking³) *of Real Madrid* (once again, the team representing the Crown), *the weaker the sense of acrimony and desire for payback from local supporters will be* (since they are not enraged by the domination of the league by the Centre); *the smaller the distance in ranking between Real Madrid and the local team, the greater the acrimony and desire for payback will be* (since the greater the distance in ranking is, the more it means that the local team is not really competing with Real Madrid, and thus it makes sense to expect that competition and comparison between the teams become senseless). *Do these feelings translate into a different degree of support for the respective ethno-regionalist parties?*

Please note that beyond the direct effect that football results have on supporters, this feeling of acrimony may be spread very easily throughout the whole local community. There is indeed anecdotal evidence that may support the argument that some people (belonging to a community in which football is part of the prevalent culture), even if they do not directly support a football team, are influenced nonetheless by the same feeling of animosity towards the rival team that can be felt around them. Indeed, in general, living in a community soaked in a feeling of hatred towards a given reality (reified in this case by a football team) is likely to have consequences even for people who are not directly interested in the specific source of this widespread acrimony (in our case, football). Furthermore, it should be kept in mind that social rewards have been proven to impact electoral turnout considerably more than other variables (even

[tral.com/madridismo/99833-1920-alfonso-xiii-hace-real-al-madrid](https://www.elcomercio.com/madridismo/99833-1920-alfonso-xiii-hace-real-al-madrid) (accessed on 9/7/2019).

³ Please note that the higher the position is, the worse a team is performing (since the best team is that ranked first, followed by the second, and so on).

more important than the effect of being in a “battleground” state, as highlighted by Doherty et al., 2017).

4 Data and methodology

It is important to underline that, ideally, to answer our research question one would rely on micro-level survey data gathered over time from supporters, to investigate the relationship between supporting a specific team and making given electoral choices over the years, looking at the *Liga* rankings before elections. Unfortunately, to the very best of our knowledge, these data are not available, and thus such an approach, in the spirit of the work of Müller and Kneafsey (2023), is impossible to implement in our case. Hence, we have had to rely on a different approach, gathering data from several different sources, and using regression analysis in a macro-level approach – the limits of this will be discussed later on – in order to test the solidity of our findings from an empirical perspective. This section will explain our empirical strategy, and is divided into two parts: the first subsection will present the methodology used and the equation chosen to model the phenomenon and thus to be estimated in the empirics, while the second subsection will deal with the data used, and present the relevant sources of information.

4.1 Methodology

As already highlighted, the principal objective of this research is to test whether or not the *Liga* ranking (both in absolute terms, as regards the position, considered as a number, of Real Madrid, and in relative terms, as regards its distance from the various local teams) has an effect on electoral behaviour. In this regard, we should look for the possible effect of the football ranking on voters’ behaviour. We model the effect of the *Liga* on election outcomes as follows:

$$share_{it} = \alpha + \beta_1 X_{1it} + \beta_2 X_{2t} + \beta_3 X_3 + \beta_4 Liga_{it} + \varepsilon \quad (1)$$

where *share* is the share of votes obtained by the localist party in (its own) region *i*, in the year *t* (this variable, as will be clarified later on, has been operationalized in three different ways, to prevent turnout from affecting the results: votes for the localist party as a share of the total votes cast, as a share of the total valid votes cast, and as a share of the whole electorate); *X1* is a matrix of control variables referred to the region *i* and the year *t* (more specifically, these variables are: the logarithm of the gross domestic product per capita of the region, labelled *Regional GDP*; a proxy of the education of the region, labelled *Education*; and the ratio between the masculine and feminine population, labelled *Sh.of Males*); *X2* is a matrix of control variables referred to the whole of Spain in a given year *t* (this matrix is composed of variables controlling for the political framework, with *Aft.Centre-Left*, controlling for the orientation of the incumbent government, and *DEE*, controlling for European elections, as dummies; apart from temporary and cyclical effects, which have the set of yearly dummies *Dummy Years*); *X3* is the size of the stadium, labelled *Stadium*, expressed in

thousands of seats, and thus a proxy of the size of the community of supporters of the team,⁴ which varies, even for different teams belonging to the same region i : in this regard, note that stadium size has been proven to affect the numbers of people watching professional football (Ferreira & Bravo, 2007), which constitute the basis of the supporter community, and which TV broadcast correlates with stadium attendance (Buraimo, 2008), and hence the availability of new technologies to watch football should not affect the mechanism we have assumed; *Liga* is a measure of the possible impact of the *Liga* ranking on the dependent variable, operationalized alternatively as the position in ranking, treated as a number, of Real Madrid in the year t , or as the distance in the ranking between Real Madrid and the local team of region i : both these values are taken in the last ranking available before the first day of elections (this choice is performed in order to use the same sets of information available to the voter; we will explain this in more detail below). Finally, ϵ is as usual the error term.

Through this equation, we aim to model the effect of the independent variables on the right-hand side of the equation on the share of votes taken by the different ethno-regionalist parties on the left-hand side. As per our hypotheses we expect $share_{it}$, i.e. the share of votes given to the ethno-regionalist party in the community it represents, to shrink both when Real Madrid is performing worse, and when the local team is further from Real Madrid (restricting the sample to teams that are not above Real Madrid in the ranking). Indeed, the worse the position of Real Madrid in the ranking (again: considered as a number, which means that the greater the variable expressing its position is the worse its position is), the lower the feeling of acrimony towards the team should be (since it is not performing as well as usual, and thus supporters' typical sense of acrimony towards them is feeblers). At the same time, the greater the distance between Real Madrid and the football team the community of voters support, the lower the acrimony towards the team should be, since the greater the distance in points, the less the home team can still be considered to be truly in competition with the team reifying the Spanish crown and the central power. If the local team is very far in the ranking from Real Madrid, the sense of acrimony towards it should be lower, given the lack of direct competition. In other words, we are suggesting that the greater the distance in ranking is, the less the teams can be considered to be in competition with each other, and that thus the level of indifference should increase, while animosity should decrease. For these reasons we expect β_4 to have a negative value for both the specifications of our *Liga* variable. Indeed, the greater the variable is (whatever the absolute position of Real Madrid in the ranking, or the relative distance from the local team), the lower the acrimony towards the Centre should be, along with support for ethno-regionalist parties.

In order to control for the variance of the different levels of wealth in the various Spanish regions, we consider it very important to control for the relative levels of wealth of each region. For this reason, in the equation we include the logarithm of GDP per capita of each region, labelled *Regional GDP*. This variable should also

⁴ Please note that in Spain, unlike in other countries, the vast majority of teams own their own stadiums, and thus these are not public goods. For this reason, it seems appropriate that the size of the stadium should be related to the size of the community of supporters, and this is thus a good operationalization of the variable.

capture some other sources of support for localist parties, because of economic backwardness or other GDP-related effects on the support for an ethno-regionalist party. This should thus also clean β_4 , our coefficient of main interest, from a possible source of noise. Even if it is very important to control for this variable, it is difficult to predict the sign of the coefficient, since two different mechanisms could be at work: on the one hand, the poorer a region is, the easier it is for an ethno-regionalist party to gather votes, since its electors feel “abandoned” by the centre; on the other hand, very rich regions have often experienced a political rhetoric of independence, since their citizens “get damaged by the equalization with poorer regions” (Saey et al., 1998). Thus, at this stage, we cannot offer any specific prediction about how the sign of this variable should be.

As explained previously, we expect the effect on the share of votes to local parties to be due to an influence on the behaviour of the supporters, or in any case of the local community. Given that football is possibly a sport more popular among men than women, one could argue that this effect could be stronger in regions with a male population that is bigger than the female one. In order to control for this potential source of bias, we included in our set of controls *Sh. of Males*, a variable measuring the ratio of masculine and feminine populations within a region, divided by ten in order to have ranges of values that are more similar among the different variables. Once again, it is hard to predict at this stage the expected sign of the coefficient of this variable, since it is hard to make an argument about the support for the different ethno-regionalist party due to the fact that there are more or fewer men than women in a given region. Nonetheless, it is important to control for this ratio, since the more males there are, the more male voters are likely to go to the polls, and thus, assuming that football is more popular among men than among women, an effect on the votes due to the *Liga* may be found.

There is no specific reason to believe that this mechanism impacting the share of votes should work differently in different years, or when the incumbent government is a left-wing one, or when campaigns are being run for European elections (rather than national ones). Nevertheless, it is important to control for these characteristics, in order to avoid capturing a different effect due to a temporary, cyclic or (politically) strategic nature. We thus include and control for these dummies in the model, even if we do not have a prediction for the sign of these coefficients.

In the empirical estimation of the equation, given that our dependent variable is always a (differently operationalized) share of votes, and thus by construction is bordered between 0 and 1, we considered as the natural candidate estimator the fractional outcome probit (Papke & Wooldridge, 1996, 2008). The fractional response estimators fit models on continuous zero to one data, using probit regression. These models are often used in the literature to estimate outcomes such as rates, proportions, and fractional data. It also seems to fit our case very well, since the dependent variable is a share of an unknown denominator, and is expressed as a 0–1 bordered variable.

Please note that in both these regression series it is possible to have more than one observation for each region per year, if in the given year more than one team in the *Liga* is from a region with an ethno-regionalist party competing in the elections. A summary of the teams included in the analysis is presented in Table 1, and a summary of the teams per *comunidad* included each year is given in Table 1bis.

Table 1 Teams included in the analysis

Teams	Years											Total
	1993	1994	1996	1999	2000	2004	2008	2011	2015	2016	2019	
Alaves	0	0	0	0	1	0	0	0	0	0	1	2
Athletic Club Bilbao	1	0	1	0	1	1	1	1	1	1	1	9
FC Barcelona	1	1	1	1	1	1	1	1	1	1	1	11
Celta de Vigo	1	0	1	1	1	1	0	0	1	1	1	8
Deportivo la Coruña	1	0	1	1	1	1	1	0	1	1	0	8
Eibar	0	0	0	0	0	0	0	0	1	1	1	3
Espanyol	1	0	1	1	1	1	1	1	1	1	1	10
Girona	0	0	0	0	0	0	0	0	0	0	1	1
Huesca	0	0	0	0	0	0	0	0	0	0	1	1
Las Palmas	0	0	0	0	0	0	0	0	1	1	0	2
Lleida Esportiu	0	1	0	0	0	0	0	0	0	0	0	1
Real Zaragoza	0	0	0	0	0	0	0	1	0	0	0	1
Real Sociedad	1	0	1	0	1	1	0	1	1	1	1	8
Racing Santander	0	0	0	0	0	0	1	0	0	0	0	1
SD Compostela	0	0	1	0	0	0	0	0	0	0	0	1
Sporting Gijon	0	0	0	0	0	0	0	1	0	0	0	1
Tenerife	1	0	1	0	0	0	0	0	0	0	0	2
Total	7	2	8	4	7	6	5	6	8	8	9	70

Table 1 bis – *Comunidad* included in the analysis per year

Comunidad	Years											Total
	1993	1994	1996	1999	2000	2004	2008	2011	2015	2016	2019	
Aragón	0	0	0	0	0	0	0	1	0	0	1	2
Canarias	1	0	1	0	0	0	0	0	1	1	0	4
Cataluña	2	2	2	2	2	2	2	2	2	2	3	23
Galicia	2	0	3	2	2	2	1	0	2	2	1	17
País Vasco	2	0	2	0	3	2	2	2	3	3	4	23
Principado de Asturias	0	0	0	0	0	0	0	1	0	0	0	1
Total	7	2	8	4	7	6	5	6	8	8	9	70

4.2 Data

Looking more specifically at the different operationalizations of our variable, our dependent variable is *Share*, which represents the support of regional voters for local autonomy. It is operationalized from data from the European Union-NUTS-Level Election Dataset (EU-NED) (Schraff et al., 2022), a recently proposed dataset on subnational election data. It covers both national parliamentary and European parliament elections, for all the European countries, over the past 30 years. The EU-NED's major contribution is probably that it provides election results on disaggregated levels of the statistical territorial units used by Eurostat with unprecedented consistency and temporal or spatial scope. We gathered data about all the national and European elections held in Spain in the time span analysed (e.g. 1993–2019), even though an ethno-regionalist party from a region including a team playing in the *Liga* that year did not compete in all these elections (and therefore it was not includable in the analysis). In other words, all the elections for which it was possible to have at least one team from a NUTS-2 region in which an ethno-regionalist party ran in the elections were included.

For these elections, we operationalized *Share* in three different ways: as the share of votes for the ethno-regionalist party over the total votes cast; as the share over the total valid votes cast; and as the share over the whole electorate. In this way, we aimed to control for potential biases that over such a long time span (our analysis includes a total of 36 years' worth of elections) may affect the analysis through a change in voting behaviour and average turnout; we also aimed to prevent various possible dynamics of abstention (whether strategic or not), as well as other characteristics that may affect turnout, from affecting our results. Please also note that while the first democratic election in Spain was held in 1977, we chose to limit the analysis to elections after 1993, since we needed to have local-level data to complete the matrix of control variables, and such data are unfortunately not available at such a detailed (e.g. regional) level before 1993.

In the present study, we equated localist parties with ethno-regionalist parties, following the Manifesto Project (Volkens et al. 2010; Lehmann et al., 2022). The Manifesto Project analyses parties' election manifestos, in order to study the parties' policy preferences. To that end, it studies the programmatic supply of parties, the relationship between parties and voters, the role of parties in parliament, and the translation of party programmes into policy output. Among the various data included for each party, it also presents a variable coding the political family to which the party belongs, labelled *parfam*. In the present article, therefore, we considered as ethno-regionalist localist parties all those for which the *parfam* variable in the Manifesto Project is coded as 90, which stands in the codebook for ethno-regionalist. This includes 29 parties, specifically listed in the dataset as: Andalusian Party, Aragonese Party, Aragonese Regionalist Party, Aragonist Council, Basque Country Unite, Basque Left, Basque Nationalist Party, Basque Solidarity, Canarian Coalition, Canarian Coalition and Canarian National party, Canarian Coalition–New Canaries, Catalan Republican Left, Commitment-We can-It is time, Convergence and Union, Democracy and Freedom, Democratic Convergence of Catalonia, Forum Asturias, Future Yes, Galician Nationalist Bloc, In Common We Can, In Tide, More Commitment, Navarrese

People's Union, Popular Unity Candidacy, Regionalist Party of Cantabria, Teruel exists, Together for Catalonia, United We Can, and Valencian style.

All the votes for these parties, obtained in the regions they stand for, in each of the elections included in the analysis (i.e. in all the national elections for the Parliament in 1993, 1996, 2000, 2004, 2008, 2011, 2015, 2016, and 2019, and in the European Parliament elections in 1994, 1999, 2004, 2009, 2014, and 2019), are gathered to operationalize electoral support for ethno-regionalist attitudes in the community.

To test the effects of the competitive sentiment against the centre due to football-related acrimony, we measure both the position of Real Madrid in that instant in time before the elections, and also how far the local teams are in terms of ranking below the team representing the central power, i.e. once again Real Madrid. With regard to this last variable, please note that, as explained previously, in the regression we only consider the teams below Real Madrid at the last ranking available before the first day of elections. We exclude all the teams that rank above Real Madrid from our analysis on relative distance, since being ahead of a team clearly implies a different dynamic of rivalry from being behind, and thus the orthogonality condition of the variable needed in order to interpret the regressions in a meaningful way cannot be assumed. This means, once again, that for certain years some teams are excluded from the analysis (indeed, as shown in the graph in Fig. 1, Real Madrid is not always the first team in the ranking at the moment of the elections). Unfortunately, while theoretically a different regression may estimate the effect on votes of being ahead of Real Madrid, the set of teams above it consists of only twenty-two teams in twelve years, and furthermore only five of them have a relative ethnic-regionalist party competing



Fig. 1 Real Madrid rank at the time of the analysis over the years

in the elections in the year they were above Real Madrid in the ranking. This means that there are not enough observations to perform a meaningful statistical analysis on this subset, and we should thus use only the teams below Real Madrid in the *Liga* ranking. Please also note that there is no hindsight effect, and the information used in our analysis is the same that the voter had before casting his or her preference in the ballot.

As previously specified, other than the absolute value of Real Madrid in the *Liga*, we also consider the relative distance between Real Madrid and the local teams. This is operationalized as a simple computation of the distance in ranks, calculated with a subtraction of the rank of Real Madrid at the given instant from the rank of the team in question in the same moment. Please note that this operation always leads to a positive result, since, as explained, the only teams we considered in these regressions are those behind Real Madrid in the ranking (as specified, this is due in principle to the fact that one should not feel acrimonious in the same way towards someone who is ahead or behind her or him; indeed, it seems reasonable to assume that the two cases would follow two very different dynamics). Both these measures of the football situation are (alternatively) employed in the regressions as independent variables.

Other variables used as controls in the regressions are: *Reg. GDP*, the natural logarithm of the GDP per capita of the region, which is included, as explained previously, as a control of a potentially different source of acrimony felt toward the centre due to relative poverty or economic backwardness;⁵ *Sh. of Males*, the ratio of the masculine and feminine populations for each region divided by ten, included as a control of the potential presence of more football supporters in one region (as explained above, it is possible that men are more interested in football than women, and thus in regions with a higher male to female ratio the effect could be stronger); *Education*, the ratio of youngsters that passed exams to go to university over the total that tried;⁶ *Stadium*, the size of the local team's football stadium expressed in thousands of seats, as a proxy of the popularity of the team and thus of the size of the supporter community (data on stadium capability in seats is taken from Wikipedia); *Aft. Centre-Left*, a dichotomous variable equal to one if the incumbent government in the national elections was a centre-left government, to control for a potential ideological effect: the importance of this variable is due also to the fact that Real Madrid was Franco's favourite team, and has a history of being the team of choice for the conservative part of the country (please note that in our data this variable is equal to one for the following years: 1993, 1994, 1996, 2004, 2008, and 2011); *DEE*, a dichotomous dummy variable equal to one if the share of votes refers to a European election, in order to control for potentially different effects in national and European elections; and a series of yearly dummies, dichotomous variables equal to one for a given year and to zero for any other, to control for possible yearly or cyclic effects, apart from all the specific political effects impacting on the election in each given year.

⁵ GDP per capita is taken from *Datos Macros*, a Spanish dataset of economic metrics available at <https://datosmacro.expansion.com/pib/espana-comunidades-autonomas>.

⁶ The ratio of students that passed the exams is taken from *Anuario estadístico. Las cifras de la educación en España*, available at <https://www.educacionyfp.gob.es/servicios-al-ciudadano/estadisticas/indicadores-publicaciones-sintesis/cifras-educacion-espana.html>.

Descriptive statistics for all the included variables are available in Table 2, for the sample composed of all the teams behind Real Madrid over several years. Please note in this respect that our regressions include 60 and 70 different observations respectively, since, for the years included in the analysis, there are a total of 70 teams belonging to regions that have an ethno-regionalist party, of which 60 were behind Real Madrid in the *Liga* ranking on the last day before the elections.

Table 2 Descriptive statistics

<i>Variable</i>	<i>Label</i>	<i>Obs</i>	<i>Mean</i>	<i>Std. dev.</i>	<i>Min</i>	<i>Max</i>
Share of votes cast in favour of ethno-regionalist parties over the total of valid votes	Sh. of Val.Votes	70	0.2876848	0.1424607	0	0.5661502
Share of votes cast in favour of ethno-regionalist parties over the total votes	Sh. of Tot.Votes	70	0.2849219	0.1413761	0	0.5623661
Share of votes cast in favour of ethno-regionalist parties over the total electorate	Sh. of Tot. Electorate	70	0.1904088	0.096488	0	0.3804825
Position of Real Madrid in the <i>Liga</i> ranking before the election	Rank	70	2.514286	1.548659	1	6
Distance of the local team from the Real Madrid in the <i>Liga</i> ranking	Dist	60	7.33333	5.226616	0	19
Dichotomous dummy variable equal to 1 if the incumbent government is centre-left	Aft.Centre-Left	70	0.4857143	0.5034046	0	1
Dichotomous dummy variable equal to 1 if the election is a European one	DEE	70	0.0857143	0.281963	0	1
Natural Logarithm of the regional GDP per capita	Reg.GDP	70	9.892417	0.4259374	8.909369	10.43828
Male regional population over female regional population, divided by ten	Sh.of Males	70	9.5324	0.191212	9.225	9.932
Share of prospective students that manage to pass the test to access university	Education	70	46.27714	11.32039	26	67.1
Thousands of places in the local stadium	Stadium	70	43.23214	26.93322	7.083	99.354

5 Results

Results of the regressions are presented in Table 3 for the analysis related to the absolute rank of Real Madrid, and in Table 4 for the relative distance from the local teams, as the main explanatory variables, for each of the three alternative measures of the share of votes as dependent variables.

These results provide some interesting findings. First of all, please note that in all of the six different specifications of the model the main variable of interest, in both its operationalizations (i.e. the absolute value of the Real Madrid position in the *Liga* and the distance from Real Madrid of the local teams) is statistically significant at the 5% level, a notable result given the small size of the sample, and the coefficient has a negative sign, as expected. This suggests that when Real Madrid is performing worse in the *Liga*'s last ranking before the election, and when it is very distant in terms of ranking from the local teams, there is lower support of the local electorates for ethno-regionalist localist parties. These findings, which it should be reiterated are to be considered especially interesting in terms of statistical validity given the small size of the sample, may indeed be explained via the mechanism we have suggested: the worse Real Madrid is performing in the *Liga*, or the further the local team is from Real Madrid in the ranking, the smaller the sense of acrimony and rivalry towards the Centre will be, since either the reification of the Centre (i.e. Real Madrid) is not performing as well as usual in the *Liga* (and thus, in our first set of regressions, the *Rank RealMadrid* variable has a higher value), or the local team is no longer really in competition with Real Madrid (and thus, in our second set of regressions, the *Dist*

Table 3 –Fractional Probit estimation – Share of votes over RM rank

	(3.1)	(3.2)	(3.3)
	Sh.of Val. Votes	Sh.of Tot. Votes	Sh.of Tot.Electorate
Rank Real Madrid	-0.407** (-2.27)	-0.406** (-2.28)	-0.312** (-2.23)
Aft.Centre-Left	1.543*** (5.75)	1.542*** (5.77)	1.539*** (6.81)
DEE	1.136*** (4.21)	1.128*** (4.19)	0.977*** (3.70)
Reg.GDP	2.463*** (8.06)	2.472*** (8.14)	2.210*** (8.34)
Sh.of Males	-0.676** (-2.08)	-0.691** (-2.14)	-0.604** (-2.17)
Education	-0.0138** (-2.21)	-0.0145** (-2.34)	-0.0133*** (-2.67)
Stadium	0.00152 (1.01)	0.00153 (1.02)	0.00131 (1.10)
Time Fixed Effects	YES	YES	YES
Constant	-17.62*** (-6.18)	-17.54*** (-6.19)	-16.33*** (-6.55)
Observations	60	60	60
Log likelihood	-33.63	-33.48	-27.61
Chi 2	171.7	186.4	216.8

t statistics in parentheses

p*<0.1, *p*<0.05, ****p*<0.01

Table 4 Fractional Probit estimation – Share of votes over distance

	(1)	(2)	(3)
	Sh.of Val.Votes	Sh.of Tot.Votes	Sh.of Tot. Electorate
Distance	-0.0145** (-2.17)	-0.0141** (-2.12)	-0.0119** (-2.09)
Aft. Centre-Left	2.380*** (7.97)	2.374*** (7.99)	2.177*** (8.48)
DEE	1.393*** (5.60)	1.386*** (5.58)	1.138*** (5.06)
Reg. GDP	2.424*** (9.52)	2.428*** (9.59)	2.174*** (9.96)
Sh.of Males	-0.622** (-2.12)	-0.635** (-2.17)	-0.566** (-2.27)
Educ-ation	-0.0142*** (-2.88)	-0.0148*** (-3.01)	-0.0137*** (-3.49)
Stadium	-0.00127 (-0.87)	-0.00124 (-0.85)	-0.00106 (-0.88)
Time Fixed Effects	YES	YES	YES
Constant	-18.77*** (-7.53)	-18.67*** (-7.53)	-17.10*** (-7.81)
Observations	70	70	70
Log likelihood	-39.61	-39.46	-32.59
Chi 2	177.3	177.3	171.4

t statistics in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

variable has a higher value); in both cases this is correlated with lower electoral support for the ethno-regionalist parties that support local interests in the elections.

Looking at the other coefficients, in an election in which the incumbent government is centre-left there is a positive effect on the share of votes for ethno-regionalist parties, as the coefficient of the *Aft. Centre-Left* variable is always positive. This suggests greater support for ethno-regionalist parties when a centre-left government is incumbent. Similarly, there is a positive effect when we look at European elections.

The log of GDP per capita has a positive impact on the share of votes for localist parties, suggesting that in richer regions the support for ethno-regionalist parties is greater. Meanwhile, the male-to-female ratio has a negative impact on the share of votes for these parties.

The non-statistical significance of the *Stadium* variable suggests that this effect is not different for teams with bigger communities of supporters. This can be taken as a further argument in favour of the previous hypotheses regarding the spread of the feelings of rivalry beyond the boundaries of football fans.

Finally, please note that in all the presented regressions we include a matrix of fixed yearly effects (i.e. a series of dichotomous dummy variables with a value equal to 0 for all the years except one, in which the value is 1) to capture cyclical effects and avoid spurious relationships that might affect our estimates.

5.1 Further results

At this point, the next step in the analysis would normally be to distinguish the impact of this absolute (due to Real Madrid's position in the *Liga*'s ranking) and relative effect (due to the distance between the local team and Real Madrid in the ranking) on votes. The usual way to do this is to estimate an equation that includes an interaction term between the measure of Real Madrid's performance and the distance in points from the local team, other than both the variables. In this way, looking at the marginal effects of the regression, it is possible to derive the complete effect of a change of a team's position in the *Liga* ranking (or of the distance between Real Madrid and local teams) while also considering the impact of the other variable.

Unfortunately, in our case such a strategy is not completely implementable. To perform such a regression it would be necessary for our dataset to drop the yearly dummy from the regression. But for each year included in the analysis, Real Madrid occupies one and only one position in the ranking. Thus, there is a clear problem of multicollinearity in estimating an interaction between the rank of Real Madrid and the distance in points from each team while keeping the set of dichotomous dummy variables as independent control variables. Of course, dropping the yearly dummies from the regression would lead to a number of different problems. Indeed – and this was the principal reason for including it in the main regressions – this set of variables is very useful for capturing the specificity of each year, especially in political terms and in regard to election peculiarities, which are difficult to control for by including other variables.

Moreover, the reduced size of our sample, and its varying composition in terms of teams and hence of regions represented in different years, makes the reliable interpretation of such an analysis a daunting task. For this reason, we prefer to focus on the results we have obtained, checking their consistency via a robustness check. In Spain it is not always easy to discriminate between regions as administrative units and their ethno-regionalist feelings, or *rectius* those of their teams and their supporters. For instance, Espanyol and its supporters have traditionally had a very different relationship to Catalan nationalism and the Spanish centre than FC Barcelona. This is of course a qualitative distinction, which by its nature is difficult to grasp in a quantitative framework such as the one we have adopted. Nonetheless, we have tested our findings through a robustness check, using another example of these differences.

More precisely, Club Atlético Osasuna, a football team from Pamplona, a city in the region of Navarra, and hence a different region from the *País Vascos*, has a history of supporters being close to Basque ethno-regionalism. A similar argument can be

made for Racing Santander, one of the teams involved in the “duel of the North” with Athletic Club Bilbao,⁷ a team from the city of Santander in the region of Cantabria. In our main analysis both these teams, which are from regions that do not have specific ethno-regionalist parties, have not been included in the main analysis. As a robustness check, we replicated the analysis including these two teams, and hence considering Navarra and Cantabria as being part of an enlarged Basque region, together with the *País Vascos*. The results, presented in Table 5, are consistent with our main results, hence suggesting at least some robustness in our findings.

6 Conclusions

The present contribution has tried to link the so-called irrelevant events literature with socio-psychological literature dealing with emotions provoked by sport. This attempt could provide some hints as to possible mechanisms capable of linking sports results with voting behaviour.

In this study, we analysed the effect of the absolute position in the *Liga* ranking of Real Madrid, and of the relative distance between Real Madrid and local teams, on electoral support for localist parties in these teams’ own communities. This analysis was performed to look at the effects of football on electoral behaviour. Since anecdotal evidence suggests that in many communities football has an importance in

Table 5 FracReg Robustness check with Osasuna and Racing Santander

	(5.1)	(5.2)
	Sh.of Val.Votes	Sh.of Val.Votes
Rank Real Madrid	-0.336 [*] (-1.80)	
Distance		-0.0147 [*] (-1.69)
DEE	1.062 ^{***} (3.75)	1.270 ^{***} (4.18)
Reg.GDPpc	2.174 ^{***} (5.13)	2.173 ^{***} (5.75)
Sh.of Males	-0.741 ^{**} (-2.26)	-0.775 ^{**} (-2.55)
Education	-0.00664 (-0.88)	-0.00734 (-1.15)
Stadium	0.00575 ^{***} (2.80)	0.00171 (0.84)
Time Fixed Effects	YES	YES
Constant	-14.74 ^{***} (-4.02)	-15.21 ^{***} (-4.38)
Observations	68	78
Log likelihood	-36.12	-42.16
Chi 2	98.38	110.1

t statistics in parentheses

^{*} $p < 0.1$, ^{**} $p < 0.05$, ^{***} $p < 0.01$

⁷ See <http://bizkaia.eldesmarque.com/athletic-club/noticias/56388-el-regreso-del-duelo-del-norte> (URL consulted on 19/2/2023).

everyday life that greatly exceeds the role normally played by sports, it seems natural to look for its possible impact in a highly behavioural activity such as voting. Our analysis, which to the best of our knowledge is the first work of its kind, and which accordingly presents results that must be taken with caution, given the various limitations that affect our research, suggests that both the overall Real Madrid position on the last day before elections, and its distance from local teams on the same day, play a role in affecting voters' behaviour. Our empirics suggest that the worse Real Madrid is performing in the *Liga*, and the further the local team is from Real Madrid on the leaderboard, the weaker voters' support will be for the relative local ethno-regionalist party.

These results may be explained by a feeling of acrimony felt toward the central power, which in Spain is embodied by the Crown, and which may be argued to be reified in the *Liga* by Real Madrid. Indeed, it seems easy to argue that both the aforementioned events may lead to a decrease in the intensity of acrimony and the sense of rivalry that a local community feels towards the Centre. Moreover, it seems reasonable to assume that, when the reification in football terms of the central power is not performing as well as usual in the *Liga*, or when it is no longer in real competition with local teams due to a large distance in points on the leaderboard, these sentiments should be weaker. In other words, we are suggesting that when the team symbolizing the Spanish Crown (and thus Spanish Central power) is dominating the *Liga*, or is a powerful rival of the local sporting heroes, autonomist political feelings will grow, and the people will tend to distance themselves from the central power and highlight their difference, and therefore be more susceptible to more independent and autonomous political rhetoric, embodied by localist, ethno-regionalist parties.

Our findings confirm that sports events and their results have an impact on electoral behaviour, but, differently from previous contributions, our investigation, which has tried to shed some light on the link between mood and voting behaviour, suggests that trivial events can contribute to shaping the outcome of a national parliament and government, and even have an impact on European elections, increasing the electoral support for ethno-regionalist parties. In other words, sports results could reveal an underlying sentiment of acrimony that pervades Spanish society, and exacerbate it, through electoral support for those parties characterized by a strong regional identity. To the best of our knowledge this study is the first contribution where the effect of the electorate's mood on voting behaviour is explained from an incumbency-oriented perspective, and moreover where a latent mechanism, namely the acrimony effect, is proposed as possible explanation of the direction that mood can exert on voting behaviour. From a theoretical perspective, the findings of the paper confirm the functioning of the prosperity model as proposed by Miller (2013), but expanding it beyond the typical effect on turnout. It is important at the same time to note that this paper has also proposed a new possible link between the so-called "irrelevant events" literature and that focused on sporting disputes and national identity (Caruso et al., 2017). To some extent, our main result could be of interest for electoral studies, as a way to forecast election outcomes more accurately, and thus to take into account a new set of variables to predict voters' behaviour; it may also be of value insofar as it provides a way to understand the links between seemingly very distant worlds more clearly.

While bringing to the attention of this emerging literature some new findings that may help to better explain and expand previous models of how apparently irrelevant events may influence electoral behaviour, the present research is not exempt from a number of limitations that it is important to bring to the reader's attention. First, it is worth noting that in order to link emotions and political outcomes it is necessary that sport and political environments share some social dispute, as is the case of the localism issue for the Spanish state. This means that although our contribution has tried to unveil the existence of a transmission mechanism between sports and politics, our results (as happens frequently in the irrelevant events literature, such as Busby et al., 2017) cannot be generalized to other contexts easily, since they are case-specific and require similar grounds. Furthermore, the relationship between Spanish teams and ethno-regionalist identity, or more generally opposition to central dominance, is not necessarily equally supportable for all of the teams included in the analysis. Indeed, while our aim was to try to be as inclusive and objective as possible, to avoid having to make choices about including or excluding teams and parties, our dataset is not the result of a sampling operation, but rather driven by the availability of data (and this also goes for our decision to start the analysis in 1993), as well as the definitions of parties as ethno-regionalist by the Manifesto Project. Hence, while we do not expect any specific bias, and on the contrary our robustness check suggests some stability in our results, at the same time it is important to underline that the external validity of our findings is potentially affected by this. The fact that our analysis is affected by limited size, which may have biased the results, is also to be noted in this regard. Finally, while our arguments are built at the individual-level, due to data availability the only tests we have been able to perform are at the aggregate level; this could of course raise concerns about the ecological fallacy, which we are not able to address empirically at present. It could of course also potentially lead to spurious results, and to endogeneity affecting our estimates.

For all these reasons, more research on the subject is needed. Further studies may try to replicate our findings with the use of individual level data, once available, or generalize our results by applying this model to one or more different cases, in which a specific team competing in a sport has some peculiar characteristics that make it possible to highlight some sentiment in a given society. Further studies may also focus on other (only apparently) trivial events, and on their impact on voting behaviour and outcomes.

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