Economic voting in a nationally complex setting: the 2012 Catalan election

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Very first draft, please do not quote

That a southern European incumbent loses an 8% of its vote in the mid of the Great Recession should be no surprise. So, when the Catalan ruling coalition CiU lost such a bunch of votes and seats, as well as missed the cherished absolute majority, many observers turned their eyes to the pocketbook account. But some intriguing questions remained. Why should CiU voters punish the Catalan government if most of them agreed their party had nothing to blame over the crisis? After all, the whole campaign had been about Spanish governments squeezing Catalan economy! When the first survey data appeared, the puzzle did nothing but to grow: there was no relationship whatsoever between the perception of the Catalan economy and the vote to the Catalan incumbent.

This paper tries to disentangle the no-relationship puzzle providing new evidence and, specially, providing some sophistication to the too rigid definition of regional economic voting. Our purpose is not explaining the Catalan incumbent 8% drop, but clarifying the role economy had in the whole election. We also expect that our case study provides new insights to regional economic voting so that conclusions may be applied to other regional elections.

The structure of the paper is the following. The theoretical background in section one reviews our knowledge of economic voting and, especially, of regional economic voting. It also suggests the existence of two new forms of regional economic voting. Section two offers a mere description of our case study in order to contextualise Catalan institutions, party system, electoral history, and recent political developments. Section three is the usual data and methods section. It displays the technical features of the surveys, the variables and the statistical analyses we use. Section four reveals the results. It basically shows that genuine regional economic voting vanished in 2012 and then goes on to detect other forms of economic voting. We end up, in section five, with a discussion of the implications of these results.

1. Theoretical background

Economic voting is a relationship between citizens' perceptions of the economy and their vote. According to the most classic monograph on the subject, 'when voters approve (disapprove) of past economic conditions, they vote for (against) the governing party (or parties)' (Lewis-Beck 1988: 34). A more axiological wording is provided by Anderson (2008: 330): 'incumbent support is, in part, a function of voters' evaluations of economic conditions'. This theory of electoral behaviour is firmly rooted on the retrospective voting theory, according to which 'citizen evaluations of political conditions or outcomes generally relate in a plausible way to their voting decisions' (Fiorina 1981: 65).

Obviously, not all voters engage equally in this behaviour. Their propensity to economic voting depends on their sophistication and information level (Duch and Palmer 2002; Duch et al 2000; Adserá et al 2003: 478-479) as well as on their age, education and income levels (Aidt 2000: 357-359). There is also extensive literature on the ideological bases of such behaviour, but this is probably too close to a tautological argument (Duch and Palmer 2002; Duch et al 2000; Evans and Andersen 2006; Lewis-Beck 2006; Rudolph 2003a and 2003b). Since Powell and Whitten (1993) a popular question has been what institutional arrangements make this behaviour more likely. The main argument is that the presence of certain institutions clarifies the task of identifying the competent person for each political decision. This 'clarity of responsibility' helps the citizen to vote according to her evaluation of the economy. The conclusion of this literature is that attribution of responsibility is harder in coalition and minority governments (Powell and Whitten 1993, Whitten and Palmer 1999, Anderson 2000), in dual executives held by different parties, in contexts with

no plausible alternative of government (Anderson 2000) and in subnational institutions (Anderson 2006, 2007a, 2007b, Cutler 2004).[1] The latter will be further addressed below.

Economic voting was first verified in the US (Mueller 1970, Kramer 1971, Kinder and Kieweit 1981, and Kramer 1983) and in UK (Goodhart and Bhansali 1970). After the US and UK, studies of economic voting spread to most OECD countries. For pioneering studies in Canada, see Clarke and Kornberg 1992, Happy 1992, Nadeau and Blais 1993; for France, see Lafay 1991; for Germany, see Alford and Legge 1984.[2] More recently, economic voting has also been hypothesized for levels of government other than national: local economic voting (Martins and Veiga 2013, Berry and Howell 2007, Jastramskis 2011, Claes et al. 2013), supranational economic voting (Tilley et al. 2008, Kousser 2004), and also an increasing body of literature assesses the occurrence of regional economic voting (Anderson 2006, Anderson 2008, Gelineau and Belanger 2005, Rodden and Wibbels 2005, Jérôme and Jérôme-Speziari 2005, Queralt 2012). Regional economic voting (abbreviated as REV) 'is said to take place if the *regional* incumbent's electoral prospects depend on the *region's* economic performance' (see also a definition of REV in Anderson 2008: 333) as opposed to national economic voting (abbreviated as NEV) which 'is said to occur if the *national* incumbent's electoral support depends on the *nation's* economic performance' (Queralt 2012: 107; italics in the original). It is implicit in these definitions (see for instance Queralt 2012: 111-113; and Anderson 2008: 336-338), that REV happens in regional elections and NEV happens in national elections. This will prove to be a restrictive assumption below.

Whereas the occurrence of NEV is generally accepted and well documented, many scholars oppose the existence of REV. Anderson (2008: 329) summarizes this position warning that

1. The contemporary key reference on the subject is Duch and Stevenson 2008. Other interesting references are: Bengtsson 2004; Lewis-Beck 1988; Powell 2000; Samuels 2000; and Tavits 2007.

2. Compare with contemporary studies for the same countries: Gelineau and Belanger 2005 for Canada; Lewis-Beck and Nadeau 2000, and Foucault 2011 for France; and Rattinger and Steinbrecher 2011 for Germany.

'in situations of multiple and overlapping levels of government, the process of correctly assigning responsibility and ultimately holding governments accountable for their actions is much more difficult.' And also: 'where decentralized authority clouds responsibility, voters may find it harder to accurately apportion credit or blame, and accountability for economic outcomes (either positive or negative) is likely to be muted'. The sceptical scholars argue that the attribution of responsibility to regional governments is unlikely because (i) they hold fewer powers and are –objectively– less responsible for economic conditions; (ii) they tend to promote a 'vertical diffusion of responsibility' (ie, blame other levels of government for the bad results of their own policies, and claim responsibility for good results of alien policies); and (iii) regional economic voters would require more information on who-runs-what whereas the media provide less coverage to these elections.[3] Although some evidence of REV has been found for Canada (Anderson 2008), the US (Squire and Fastnow 1994, Atkeson and Partin 1995, Niemi et al. 1995, Hansen 1999), it has been generally tough to verify episodes of economic voting in regional elections. This difficulty may be due to the inflexibility of the definition of genuine REV. Indeed, figure 1 suggests that the simple distinction between genuine REV and genuine NEV (although being the mainstream typology in multilevel economic voting studies) is not an exhaustive typology. As this distinction is so orthodox, other patterns of economic voting are being ignored and, thus, some episodes of economic voting in regional elections may be going unnoticed.

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3. See also the three reasons worded differently in Anderson (2008: 330).

Figure 1 – A tentative typology of multilevel economic voting

	Regional elections			National elections	
	Economy to be assessed:			Economy to be assessed:	
	Regional	National		Regional	National
Incumbent to be assessed: Regional	Genuine REV	(c)	Regional		
National	(a)	(b)	National	(d)	Genuine NEV

Source: Prepared by the authors.

Very few authors have suggested the existence of types of economic voting other than NEV or REV. Here are some examples. When Anderson (2008: 331) asks 'are provincial incumbents evaluated on the basis of provincial economic conditions alone or do national conditions also have an effect?' he is in fact asking whether it exists 'genuine REV' alone, or it exists also a type of economic voting on the cell at its right (cell 'c'). Even though suggesting this possibility[4], he then goes on to preclude it: 'it is anticipated that perceptions of national economic conditions will not influence vote choice at the provincial level' (2008: 333). The same author makes a further original suggestion: 'is federal incumbent support influenced by evaluations of national and provincial economic conditions or just national economic conditions?' (2008: 331). We could easily decode such a question locating it on figure 1: is it 'genuine NEV' plus the cell at its left (cell 'd'), or is it just 'genuine NEV'? The author is positively disposed towards this cell-d-style economic voting and he includes it in his hypothesis 1 (2008: 332). He even mentions a previous study where a cell-d-style economic voting happens (Orth 2001). However, he ends up not finding such a result (2008: 346). Another cell-d-style study is Pattie and Johnston 1995.

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4. He even mentions some references for State governor elections where national economic conditions have an influence: Kone and Winters 1993, Peltzman 1987, and Crew and Weiher 1996.

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The two pairs of cells considered so far ('genuine REV' and cell 'c' on the one hand, as well as 'genuine NEV' and cell 'd' on the other) fulfil one restrictive assumption already alluded: regional elections are used to assess regional incumbents and national elections are used to assess national incumbents. However, a quick look at figure 1 makes it clear that other types of economic voting remain that do not fulfil this assumption (the dark cells). We would like to draw attention to the two cells where national incumbents are assessed in regional elections: cells 'a' and 'b'. These cells describe patterns of electoral behaviour where there is a contamination effect of national politics over regional elections. Whereas contamination effects are rather well studied in general (see eg Gschwend 2008), the ones described here (economic assessment of national incumbents in regional elections) have gone so far unnoticed.

Cell 'a'. Certain voters may use *regional* elections to make the *national* incumbents (or rather, their regional branches) pay for the state of the *regional* economy. This is a sort of economic version of the well-known 'coattail effect'. The label 'coattail effect' is primarily used to refer to the vote increase that a popular President produces in his fellow-party Congress candidates (Golder 2006; Shugart and Carey 1992; Matteia and Glasgow 2005). The concept has been extended to refer to any electoral influence of a higher level of government on a lower level candidature (Hogan 2005). As for theorizations of an economic version of the coattail effect, only Norpoth (2001) constitutes a renowned attempt. Our categorisation keeps a very remote similarity to his 'president liable hypothesis'. This economic version of the coattail effect could be labelled 'coattailed EV' and it would be placed –in figure 1– just below the genuine REV.

Cell 'b'. Certain voters may use *regional* elections to make the *national* incumbents (or rather, their regional branches) pay for the state of the *national* economy. This is a sort of

economic version of the well-known 'second order elections'. The literature on 'second order elections' (Reif and Schmitt 1980; Norris and Reif 1997; Schmitt 2005; Rohrschneider and Clark 2008) emphasizes that voters rank elections according to its importance: national elections (eg: presidential or legislative) are first-order; and supranational (eg: European) or subnational (eg: local or regional) are second-order. In second-order elections, voters transfer the evaluations of their national incumbents to their fellow-party candidatures at other levels. As a result, citizens vote in regional, local or European elections as if they were assessing the national incumbents. The economic version of the second order voting could be labelled 'second order economic voting' (2OEV) and it would be placed –in figure 1– just on the right of the 'coattailed EV'. A phenomenon similar to 2OEV has been recently theorised for local elections in unitary states by Fauvelle-Aymar and Lewis-Beck (2011). The authors show that when local and national incumbents are different, voters punish the national incumbents –and not the local incumbents– for bad economic conditions.[5]

In addition to the alluded literature in regional economic voting, it is also worthwhile mentioning three articles that treated economic voting specifically in Catalan elections. The resulting evidence is mixed: whereas Riba and Diaz (2002) confirm the existence of economic voting in Catalonia, León (2012) reach a negative result. Queralt's (2012) results are more complex: positive in principle, but negative after quite demanding controls are included, and positive again among the better informed.

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5. Notice their 2OEV is somewhat different from ours because their characterisation is based on voter's assessment of local economic conditions, whereas ours is based on national ones. In fact, their type of economic voting is more similar to what we call 'coattailed EV'.

2. Context: the Catalan case

Catalonia is an 'autonomous community' of the kingdom of Spain. Together with the Basque country, they were the frontrunners of the devolution process initiated in the 1980s, and they are the communities with more devolved powers in Spain. The 'Generalitat de Catalunya' is the institution which holds these powers and it comprises a parliament elected by list PR every four years, a president elected by this parliament, and an executive council appointed by the president. The party system is rather fragmented. The key parties have always been CiU (a nationalist coalition ranging from right-wing Christian democrats to centrist liberals) and PSC (the Catalan branch of the Spanish socialists, PSOE). But as fragmentation increases, some other parties are becoming more important: ERC (left-wing independentists); PP (the Spanish conservatives); ICV-EUiA (a coalition of ecologists, postcommunists and other left-wing groups); and some minor parties that come and go in every election.

From 1980 to 2003, the president of the Generalitat was the nationalist icon Jordi Pujol, founding leader of CiU and defender of collaborating with the successive Spanish governments. CiU steadily lost electoral support during the 1990s and the retirement of the leader in 2003 entailed the raise to power of a leftist coalition (PSC+ERC+ICV). The new majority initiated a reform of the 'Estatut' (the law regulating Catalan-Spanish relations) that involved seven years of serious troubles. In the meantime, the position of almost all actors radicalised and mutual mistrust intensified both in Catalonia and in Spain. The 2010 election returned CiU to power but the old strategy of collaboration with the successive Spanish governments had vanished. The scenario of hostility –together with the intensification of the great recession– boosted independentism and the 2012 election, carried out the 25th of November, was framed as a confrontation between Spain and Catalonia. The election campaign of the nationalist parties (including the incumbent) was

very much based on blaming the Spanish governments (both the current as well as the recently expelled) for Catalan economic hardship.

The Catalan case is an adequate –and usual– case study because it is a relatively large and developed community, with a strong national identity and consistent self-government institutions. Conclusions for the Catalan case may be of some interest for several other European regions. Finally, it is worth a caveat on the terms 'regional' and 'national'. The following pages will use the term 'national' to refer to nation-States such as Spain and it will use the term 'regional' to refer to communities –such as Catalonia– that are not independent nation-States. This has a mere descriptive value and no political implications.

3. Data and Methods

Most of the data used in this paper comes from the 2012 ICPS annual survey. ICPS is a university research institute funded by the provincial government of Barcelona. The survey is available in: www.icps.cat/research/sondeigs-i-dades/sondeigs/opinion-polls-catalonia. The sample is n: 1200 and the fieldwork was carried out by the research company GESOP from the 27th November to the 20th December, 2012. We thank their generosity and their willingness to include in the questionnaire one question of interest to us. In addition to the merits of this survey, it has to be said that there was no other 2012 postelectoral survey available until the 2nd of August, 2013, when the Spanish agency for public opinion (CIS) released its own.

Data referring to previous elections are drawn from several surveys that satisfy the condition of including questions on both vote recall and perception of the Catalan economy. They are the following. For the 2003 election, we use the 2003 ICPS annual survey (n: 1200, fieldwork: 15th to 21st December, 2003). For the 2006 election, we use CIS study number 2734/3 (n: 1500, fieldwork: from the 21st January to the 6th March 2008). Notice that this fieldwork is rather distant from the election date, but no other survey asked for the perception of the Catalan economy and its use in the paper is rather marginal. And for the 2010 election, we use CIS study number 2857 (n: 2523, fieldwork: 3rd December, 2010, to the 31st January, 2011). The use of different sources (ICPS and CIS surveys) should not represent a serious problem since the data previous to 2012 do not constitute the core of the paper.

The single statistical technique used in this paper is binomial logistic regression. The technique is suitable to the structure of the data, since the several dependent variables through the paper are always dichotomic (having voted or not for the successive incumbents) and most of the independent variables are either numerical (such as age) or ordinal (scales of ideology, national identity, perception of the economy, etc.). For the 2012 analyses, we have categorised the ideology scale in order to acknowledge its nonlinear influence over the vote.[6] The display of the regression results follows conventional practice. We show the logistic coefficients, the standard errors between brackets, and the significance levels with the following notation: *** 0.99; ** 0.95; and * 0.90. When informative, we also show the simulation graphs for the logistic results. In these cases, we estimate the probability of voting for the incumbent for diverse values of the independent variable, keeping all other variables at its average value.

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6. We are aware that this categorisation should also be applied to some previous elections and perhaps also to the national identity. It will be done – time permitting.

The successive dependent variables (vote for the incumbent parties) refer to the following. Vote for 2003 incumbent: CiU. Vote for 2006 incumbent: PSC or ERC or ICV-EUiA. Vote for 2010 incumbent: PSC or ICV-EUiA. Notice that ERC had repudiated the coalition well before the election and promised not to reinstate it. Vote for 2012 Catalan incumbent: CiU. Vote for 2012 Spanish incumbents: PP or PSC. Notice that the Spanish incumbent at the time of the Catalan election was PP but, given the short time since PSOE departure from the Spanish government (and the low number of cases in the sample), we merged the two incumbents. We also estimated the results separately to ensure they were not very different.

4. Results

As stated in section 1, evidence on the relationship between the perceptions of the Catalan economy and the vote are controversial (see diverging results in Riba and Diaz 2002; León 2012; and Queralt 2012). Table 1 does not aim to join the controversy, but it just shows some very simple models that may suggest the existence of a lasting relationship for the 2003, 2006 and 2010 elections.

Table 1 – Vote for the incumbents and perception of the economy, 2003, 2006 and 2010

	2003			2006			2010		
Constant	-2.4***	-3.8***	-8.0***	-1.4***	-1.7***	0.4	-2.4***	-2.7***	-2.2***
	(0.29)	(0.39)	(0.67)	(0.20)	(0.29)	(0.41)	(0.17)	(0.29)	(0.48)
Gender		-0.2	-0.1		0.0	+0.1		0.1	0.2
		(0.14)	(0.17)		(0.11)	(0.12)		(0.11)	(0.13)
Age		0.0***	0.0***		0.0	0.0***		0.0	0.0***
		(0.00)	(0.01)		(0.00)	(0.00)		(0.00)	(0.00)
Ideology			+0.9***			-0.5***			-0.7***
			(0.07)			(0.04)			(0.05)
National identity			+0.5***			-0.1**			-0.7***
			(0.09)			(0.06)			(0.07)
Perception of the Catalan economy	+0.4***	+0.5***	+0.3***	+0.4***	+0.4***	+0.4***	+0.5***	+0.5***	+0.4***
	(0.08)	(0.09)	(0.11)	(0.08)	(0.07)	(0.08)	(0.07)	(0.07)	(0.08)

Sources and details: see section 3.

Indeed, the table seems to display a persistent pattern through time: incumbent parties had a significantly higher percentage of the vote among those who perceived a better economic situation. The pattern is in line with the basic principle of economic voting (see section on 'theoretical background') and it holds the reliability of comprising different incumbent parties and different economic circumstances through time. Admittedly, this pattern could be subject to many criticisms: the direction of causality could be reversed; it should be further controlled by more causes of the vote; we should analyse also the vote to opposition parties; a disaggregation of the parties in each category would be needed, etc.[7] But none of these criticisms will be needed, because the real puzzle is the discrepancy with table 2, which shows that the pattern vanished in the 2012 election.

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7. The models for opposition parties can be found at the annex. It also displays a disaggregation of the parties both in government and in the opposition.

Table 2 – Vote for the incumbent and perception of the Catalan economy, 2012

	Model 1	Model 2	Model 3
Constant	-1.3 ***	-3.9 ***	-7.3 ***
	(0.18)	(0.46)	(0.67)
Gender		+0.1	+0.1
		(0.15)	(0.18)
Age		0.0 ***	0.0 ***
		(0.01)	(0.00)
Education		+0.1	+0.1
		(0.03)	(0.03)
Ideology: Left			-0.9 ***
			(0.32)
Ideology: Centre-left			+0.3
			(0.32)
Ideology: Centre			+1.2 ***
			(0.30)
Ideology: Centre-right			+1.5 ***
			(0.40)
Ideology: Right			+0.3
			(0.50)
National identity			+1.0 ***
			(0.10)
Perception of the Catalan economy	-0.1	-0.1	-0.1
	(0.10)	(0.10)	(0.12)
Sources and details: see section 3.			

Table 2 shows an outright blurring of the previous patterns of economic voting. The incumbent party did not have a higher percentage of the vote among those who perceived a better economic situation.[8] Leaving aside the alluded controversy over the existence –in previous Catalan elections– of a relationship between the perceptions of the economy and the vote, the evidence is clear that –in the 2012 Catalan election– it remained no relationship at all[9]. Or at least, it remained no relationship of a 'genuine' kind. However, as specified in the section on theoretical background, 'genuine REV' is not the only kind of

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8. We are aware that the low variance of the independent variable in 2012 may have some role in the collapse of the model. But additional analyses not shown here, suggest there is more than a mere statistical artifact in this collapse.

9. We have also tried to detect such a relationship in some subsamples of the whole survey, such as those who attribute responsibility to a particular layer of government. Results were always adverse.

economic voting we may perceive in a regional election. Instead, evidence of 'coattailed EV' and 'second order EV' might be revealed.

Coattailed EV. According to section 1, 'coattailed EV' would happen if there was a relationship between the perception of the *regional* economy and the vote to the *national* incumbent –or rather, the vote to *the regional branch of* the national incumbent, since we are faced with a regional election, and not a national one. In other words, we shall replicate the estimates in table 2, but replacing the dependent variable. Thus, the dependent variable in table 3 will be the vote –in the 2012 Catalan election– to the regional branches of the Spanish incumbents.

Table 3 – Vote for Spanish incumbents and perception of the Catalan economy, 2012

	Model 4		Model 5		Model 6	
Constant	-2.4	***	-2.3	***	-1.5	**
	(0.23)		(0.52)		(0.63)	
Gender			-0.2		-0.1	
			(0.19)		(0.20)	
Age			0.0	***	0.0	***
			(0.01)		(0.01)	
Education			-0.2	***	-0.2	***
			(0.04)		(0.05)	
Ideology: Left					+1.2	***
					(0.36)	
Ideology: Centre-left					+1.6	***
					(0.39)	
Ideology: Centre					+1.0	***
					(0.37)	
Ideology: Centre-right					+1.3	**
					(0.49)	
Ideology: Right					+1.9	***
					(0.42)	
National identity					-0.7	***
					(0.09)	
Perception of the Catalan economy	+0.2	*	+0.2	*	+0.3	**
	(0.11)		(0.12)		(0.13)	
Sources and details: see section 3.						

The coefficients for our main independent variable shown in table 3 are not impressive (neither are their standard errors and significance levels). However, they show some influence over the vote to Spanish incumbents –whereas those in table 2 showed no influence at all. Thus, we have some evidence that economic perceptions may be influencing Spanish incumbents more than Catalan incumbents. It all seems to suggest that economic voting in the 2012 Catalan election was a mixture of Catalan and Spanish factors. Therefore, it might be appropriate to incorporate the perceptions of the Spanish economy in the analysis. This leads us to 'second order EV'.

Second order EV. According to section 1, 'second order EV' would happen if there was a relationship between the perception of the national economy and the vote to the national incumbent(s) –even though we are not faced with a national election but with a regional one. The results for the 2012 Catalan election, displayed in table 4, are rather sound and interesting. The models show the solid contribution of the perception of the Spanish economy over the vote for the Spanish incumbents.

Table 4 – Vote for Spanish incumbents and perception of the Spanish economy, 2012

	Model 7		Model 8		Model 9	
Constant	-2.9	***	-2.8	***	-1.9	***
	(0.23)		(0.54)		(0.66)	
Gender			-0.2		-0.1	
			(0.19)		(0.21)	
Age			0.0	***	0.0	***
			(0.01)		(0.01)	
Education			-0.2	***	-0.2	***
			(0.04)		(0.05)	
Ideology: Left					+1.3	***
					(0.36)	
Ideology: Centre-left					+1.6	***
					(0.39)	
Ideology: Centre					+1.0	***
					(0.37)	
Ideology: Centre-right					+1.2	**
					(0.50)	
Ideology: Right					+1.9	***
					(0.42)	
National identity					-0.6	***
					(0.09)	
Perception of the Spanish economy	+0.5	***	+0.5	***	+0.4	***
	(0.12)		(0.13)		(0.14)	

Sources and details: see section 3.

The logistic coefficients confirm that the better the perception of the Spanish economy, the higher the probability of voting –in 2012 Catalan elections– for the Catalan branch of the Spanish incumbents. Or rather, given the widespread negative view of the Spanish economy, perhaps we should state it in a negative fashion: the worse the perception, the lower the probability of voting for them. The simulation graph 1, display these probabilities for each category of our independent variable.

Graph 1 – Simulation of the logistic regression model number 9
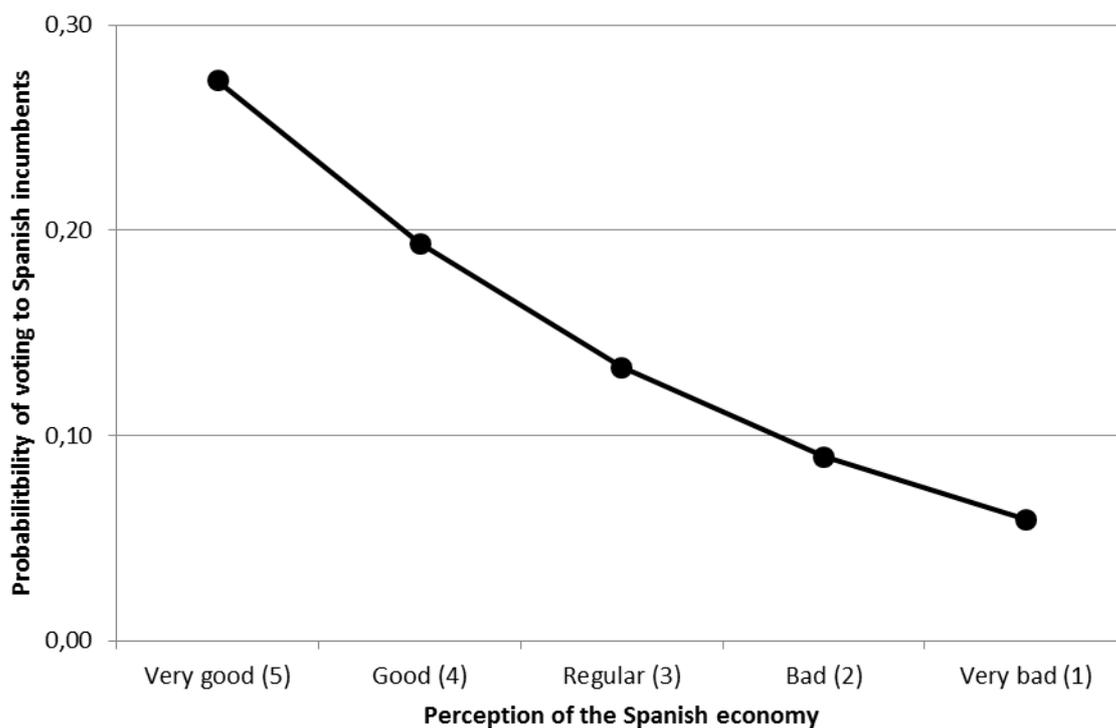
So far, we can say that –even if in previous Catalan elections, voters rewarded and punished the Catalan incumbents for the state of the Catalan economy– this did not happen in the 2012 Catalan election. Instead, it seems clear that Catalan voters used the 2012 Catalan election to punish the Spanish incumbents for the state of the Spanish economy. Thus, this election would be a clear example of 'second order economic voting'. The question is why should this innovative behaviour appear now?[10] The reading of section 2, on the context of the election, may suggest one possible answer: the attribution of responsibility for the economic crisis may rest on the Spanish institutions rather than on the Catalan ones. Luckily, the survey includes a question on attribution of responsibility for the economic crisis, and the results endorse this suspicion: 49.1% of the sample see the Spanish government as being more responsible for the economic crisis than the Catalan government; whereas only

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10. In order to convincingly argue that this is an innovative behaviour, we should add even another data test. We should replicate models 4-6 (and especially models 7-9) for elections previous to 2012, to show that these did not work before. Provisional data analyses seem encouraging but not finished yet.

5% of the sample see the Catalan government as being more responsible for the economic crisis than the Spanish government; and 41.4% give them equal responsibility. If the attribution of responsibility to the Spanish government was the origin of this 'second order EV', the relationship should hold especially for the initial 49.1% of the sample. Therefore, we replicated models 7, 8 and 9, but splitting the sample in two halves, according to their attribution of responsibility. Table 5 displays only the coefficients for the relevant independent variable, leaving aside the controls.

Table 5 – The unequal impact of the perception of the Spanish economy, 2012

		Model 10	Model 11	Model 12
Perception of the Spanish economy	AR Spanish govt.	+0.8 ***	+0.8 ***	+0.6 **
		(0.22)	(0.23)	(0.26)
	Other ARs	+0.3 **	+0.3 **	+0.3 *
		(0.15)	(0.16)	(0.18)

Sources and details: see section 3.

The results are quite clear. Among those who attribute the responsibility for the economic crisis primarily to the Spanish government, the coefficients are higher than those shown in table 3 (ie, higher than for the whole sample). Despite the higher standard errors (attributable to the smaller sample), the significance levels withstand rather soundly the continuous inclusion of controls. Conversely, among those who did not attribute the responsibility for the economic crisis primarily to the Spanish government, the coefficients are not only smaller, but they also show increasingly worse significance levels. The simulation of probabilities of the two logistic models display it graphically. Graph 2 shows the probability of voting for the Spanish incumbents for respondents who attribute responsibility to the Spanish government and respondents who do not.

Graph 2 – The unequal impact as seen in a simulation of probabilities
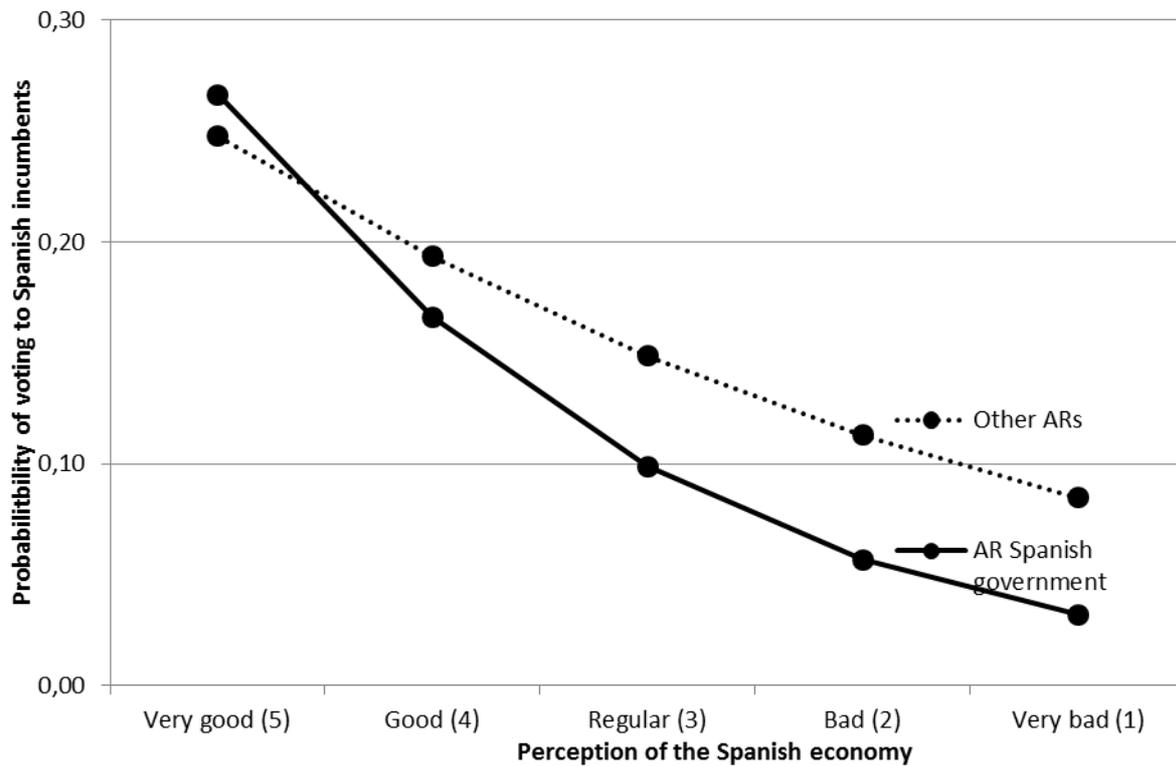
When the alluded two types of respondents perceive very optimistically the Spanish economy, they both display an equally high probability of voting for the Spanish incumbents. But as the perception of the economy worsens, those who attribute the responsibility of the crisis to the Spanish government diminish their probability more sharply. At the end, the respondents situated in the right hand side of the graph (and they are the majority of the sample) double their probability of voting for the Spanish incumbents when they attribute responsibility to the Spanish government. Even if the data analysis is basic and it has to be further developed, it seems that one of the reasons for the appearance of the second order EV may be the widespread attribution of responsibility for the crisis to the Spanish government.

Second order EV and coattailed EV. The evidence of second order EV shown in table 4 seems more solid than the evidence of coattailed EV shown in table 3. Therefore, we could

advocate that Spanish incumbents were punished more for the perceptions of the Spanish economy rather than for the perceptions of the Catalan economy. One possible criticism to this could be that people do not adequately distinguish their perception of the Spanish economy from their perception of the Catalan economy ($r=0.77^{***}$), so why should we sharply distinguish between the two? In order to address this criticism, we performed a very simple test to check whether one of the two perceptions displayed a more reliable influence: we included both perceptions in the final model. The result was that the perception of the Catalan economy kept no significant influence whatsoever, whereas the perception of the Spanish economy kept the same logistic coefficient (+0.4). As expected, the significance level worsened a bit –down to 90%– as a consequence of the high correlation between the two, but notice this was not the purpose of the test.

5. Discussion

The results show the existence of a second order economic voting in the recent 2012 Catalan election, whereas previous elections used to reveal just genuine REV. This calls for an explanation of such a shift. One line of argument could be that such a shift is the result of a change in the issue priorities following the campaign. In a sense, the economic issues were overtaken by independence issues, so it is no wonder that economic voting collapses. A second line of argument reasons that, if 2OEV did only emerge after the 2012 Catalan incumbent's campaign to blame the Spanish government for Catalan economic hardship, then what we see is a generalised change in the attribution of responsibilities. And the shift in the type of economic voting would just be the reasonable consequence of it. A final line of argument notices that this is the first regional election in Catalonia with confronted Catalan-Spanish incumbents (for two decades, regional elections involved always Catalan incumbents who held some complicity with Spanish executives). This would open the possibility to divergent evaluations of the two incumbents, and could hide patterns of genuine REV.

Any of the three accounts suggests the likelihood that certain political or economic conditions may be at the origin of the emergence of 2OEV but more case studies are needed explain these sorts of shifts. In particular, more efforts should be devoted to detect more cases of 2OEV and, subsequently, to identify what political conditions encourage this phenomenon. It would also be interesting to check whether certain type of electors tend to engage in such behaviour more than others. In particular, it could be that less sophisticated voters are more prone to engage in this contaminated behaviour (2OEV), whereas more sophisticated voters keep voting following a genuine REV pattern.

Of course, some may assess this departure from genuine REV taking a purist stance and arguing that coattailed REV and 2OEV are not convincing evidences of economic voting. It is arguable that only genuine REV and genuine NEV deserve the denomination of economic voting and the rest are mere examples of contamination effects. In this case, the conclusion to draw would be much simpler: there might be evidences of genuine REV in previous elections, but they ceased in the 2012; the campaign of vertical diffusion of responsibility initiated by the Catalan incumbents would be the origin of the responsibility blurring and this would have caused the interruption of Catalan economic voting. And of course, this would be the end of the problem because we would have no puzzle. We would have just a typical campaign of vertical diffusion of responsibility that hides economic voting.

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Annex

Table A1 – Vote and perception of the economy, 2003

Vote:	Perception of the Catalan economy:						Total
	Very good	Good	Regular	Bad	Very bad	DK	
Incumbent:							
CiU	33%	34%	23%	17%	13%	30%	27%
Opposition:							
PSC	13%	22%	27%	21%	25%	10%	23%
ERC	15%	13%	17%	24%	9%	20%	16%
ICV-EUiA	9%	4%	9%	10%	6%	0%	7%
Grey zone:							
PP	11%	7%	4%	3%	0%	0%	5%
Others:							
Green	0%	1%	2%	1%	3%	0%	1%
Other parties	0%	0%	0%	0%	0%	0%	0%
Blank ballot	0%	1%	1%	1%	6%	0%	1%
Do not know	0%	1%	2%	2%	6%	10%	2%
Do not answer	2%	4%	7%	8%	6%	15%	6%
Did not vote	17%	12%	8%	13%	25%	15%	11%
n:	46	468	484	157	32	20	1207

Table A2 – Vote and perception of the economy, 2006

Vote:	Perception of the Catalan economy:						Total
	Very good	Good	Regular	Bad	Very bad	DK&DA	
Incumbents:							
PSC	37%	29%	30%	19%	17%	15%	27%
ERC	5%	13%	9%	6%	3%	0%	9%
ICV-EUiA	5%	6%	8%	4%	6%	15%	6%
Opposition:							
CiU	5%	17%	16%	16%	10%	15%	16%
PP	16%	3%	4%	9%	9%	0%	5%
Cs	0%	2%	0%	2%	1%	0%	1%
Others:							
Other parties	0%	1%	0%	1%	0%	0%	0%
Blank ballot	0%	3%	3%	5%	2%	0%	3%
Do not remember	0%	3%	3%	5%	3%	15%	4%
Do not answer	5%	4%	4%	8%	14%	23%	5%
Could not vote yet	0%	2%	1%	2%	1%	0%	1%
Did not vote	26%	18%	21%	23%	33%	15%	22%
n:	19	309	776	295	88	13	1500

Table A3 – Vote and perception of the economy, 2010

| Vote: | Perception of the Catalan economy: | | | | | Total |
	Very good & good	Regular	Bad	Very bad	DK & DA	
Incumbents:						
PSC	25%	17%	9%	6%	8%	10%
ICV-EUiA	4%	8%	6%	5%	12%	6%
Opposition:						
CiU	17%	29%	31%	29%	19%	29%
PP	3%	2%	5%	6%	0%	4%
C's	1%	1%	2%	3%	4%	2%
Grey zone:						
ERC	0%	5%	6%	3%	4%	5%
SI	1%	2%	2%	2%	4%	2%
Reagrupament	0%	1%	1%	1%	0%	1%
Others:						
UPyD	1%	0%	0%	0%	0%	0%
PxC	0%	0%	1%	1%	0%	1%
Other parties	2%	1%	1%	2%	0%	1%
Blank ballot	2%	2%	3%	3%	4%	3%
Do not answer	12%	11%	10%	12%	12%	11%
Did not vote	30%	20%	23%	28%	35%	24%
n:	89	646	1091	668	26	2520