The nationalization of electoral change in a geographical perspective: the case of Italy (2006–2008)

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Abstract This paper assesses the nationalization of electoral change in a setting of major changes at the party level. After discussing the theoretical difference between the configuration of the electorate and its movement, the Italian case is examined. In order to check whether strategic voting dynamics took place between the 2006 and 2008 Italian Parliamentary elections, the swing voters' estimates are obtained. After having shown that the Italian electorate behaved strategically, we investigated whether the swing had a national or a territorial pattern. The findings show that the switching occurred in Italy between the 2006 and the 2008 elections can be considered national.

Keywords Electoral change · Nationalization · Electoral behaviour · Ecological inference · Aggregate data · Italy

Introduction

The nationalization of politics is generally defined as the uniformity or universality of attitudes and political behaviour within nations (Caramani 1996).

The concept of "nationalization of politics" is originally found in Schattschneider (1960), who

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observed that in the United States the electoral support of the two major political parties until 1932 was characterised by a marked territorial segmentation: Republican support in the northern states (North-East and Middle-West) and Democratic support in the southern states. But then, the Great Depression, the Second World War and the Cold War have focused the electors' attention towards national concerns, thus causing a community of interests across the country. Basically, the nationalization process was triggered by the fact that American politics was suddenly dominated by national rather than local issues (Caramani 2004). Two different dynamics are involved in this shifting from local to national: (1) a horizontal process, implicating the penetration and standardisation of peripheries, and (2) a vertical process, consisting of the shifting of dislocation of issues and competence from the local to the national level—is, centre formation (Caramani 2004).

According to the nationalization theory the differences among the areas of a country decrease as time goes by, and eventually disappear. Basically, national politics substitutes local politics (Caramani 1996). This nationalisation process was observed in several countries, both in Europe (Caramani 2004) and in the Americas (Alemán and Kellman 2008).

The study of nationalization of politics is a complex one since it involves several dimensions and concepts. It is possible to approach the nationalization at the offer level (that is, if all the parties are presents in all districts) (Caramani 2004; Lago and Montero 2009),

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or at the voter level (that is, how homogenous the support for a party is across the country) (among others: Bochsler 2010).

A further distinction can be made when considering the elements of nationalization: there is a dynamic element, that is the nationalization of the politics as a historical process; a social element, that is the nationalisation as a cultural process; and finally a geographical element, that is the nationalization as increasing electoral similarities among different areas of a country (Schattschneider 1960).

With regard to the geographical element, it is possible to make a further distinction, by considering (1) convergence in the level of partisan support across the nation (already mentioned); (2) uniform response of the different sub-units to political forces (Claggett et al. 1984; Alemán and Kellman 2008). In other words, how homogeneous is the sub-national areas' support in response to electoral stimuli (like an election)?

These two concepts involve two different dynamics, as the first one refers to the configuration of the electorate, whilst the second one refers to its movement (Alemán and Kellman 2008). In other words, "The unidirectional swing around the levels of support takes place independently of the levels of the support themselves" (Caramani 1996).

Since Stokes' prominent researches on British and US electoral change (1965, 1967), several researches engaged in measuring electoral change by employing different methods (Katz 1973; Claggett et al. 1984; Kawato 1987; Bartels 1998; Bawn et al. 1999; Brady et al. 2000; Morgenstern and Potthoff 2005; Alemán and Kellman 2008).

Knowing the level of the nationalization of the electoral change is important for several reasons. As Alemán and Kellman (2008) state, "fluctuations in the partisan distribution of vote, whether uniform or idiosyncratic, across districts, affect constituent representation, partisan behaviour, and government policy priorities". When the elections are decided on local issues, the agenda (and the campaign) of parties change in order to specifically represent the interest of one precise area. Moreover, a national response to an election might imply that, at least with regard to the swing voters, the main mechanism determining the switching might be a strategic electoral behaviour, as a national, uniform response to a campaign or to a change in the political party system.

However, even when talking about uniform swings, it is important to postulate a further distinction. As Claggett et al. (1984) point out, when a uniform swing takes place it is imperative to find out which mechanism induces it. The authors suggest that when observing a uniform swing the location where the stimuli are originated is crucial to understand if we are actually witnessing a proper process of nationalization or a simple coincidence. If the uniform swing originates separately in each of the areas observed as response to independently separate factors, the authors classify the phenomenon as a coincidence. Instead, if the uniform swing is indeed a response to one or more national factors (f.i. a political scandal) it is possible to ascribe the phenomenon to a movement of nationalization of politics.

As Butler and Stokes (1974) found, a non-uniform swing can be the result of mediated national influences or a true localization of politics. However, Claggett et al. (1984) claimed that in the case of a non-uniform swing it would be empirically impossible to retrace the origin of the stimulus without employing survey techniques. Nonetheless, they also claim that it is plausible to assume that uniform swings are caused by national influences (Claggett et al. 1984; Caramani 2004).

Italy is a particularly interesting case for analysis on the nationalization of the electoral change. First of all, Italy represents an exception with respect to the general tendency of Western Europe towards nationalization (Caramani 2004). In fact, Italy's electoral behaviour has always been very territorialized (Agnew 1996, 2002; Shin and Agnew 2007; Diamanti 2009; Corbetta and Piretti 2008), and the 2006 and 2008 elections did not represent an exception to this trend (Shin and Agnew 2008; Diamanti 2009). However, as said, in theory it is absolutely possible that an electorate characterized by a stable territorial party support would have a homogenous swing at the national level (and viceversa). Thus, it is interesting to investigate whether in Italy the two dimensions of nationalization (composition and movement) are convergent or opposite.

Secondly, the Italian Parliamentary elections of 2006 and 2008 (for a detailed description see section "Parliamentary elections 2006 and 2008 in Italy: a summary") offer an opportunity to test the occurrence of a strategic vote swing, and whether the strategic voting was national. In fact, between 2006 and 2008,

the two main centre-left parties (*Democratici di Sinistra* and *la Margherita*) and the two main centreright parties (*Forza Italia* and *Allenanza Nazionale*) merged in two single parties (respectively, the *Partito Democratico* and the *Popolo delle Libertà*). The two new parties were both perceived as more moderate than the ones that created them (Curini and Iacus 2008).

This change affected the composition of the coalitions as well. In fact with respect to the previous 2006 coalitions, which were very inclusive, both the *Partito Democratico* and the *Popolo delle Libertà* allowed only one party to compete together with them. This caused the exit of two important parties form the coalitions: the *Unione di Centro* (5.6 % in 2006) left the centre-right coalition, while the alliance of the communists and green parties (the *Sinistra Arcobale-no*, 10.2 % in 2006¹) left the centre-left coalition.

With regard to the 2008 elections, there are two elements that can have an impact in terms of strategic voting on the electoral behaviour. The first one implies the shift of voters towards a more radical position. As said, the voters perceived that the two new main parties moved more toward the centre of the right-left continuum (Curini and Iacus 2008). This setting might encourage the voters who are willing to continue to vote for the same coalition but those who have a more radical position can decide to vote for the party's ally if the ally is indeed more radical (Downs 1957; Stokes 1963; Enelow and Hinich 1984; Hinich and Munger 1984), as it is in the Italian case. The second element is the exit of one party per coalition. We might expect that voters abandon their most-preferred party because it has little chance of winning the current election (Downs 1957; Black 1978; Cain 1978; Abramson et al. 1992; Ordeshook and Zeng 1997; Alvarez and Nagler 2000).

The aim of this paper is to check whether these strategic voting dynamics took place, and whether the swing had a national or a territorial pattern. If it will be possible to identify a national pattern, it will be argued that the uniform swing was not originated by factors playing at the local level but it was the result of a national stimulus, that is the electoral offer of the 2008 elections. For this purpose, this paper obtains the flows-of-vote estimates by using the Goodman model

¹ This percentage refers to the sum of the three distinct 2006 parties which funded the *Sinistra Arcobaleno* in 2008.

and by employing the national aggregate data of the 2006 and 2008 Italian Parliamentary elections. In order to check the nationalization of the swing, the flows-of-vote estimates are shown on maps.

Parliamentary elections 2006 and 2008 in Italy: a summary

The 2006 parliamentary elections

In the year leading up to the 2006 elections Berlusconi's incumbent government (Casa della Libertà) had been rather unpopular (Bellucci and Segatti 2011), yet he was the primary candidate of the Italian right. On the left, Prodi had the support of a broad coalition called Unione. In other words, both candidates were supported by sizeable coalitions on their respective sides of the political spectrum. In the run-up to the elections opinion polls estimated the left-wing coalition had a 7 % points lead over the right-wing coalition (Bellucci and Segatti 2011). However, final results showed an extremely narrow victory for Prodi's left-wing coalition, mostly thanks to a "majority premium", which allowed the winning coalition to have 340 elected MPs out of 630 in total. In the end, the left-wing government only had a 0.1 % point advantage over the right-wing coalition.

In the Senate, the situation was even closer. Prodi's left-wing coalition obtained a two-seat majority over the right-wing coalition, as a direct consequence of Italy's unique electoral law and the massive support for Prodi by Italians abroad. Such a minimal majority could very easily be taken hostage by a smaller partner, which is exactly what happened when the small party *Udeur* (1.4 % points in the 2006 elections) toppled the Prodi government, and forced it to resign on January 24th 2008 after 2 years in office, instead of the regular 5-year term.

The 2008 parliamentary elections

The narrow majority in the Senate played a role in the collapse of the Prodi government, but it is also true that the Italian electoral law (law n. 270 of December 21st 2005) forces parties—regardless of their size—to make pre-electoral alliances in order to increase the chances of victory. Naturally, this increases the likelihood that a small coalition-partner can hold an

entire coalition hostage. Such a dynamic can cause instability, makes it difficult to govern a country persistently, or carry out an electoral agenda.

Therefore, Walter Veltroni, the left-wing candidate, decided to simplify the political panorama by unifying the left democratic party (*Partito Democratico della Sinistra*, PDS) with the centre-left party *la Margherita*, the party *Rosa nel Pugno* (RNP, a combination of socialist-democratic and libertarian parties)² and several smaller left-wing parties into the Democratic Party (*Partito Democratico*, PD).³ All these left-wing parties were unified under one name and logo. Only Antonio Di Pietro's party, *Italia dei Valori* (IdV), was allowed in a centre-left alliance with its own party name and logo. The Socialist Party (*Partito Socialista*, PS) wanted an alliance with the PD using its own symbol, like IdV did, but this was rejected and it competed alone.

Whereas in 2006 the Italian communist parties were part of the left-wing alliance, in 2008 they were not included in the PD. Subsequently, they founded the *Sinistra Arcobaleno*, which included the Communist Re-foundation (*Partito della Rifondazione Comunista*, PRC), the Italian Communists (*Partito dei Comunisti Italiani*, PDCI), and the Green Party (*Verdi*). Two other communist parties, which in 2006 were part of the PRC, competed alone in 2008: *Sinistra Critica* and the Workers Communist Union (*Partito Comunista dei Lavoratori*, PCL).

Similarly to the dynamics on the left, Berlusconi formed the PdL (*Popolo della Libertà*), an alliance between *Forza Italia* (Silvio Berlusconi's party) and *Alleanza Nazionale*, and some other smaller parties under u unified symbol. The *Lega Nord* and the MpA (*Movimento per le Autonomie*) joined the PdL using their own symbols—similar to IdV on the left. Both in 2006 and 2008 the *Lega Nord* and the MpA agreed with each other not to run candidates in the same constituencies. The *Lega Nord* operates in the North and the Centre of Italy, whereas the MpA operates in the South of Italy and on its Islands.

However, not all parties formed pre-electoral alliances. As a direct result of the increasing bipolar situation, the *Unione di Centro* (UDC) (Union of

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Christian Democrats), a catholic party, chose not to participate in any of the coalitions and competed on its own. Similarly, the *Destra-Fiamma Tricolore*, an extreme right party created by former MSI (*Movimento Sociale Italiano*) members, also decided to compete independently from any pre-electoral coalitions.

The two main competitors, PD and PdL, dominated the 2008 electoral campaign. Even to such an extent that smaller parties criticized the media for giving them too much coverage. During the campaign, the PD and PdL stressed the need for a "useful vote" by declaring that a vote for one of the smaller parties would be useless, or even worse, it would be a vote for the opposite candidate.

The PdL won the 2008 parliamentary elections with a significant majority. It obtained 272 seats in the Camera (as opposed to 211 seats for the PD) and 172 seats in the Senate (as opposed to 132 for the PD). Generally, commentators and journalists predicted a victory for the PdL, however, few people expected it to be this overwhelming. The electoral results caused a near shockwave in Italy: for the first time, only five parties (two parties for each alliance and the UDC) went to Parliament. Despite almost twenty parties on the ballot, seven out of ten Italians voted for one of the two major competitors.

In 2008, "only" 80.5 % of the electorate went to the ballot box. It is the lowest figure in a parliamentary election in Italy's history. Compared to the 2006 elections, Italy experienced a 3.1 % increase of abstainers.

To illustrate this, you can observe the differences between the votes per party in the 2006 elections and in the 2008 elections in the following Table 1:

Table 1 shows that the parties that suffer significant losses are *la Sinistra Arcobaleno* (both with and without the other communist parties), the UDC and the PD (only if comparison with 2006 includes the RnP). Such results could be attributed to the bipolar scenario one finds in Italy. This indicates that if one is not included in a grand alliance, like *la Sinistra Arcobaleno* or the UDC, it is extremely difficult to be part of a governmental coalition. From Table 1 it becomes clear that the party with the best result in terms of increased vote share (compared to 2006) is the *Lega Nord*, together with the MpA. The party getting the best result in its history), which accounts for 8.3 % points of the 9.4 % obtained together with the MpA.

² The RNP participated in the centre-left coalition of l'*Unione* in 2006.

³ In 2006, the aforementioned two parties formed the preelectoral alliance *Ulivo*.

Table 1	A	comparison	between	the	2006	and	the	2008	elections
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Italy					
Parties		2006 (%)	2008 (%)	Differences 2006–2008 (%)	
2006	2008				
Forza Italia	PdL	23.7	37.4	1.4	
Alleanza Nazionale		12.3			
Lega Nord/MpA		4.6	9.4	4.8	
l'Ulivo (+RnP)	PD	33.9	33.2	-0.7	
Di Pietro-Italia dei Valori		2.3	4.4	2.1	
Rifondazione Comunista	Sinistra Arcobaleno	5.8	3.1	-7.1	
Verdi		2.1			
Comunisti Italiani		2.3			
UdC		6.8	5.6	-1.2	
La Destra		0.6	2.4	1.8	
Others		4.6	4.7	0.1	

Research questions

As said in the previous paragraph, the 2008 Parliamentary elections were characterized at the party level by a specular dynamic in the left and right coalitions. In both coalitions, the main parties decided to re-found themselves by merging. There is evidence that this transformation was perceived as a shift towards the centre (Curini and Iacus 2008). Furthermore, each coalition dropped one party.

We do, however, not know whether these changes at the party/coalition level influenced the voters' electoral behaviours.

In particular, this paper will try to answer the following research questions:

- (1) Can the switching be ascribed to a strategic voting behaviour?
 - a. Did previous voters of PdL and PD switch towards their allies?
 - b. Did previous voters of the parties exiting the coalition (UDC and *Sinistra Acobaleno*) switch in favour of a party which remained in the coalition? In other words, did they cast a useful vote?
- (2) Did a national or a territorial pattern characterize the swing between the 2006 and the 2008 elections?
- (3) If a national pattern characterized the swing between the 2006 and the 2008 elections, is it possible to identify it as a reaction to a national stimulus?

The main research question (RQ1) aims to assess whether the swing that occurred between the 2006 and 2008 elections can be ascribed to strategic voting behaviour. In fact, the parties and coalitions changes might lead part of the electorate to make strategic considerations and change their previous vote choice.

The RQ1a investigates the possible swing occurring inside the coalition. As already said, both the PD and the PdL were parties which changed name and refounded themselves. The voters perceived the new refounded parties to be collocated more toward the centre of the left-right continuum (Curini and Iacus 2008). Furthermore, both the ally of the PdL (the alliance formed by Lega Nord and Movimento per le Autonomie) and the ally of the PD were perceived as more radical with respect to the main party in their coalition (Curini and Iacus 2008). This might have encouraged a classical political-spatial dynamic: the previous PD and PdL voters who are willing to continue to vote for the same coalition but who have a more radical position can decide to vote for the party's ally (Downs 1957; Stokes 1963; Enelow and Hinich 1984; Hinich and Munger 1984).

RQ1b focuses on the coalition's changes. With respect to the 2006, the 2008 coalitions are much smaller and less inclusive. The major changes are due to dropping of the *Unione di Centro* from the centreright coalition, and dropping parties that now constituted the *Sinistra Arcobaleno* from the centre-left coalition. Because of the electoral size of both these parties (see Table 1), it was reasonable to assume that neither had a chance to govern after the elections. This argument was also stressed during the campaign by the major party in each coalition, which encouraged the voters to cast a "useful vote". Thus, we expect to observe that part of the 2006 UdC and *Sinistra Arcobaleno* voters decided to vote for the secondpreferred party, in order to vote for a party that did have a chance on governing (Downs 1957; Black 1978; Cain 1978; Abramson et al. 1992; Ordeshook and Zeng 1997; Alvarez and Nagler 2000).

RQ2 aims to verify whether a territorial or a national pattern characterized the swings among parties. There is a vast literature showing that Italy is very territorialized (and very stable) with regard to voting preferences (Agnew 2002; Diamanti 2009; Galli 1968). Moreover, Italy does not seem to follow the nationalization of vote tendency which characterizes most of Europe (Caramani 2004). However, in spite of the traditional geographical composition of the Italian electorate, it might be that the changes that occurred at the party level did not have a territorial character. In other words, it might be the case that despite a highly territorialized composition of the electorate, the potential swing between the 2006 and 2008 elections would be characterized by a national dynamic. That is, a uniform response of the swing voters.

Finally, RQ3 by combining the findings of RQ1 (direction) and RQ2 (amount) deals with the location of the stimuli that induce the swing. Following Claggett's et al. (1984) suggestions, the directions of the swings—together with the amount of districts switching in the same directions—will be employed as an indication to locate the origin of the stimuli. If it will be possible to identify a national pattern involving a large majority of the districts switching's in favour of the parties being part of one of the two major coalitions, it will be argued that the uniform swing was not originated by factors playing at the local level but it was the result of a national stimulus, that is the electoral offer of the 2008 elections. More in general, it will be argued that a change in the electoral offer can induce an uniform swing.

Method

Answering the research questions of this study implies knowing the amount of swing voters, the party they voted in 2006 and the one they voted in 2008. Moreover, it is necessary to locate the swing voters geographically and to be able to have a territorial picture of the swing. The latter task is not feasible by employing any survey method, since we would need as many representative samples as the areas employed in the research.

In order to be able to provide the estimates required in a format suitable for a geographical analysis, this research employs an ecological inference method: the Goodman model.

In 1953, Goodman developed a statistical model capable of producing an ecological inference, claiming that one can overcome the problem of ecological inferences by treating the relationship under study as a linear one and using standard regression procedures (such as OLS) to estimate the model's regression coefficients. This model has gradually become accepted and has been employed to estimate the flows-of-vote between political parties by using aggregate data.

The model assumes the population of one electoral district can be classified by using two variables: the variable Y (election t0), which has K categories (the parties at election t0), and the variable X (election t1), which has J categories (the parties at election t1). Subsequently, Y_k is the percentage of the population that belongs to the *k* categories of variable Y, and X_j is the percentage of the population that belongs to the *k* categories of variable Y, and X_j is the percentage of the population that belongs to the *k* categories of variable Y, and X_j is the percentage of the population that belongs to the *j* categories of variable X. Following these specifications, one can assume the percentage of the population to be positive, and to be smaller than the population itself.

For each electoral division of the sample (or the population if all polling stations are used) the equation can be represented by the following expression:

$$Y_k = b_{k1}X_1 + b_{k2}X_2 + b_{k3}X_3 + \dots + b_{kj}X_j$$

In the Goodman model, independent and dependent variables represent percentages of the population, and the regression coefficients correspond to these percentages. Therefore, as already indicates, it is not possible for coefficients to have negative values or values greater than 1. If such unacceptable values do appear, it is necessary to re-adjust them in order to obtain coefficient estimates that are between 0 and 1, as the Goodman model requires, by, i.e. using an iterative algorithm. Any such re-adjustment of the coefficient estimates has to be as minimal as possible (see Sect. "Applying the Goodman model"). The main reasons why the Goodman model was employed in this paper is that Italy has a long tradition in the application of this model. This means that there is a solid literature validating the effectiveness od the use of the Goodman model in this country (Schadee and Corbetta 1984; Biorcio and Natale 1987; Agnew 1996; De Sio 2008; D'Alimonte and De Sio 2010) while there are very few studies (Ricolfi 1990; De Sio 2008) on the application of other techniques (Brown and Payne 1986; King 1997) the Goodman model continued to be the preferred one to use when estimating Italian flows-of-vote. In fact, these other models were originally built to measure the electoral flows in a two-party system (King 1997; Brown and Payne 1986), whilst Italy is a multi-party system.

One Italian scholar, Lorenzo De Sio, tried to apply the King model to estimate the Italian electoral flows (De Sio 2008). He argued that the King model offered more reliable estimates, but when he compared the estimates obtained by the King and the Goodman Model, they were not very different. In fact, in later researches De Sio employed the Goodman model (D'Alimonte and De Sio 2010). This is not surprising since several researches showed that differences between Goodman and King approaches can be quite small (Grofman and Migalski 1988; Grofman and Barreto 2009). In fact, the King models is simply Goodman's regression approach using the Duncan and Davis (1953) deterministic bounds to inform the results.

Applying the Goodman model

As for any statistical model, one has to emphasise that the Goodman model provides indicators, not a perfect description of reality. Especially in electoral politics, it is almost impossible to apply this model without some sort of violation. For example, the Goodman model requires a comparison between the same groups of voters. In reality, the voting population changes every election as the result of various dynamics. Examples of such dynamics are generational turnover, changes in residency or even the rezoning of electoral districts.

As a direct result, the application of the Goodman model becomes nearly impossible when there is a complete or substantial shift in the electoral division of a city. This becomes more likely when time between elections is substantial. In other words, the longer a time interval between elections, the less reliable the flow-of-vote estimates will be. However, this has not been the case in Italy, or at least not in the past two parliamentary elections. More specifically, during the past two parliamentary elections, the redistribution of polling stations was rather minimal (see the discussion of the quality of the aggregate data). In addition, the two elections under examination have been close enough to provide the analysis with reliable estimates.

An additional requirement for the Goodman model to obtain reliable estimates is the aggregation level of the data. In order to do this, it is crucial to employ data at the lowest possible level of aggregation. After all, the broader the analysed area, the less reliable its estimates are (Schadee and Corbetta 1984). Therefore, it is not a suitable solution to estimate flow-of-vote for Italy as a whole. It would be more appropriate to divide Italy in smaller areas and provide estimates for these areas. One of the smaller areas one can examine is an electoral district, or *collegio uninominale*, which this paper will apply as its unit of analysis.

In the 2005 elections, electoral districts were suppressed, however, it is important to maintain this level of analysis for two specific reasons. Firstly, each of the electoral districts only comprised about 100,000 voters, which allows for the analysis of a homogenous area. The calculation of the flow-of-vote estimates on such a relatively small group of voters allows for the use of the Goodman model and does not violate its assumptions. Secondly, since each electoral district has about the same number of voters, it is possible to analyse national flow-of-vote estimates by calculating a simple average.

One concern remains, which is the occurrence of replacements in the lists of voters for the electoral divisions, i.e. the lists of those entitled to vote at a particular polling station. In order to resolve this problem, polling stations with a between-election difference in the electoral division lists of voters that exceeded 10 % have been eliminated. The result of this transformation was the preservation of 55,081 out of 60,077 polling stations, or a total of 91.61 % of the polling stations were kept in the analysis.

A dataset was created for each constituency, so to have 466 datasets. Actually, there were 475 constituencies in Italy (not including the region of Valle d'Aosta), but in this paper I excluded from the analysis two Italian regions (*Valle d'Aosta* and *Trentino Alto-Adige*), because they have a very diverse party scenario, which is not comparable with the rest of the Italy. The large number of sub-areas in which the country was divided will provide the main evidence to argue that the national swing was a national response to the 2008 electoral offer: when the same dynamics will be founded in a large majority of the areas it will reasonable to argue that the swing did not happened to be uniform by coincidence (because of independent locally based factors).

Data

The electoral data are public and uncomplicated to access. Generally, national and constituency data are available online. Data at the polling station level and for the Chamber of Deputies (*Camera dei Deputati*) are not available online. Rather, it is necessary to obtain those at the *Archivio Storico della Camera* (Historical Archive of the Chamber of Deputies). It is the latter data that is used to construct the dependent variable and the flow-of-vote estimates.

Indeed, Italy is a bicameral system, but the age's thresholds to vote for the Chamber of Deputies and the Senate are different. To vote for the Chamber of Deputies, it is required to be 18 years old, while to vote for the Senate it is required to be 25 years old.

Then, since the threshold for the Chamber of Deputies is more inclusive, this thesis employ the votes expressed for this Chamber.

In order to estimate the flow-of-vote estimates, the lowest aggregation level of electoral data has been used, which is the polling station level. Each polling station represents between 500 and 1200 voters. In total, there are about 60,000 polling stations in Italy. For the calculation of the eligible voters for the Chamber of Deputies, Italy is divided into 26 constituencies. Article 56 of the Italian Constitution states the attribution of the polling stations among the constituencies is determined by dividing the number of inhabitants (the number indicated by the last national census) by six hundred and eighteen, and then distributing the polling stations in proportion to the constituency's population.

The quality of aggregate data

For this research paper, the completeness, representativeness and the appropriate selection mechanisms (i.e. the quality) of the data are not problematic since the research does not deal with a sample but rather with the entire population. However, the principal quality concern of the research paper is that of the flow-of-vote estimates. Evidently it is not possible to assess their quality by the comparison between the Goodman estimates and real electoral results. Therefore, two crucial controls are necessary to ensure the reliability of the flow-of-vote estimates.

As previously discussed, it is possible for the Goodman model to obtain coefficients greater than one or even negative coefficients. In that case, it is necessary to readjust these so as to obtain values between 0 and 1 by using an iterative algorithm. The Re-distributed Value or VR measured the size of such a readjustment (Schadee and Corbetta 1984). The VR is calculated by taking the differences of the coefficients' values before and after the readjustment obtained by the iterative algorithm and adding them up (Schadee and Corbetta 1984 p. 87). If the VR coefficient is inferior to 0.15 (or 15 if the population is expressed in percentages), the flow-of-vote estimates can be considered reliable. The second control is related to the Goodman model's selection criteria. In order to avoid possible problems caused by excessive replacement in voters' electoral divisions list (those eligible to vote in a particular polling station), polling stations with a between-election difference in voters' electoral division lists of more than 10 % have been eliminated.

Following this, Table 2 shows the percentage of polling stations maintained and eliminated at the national level. The average percentage of voters in each polling station maintained is high, since the replacement in the electoral divisions lists of voters was less than 10 % in the 91.61 % of the polling stations (or, 55,081 out of 60,077 polling stations were retained).

In order to check the reliability of the flow-of-vote estimates, one needs to analyse the VR values, which can be observed in Table 3. On average the VR values indicate reliable measures (i.e. 5.53 %). There appears to be only one case where the VR estimate exceeds the original threshold of 15 %, and only by 0.01 %.

Table 2 Polling stations maintained/eliminated per district

Polling stations	Obs	Mean	Std. Dev.	Min (%)	Max (%)
Maintained	55,081	91.61	6.01	61.15	100
Eliminated	4,996	8.39	6.01	0	38.85

Table 3 National estimates of the re-distributed value

VR	Obs Mean		Std. Dev.	Min	Max	
	466	5.53	1.73	1.83	15.01	



Fig. 1 Re-distributed value (%) of the Goodman estimates for each of the electoral districts

This theoretically unreliable estimate refers to electoral district 12 of constituency two (Piedmont), however, it is a very isolated case. Figure 1 indicates that all but one estimate of the VR are reliable in each of the electoral districts.

To summarise, from the above tables and figures it is clear that the flow-of-vote estimates can be considered extremely reliable, both with regard to the number of polling stations on which the analysis was performed and to the VR values.

Findings

The national swing estimates are obtained by taking the average of the estimates of the 466 examined districts.

Regarding the *Lega Nord* and the *MpA* estimates, even when they are technically two different parties, in

this analysis they are treated as one single party because, as described in above, these two parties came to a pre-electoral agreement: the *Lega Nord* would run in the North and the Centre of Italy, whereas the MpA would only run in the South and on the Islands. For the sake of parsimony in the analysis, the parties were grouped together, but it is important to keep in mind that 8.3 % points out of the 9.4 % that the party gained at the 2008 elections (see Table 1) belong to the Lega Nord.

Table 4 shows the national flow-of-vote estimates. For the new parties PdL and PD, the estimates of the parties composing them in 2006 (*Forza Italia* and *Alleanza Nazionale* for PdL, and *Ulivo* and *Rosa nel Pugno* for PD) have been obtained separately, in order to have a more detailed picture of the flow-of-vote. In order to correctly read the flow-of-vote matrix, consider that the total of the whole table is 100 %. Then, the matrix has to be read as follows: for every 100 votes gained, in the column (2006 parties) there are the votes that each party is losing in favour of the parties in rows (2008 parties).

In addition, it is important to notice that a no-vote is treated as a proper party vote (for no party), thereby allowing the entire Italian electorate to be considered in this analysis. The non-voters are defined both as voters who do not vote and those who cast a blank or spoiled vote.

By looking at the national estimates it is possible to answer RQ1. Table 4 shows that two main strategic behaviours took place:

- (1) The main parties' losses toward their allies within their own coalition:
 - a. the PdL's loss toward sthe *Lega Nord* & *Movimento per le Autonomie* (MpA);
 - b. the PD's loss towards the *Italia dei Valori* (IdV).
- (2) The losses of the parties that were dropped from the 2006 coalitions in favour of the main parties:
 - a. the *Unione di Centro*'s (UDC) loss in favour of PdL, for the right coalition;
 - b. the *Sinistra Arcobaleno*'s loss in favour of the PD, for the left coalition.

Following the order of the previous list, a full description of the electoral swing that took place is now provided.

Parties 2008	Parties	Parties 2006												
	FI	AN	Lega Nord & MpA	UDC	Post fascist	Other right	Ulivo	IdV	RnP	Communists	Other left	No- vote	Total	
PdL	16.09	6.70	0.20	1.41	0.29	0.33	0.63	0.21	0.27	0.50	0.50	1.65	28.75	
Lega Nord & MpA	1.52	0.81	3.00	0.53	0.09	0.29	0.21	0.07	0.08	0.12	0.25	0.20	7.18	
UDC	0.15	0.17	0.08	2.25	0.07	0.12	0.52	0.12	0.05	0.18	0.32	0.37	4.41	
Post-fascist	0.16	0.67	0.07	0.10	0.22	0.06	0.19	0.04	0.05	0.20	0.05	0.15	1.96	
Other right	0.10	0.08	0.03	0.12	0.03	0.03	0.10	0.03	0.03	0.03	0.02	0.10	0.69	
PD	0.09	0.45	0.05	0.44	0.06	0.07	20.43	0.33	0.67	2.54	0.43	0.14	25.70	
IdV	0.11	0.35	0.06	0.15	0.03	0.06	1.08	0.69	0.16	0.46	0.15	0.07	3.38	
Communists	0.03	0.03	0.02	0.06	0.03	0.03	0.42	0.04	0.09	2.15	0.07	0.20	3.18	
Other left	0.09	0.08	0.04	0.07	0.02	0.04	0.19	0.05	0.39	0.19	0.12	0.13	1.33	
No-vote	0.81	0.59	0.13	0.38	0.17	0.23	1.60	0.26	0.30	1.80	0.49	16.68	23.44	
Total	19.16	9.94	3.67	5.52	1.00	1.23	25.37	1.85	2.01	8.18	2.41	19.67	100.00	

Table 4 The Goodman estimates for the flows of vote of the 2006–2008 Italian parliamentary elections





of votes gained and/or lost





Fig. 3 Net effect legend: minimum and maximum values of votes gained and/or lost

As Table 4 shows, the combined Forza Italia and Alleanza Nazionale looses 2.33 % points in favour of the Lega Nord & MpA, while gaining only 0.2 % points from it, resulting in a net loss of 2.13 % points. This swing represents the most substantial loss for the PdL and the most substantial gain for the Lega Nord & MpA.

With regard to the PD, the main loss is indeed in favour of the no-vote, with a net loss of 1.76 % points. However, when leaving aside the no-vote and taking into account only the party level, the IdV is the party towards which the PD loses more votes, with a net loss of 0.91 % points.

Concerning the losses of the parties which were dropped from the 2006 coalitions in favour of the main parties, Table 4 shows that the UDC losses are mostly in favour of the PdL. In fact, the PdL gained 1.41 % points from the UDC, losing in its favour only 0.32 % points: the balance is in favour of the PdL, with a 2008 net gain of 1.09 % points. This constitutes both the largest gain of the PdL and the biggest loss for the UDC. In fact, even if for the PdL no-vote gain is more substantial, the loss in favour of the no-vote is substantial as well, and the net gain with respect to the no-vote is only 0.25 % points.

Finally, the flow-of-vote between the Sinistra Arcbaleno and the PD was actually the biggest one (2.54) in the whole matrix. This swing represents both the largest loss for the Sinistra Arcobaleno, and the



Fig. 4 PdL/Lega Nord & MpA net effect: balance of votes gained and/or lost by the PdL from/to the *Lega Nord/MpA*

Table 5 Electoral districts' net effect for Lega Nord and MpA

	PdL/ <i>Le</i> g	ga Nord	PdL /	МрА
Legend	Ν	%	Ν	%
	5	1.88	67	33.50
	2	0.75	16	8.00
	259	97.37	117	58.50
Tot	266	100.00	200	100.00

biggest votes' gain for the PD, with a net gain of 2.03 % points.

Summarizing: as expected, the main parties lose in favour of their allies within their own coalition (RQ1a), and those parties that left the coalition after 2006 lose in favour of the main parties (RQ1b).

Such analogies between the left and the right coalitions reflect strategic voting behaviour.

Now that the flows-of-vote estimates have shown that two strategic electoral dynamics took place regarding the 2008 Italian election, it is possible to proceed in answering RQ2 in order to verify whether these strategic behaviours had a territorialized or a national pattern.

Fig. 5 PdL/UDC net effect: balance of votes gained and/or lost by the PdL from/to the UDC

After disentangling the swings and by looking at Table 4 it is clear that the principal approach to observe the flows-of-vote between two parties is the votes gained and the votes lost (with respect to the other parties).

In the end, what eventually really matters is the net effect, which refers to the balance of votes gained and/ or lost, as Fig. 2 shows.

Yet, even when the net effect is strongly in favour of one party, at the geographical level two different scenarios are possible: there are a few electoral districts largely in favour of the party with the positive net effect countering a majority of neutral or slightly negative electoral districts, or the trend is national, and the vast majority of the electoral districts share the same tendency.

As Caramani (1996) points out, when analysing the nationalization of the electoral change, what counts are two elements: the amount and the direction. By mapping the net effect between two parties it is possible to give a representation of both, since the direction is obtained by taking into account the share of gains and losses (the amount) of both parties

considered. However, in this research, in order to give a clear and parsimonious graphical representation, the dimension of the direction is emphasized. Yet, an indication of the amount is provided as well in the legend.

Concretely, the maps in this paragraph have been designed using the same criteria: the net effects are divided in three categories, as Fig. 3 shows: in favour of the main party, neutral, in favour of the other party. In order to give an indication of the amount, in the legend of each map the minimum and maximum values are shown.

Figure 4 shows the net effects of flow-of-vote between the PdL and the alliance of the *Lega Nord* and MpA. The net balance at the national level was a 2.13 % points gain for the *Lega Nord* and MpA alliance. Here, it is worth to remember that the *Lega Nord* and the MpA are really different in terms of size: 8.3 % points out of the 9.4 % that the party gained at the 2008 elections consisted of votes for the *Lega Nord*. In order to give a clear graphical representation of the difference between the *Lega Nord* and the MpA, the map is divided in two by a thicker black line. The upper part defines the territory of the *Lega Nord* and the lower part defines the territory of the MpA (plus the two Islands).

Visually, it is immediately possible to notice that the dynamic involving the *Lega Nord* is far more homogenous with respect to the one involving the MpA. Table 5 provides a detailed description of the distribution by disaggregating the two different territorial parties: *Lega Nord* and MpA.

Table 5 shows that the PdL lost votes in most of the districts both with respect to the *Lega Nord* and to the MpA. However, the losses involve 97.37 % of the districts in the area of the Lega Nord and 58.50 % in the area of the MpA. The trend is the same (the PdL lost vote in favour of the other party), but the size of the phenomenon varies largely. For this, it is important to remember that the *Lega Nord* and the MpA are very different in terms of size (see Table 1).

With regard to the net effect between the PdL and the UDC, it was already noted that it was 1.09 % points in favour of the PdL. As Fig. 5 shows, the switching from UDC in favour of PdL was fairly homogenous all over the country.





Fig. 6 PD/IdV net effect: balance of votes gained and/or lost by the PD from/to the IdV

Fig. 7 PD/Sinistra Arcobaleno net effect: balance of votes gained and/or lost by the PD from/to the Sinistra Arcobaleno

Table 6Electoral districts'net effect per number ofdistricts and per party

	PdL/ <i>Lega N</i> e	ord &MpA	PdL /U	DC	PD/ lo	V	PD/ Sinistra	Arcobalenc
Legend	Ν	%	Ν	%	Ν	%	Ν	%
	72	15.45	357	76.61	46	9.87	433	92.92
	18	3.86	37	7.94	7	1.50	2	0.43
	376	80.69	72	15.45	413	88.63	31	6.65
Tot	466	100.00	466	100.00	466	100.00	466	100.00

There are a few areas, like the North-West of Italy and the South of Sicily, showing a different trend, but the tendency to switch toward the PdL involved most of the country.

As Fig. 6 shows, the swing involving the PD and the IdV (with a national net effect of 0.91 % points in favour of the IdV) is also fairly uniform.

Finally, as already been pointed out, the flows-ofvote between the *Sinistra Arcobaleno* and the PD was the biggest votes' gain for the PD, with a net gain of 2.03 % points. Again, except for few exceptions, this swing is characterized by a homogenous pattern, as Fig. 7 illustrates.

The maps help visualizing the degree of uniformity across the country. Yet, it is also important to look at this phenomenon from a numerical point of view. Table 6 summarizes the number of districts falling in each of the three categories designed (see Fig. 3).

Because of the pre-electoral agreement, the *Lega Nord* and the MpA are considered as one party (the disaggregated net effect per party was shown in Table 5).

As you can observe, for each of the pairs of parties considered there is a category which collects the vast majority of the electoral districts: the first one (in favour of the main party) for the pairs "PdL- UDC" and "PD - *Sinistra Arcobaleno*"; the third one (in favour of the other party) for the pairs "PdL- *Lega Nord* & MpA" and "PD - IdV". In none of these cases the prevalent category includes less than 75 % of the electoral districts.

The only exception to this trend emerges when considering the *Lega Nord* and the MpA as two separate parties, as they actually are (see Table 5; Fig. 4). In this case, the only observable uniform swing involves the PdL and the *Lega Nord*, whilst the swing involving the PdL and the MpA is less sizeable (only 58 % of the electoral districts—see Table 5) and also more geographically scattered (see Fig. 4). Yet, it is important to remember that the *Lega Nord* and the MpA had very different electoral results (see section "The 2008 parliamentary elections") in 2008: 8.3 % for the *Lega Nord* and 1.1 % for the MpA. In terms of

votes, the flows-of-vote involving the PdL and the MpA is thus pretty small.

It is possible to answer RQ2 (A national or a territorial pattern did characterize the swing between 2006 and 2008 elections?) by stating that the swing between the 2006 and 2008 Italian election was characterized by a national pattern. All the strategic behaviours observed by answering RQ1 turned out to take place in, at least, the 75 % of the electoral districts. The only exception regards the MpA, a party that accounts for 1.1 % of the votes.

To conclude, the answer to RQ3 is that because of the large quota of electoral districts involved in a uniform swing and because of the direction of the swing (in favour of the parties being part of a coalition with a chance to govern), it is possible to argue that the uniform swing can be identified as a national response to a national electoral factor (the party offer).

Conclusions

The nationalization of politics is generally defined as the uniformity or universality of attitudes and political behaviour within nations (Caramani 1996). There are several ways in which this concept can be developed (nationalisation as a convergence of the regional levels of parties' electoral support, or territorial homogenisation; nationalisation as a uniform or unidirectional response or uniform swing; nationalisation as a response to political factors situated on a national level rather than on a regional and/or local level) and there is a rich body of literature about it (Stokes 1965, 1967; Katz 1973; Claggett et al. 1984; Kawato 1987; Bartels 1998; Bawn et al. 1999; Brady et al. 2000; Morgenstern and Potthoff 2005; Alemán and Kellman 2008).

This paper deals specifically with the nationalization of the electoral change in order to understand if a uniform swing occurred with regard to the 2006 and 2008 Italian parliamentary elections, and whether the swing could be interpreted as a response to local independent factors or a national response to the 2008 party offer. More specifically, the 2008 Parliamentary elections were characterized at the party level by a specular dynamic in the left and right coalitions. In both coalitions, the main parties decided to re-found themselves by merging, and each coalition dropped one party each. As discussed, these scenarios can potentially encourage strategic voting behaviour. Hence, by employing aggregate electoral data and an ecological inference method, it was confirmed that there was switching among parties between the two elections considered, which was possible to ascribe to strategic voting behaviour. The second step consisted in observing whether the switching had a national or a territorial pattern, that is, whether the electoral change was national or not. The evidences show that (apart from one small exception, concerning the MpA) all the switching can be considered national, since they involve more than the 75 % of the electoral districts in the analysis, and they can be considered a national response to the party offer because of the direction of the swing (in favour of the parties being part of a coalition with a chance to govern). It is possible to claim that a change in the electoral offer can induce a national uniform swing.

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