Asymmetric federalism, clarity of responsibility and economic voting.

Evidence from Spain.

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Very first draft, please do not quot

Abstract

In this paper we explore whether variation in decentralization arrangements between the central government and subnational units conditions attributions of responsibility and, in turn, the operation of electoral accountability. The general hypothesis is that the relationship between economic results and voting behaviour will be stronger in contexts where decentralization design has followed more closely a layer-cake model of federalism. We expect weaker economic voting in contexts where the distribution of vertical government authority is more intertwined. We test these predictions in an asymmetric federal state: the Spanish State of Autonomies. Results show that regional economic voting is more pronounced in regions where clarity of responsibility is highest as a result of the layer-cake nature of regional decentralization design. On the contrary, where the division of powers between the central government and the regions has adopted a more intertwined structure, we find no significant impact of regional conditions upon regional incumbent's support.

Introduction

One of the most celebrated promises of federalism is the democratic one. Classical political theorists as well as modern welfare economists have praised decentralized governance as an institutional solution to facilitate democracy and enhance the control of governments. Political scientists have stressed the accommodating virtues of divided sovereignty in large, heterogeneous societies with strong ethnic or linguistic communities, whereas welfare economists have emphasized the qualities of the vertical fragmentation of powers to promote intergovernmental competition and bring policies more into line with citizens' preferences. While anchored in different mechanisms, both views associate decentralized governance with increased responsiveness and accountability.

Although the enthusiasm for federalism has shown up time and again strong resilience to the (less optimistic) realities of federations (Beramendi 2007), the literature in the area illustrates growing recognition of the perils associated to decentralized governance such as increasing corruption, ethnic conflict, inefficiency or fiscal indiscipline. Challenges to the attraction of federalism have also affected its democratic promises. Some scholars have taken the accountability advantages of federalism to task by showing that the intertwined division of governmental authority in federations diffuses responsibility attribution (Cutler, 2004, 2008, Rudolph, 2003b, a) and that the relationship between economic conditions and vote is weaker where multilevel governance is more prominent (Anderson, 2009, 2006, 2008).

In bridging the gap between the theoretical promises of federalism and the actual operation of federations, there is still much to be learned about how decentralized governance affects democratic accountability. Certainly, we need a better understanding

on how the institutional variation that exists in federations results in different levels of clarity of responsibility and whether this in turn explains differences in the operation of performance voting.

This paper tackles this task by exploring the relationship between decentralization design, responsibility attribution and economic voting. More specifically, we espouse the argument that decentralization will moderate the relationship between economic outputs and vote through its impact upon clarity of responsibility. We expect economic voting to be strongest in contexts where the type of decentralization follows more closely a "layer-cake" model of federalism. This model is characterized by concentrating more authority and resources at one level of government, which enhances clarity of responsibility. Economic voting will be weaker in contexts where the distribution of expenditures and revenue powers between levels of government are highly intertwined ("marble-cake" model) and thus clarity of responsibility is undermined.

These hypotheses will be tested using both individual and aggregated data on an asymmetric federal state. The Spanish State of Autonomies is asymmetric on both its revenue and expenditure sides, which allows testing whether cross-regional variation in decentralization design is associated to variation in regional economic voting and if responsibility attribution mediates that relationship. Using data on regional levels of unemployment and GDP together with *all* available pre-electoral surveys during the 1982-2012 period, we find evidence that regional economic voting is strongest in the Basque Country and Navarre, two regions that adopted a layer-cake model of

decentralized governance and which exhibit the highest levels of clarity of responsibility.

1. Attributions of responsibility, clarity of responsibility and economic voting

The clear-cut distribution of powers between levels of governments of the federation envisaged in *The Federalist Papers* by Hamilton, Madison and Jay is a far cry from the highly intertwined division of governmental authority in modern federal states. Certainly, the most defining feature of the distribution of policy and fiscal authority between the center and the subnational units in multilevel systems is the predominance of shared authority (see Henderson's *decentralization index*[1]; Watts 2003). This means that the widespread move towards decentralization that has taken place in the last decades (Arzaghi and Henderson 2005; Dillinguer 1994) has mainly consisted in the establishment of joint policy authority, rather than a "watertight compartment" form of power division (Rodden, 2006).

The predominance of intertwined distribution of powers between levels of government poses a challenge on the operation of democratic accountability. Accountability works as an effective retrospective mechanism to control governments insofar as there is clarity of responsibility (Powell, 2000, Key, 1966, Ferejohn, 1986). If citizens cannot clearly distinguish spheres of authority across levels of government, elections may turn out to be an ineffective mechanism to hold governments accountable, as voters' electoral punishments or rewards may be barely connected to incumbents' past performance. In addition, when responsibility is blurred, voters may become more vulnerable to politicians' strategies of blaming other levels of government to excuse or

[1] http://www.econ.brown.edu/faculty/henderson/papers.html

justify bad policy outcomes (McGraw, 1990, McGraw et al., 1993). In turn, informational asymmetries may increase politicians' incentives to develop blame-avoidance strategies.

The relationship between clarity of responsibility and electoral accountability has been extensively analysed by aggregated-level research on institutional context and economic voting. This literature suggests that the degree to which governments are held accountable for economic outcomes is conditional upon contextual factors. Different forms of horizontal division of powers, such as coalition governments or bicameral opposition, are associated to low levels of clarity, which attenuates the economy-vote relationship (Anderson, 2000, Lowry et al., 1998, Powell and Whitten, 1993, Royed et al., 2000, Hobolt et al., 2013, Nadeau et al., 2002). More recent contributions in the area have extended the reward-punishment model of voting to areas other than the economy, such as health care (Hobolt et al., 2013) or EU integration (de Vries et al., 2011).

Among the institutional conditions that may affect clarity of responsibility and performance voting, the vertical division of powers of multilevel systems has barely captured the attention of comparative research on economic voting.[2] Anderson finds evidence of weaker economic voting where multilevel governance is more prominent (2006) and shows that the transition to federal institutions in Belgium has resulted in an attenuated relationship between economic conditions and government support (2009). There is also evidence on how responsibility judgements and voting decisions operate in multi-level contexts (see for instance Cutler (2004) for Canada, Rudolph (2003a) for the US or Johns (2011) for Ontario and Scotland). Yet the institutional variation across

[2] Other scholars have included federalism as a dichotomous variables (federal-unitary) as one of the dimensions to measure institutional clarity of responsibility see Hobolt, Tilley and Banducci (2013).

federations and its potential impact on clarity of responsibility and electoral accountability remains unexplored in the literature. Federal countries exhibit enormous variation in the way policy and fiscal authority is distributed between the center and the subnational units as well as in other institutional characteristics.[3] However, there is still much to be learned about whether, among the existing institutional variety, there is a particular design that enhances clarity of responsibility and, in turn, better serves the conditions to hold politicians accountable.

A second gap in the aggregated-level literature on clarity of responsibility and economic voting is that individuals' responsibility judgements are inferred from institutional characteristics rather that measured directly. Although the micro-level foundations of this literature suggest that citizens are able to incorporate contextual information into their responsibility judgments, research has not actually addressed "the important question of how individuals acquire such information" (Rudolph 2003: 210). Recent works in the area, however, have contributed to bridge research on economic voting and responsibility judgements by providing direct evidence at the individual level on the formation of responsibility attribution and the extent to which it has an impact on voting decisions (Rudolph, 2003a, b, Cutler, 2004, Marsh and Tilley, 2009, Johns, 2011, Arceneaux, 2006). An important limit to advance comparative research in this area is

[3] There are some remarkable differences across federations in the extent of overlapping jurisdiction that may be associated to variation in levels of clarity of responsibility. For instance, in Canada, Australia and the United States executive and legislative powers tend to coincide at one level of government, which results in lower coordination requirements in policy-making and higher clarity of responsibility. On the contrary, in Germany, Austria or Switzerland state and provincial governments hold executive authority over policy areas that are legislated at the federal level (Watts 2003). This model involves a more intertwined distribution of executive and legislative authority that allows flexibility in policy-making, but probably at the cost of lower clarity of responsibilities.

the lack of comparable cross-country individual data on attributions of responsibility between different levels of government.[4]

This paper helps to advance over existing gaps in the literature by exploring whether differences in the design of decentralization agreements in modern federations results in variation in the strength of the relationship between economic conditions and vote. We espouse the argument that the economic-vote relationship will be strongest in contexts where the type of decentralization is characterized by concentrating authority and resources at one level of government, as in this context responsibility attribution is "clearer". On the contrary, in contexts where decentralization agreements involve higher levels of shared authority between levels of government clarity of responsibility will be undermined and economic voting will be weaker.

We test this argument in an asymmetric federal state, the Spanish State of Autonomies. Spain is an excellent case study because its devolution process has been characterized by being asymmetric both in its revenue and expenditure side. Cross-regional asymmetries in the distribution of policy and fiscal powers allows to test whether variation in the specific decentralization agreements have an impact on clarity of responsibility and, in turn, on the operation of economic voting. We provide evidence with individual data that the decentralization design conditions individuals' responsibility judgements: in regions where decentralization design has more closely followed a layer-cake model of federalism responsibility attribution has been clearer than in Autonomous Communities where the distribution of authority has been more

[4] A recent exception is the European Electoral Survey 2009, which includes several questions on attributions of responsibility.

intertwined. We then hypothesize that regional economic voting will be more pronounced in regions where clarity of responsibility has been more prominent.

Results show that regional economic voting is more pronounced where clarity of responsibility is highest as a result of the layer-cake nature of regional decentralization agreements. On the contrary, where the division of powers between the central government and the regions has adopted a more intertwined structure, we find no significant impact of regional conditions upon regional incumbent's support. Contrary to our expectations, regional economic voting in slow-track regions is not significantly weaker than in fast-track regions. However, a more nuanced account of the data indicates that in these regions the relationship between regional economic outputs and vote choice is driven by national coattails.

This paper advances research in three different ways. First, it provides new insights on how variation in the specific design of vertical power division may result in more or less "clear" responsibility attribution and, in turn, in more or less pronounced performance voting. Second, the article contributes to bridge research on economic voting and responsibility judgements by providing direct evidence at the individual level on the relationship between decentralization design, responsibility attribution and economic voting. Third, whereas asymmetric federalism has been mainly accounted in the literature for its "holding the state together" properties (Stepan, 1999), our study helps to advance this research by exploring its implications upon electoral accountability. Finally, our analysis of the Spanish case goes beyond a purely local study as it may be extended to explore variation in clarity of responsibility and economic voting in other asymmetric states such as Canada, Italy, Belgium or the United Kingdom. Besides, this paper may inspire further exploration of the implications of the existing variation across

federal countries in decentralization arrangements on the operation of responsibility attribution and electoral accountability.

2. Decentralization and responsibility attribution in Spain

The 1978 Spanish Constitution established different procedural mechanism for the regional governments (Autonomous Communities (ACs)) to be formed, each one involving different levels of authority over revenues and expenditures (Aja, 2003, Almendral, 2003). The asymmetric nature of the devolution path provided Basque Country and Navarra with the highest level of autonomy. These regions were granted broad executive and legislative powers over many policy areas such as health care, education and social policy. In addition, they assumed a regional system of financing that provided full regional autonomy over major taxes. As these regions accessed autonomy at the beginning of the devolution process and with greater levels of authority than the rest, we will define them as the "fast-track" regions.

A second group of regions that we will label the "mixed-track" group were endowed with the same expenditure powers as the Basque Country and Navarre, but with limited powers over revenues. These regions have been financed through a regional system of financing (the so-called "common system") that has provided them with limited taxation powers. As a result, they have traditionally remained dependent upon transfers from the central government. Finally, "slow-track" regions were endowed with very limited autonomy over expenditures, as policy areas such as health care, education and social policies remained in the hands of the central government. These regions were gradually endowed with new competences on expenditure powers during the second half of the

1990s, which eventually put an end to cross-regional asymmetries in expenditure powers. As for revenue powers, slow-track regions have been financed through the "common system" of regional financing and thus have enjoyed very limited powers over taxes (León, 2010, 2012)). Table 1 exhibits the classification of Autonomous Communities according to levels of authority and decentralization design.

Table 1. Classification of Autonomous Communities according to regional governments expenditure and revenue powers and decentralization design

	Fast-track regions[1]	*Mixed-track regions*[2]	*Slow-track regions*[3]
Expenditure powers	High	High	Low[4] [until mid-1990s] High [since 2002]
Revenue powers	High	Low	Low
Decentralization design	Layer-cake	Marble-cake	Layer-cake [until mid-1990s] Marble-cake[since 2002]

[1]Basque Country and Navarre
[2]Andalusia, Catalonia, Canary Islands, Comunidad Valenciana, Galicia.
[3] Extremadura, Murcia, La Rioja, Cantabria, Asturias, Balearic Islands, Aragon, Castilla León, Castilla la Mancha and Madrid.
[4] From 1996 until 2001 slow-track regions were gradually transferred expenditure powers over education, social policies and health care (see León 2010). This devolution process put an end to cross-regional asymmetries in expenditure powers.

The specific decentralization arrangements in fast-track regions have resulted in a sort of *layer-cake* model of federalism. Regional governments in the Basque Country and Navarra have authority over the lion's share of public policies and tax income, whereas the central government keeps powers over competencies such as international relations or defence. This model enhances clarity of responsibility because it is the regional level of government that concentrates most powers and authority, particularly in those policy areas that involve higher levels of interaction with citizens (taxation, health care or education). On the contrary, decentralization design in the mixed-track group has

followed an unbalanced distribution of powers, which has endowed regional governments with high powers over expenditures but revenue authority has mostly remained in the hands of the central government. This model follows more closely a marble-cake federal design, as most government decisions over revenues and expenditures are highly intertwined. As a result, no level of government clearly predominates over the other, which hampers clarity of responsibility. Finally, in slow track regions the distribution of powers until the mid-1990s enhanced responsibility attribution, as the central government concentrated major powers over revenues and expenditures. The decentralization model in these regions became more intertwined as they were gradually endowed with authority over public policies that take up most of the regional budget (such as health care, social policies or primary, secondary and university education). Devolution ended in 2002, with the transfer of health care powers to all slow-track regions, a process that virtually put an end to cross-regional asymmetries in expenditure powers.

Previous empirical evidence suggests that cross-regional variation in the design of decentralization in Spain has conditioned individuals' responsibility attribution. Using survey data from 1998, León (2010) finds evidence that the relationship between decentralization design and responsibility attribution is "U"-shaped. In regions where there was one level of government that clearly predominated over the other (the central government in slow-track regions until the end of the 1990s, and the regional government in fast-track regions throughout the period), citizens were more capable to assign responsibility for distinct policy areas. In Autonomous Communities where the distribution of powers was more intertwined (mixed-track regions), individuals performed worse in assigning responsibilities between different levels of government.

Citizens were more capable to assign responsibilities in fast-track and slow-track regions because they exhibited a comparative informational advantage in those policy areas that form part of the responsibilities of the *predominant* level of government in their region. In other words, the empirical evidence suggests that individuals perform better because they are simple aware about which is the principal level of government in the region (León 2010:97). Additional analyses indicate that the transition from a layer-cake to a more intertwined distribution of powers in slow-track regions has hampered clarity of responsibility in those Autonomous Communities (León 2012).

The analysis of responsibility attribution with more recent survey data shows that the assignment of responsibility is clearest in regions with a layer-cake type of power division, i.e. Navarre and the Basque Country (fast-track regions). Table 1 displays information about the capacity of individuals from different groups of regions to identify the responsible level of government for policy areas that predominantly fall within the regional governments' sphere of powers (health care, education and housing policies) in 2010 and 2012. The variable *knowledge scale* measures the number of policy areas for which individuals assign responsibility correctly (responses have been coded as 1 when the individual correctly identifies the level of government in a policy area, and 0 when she fails).[5] Data shows that both in 2010 and 2012 the percentage of individuals that are capable to assign responsibility attribution correctly is highest in fast-track regions.

[5] Survey were conducted by the Centro de Investigaciones Sociológicas (Centre for Sociological Research) between January and February 2010 (survey code: 2829) and between September and October 2012 (survey code: 2956).The survey question asks*: 'Which is the most responsible level of government (central government, regional government or local government) if things go well or badly in the following policy areas?'*. Don't know" and "Don't answer" are coded as missing. An alternative specification of the knowledge scale coding the "Don't know" as zero yields similar results.

Table 2. Attributions of correct responsibility over regional competencies (health care, education and housing policies) in 2010 and 2012

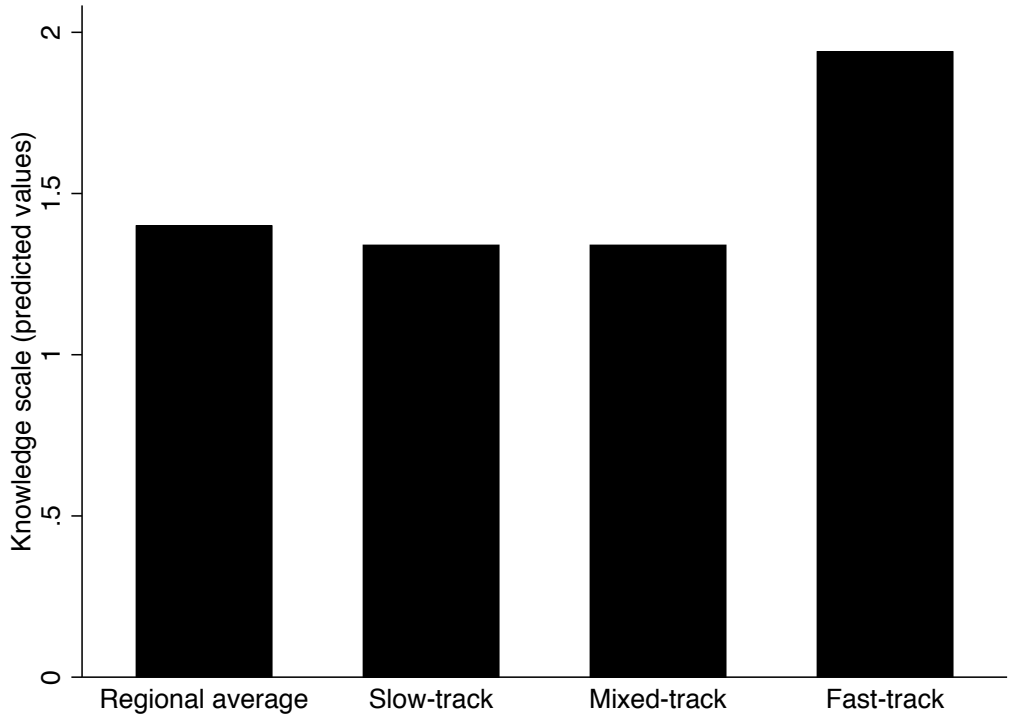
Knowledge Scale[1]	*Slow-track regions*		*Mixed-track regions*		*Fast-track regions*	
	2010	2012	2010	2012	2010	2012
0	33,3	34,8	33,8	33,7	16,4	20,8
1	23,6	21,2	21,6	21,3	12,2	16,3
2	24,5	24,1	26,8	26,5	24,7	29,8
3	18,3	19,7	17,6	18,3	46,5	32,9
	100	100	100	100	100	100

[1] Number of policies for which individuals assign responsibility attribution correctly

The differences exhibited in Table 1 are significant if we estimate the relationship between type of region and responsibility attribution with an econometric model. Figure 1 exhibits calculations of predicted probabilities of an econometric model where the dependent variable is *knowledge scale* and the most important independent variable is decentralization design (slow-track, mixed-track and fast-track). Political and socioeconomic characteristics are included as control variables[6] and observations have been clustered by region.

[6] As empirical evidence shows that attributions of responsibility are highly endogenous to partisanship, the econometric model controls for ideology and vote in last national elections. In addition, as we showed elsewhere (Leon 2012a) preferences with regard to the centre-periphery cleavage may generate biases in responsibility attribution. Individuals may ascribe responsibilities to the level of government with which they are more closely identified (central versus regional government), rather than to the government that actually holds the responsibility. Respondents may therefore interpret responsibility attribution as a normative question about which level of government *should* hold competences. Accordingly, individuals' national identity, preferences over regional autonomy as well as over the devolution model are included as controls. Other independent control variables are political knowledge (if they know the name of the regional Prime Minister), participation in last general election, age, education and work status (1= employed 0=unemployed, student, retired).

Figure 1. Predicted values of Scale of Knowledge for central and regional policy areas in 2010



The predominance of the regional level of government in fast-track regions is also illustrated by the fact that in these regions individuals pin the regional government down as the most responsible level of government 47% of the times, whereas in mixed-track and slow-track regions the percentage decreases to 32 and 30 per cent, respectively[7].

In summary, empirical evidence suggests that decentralization asymmetries in the Spanish devolution model have conditioned individuals' responsibility judgements. Assignment of responsibility across levels of government has been clearest in regions

[7] These numbers are calculated as the average percentage of individuals that ascribe responsibility to the regional level of government (vs. central and local government) for a bunch of nine policy areas (housing, security, education, unemployment, infrastructures, health care, environment, economy and immigration).

where decentralization design has more closely followed a layer-cake model of federalism. We therefore espouse the argument that insofar as accurate responsibility judgments are necessary for voting decisions, the relationship between regional economic outcomes and support for the regional incumbent will be more pronounced in regions where clarity of responsibilities has been highest throughout the democratic period. More specifically, we hypothesize that regional economic voting will be more pronounced in the Basque Country and Navarre than in the rest of regions. In other words, we predict that electoral support of the regional incumbent in fast-track regions will be more strongly associated to regional economic performance than in slow-track and mixed-track regions.

H1: Regional economic voting will be higher in fast-track than in slow-track and mixed-track regions

3. Data, variables, and methods

Data and variables

Our hypothesis is tested using a dataset that contains all available pre-election surveys of the Spanish regional elections held in from 1982 to 2012. The dataset includes information on 123 elections from the 17 Spanish regions, but we lose 16 elections because they lacked some relevant political variables. All surveys belong to the Centre for Sociological Research (CIS) catalogue and follow a similar survey methodology.[8]

Dependent variable: all Spanish regions adopted a parliamentary form of government and, therefore, coalition governments are possible. In fact, 34% of the cases included in

[8] Recent surveys are freely available online at www.cis.es

our dataset are coalition governments. In these settings, it is more difficult to determine who is accountable for government performance: are all parties in the coalition equally punished or rewarded? Or some members of the government are held more accountable than others? As mentioned above, accountability becomes more difficult in coalition governments, where the assignation of responsibility of policy outcomes is more problematic (Lewis-Beck 1988)(Powell and Whitten, 1993).

The existing literature shows that not all members of the coalition are equally held responsible for government outcomes. The assignment of responsibility within the coalition depends on the size of the party (Anderson 2000), the number of portfolios the party holds (Duch and Stevenson 2008), the party who is perceived as the agenda setter (Duch, Przepiorka and Stevenson 2012) or the level of centralization/ compartmentalization of the cabinet (Falcó-Gimeno 2012). Hence, the way in which voters distribute rewards and punishments among the different members of the coalition depends on the political context. Yet, it is generally the Prime Minister's party the one that tends to be more affected by economic performance (Urquizu 2008).

Accordingly, our dependent variable takes value 1 when respondents intend to vote for the regional Prime Minister's party and 0 when they intend to do it for any other party.[9] Hence, our models assume that only Prime Ministers are held accountable for economic outcomes. However, the conclusions of this paper do not substantially change if we include all parties in the coalitions as incumbent parties.

Independent variables: We analyze accountability in regional elections by focusing on the electoral effect of economic outcomes. We rely on two objective measures that capture the evolution of the economy at the regional level: unemployment growth and

[9] This is the also the dependent variable used in some previous literature on economic voting (i.e. Duch and Stevenson 2008 or Fortunato and Stevenson 2013).

the GDP growth. Both variables are measured as the mean annual change (in percentage points) during the past mandate (four years in most of the cases). The data comes from the official statistics of the *National Statistics Institute* (INE) economic series.

The variable "region type" classifies the different regions in Spain in three categories depending on their decentralization design (see Table 1 in section 2): first, the slow-track regions which were initially endowed with lower levels of expenditure and revenue authoriy; second, the mixed-track regions, which accessed autonomy with higher levels of expenditure powers than ordinary regions; and, third, the fast- track regions, which retains control of fiscal revenues. The most important independent variable in the econometric model is the interaction between "region type" and unemployment and GDP outputs. The interaction captures the moderating effect of decentralization design upon the relationship between economic outputs and incumbent support. According to our hypothesis, we expect the interaction coefficient to be highest in fast-track regions. .

We also introduce in our models the variable "Affilitated", which takes value 1 when both regional and central levels are ruled by the same party, and 0 otherwise. We use this variable to control for the potential coattail effects of the national elections at the regional level.

Models include additional individual- and contextual-level control variables. At the individual level, we control for respondents' education, sex, age, employment status, ideology (left-right self-placement) and political knowledge. This latter variable is an index that measures voters' knowledge of the three main party leaders of the region and it ranges from 0 (the respondent affirms that he doesn't know any candidate) to 3 (the respondent affirms that he knows all three candidates).

At the aggregate level, we introduce the Effective Number of Parties (ENP). [10] We expect that the likelihood of voting for the government decreases as level of fragmentation of the party system increases. We also control for the number of days between General and Regional elections and the type of government (majoritarian single party governments (as base category), minoritarian single party governments, majoritarian coalitions and minoritarian coalitions).[11]

Methods

Since our models combine individual and contextual-level variables, we use multilevel techniques. In particular, we estimate a logistic random intercept model, where the intercept is composed of an average value for the groups (γ_{00}) and a random value to account for the variation across groups (U_{0j}). Thus, our final model specification is the following:

$$\log\frac{(\pi_{ij})}{(1-\pi_{ij})} = \gamma_{00} + \gamma_{1j}x_{1j} + \beta_{1j}x_{1j} + R_{ij} + U_{ij}$$

where the random effects are R_{ij} (the unexplained individual-level residual) and U_{ij} (the group-level one). B_{ij} is a fixed effect of the individual level variables and γ_{1j} are group-level variables that explain variation in the intercept. In our models we have 107 observations (regional elections) at the contextual level and 115916 individuals.

[10]The formula is the following: $N = \frac{1}{\sum_{i=1}^{n} P_i^2}$, where *n* is the number of parties competing in the elections with at least one vote and P_i is the vote share of each party

[11] We use the "Observatory Coalition Governments in Spain" dataset (University of Barcelona) to classify the regional governments. Data reachable online at: http://www.ub.edu/OGC/index_es.htm

4. **Results**

In Models A1 and B1 of Table 3 we estimate the effect of the economy on incumbent voting. These initial models do not take into consideration the conditional effects generated by the type of regional decentralization or by the party affiliation of the regional incumbent. The estimates of these two initial models show that incumbents' electoral success is indeed influenced by the evolution of the regional economy. The coefficients associated to unemployment and GDP growth variables show the expected sign and they are statistically significant at the $p<0.01$ level.

In order to have a more intuitive idea about the magnitude of the effect of the economy, we plot in Figure 1 the predicted probabilities of voting for the incumbent.[12] The unemployment growth shows a negative slope: the probability of voting for the incumbent is 0.5 when unemployment decreases 2.5 percentage points (our sample minimum) and the probability drops to 0.38 when unemployment increases in 5 percentage points (sample maximum). In the case of GDP growth the slope is positive and steeper than with unemployment. The probability ranges from 0.33 when GDP decreases 2.5 percentage points (sample minimum) to 0.55 when the economy grows 7 percentage points (sample maximum).

[12] The predicted probabilities are estimated keeping all remaining variables at their mean.

Table 3. The effect of unemployment and GDP growth on incumbency voting

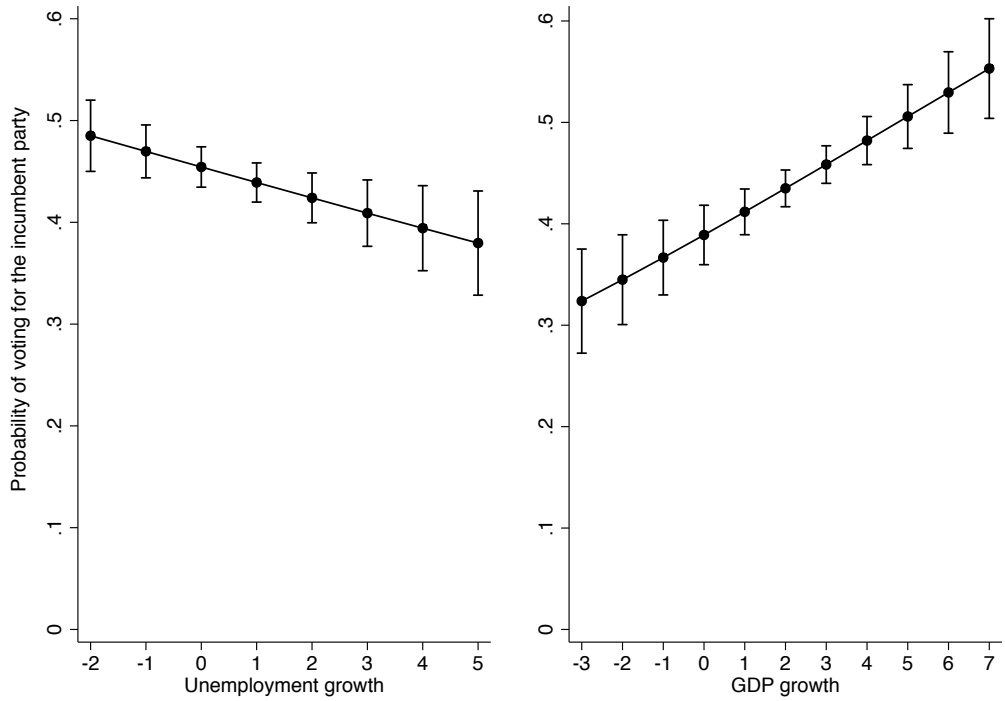
	Unemployment Growth						GDP growth					
	Model A1			Model A2			Model B1			Model B2		
Individual-level variables	Coef.	*S.E.*	Sig.	Coef.	S.E.	Sig.	Coef.	*S.E.*	Sig	Coef.	S.E.	Sig.
Ideology												
Centre-Left	0.66	(0.03)	**	0.66	(0.03)	**	0.66	(0.03)	**	0.66	(0.03)	**
Centre	0.78	(0.03)	**	0.78	(0.03)	**	0.78	(0.03)	**	0.78	(0.03)	**
Centre-right	1.09	(0.03)	**	1.09	(0.03)	**	1.09	(0.03)	**	1.09	(0.03)	**
Right	0.88	(0.03)	**	0.88	(0.03)	**	0.88	(0.03)	**	0.88	(0.03)	**
No ideology	0.78	(0.03)	**	0.78	(0.03)	**	0.78	(0.03)	**	0.78	(0.03)	**
Education												
Primary	-0.17	(0.02)	**	-0.17	(0.02)	**	-0.17	(0.02)	**	-0.17	(0.02)	**
Secondary	-0.44	(0.03)	**	-0.44	(0.03)	**	-0.44	(0.03)	**	-0.44	(0.03)	**
Vocational	-0.39	(0.03)	**	-0.39	(0.03)	**	-0.39	(0.03)	**	-0.39	(0.03)	**
University	-0.65	(0.03)	**	-0.65	(0.03)	**	-0.65	(0.03)	**	-0.65	(0.03)	**
Age	0.01	(0.00)	**	0.01	(0.00)		0.01	(0.00)		0.01	(0.00)	
Laboral status												
Retired	0.16	(0.02)	**	0.16	(0.02)	**	0.16	(0.02)	**	0.16	(0.02)	**
Unemplyed	-0.02	(0.02)		-0.02	(0.02)		-0.02	(0.02)		-0.02	(0.02)	
Student	-0.13	(0.03)	**	-0.13	(0.03)	**	-0.13	(0.03)	**	-0.13	(0.03)	**
Housework	0.07	(0.02)	**	0.07	(0.02)	**	0.07	(0.02)	**	0.07	(0.02)	**
Sex (female)	0.01	(0.01)		0.01	(0.01)		0.01	(0.01)		0.01	(0.01)	
Political Knowledge	-0.09	(0.01)	**	-0.09	(0.01)	**	-0.09	(0.01)	**	-0.09	(0.01)	**
Contextual-Level Variables												
Affiliated	-0.05	(0.08)		-0.06	(0.08)		-0.08	(0.08)		-0.09	(0.08)	
Coalition Government												
Majority	-0.13	(0.12)		-0.13	(0.12)		-0.06	(0.12)		-0.06	(0.11)	
Minoritarian coalition	-0.33	(0.12)	**	-0.32	(0.12)	**	-0.32	(0.11)	**	-0.33	(0.11)	**
Majoritarian coalitiion	-0.16	(0.16)		-0.22	(0.15)		-0.15	(0.14)		-0.19	(0.14)	
Nº days since last General Election	0.00	(0.00)		0.00	(0.00)		0.00	(0.00)		0.00	(0.00)	
Number of effective Parties	-0.23	(0.07)	**	-0.23	(0.07)	**	-0.23	(0.06)	**	-0.23	(0.06)	**
Type of region												
Slow-track region	0.15	(0.10)		-0.23	(0.16)		0.16	(0.09)	'	-0.26	(0.14)	
Mixed-Trac k region	0.20	(0.16)		-0.13	(0.15)		0.20	(0.15)		-0.27	(0.23)	
Economy. *Unemployment growth (Models A) / GDP growth (Models B)*	-0.06	(0.02)	**	-0.19	(0.08)	*	0.09	(0.02)	**	0.18	(0.06)	**
Interaction terms												
Economy x Slow-track				0.11	(0.08)					-0.09	(0.07)	
Economy x Mixed-Track				0.18	(0.09)	*				-0.13	(0.07)	'
Constant	0.15	(0.23)		0.42	(0.30)		-0.13	(0.23)		0.12	(0.24)	
/lnsig2u	-1.98	(0.14)		-2.03	(0.14)		-2.10	(0.14)		-2.13	(0.14)	
sigma_u	0.37	(0.03)		0.36	(0.03)		0.35	(0.03)		0.34	(0.02)	
rho	0.04	(0.01)		0.04	(0.01)		0.04	(0.01)		0.03	(0.00)	
Number of observations	115916											
Number of groups	107											

Multilevel logistic regression maximum likelihood estimates. ‘ significant at p<0.1 * significant at p<0.05 ** significant at p<0.01.

In summary, the effect of the economy on Spanish regional elections indicates that the classic punish/reward model usually studied at the national level also operates at the

regional one. Although the literature has provided mixed results on this topic, these findings are consistent with some of the studies in other countries (i.e. Niemi, Stanley and Vogel for the US, …).

Figure 1. The economic voting in the Spanish regional elections: the effect of unemployment and the GDP growth.



Note: predicted probabilities using models A1 and B1 of Table 1. All remaining variables are kept in their means.

These initial findings overlook the significant power asymmetries between sub-national governments in Spain. As we argued in the introduction, multilevel institutional designs affect clarity of responsibility and, as a consequence, moderate the relationship between the economy and vote choice. Accordingly, regional economic voting in Spain will be

conditioned by the design of decentralization. More specifically, we expect higher economic voting in fast-track regions than in mixed-track or slow-track regions.

In models A2 and B2 of Table 1, we test this hypothesis by interacting economic variables and type of region. We expect coefficients in mixed-track and slow-track regions to be lower than in fast-track regions in. Unemployment and GDP growth coefficients in models A2 and B2 show the expected sign and they are statistically significant at $p<0.05$ and $p<0.01$ level respectively, which indicates that the relationship between economic outcomes and support to the regional incumbent is stronger in fast-track regions (the base category). Hence, our estimates suggest that voters in regions where clarity of responsibility is highest hold incumbents more accountable for the evolution of the economy in the region.

The interaction terms in both unemployment and GDP models also show the expected sign. Yet not all of them are statistically significant. We find significant differences between fast-track and mixed- track regions (model B2), although the interaction term is only statistically different from zero at $p<0.10$. Overall, models A2 and B2 show that while economic conditions have an impact upon regional incumbent support in fast-track regions, they are insignificant in the mixed-track group. Indeed, the coefficients of *unemployment growth* and *GDP growth* for these latter regions are -0.01 and 0.06 respectively, and none of them are significantly different from zero.[13]

As for differences between economic voting in fast-track and slow-track regions, the interactions between economic outputs and the slow-track dummy variable show the expected sign. However, coefficients are not statistically significant. We therefore do not find evidence that supports the argument that economic voting will be weaker in

[13] The coefficients unemployment growth and GDP growth for mixed-track regions are calculated as the the sum of the main effect and the interactive term. The coefficient "GDP growth" (0.06) is only statistically significant at the $p<0.11$ level.

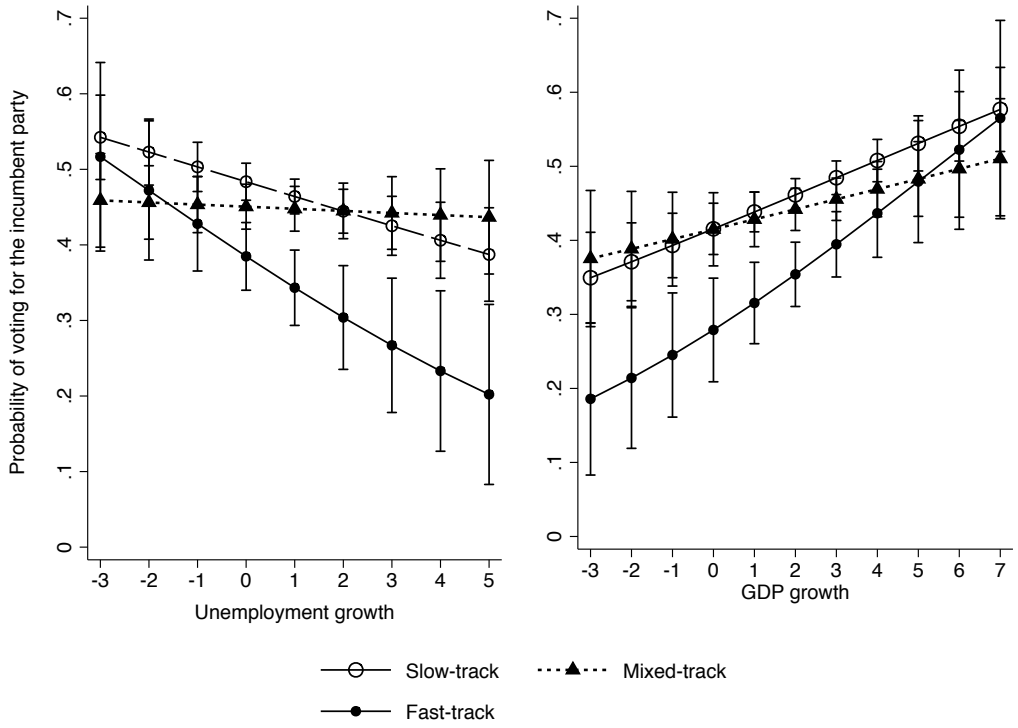
slow-track regions. Actually, results show that both unemployment and GDP growth have an impact on incumbency vote in slow-track regions.[14] Hence, we find evidence consistent with economic voting in slow-track regions.

Figure 2 illustrates the moderating effect of type of decentralization on economic voting. The left graph of the figure exhibit results for unemployment growth, showing that the slope is steeper in fast-track regions, whereas it is almost flat in mixed-track ones. This figure provides support to the argument that regional economic outputs have a stronger impact upon vote choices in regions where clarity of responsibility is highest. The probability of voting for the incumbent party in fast-track regions is 0.5 when unemployment is reduced in 2.5 percent points, but this probability decreases to 0.20 when unemployment grows 5 points. Yet, in mixed- track regions the probability of voting for the incumbent is about 0.45 irrespectively of the evolution of the unemployment in the region. The trend in slow-track regions fallsin-between the previous two types.

A similar pattern emerges in the right graph of Figure 2, which shows the effect of GDP growth upon regional incumbent support. Although the slope of mixed-track regions is not completely flat, confidence intervals indicate that most the differences are not significantly different from zero.

[14] The coefficients of unemployment and GDP growth for slow-track regions are the sum of the main effect and the interactive term (-0.08 and 0.09 respectively) are statistically significant at $p<0.05$ level.

Figure 2. The effect of the unemployment and the GDP growth in incumbency vote, by different type of regions.



Note: predicted probabilities using models A2 and B2 of Table 1. All remaining variables are kept in their means.

In sum, the impact of economic conditions upon vote is strongest in fast track-regions, whereas its effect is smaller (although not statistically significant) in slow-track regions. Finally, empirical evidence suggests that in mixed track regions economic performance does not have an impact on electoral support to the regional incumbent. These results are not entirely consistent with our expectations. We hypothesized that electoral support of the regional incumbent in fast-track regions would be more strongly associated to regional economic performance than in the remaining regions. This is the case of

mixed-track regions, but we found no statistical significant differences between fast-track and slow-track regions. Our findings rather show a curvilinear relation, where the regional economic conditions only matters in the two extreme models of decentralization design (slow- and fast-track regions).

An alternative argument to account for regional economic voting in fast-track and slow-track regions is that electoral results are partially driven by national electoral dynamics. This speaks to the issue of coattail effects and the second-order nature of regional elections (Reif and Schmitt, 1980, Jeffery and Hough, 2009). According to this argument, citizens would not regard the state of the regional economy as an indicator of regional incumbent's performance but assess it as the result of economic decisions taken at central level. The evaluation of national economic performance spillovers on regional elections through vertical party links.

If this argument is true, then the relationship between regional economic indicators and the electoral support for regional incumbents would be stronger among affiliated regions (regional chief executives that share party affiliation with the federal chief executive). On the contrary, if voters regard the regional administration as responsible for regional economic conditions, then economic downturns (upturns) would be negatively (positively) associated to support to the regional incumbent, regardless of the affiliated status of the regional executive.

The coattails-effect argument is unlikely to drive results in fast-track regions because in almost all regional elections the regional and national executives were ruled by different

parties[15]. In addition, empirical evidence presented in section 3 showed that the regional administration is the predominant level of government in these regions, which runs opposite to the idea of individuals interpreting regional conditions as the result of national performance.

The second-order nature of regional elections is a more plausible argument to account for empirical results in slow-track regions because affiliated governments represent 63% of the observations. In addition, the central government has been the most predominant level of government for a long period after these regions accessed autonomy, so it is likely that citizens still regard the regional arena as a referendum of central government performance.

In Table 4, we estimate new regression models only for the subsample of slow-track regions, interacting *affiliated* and the economic variables. We can only be confident about the existence of economic voting at the regional level if we find significant effects of unemployment and GDP growth in both affiliated and non-affiliated governments.

[15] The only exceptions are Navarrese regional elections of 1999 and 2003, when the People's Party (PP) was ruling the national government and the Navarrese Peoples Union (UPN) the regional one. Although PP and UPN are not the same party, from 1991 to 2008, PP decided not to run in Navarresse elections and let UPN to be its branch in that region. Empirical results remain robust to the exclusion of these two cases from the sample.

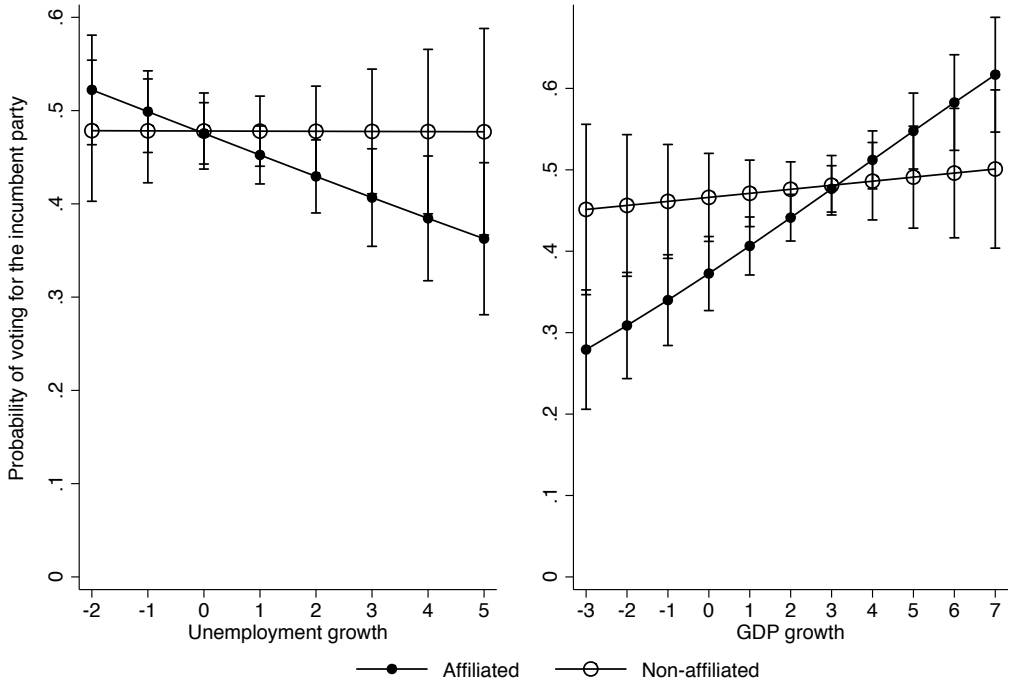
Table 4. Regional economic voting and coattail effects in slow-track regions

	Unemployment Model C1			GDP Model C2		
	Coef.	*S.E.*	Sig.	Coef.	S.E.	Sig
Coalition Government						
Majority	0.20	(0.17)		0.33	(0.15)	*
Minoritarian coalition	-0.04	(0.20)		-0.08	(0.17)	
Majoritarian coalitiion	0.00	(0.17)		-0.02	(0.25)	
Nº days since last General Election	0.00	(0.00)		0.00	(0.00)	
Number of effective Parties	-0.54	(0.15)	**	-0.51	(0.13)	**
Affiliated (base category: affiliated)	-0.03	(0.11)		0.42	(0.15)	**
Economy. *Unemployment growth (Models C1) / GDP growth (Models C2)*	-0.09	(0.03)	**	0.14	(0.03)	**
Economy x Affiliated	0.09	(0.06)		-0.12	(0.05)	**
Constant	1.41	(0.50)	**	0.64	(0.48)	
/lnsig2u	-2.07	(0.19)		-2.28	(0.20)	
sigma_u	0.36	(0.03)		0.32	(0.03)	
rho	0.04	(0.01)		0.03	(0.01)	
Number of observations	50508					
Number of groups	59					

Multilevel logistic regression maximum likelihood estimates. * significant at p<0.05 ** significant at p<0.01. Note: For space reasons, the table does not report the individual control variables of Table 1. Information is available upon request.

The results are compatible with the existence of coattail effects. While the economy does have an impact on incumbent voting in affiliated executives, the effect totally disappears in regions with non-affiliated governments (see Figure 3). Hence, it seems that voters are holding the central (and not the regional) government accountable for the economic outcomes of the region.

Figure 3. Regional economic voting in slow-track regions, by affiliated governments.



Note: predicted probabilities using models of Table 2. All remaining variables are kept in their means.

In sum, the exploration of regional economic voting in Spain confirms our expectations that economic voting would be higher in fast-track regions, where clarity of responsibilities over regional powers is highest. Although our initial models seem to find a significant impact of the economy in slow-track regions, the result is driven by the contamination from the national arena to regional one. Voters in these regions seem to use their vote to punish the central government for the evolution of the economy in the region. Once we take coattail effects into account, our hypothesis is confirmed: only incumbents of fast track regions are hold accountable for economic outcomes.

4. **Conclusions**

In this paper we try to shed some light on how the institutional design in multi-layered governments affects accountability. In particular, we examine whether economic voting is weaker in those institutional designs that hinder clarity of responsibility. Our hypothesis is that those models of federalism where the distribution of powers are clearer (layer cake model) accountability is higher than in models where powers between levels are more intertwined (marble cake model). In Spain, the division of revenue and expenditure powers between the different regions is not symmetric. This setting provides us a good case study to test whether economic voting is mediated by the cross-regional variation in decentralization design.

We test the hypotheses using all available pre-electoral surveys during these three decades of regional elections in Spain (107 surveys in total). Our results show that regional economic voting is stronger in Basque Country and Navarre, the tow regions that adopted a "layer-cake" model, where clarity of responsibilities is highest. Contrary to our expectations, we find that economic voting was also significant in slow track regions. Yet, the relation between the economy and incumbent voting in these regions are mainly driven by national coattails. Economic voting only emerges when national and regional government have the same incumbent party. Hence, in these regions, the national arena contaminates the regional one: voters seem to use the regional elections to punish the central government for the economic situation of the region.

In sum, once we bring coattail effects into consideration, the evidence we provide in these pages is consistent with our expectation that accountability only emerges in those institutional designs that enhances clarity of responsibilities.

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