LETTER

Electoral Spillovers in an Intertwined World: Brexit Effects on the 2016 Spanish Vote

Agelos Delis[1], Konstantinos Matakos[2]* and Dimitrios Xefteris[3]

[1]Aston Business School, Birmingham, [2]Department of Political Economy, King's College London and [3]Department of Economics, University of Cyprus
*Corresponding author. Email: konstantinos.matakos@kcl.ac.uk

In the wake of the Brexit referendum result on Friday, 24 June 2016, IBEX – the main index of the Spanish stock market – fell by 12 per cent, which represents the biggest single-day drop in its twenty-five-year history. Hence, it is arguably fair to say that Brexit was not anticipated in Spain, and – during those days at least – generated additional fear of destabilization and uncertainty in the country's fragile party system and economy. Two days later (Sunday, 26 June 2016) Spain held parliamentary elections for a second time within a few months searching for a way out of deadlock. The last election was held in December 2015, but no agreement for the formation of a coalition government could be reached. According to opinion polls between December 2015 and early June 2016, the leftist radical alliance between Podemos and Izquierda Unida was on course of maintaining its popularity, but in the June 2016 election its vote share fell from 24.5 per cent to 21.2 per cent.

Was this unanticipated drop in electoral support for anti-systemic parties at least partially a consequence of the unprecedented short-run uncertainty and instability in Spain caused by the Brexit vote? Many observers and analysts[1] have argued that voters reacted reasonably to the increasing unpredictability by refusing to further fuel the fire and gave less power to radical leftist parties. Indeed, a recent strand of literature –which includes, but is not limited to, Klößner and Sekkel (2014) and Balli et al. (2017) – has established that national borders are not enough to prevent political instability and uncertainty spillovers: systemic uncertainty and instability generated in an interconnected system such as the EU by exogenous (or endogenous) incident travel abroad.[2] Many factors determine the size and speed of such spillovers; the degree of economic integration between the origin and destination countries is naturally the dominant one. Undoubtedly, the record drop in the IBEX is a striking indication that the uncertainty generated by Brexit affected Spain both economically and politically – as stock market fluctuations also reflect political instability. Importantly, while economic anxiety often plays a large role in fueling uncertainty, the Brexit vote and its consequences might well extend beyond exclusively economic concerns. For example, Brexit might have changed Spanish voters' beliefs about the prospects of a generalized institutional crisis (for example, more countries leaving the EU) or even the like-lihood of a Spanish exit should the anti-systemic parties prevail. In other words, the Brexit vote might have generated fears of multi-dimensional instability both domestically and at the European level.

---

[1]See, e.g., Frayer 2016.

[2]Similarly, Böhmelt et al. (2016) establish the existence of policy diffusion from one political system to another. A recent discussion (see, e.g., Rooduijn 2014) has also ensued on possible diffusion mechanisms of populism across European countries.

But did Brexit affect the Spanish vote a couple of days later as well? A rational choice theory argument would suggest that it presumably did: when faced with an exogenous increase in the level of systemic uncertainty and instability (at the national and European levels), rational voters should react by opting for greater political stability that systemic parties offer. In a turbulent Europe, shocked by the vote for Brexit, the choice to vote for a systemic party (such as the Partido Popular (PP) or the Partido Socialista Obrero Español (PSOE) in Spain) which is a known variable in the European equation seemed to be a more stable option.[3] Despite the apparent reason behind this argument, there is so far no evidence that without the shock caused by the Brexit vote, this drop in electoral support for radical parties in Spain would not have taken place.[4] This short note aims to fill this gap by providing the first piece of causal evidence in support of the described link.

By exploiting, as a natural experiment, the fact that a part of the Spanish population residing abroad voted before the Brexit vote while locals voted right after Brexit, we find strong indications that Brexit affected the Spanish vote.[5] This institutional aspect allows us to conduct a differences-in-differences analysis similar in to the one used by Montalvo (2011) and identify the effect on electoral behavior of being exposed to the Brexit result as opposed to voting without it having occurred. In the next section we describe our empirical approach and then discuss the results and their limitations.

Data and Empirical Approach

We obtain data for electoral results from the Spanish Ministry of Interiors. We use information for four general elections (2008, 2011, 2015 and 2016) and two European elections (2009 and 2014). The size and composition of non-residents' districts changed considerably in 2009 (up to 2009 the actual Censo Electoral de los Residentes Ausentes (CERA) vote was, on average, slightly above 1 per cent of the total vote, while from 2011 on it was about 0.3 per cent).[6] Our sample contains data for eighteen provinces, and we have information about the votes of both Spanish citizens residing in Spain (non-CERA votes) and those living abroad permanently[7] (CERA votes) for each province. We have data on how many votes each party received from both groups of voters for all the elections mentioned above. Hence, we can organize our data as a panel with six elections and thirty-six districts (eighteen non-CERA and eighteen CERA).

We define non-systemic parties as those that participated in the Unidos Podemos coalition for the June 2016 election and left-wing, green and nationalist parties from different provinces, such as Izquierda Unida in all its earlier incarnations and Compromís-Q. The left-wing nationalist parties we include in our definition are Esquerra Republicana de Catalunya in all its different formats over the years for Catalunia, and Euskal Herria Bildu for the Basque Country. Other examples of left-wing and green nationalist parties are Europa de los Pueblos-Verdes, a coalition of nationalist parties from Catalunia, Basque Country, Aragon, Galicia, Balearic Islands and Castilla y León. Table 1 summarizes our definition of non-systemic parties as it evolves over time.

---

[3]For recent discourse regarding the rise of populism in European countries – especially with respect to the issue of European integration – see Hobolt and de Vries (2016).

[4]If anything, popular wisdom would suggest that, as is the case of Donald Trump's success in the November 2016 US presidential election, the populists' success in the Brexit vote might have boosted anti-systemic parties in the Spanish elections as well.

[5]Natural experiments are consistently being exploited for the study of a variety of political economy questions. Recent examples include, but are not limited to, Giani (2017), Dinas et al. (2018), Giannetti and Grofman (2011), Ferwerda (2014), Spenkuch and Toniatti (2015), De Melo and Silveira (2011), Lucardi (2017).

[6]While the actual CERA vote decreased by approximately 60–70 per cent, the eligible CERA voters decreased by more than 90 per cent, since after 2009 registered voters had to re-apply for every election in order to be allowed to vote.

[7]There is another category of voters that are temporarily abroad (electores españoles residentes en España temporalmente en el extranjero, ERTA: 14,810 votes in total for 2016) and vote by post or at Spanish consulates abroad, but their votes are counted together with the domestic postal votes and no information is provided about which party they voted for.

Table 1. Non-systemic parties for general and European Elections, 2008–16

Election	Parties
General Elections 2008	Izquierda Unida (IU)
	Esquerra Republicana de Catalunya (ERC)
European Elections 2009	La Izquierda (IU-ICV-EUiA-BA)
	Europa de los Pueblos-Verdes (Edp-V)
General Elections 2011	AMAIUR
	Compromís-Q
	Esquerra Republicana
	La Izquierda Plural (IU-LV)
European Elections 2014	Podemos
	La Izquierda Plural
	Primavera Europea
	Los Pueblos Deciden (LPD)
	L'Esquerra pel Dret a Decidir (EPDD)
General Elections 2015	En Comú
	Podemos
	Unidad Popular: Izquierda Unida, Unidad Popular en Común
	Euskal Herria Bildu
	Podemos-En Marea
	Podemos-Compromís
	Esquerra Republicana de Catalunya - Catalunya Sí (ERC-CATSI)
General Elections 2016	En Marea
	En Comú Podem
	Unidos Podemos
	Euskal Herria Bildu
	Compromís-Podemos
	Esquerra Republicana de Catalunya - Catalunya Sí (ERC-CATSI)

While other political parties can be described as non-systemic, our definition attempts to capture: (a) parties that appear not to be part of the political establishment and (b) parties that had a significant presence on the Spanish political scene (those that had elected Members of Parliament or Members of the European Parliament).

Our approach tries to identify and estimate whether Brexit caused a change in the voting behavior of the Spanish electorate from non-systemic towards systemic parties, due to the increased uncertainty. Voters who permanently reside abroad (CERA voters) could vote either by post until 21 June or by casting their vote at a ballot in Spanish embassies and consulates around the world from 22–24 June.[8] Our identification strategy attempts to exploit the fact that the vast majority of CERA voters did not know about the outcome of the Brexit vote when they cast their votes, compared to the voters in Spain who voted after the release of the Brexit result.

By splitting the Spanish electorate between standard votes cast on Sunday, 26 June 2016 (residents' districts) and votes that were mainly cast days before Brexit (non-residents' districts), we construct a difference-in-differences empirical model and identify the causal effect of the Brexit result on the trend of the vote share of the leftist alliance.

$$Y_{s,t} = a + \beta_t + \gamma_s + \sum_{t=2009}^{2016} \delta_t (T_t V_s) + u_{s,t} \tag{1}$$

---

[8]An extension was granted until 26 June by the Spanish Electoral Office due to delays in CERA voters receiving the necessary paperwork that would allow them to vote. This might have 'contaminated' our data since we did not initially have information about whether the CERA votes were cast by post prior to 21 June or at urns in Spanish consulates potentially after 24 June. However, we gathered from a sizeable sample of Spanish consulates a breakdown of their votes by post and urn, and 65 per cent of these CERA votes were cast by post, implying that if some contamination took place it must have been on a very small scale. In any case, even if it took place, it makes our main point stronger since it increases the likelihood that CERA voters voted against anti-systemic parties, thus making our estimates a low bound.

Table 2. The effect of Brexit on Spanish election

Dependent variable	Rise of anti-systemic vote (Ys,t) (1)	Vote share of anti-systemic parties (2)
Treatment effect *(Non-CERA *2016) 2016*	−0.222	−0.116
	(0.105)**	(0.025)***
Placebo tests		
Non-CERA x 2015	−0.167	−0.090
	(0.105)	(0.022)***
Non-CERA x 2014	0.000	0.038
	(0.023)	(0.023)
Non-CERA x 2011	−0.055	−0.013
	(0.095)	(0.018)
Non-CERA x 2009	−0.111	0.001
	(0.107)	(0.007)
Fixed effects	YES	YES
R^2	0.51	0.93
N	180	216

Note: robust standard errors reported in parentheses in Columns 1 and 2; cluster bootstrapped standard errors (20,000 replications) were also constructed, but the results remained mostly similar. Treatment lags, election year and region fixed effects included in all specifications. * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$

$Y_{s,t}$ takes a value of 1 if the cumulative vote share of anti-systemic parties in district s in the current elections (period t) increased compared to the previous elections (period $t − 1$) and 0 otherwise; β_t and γ_s are time and district dummies, respectively; V_s is a dummy that takes a value of 1 if district s is a Non-CERA one (that is, it is treated) and 0 otherwise; T_t is a dummy that takes a value of 1 if the year is t and is 0 for all other years; and $u_{s,t}$ is the error term.

Results

The results support the idea that turbulence caused by Brexit cost Unidos Podemos an increase in its vote share, and a potential key role in government formation. The first column of Table 2 shows that Brexit had a negative causal effect on the electoral performance of anti-systemic parties in the Spanish general election of 2016 since the coefficient of interest (non-CERA × 2016) is highly statistically – and electorally – significant. Furthermore, by including treatment leads to check for pre-trends[9] we can verify that the parallel trends assumption prior to treatment is clearly satisfied, since all pre-treatment differences for the control and treated groups are statistically not significant.[10] Notably, this differential effect of residents' versus non-residents' districts on the trend of anti-systemic electoral performance exists only for the 2016 elections. In other words, the required parallel trends hypothesis, which is required for the differences-in-differences approach, is found to hold, allowing a causal interpretation of the results.

We prefer to focus on trends rather than absolute measures of electoral performance because the Spanish political system has recently experienced dramatic institutional and party system structural changes. Yet we note that any alternative absolute measure yields the same result with respect to the 2016 elections (anti-systemic parties performed differentially worse in the residents' districts compared to non-residents' districts). The placebo tests regarding the previous electoral races are meaningless, given that anti-systemic vote shares increased from about 5 per cent in 2008 to above 25 per cent in 2015 and, more importantly, the composition of non-residents' districts dramatically changed in 2009 (their size was reduced by more than 90 per cent). In Column 2 of Table 2 we substitute our dependent variable with the cumulative vote share of anti-systemic parties and find exactly this. The Brexit effect is still significant, but the

---

[9]See, e.g., Autor 2003.
[10]See, e.g., Angrist and Pischke 2009.

interaction referring to the previous election also becomes relevant since it captures the political system transformation.[11]

Indeed, in such an institutionally and politically volatile environment, a rough-cut dependent variable like the trend (increase versus decrease) of anti-systemic parties' electoral performance seems to be the obvious choice for comparing political behavior from one election to the next in a meaningful manner. Of course, the fact that the environment in which this natural experiment takes place went through such important transformations in recent years calls for extreme caution: a pre-2016 stable institutional and political framework would provide additional confidence. But, regardless of the limitations and objective obstacles, our analysis provides a strong first indication of a causal link between Brexit and the result of the Spanish elections, and will hopefully serve as a starting point for subsequent comprehensive studies of spillovers among interconnected political entities.

Our results, beyond supporting popular conjectures made – among others – by the press and many academics, also permit a wider interpretation. Past studies have documented the existence of substantial policy[12] and institutional[13] spillover effects. Our work extends these findings by documenting that political outcomes and shocks (such as electoral results) of a more contemporaneous nature that occur in one country can also generate spillover effects via the channel of systemic instability. It is therefore fair to say that in our intertwined world attempts to restore last century's – partial, at most – national isolation are very difficult, if not almost impossible, to achieve. As a result, our findings can yield useful insights and suggest possible channels of diffusion to the growing literature that studies the rise of anti-systemic parties in Europe and elsewhere.[14]

Supplementary Material. Data replication sets are available in Harvard Dataverse at: https://doi.org/10.7910/DVN/MGMBL3.

References

Angrist JD and Pischke J-S (2009) *Mostly Harmless Econometrics: An Empiricist's Companion*. Princeton, NJ: Princeton University Press.

Autor D (2003) Outsourcing at will: the contribution of unjust dismissal doctrine to the growth of employment outsourcing. *Journal of Labor Economics* 21, 1–42.

Balli F *et al.* (2017) Cross-country determinants of economic policy uncertainty spillovers. *Economics Letters* 156, 179–183.

Böhmelt T *et al.* (2016) Party policy diffusion. *American Political Science Review* 110 (2):397–410.

Da Silveira BS and De Mello JM (2011) Campaign advertising and election outcomes: quasi-natural experiment evidence from gubernatorial elections in Brazil. *The Review of Economic Studies* 78, 590–612.

Delis A, Matakos K and Xefteris D (2018) Replication Data for: Electoral spillovers in an intertwined world: Brexit effects on the 2016 Spanish vote, https://doi.org/10.7910/DVN/MGMBL3, Harvard Dataverse, V1.

Dinas E *et al.* (2018) Waking up the golden dawn: does exposure to the refugee crisis increase support for far-right parties? *Political Analysis*, forthcoming.

Ferwerda J (2014) Electoral consequences of declining participation: a natural experiment in Austria. *Electoral Studies* 35, 242–252.

Frayer L (2016) How Brexit affected Spain's election. *Los Angeles Times*, 27 June. http://www.latimes.com/world/europe/la-fg-spain-election-snap-story.html.

Giani M (2017) *Don't Ban the Muslims: Public Reaction to Terror Attacks*, London School of Economics: Mimeo.

Giannetti D and Grofman B (2011) *A Natural Experiment on Electoral Law Reform: Evaluating the Long Run Consequences of 1990s Electoral Reform in Italy and Japan*. New York: Springer.

---

[11]Our binary variable is free of such concerns, which makes identifying the Brexit effect harder – not easier – thus making our point arguably stronger. It requires that there are h populations. Indeed, the anti-systemic vote increases on average in both CERA and non-CERA districts up to 2015; only in 2016 does it exhibit a diverging pattern in terms of trends: it decreases substantially in non-CERA districts but less so in CERA ones.

[12]See, e.g., Böhmelt et al. 2016.

[13]See, e.g., Gleditsch and Ward 2006.

[14]See, e.g., Hobolt and de Vries 2016.

Gleditsch KS and Ward MD (2006) Diffusion and the international context of democratization. *International Organization* **60** (4):911–933.

Hobolt SB and de Vries CE (2016) Public support for European integration. *Annual Review of Political Science* **19**, 413–432.

Klößner S and Sekkel R (2014) International spillovers of policy uncertainty. *Economics Letters* **124**, 508–512.

Lucardi A (2017) The effect of district magnitude on electoral outcomes. Evidence from two natural experiments in Argentina. *British Journal of Political Science*, forthcoming.

Montalvo JG (2011) Voting after the bombings: A natural experiment on the effect of terrorist attacks on democratic elections. *Review of Economics and Statistics* **93**, 1146–1154.

Rooduijn M (2014) The mesmerising message: the diffusion of populism in public debates in Western European media. *Political Studies* **62** (4):726–744.

Spenkuch JL and Toniatti D (2015) Political advertising and election outcomes. Barcelona GSE Working Paper.