Incumbents Beware: The Impact of offshoring on elections

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Abstract

Offshoring is one of the most controversial aspects of modern-day globalization. Yet, it remains unclear how offshoring impacts voters' decisions. Using a difference-in-differences estimation strategy, I find that incumbent government parties lose more votes in municipalities where a plant relocated production abroad between elections than in municipalities without such an event. This result holds across different time periods, political parties, and elections. In both national and regional elections, voters punish incumbent parties when a firm moves production abroad and parties' vote shares fall as the number of jobs lost due to offshoring increases. In multi-party governments, voters disproportionately punish the largest coalition party for offshoring. Results from an original survey of voters in Spain verify the importance of offshoring for their vote choice. Existing compensation programs appear to be insufficient to fully offset the costs of offshoring, which may explain the growing backlash against globalization.

Word count: 9,856

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In recent years, public sentiment towards globalization has changed with more and more people questioning the benefits of economic openness. One facet of globalization garners particular angst, namely offshoring. Offshoring occurs when firms move production abroad for reasons of comparative advantage.[1] Firms' decisions to relocate production to other countries causes job losses at home (OECD 2007). While workers laid off as a result of offshoring experience economic hardships, so too do people living near shuttered factories: local businesses suffer, young people leave the area, real estate values plummet, and social services decline (OECD 2007; Frieden 2018).

It comes as no surprise then that voters dislike offshoring. Surveys show that more than 95 percent of voters oppose businesses' decisions to move manufacturing operations abroad (Mansfield and Mutz 2013). And voters increasingly associate offshoring with globalization. Forty-five percent of European respondents think about the offshoring of jobs to countries with cheap labor when they hear the word globalization (Eurobarometer 2005). Although offshoring is increasingly salient and disliked by many, it is unclear how offshoring impacts voters' decisions at election time, if at all.

In this study, I investigate the electoral consequences of offshoring. This investiga-

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[1] In the academic literature, there are primarily two notions of offshoring (Jensen, Quinn, and Weymouth 2017). The first refers to moving certain tasks in the production process overseas. The second is when a company relocates production abroad for reasons of comparative advantage. The second concept applies here.

tion speaks to fundamental questions about democratic representation, such as what outcomes voters hold politicians accountable for in an era of hyper-globalization. Understanding the electoral consequences of offshoring is a timely objective because offshoring is poised to become one of the biggest economic issues facing elected leaders (Blinder et al. 2009). As offshoring affects more jobs and particularly more highly-skilled jobs, opposition to offshoring will increase (OECD 2007).

In one of the first studies to directly measure offshoring events and their political consequences, I find that voters punish incumbents for offshoring. Using a difference-in-differences estimation strategy, I show that incumbent government parties lose more votes in municipalities where a plant closed to relocate internationally between elections than in municipalities without such an event. Voters punish incumbent parties in both national and regional elections and government parties' vote shares fall as the number of jobs lost due to offshoring increases. In multi-party coalition governments, voters disproportionately punish the largest party for offshoring. An original survey of voters verifies the importance of offshoring for their vote choice.

These findings make three contributions of note. First, they emerge in a context *other* than the United States. This is noteworthy because most evidence connecting globalization to elections comes from the US. However, the myriad US findings may not generalize to other countries, particularly those with different electoral institutions. America's institutions, which include plurality electoral rules and single-member districts, maximize leaders' accountability to voters (Lijphart 1984). US voters can hold elected leaders accountable for negative economic shocks by voting against them in subsequent elections. Given the high levels of accountability en-

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gendered by US electoral institutions, it is no surprise that American voters punish incumbents for trade-related job losses (Margalit 2011), import shocks (Feigenbaum and A. Hall 2015; Autor, Dorn, Hanson, and Majlesi 2016), and economic insecurity (Jensen, Quinn, and Weymouth 2017).

Observing similar behavior in countries with different electoral institutions is more surprising. Some countries' institutions make it relatively more difficult for voters to hold leaders accountable for negative economic shocks. In countries where parties win legislative seats in proportion to their share of the national vote, for example, governments often include more than one political party. When faced with a multi-party government, voters find it difficult to allocate blame for negative economic shocks. Additionally, in some countries with proportional representation (PR) systems, voters cannot punish their own representative in parliament when a local plant closes to move abroad. In closed-list PR systems, for example, voters cannot cast their ballot for (or against) an individual candidate. Instead, they can only choose a political party. The party's leaders then decide which candidates will fill the party's legislative seats.

Economic shocks may consequently have varied effects on voting behavior in countries with different electoral systems. However, this possibility remains under-explored because of the prevailing focus on the US. In an effort to redress this imbalance, I investigate how offshoring impacts elections in Spain - a country with a proportional electoral system, multi-member districts, and closed party lists. These institutions promote representation but do so at the expense of accountability (Powell 2000; Lijphart 1984). As a result, Spanish voters find it relatively more difficult to

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hold elected leaders to account for negative economic shocks. In this sense, Spain is a hard case.[2] Yet even in this context, I find evidence that voters punish incumbent government parties for offshoring. This finding demonstrates that the electoral consequences of globalization, and offshoring in particular, extend beyond the United States to democracies with other types of electoral institutions.

Second, this study contributes new evidence to an emerging debate over whether compensation remains an effective way to sustain public support for globalization. A long held idea, often referred to as embedded liberalism, suggests that mass support for globalization can be maintained by government transfer systems that tax the winners from economic integration to fund a social safety net for the losers (Frieden 2018; Ruggie 1982). However, recent evidence suggests that such compensation may no longer be effectual (Gidron and P. Hall 2017; Gingrich 2019). Today's losers from globalization seem to prefer recognition over redistribution. My results support this emerging view.

Although Spain maintains strong employment regulations and generous active labor market programs, voters punish incumbents for offshoring. This implies that existing compensation programs fail to appease voters negatively impacted by offshoring. This may be because the costs of offshoring are relatively high. Workers made unemployed by offshoring often have a harder time finding new jobs that pay a similar wage than workers laid-off for other reasons (Miguélez Lobo 2004). The inability of compensation programs to fully offset the costs of offshoring may explain why compensation has become less effective in sustaining public support for global-

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[2]However, see Field (2016).

ization in recent years as offshoring has become an increasingly important aspect of international economic integration.

Third, this study contributes new evidence to understanding how the economy affects voter behavior in multilevel polities by examining the effects of offshoring on both national and sub-national elections. Most previous studies focus exclusively on national elections. For example, Autor et al. (2016) examine the impact of Chinese imports on US Congressional elections and Margalit (2011) examines the impact of trade-induced job losses on US presidential elections. While these studies expertly illustrate how globalization impacts elections for national office, they fail to illuminate what, if any, effect globalization has on sub-national elections. Here I find novel evidence that voters punish incumbent parties for offshoring in regional elections, as well as national ones. Examining only national elections underestimates the total electoral impacts of globalization.

Connecting Offshoring to Voting

Although offshoring is one of the most contentious aspects of modern-day globalization, it remains unclear what impact, if any, it has for democratic elections. On one hand, offshoring may have little effect on voters' behavior. Offshoring is possible because of high levels of international economic integration and voters evaluate incumbents differently when levels of international economic integration are high (Duch and Stevenson 2008; Kayser and Peress 2012; Hellwig 2014; Hellwig 2001). If voters view offshoring as a consequence of globalization, they may not blame incumbents

for firms' decisions to move production abroad.[3]

Additionally, voters may not punish incumbents for offshoring if governments provide sufficient compensation. Governments can protect workers from offshoring and compensation them for the costs of offshoring via active labor market policies and strict employment regulations. In Spain, employment protection regulations are among the toughest in the OECD and firms often find it difficult to lay-off Spanish workers (Menendez 2010). If firms manage to make workers redundant, workers have the right to receive a minimum severance payment equivalent to 20 days of salary per year of service and, in practice, higher severance payments are usually agreed (Menendez 2010).

Unemployed persons can also take advantage of Spain's generous active labor market policies, which include retraining and relocation assistance. The government promotes special education and training programs for people who have lost their jobs due to offshoring (OECD 2007). And Spanish governments often apply to the European Union's Globalization Adjustment Fund (EGF) for money to top up domestic assistance for workers who lost their jobs as a result of international restructuring and offshoring. If compensation programs like these offset the costs of offshoring, voters may not punish incumbent government parties when jobs move abroad.

On the other hand, however, several compelling reasons exist to expect offshoring to impact voters' choice at the ballot box. First, offshoring reduces employment levels in offshoring plants (Bachmann and Braun 2011; Görg and Hanley 2005).

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[3]Alternatively, voters may reward incumbents when certain types of plants close to move abroad. My empirical specification allows for - but rules out - this possibility.

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Half of the offshoring events in my sample generate more than 375 job losses each. Workers laid off because of offshoring experience a deterioration of their personal economic circumstances. They typically experience real earnings losses and these losses are often significant (B. Michael and R. Michael 2012). Offshored workers' wage losses tend to be significant because of their characteristics and employment history. In Spain, workers fired because of offshoring tend to be middle-aged and middle-aged workers experience greater earnings losses after dismissal than their younger counterparts (Koeber and Wright 2001). Spanish workers made redundant because of offshoring also tended to have relatively low qualifications and little seniority (Miguélez Lobo 2004). The possibility of retraining to obtain jobs under similar conditions is limited and many workers who are made redundant due to offshoring end up accepting worse pay and/or temporary jobs (Miguélez Lobo 2004). Given these substantial economic consequences, workers who lose their jobs due to offshoring may vote against the incumbent government party.

Second, voters whose personal economic situation deteriorates as an *indirect* result of offshoring may vote against the incumbent government party. Offshoring affects not only the relocated plant but also a host of related businesses in the local area. As a result, individuals employed in the region, but not at the relocated plant itself, may suffer economically. A plant closure may reduce wages in the local labor market as more workers become available and jobs become scarcer. Workers in auxiliary companies and suppliers, some of which will be losing their main customer, may also be laid off. The closure of Braun AG's factory in Esplugues de Llobregat, for example, resulted in 690 direct job losses. Estimates suggest that a further 1,500

jobs were indirectly eliminated.[4] These 1,500 jobs were connected to Braun's plant via its network of providers and other services. This example points to a second possible causal mechanism: indirect pocketbook voting.

Third, voters may blame the government for failing to keep businesses and jobs onshore. Voters might believe that subsidies and/or generous tax breaks from the government could keep firms from moving production abroad. In Spain, for example, voters watched as subsidies kept the Seat and Ford automotive plants in Barcelona and Valencia (at least in the medium term) (Jofre-Monseny, Sánchez-Vidal, and Viladecans-Marsal 2018). Given this experience, Spanish voters may view offshoring as a failure of government policy and consequently hold incumbents accountable when plants close to move abroad.

Fourth, local sociotropism may link offshoring to voting behavior. Voters often consider the interests of others when formulating their attitudes about economic policies and the governments responsible for them (Mansfield and Mutz 2009; Lü, Scheve, and Slaughter 2012). But such altruism is often particular rather than universal. Individuals predominantly care about the well-being of those closest to themselves, including their neighbors and local community. Individuals have a social, material, and psychological stake in their communities: they care about how their neighbors and fellow citizens fare, whether for altruistic or self-interested reasons (Kiewiet and Lewis-Beck 2011; Ansolabehere, Meredith, and Snowberg 2014). As a result, voters in communities where a plant closed to move abroad to may vote against

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[4]`https://elpais.com/diario/2006/05/20/economia/1148076003_850215.`
`html`

the incumbent government party out of a sense of "place-based" threat (Cramer 2016) – even if the voter herself is not personally affected by the plant closure.

This mechanism requires that voters not personally affected by a plant closure know about it. Evidence from an online survey I fielded in Spain indicates that knowledge about offshoring is relatively widespread.[5] Forty-one percent of respondents said they personally knew someone who had lost their job because a business had closed to move abroad. And thirty-two percent said they had heard about a business in their local area that closed to move abroad.

Local job losses tend to be well publicized and plant closures often trigger public protests. In early 2002, the US-owned multinational, Lear, unexpectedly announced the closure of its electrical components plant in Cervera, Spain. The announcement led to protests in the local area, which were attended by over 4,000 people including the plant's workforce of 1,200 employees and local trade union members (Miguélez Lobo 2004). Similarly, in January 2003, more than 2,000 people protested the offshoring of production from the Moulinex factory in Barbastro, Spain to China, which resulted in 150 people being fired.[6]

This is not to suggest that the informed but personally unaffected voters have a sophisticated model of the distributional impact of offshoring. It is simply to propose

[5]The survey was administered online to 1,000 respondents by Netquest in October 2018. The sample was selected using age, gender, and province quotas in order to ensure a nationally representative sample. Additional information about the survey is provided in the Appendix Section B.

[6]https://www.diariocordoba.com/noticias/economia/
rechazo-ajuste-empleo-moulinex_37789.html

that voters typically know when their communities are doing poorly, that offshoring probably played some role in the problem, and that incumbents have not responded effectively enough to halt the decline (Frieden 2018).

Taken together, these mechanisms suggest the following hypothesis: voters exposed to a local offshoring event will be more likely to vote against the incumbent government party in the next election than voters not exposed to such an event.

Data

I test this hypothesis using evidence from Spain where a wave of offshoring began in 2000. The surge in offshoring occurred, in part, because of the pending expansion of the European Union (EU), which brought ten new countries into the EU in 2004. Many of the new member-states had lower labor costs than Spain who, during this period, had neither very low pay nor very high innovation. In 2004, the average annual earnings per worker in Spain was 17,547 US dollars. In contrast, the average annual earnings per worker in Poland was just 5,513 US dollars.

Spain's wage levels and intermediate position in the global division of labor led some firms to move their manufacturing operations abroad. For example, between 2002 and 2005, the Spanish automobile components sector lost 20 percent of its workforce to central and eastern European countries (Miguélez Lobo 2004).

During this offshoring surge, Spain's economy grew strongly. Annual average economic growth during this period was 4 percent and unemployment rates were low. The strength of Spain's economy during this period demonstrates how offshoring dif-

fers from other types of plant closures. Firms typically do not offshore production in response to declining local economic conditions (Jofre-Monseny, Sánchez-Vidal, and Viladecans-Marsal 2018). Instead, firms' international location decisions are driven primarily by production costs (Helpman 1984; OECD 2007). Because offshoring is largely motivated by cost-saving concerns, it may occur more often when a country's economy is doing well. Wages tend to rise in growing economies, which makes the country less attractive as a place of production. Companies may subsequently consider moving production to a lower-cost country. For example, the Danish firm Vestas decided to close its plant in the Spanish municipality of León, which produced wind turbines for the global market. They relocated production to China in order to save money on labor and other production costs.

Offshoring in Europe, and especially in Spain, is largely concentrated in manufacturing (OECD 2007). Of all the jobs that have been lost due to offshoring in EU countries, the manufacturing sector accounts for the largest share – 56 percent. I therefore identify firms in the manufacturing sector that ceased production at a location in Spain and moved production abroad. Braun AG provides one such example. The firm closed its factory in the Spanish municipality of Esplugues de Llobregat, which produced approximately nine million small appliances, including steam irons and blenders, every year.[7] When the plant closed, nearly all of its production was relocated to China in an effort to reduce costs. The relocation resulted in 690 direct job losses in Esplugues de Llobregat.

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[7]`https://elpais.com/diario/2006/05/20/economia/1148076003_850215.`
`html`

Identifying plants that move production abroad is difficult. No authoritative data on offshoring exist. As a result, most existing studies use indirect measures of offshoring. For example, some studies calculate the total number of manufacturing-sector layoffs in a region and assume that some of them are due to offshoring. Others estimate the number of potentially offshorable jobs by identifying occupations that are at risk of being offshored.[8] This study represents one of the first efforts to directly measure offshoring and its electoral consequences.[9]

Spanish labor law makes it possible to identify offshoring events. Firms in Spain are required to submit an employment regulation file (ERF) prior to dismissing any workers.[10] In the ERF, employers must explain why workers are being dismissed. They can list offshoring or "delocalisation" as the reason. Using ERFs, and documents from the European Union, as well as several additional sources, I identify manufacturing-sector offshoring events in Spain from 2000 to 2011.[11]

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[8]Such measures indicate only the number of *potential* job losses rather than the number of actual jobs lost due to offshoring.

[9]Margalit (2011) uses applications for the United States' Trade Adjustment Assistance (TAA) program made after 2002 to calculate the number of jobs lost due to offshoring. While innovative, data from TAA applications likely underestimates significantly the number of lob losses due to offshoring (Autor et al. 2013) and may do so in a systematic fashion.

[10]`https://www.eurofound.europa.eu/observatories/emcc/comparative-information/legal-framework-for-restructuring`

[11]Jofre-Monseny, Sánchez-Vidal, and Viladecans-Marsal (2018) use data from Myro-Sánchez and Fernández-Otheo (2008) and balance sheet data from the Sis-

For each offshoring event, I record the plant's exact location in Spain. I then use these geo-located data to identify municipalities that experienced an offshoring event between two elections. More precisely, I construct two groups of municipalities: 1) a control group that did not experience a plant closure due to offshoring between two election dates but experienced job losses due to other factors; and 2) a treatment group that experienced a plant closure due to offshoring between two elections. In addition to this binary treatment indicator, I also construct an "intensity of treatment" indicator that reports the number of job losses in a municipality that occurred as a direct result of offshoring between two elections.

Because economic shocks have strong local effects (Autor, Dorn, and Hanson 2013), the most appropriate unit of analysis is the community, not the individual (Broz, Frieden, and Weymouth 2019). When local factories that used to provide decent paying jobs move production abroad, the surrounding areas experience increased unemployment, lower labor force participation, and outmigration by mobile inhabitants (Frieden 2018). Given these local economic effects, offshoring's electoral consequences are most appropriately measured at the community level.

I use municipalities to proxy for local communities. Spanish municipalities are tema de Análisis de Balances Ibéricos (SABI) to identify offshoring events. I confirm the details of each of these cases using ERFs, Spanish newspapers, data from Bronfenbrenner and Luce (2004), and data from the European Restructuring Monitor (ERM). An offshoring event is included in my dataset only if the details are confirmed by at least two sources. All of the offshoring events in my sample come from different firms. In other words, there are no duplicate firms in my sample.

relatively small; the average municipality in my sample has a population of less than 24,000 people. Municipalities are the smallest geographical unit for which the necessary economic data are available (e.g. GDP per capita). Usefully, municipalities approximate local labor markets. Most people live and work in the same municipality. In my survey, for example, 60 percent of respondents said they worked in the same municipality in which they lived. Because people living nearby generally experience the most intense economic impacts from a plant closure (Holl 2004), municipalities are the appropriate unit of analysis for this study.

Empirical Model

Given the myriad possible correlates of incumbent vote shares, I use a difference-in-differences estimation strategy. The difference-in-differences estimator does not require the voting preferences in both groups of municipalities to be the same. The estimator compares the change in the choices of voters in treated municipalities between two elections with the change in the choices of voters in control municipalities. If a local plant closure occurs between the two elections and this event has an influence on voting decisions, a change in the voting patterns in treated municipalities will be observed but not in control municipalities. In other words, the difference-in-differences estimator compares the change in voting choices by both groups over time instead of comparing both groups directly in a particular period of time, which helps to rule out alternative explanations.

For my first test, I consider i = (1, ..., 943) Catalan municipalities for election

years t = (2000, 2004). Catalonia is Spain's most industrial region and the region most affected by offshoring (Miguélez Lobo 2004). Over half of the offshoring events that occurred during this period took place in Catalonia.

While some municipalities in Catalonia experienced an offshoring event, others did not. However, all municipalities in Catalonia experienced some job losses during this period. In the untreated municipalities, these job losses were due to things *other* than offshoring including bad management, labor market churn, and demand shocks. The untreated municipalities are therefore most correctly described as municipalities that experience job losses for reasons *other* than offshoring. In contrast, treated municipalities experience job losses due to offshoring.

National parliamentary elections in 2000 and 2004 span Spain's largest wave of offshoring. Usefully, this period excludes Spain's economic crisis, which began in 2008. It also spans a period of strong economic growth, which helps to distinguish the effects of offshoring from poor economic performance.

For each municipality, I calculate the change in the incumbent government party's vote shares between the 2000 and 2004 elections. This is the theoretically appropriate outcome of interest given Spain's closed-party lists. In the 2004 election, voters had to decide whether or not to vote for the incumbent government party: *Partido Popular* (PP). PP is a center-right party that is broadly conservative in orientation and its economic policies are generally pro-market.

By examining parties' vote shares, this study makes an important contribution. Most previous studies examine how public opinion or self-reported voting intentions change in response to offshoring (Owen and Johnston 2017; Chase 2008). But

how these preferences translate into actual voting behavior remains largely unknown (Margalit 2019). Economic shocks like offshoring change attitudes on some issues, such as redistribution, but have no impact on other dimensions (Margalit 2019). A change in preferences in one dimension may not lead to changes in voting behavior (Margalit 2019; Lee, Roemer, and Van der Straeten 2006). Given this, existing studies leave unanswered the question of whether offshoring affects actual voting behavior.

Let $Y1_{it}$ and $Y0_{it}$ indicate the pair of potential vote shares that the incumbent government party attains in municipality i at time t when exposed to the treatment or the control condition between the two elections.

The quantity of interest is the electoral effect of offshoring, which is defined as the average treatment effect on the treated (ATT) given by $\alpha = E[Y1_i, t - Y0_i, t \mid D_i = 1]$. This measures the average difference between the posttreatment vote shares that the affected municipalities attain with and without the treatment. Since it is not possible to observe $E[Y0_i, t \mid D_i = 1]$, I estimate the potential outcome based on the usual difference-in-differences assumption of parallel trends. To assess the empirical validity of the parallel trends assumption, I examine whether the PP vote share in municipalities affected by offshoring between the 2000 and 2004 elections followed a similar trend to the control municipalities in the years prior to the treatment, as illustrated in Appendix Figure A-1. I assume $E[Y0_i, t - Y0_i, (t-1) \mid D_i = 1] = E[Y0_i, t - Y0_i, (t-1) \mid D_i = 0]$ where t-1 equals the year of the most recent previous election. Based on this assumption, the ATT is identified from observed outcomes as: $\alpha = (E[Y_i, t \mid D_i = 1] - E[Y_i, t-1 \mid D_i = 1]) - (E[Y_i, t \mid D_i = 0] - E[Y_i, t-1 \mid$

$Di = 0$).

I estimate α using a standard fixed effects regression given by: $Yit = \nu i + \delta t + \alpha Dit + \chi it\beta + \epsilon it$ where Yit is the incumbent government party's vote share in municipality i at time t. νi is a municipality-level fixed effect to control for any time-invariant unobserved factors, δt is a period fixed effect to control for common trends, α is the treatment effect, Dit is the treatment variable, and ϵ is an idiosyncratic error term. Xit is a vector of time-varying covariates including a constant.

I first present the main results without time varying covariates (except a constant). I then add control variables, which are all measured at the municipality level. To account for potential serial correlation and heteroskedasticity, I cluster the standard errors by municipality.

Results

Table 1 reports the difference-in-differences estimates for the electoral effects of off-shoring as measured by the change in the national government party's vote shares between the 2000 and 2004 elections. Figure 1 displays the average treatment effect on the treated (ATT), measured using the binary treatment indicator, with 99 percent confidence intervals. The four ATTs are stacked to facilitate comparison across models with different control variables.

The incumbent government party lost votes, on average, between the 2000 and 2004 elections, as demonstrated by the negative coefficient on the time period variable (Post Period).[12] However, their vote losses were relatively greater in treated

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[12]This may be because three days before the 2004 election ten bombs exploded

Table 1: Estimating the change in the national government party's vote share, 2000-2004

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Plant closed	-1.947	-1.507	-1.277	-1.636				
	(0.463)	(0.465)	(0.477)	(0.423)				
Jobs lost					-0.004	-0.003	-0.003	-0.003
					(0.001)	(0.000)	(0.000)	(0.000)
Post period	-6.131	-6.933	-6.734	-7.000	-6.135	-6.895	-6.752	-6.967
	(0.121)	(0.270)	(0.243)	(0.224)	(0.121)	(0.272)	(0.241)	(0.224)
GDP per capita (thousand)		0.006				-0.004		
		(0.037)				(0.036)		
Growth rate			0.044				0.043	
			(0.026)				(0.026)	
Population (thousand)				0.035				0.018
				(0.036)				(0.033)
Constant	17.37	21.42	20.98	20.78	17.37	21.63	20.99	21.16
	(0.060)	(0.741)	(0.387)	(0.767)	(0.060)	(0.733)	(0.389)	(0.704)
Observations	1,885	378	333	378	1,885	378	333	378
R-squared	0.736	0.911	0.906	0.911	0.736	0.911	0.906	0.911
Number of municipalities	943	200	179	200	943	200	179	200

municipalities. The incumbent government party's vote share fell by one to two percentage points, on average, in treated municipalities. The treatment effect is highly statistically significant (with a t-statistic of 4.2) and realistic in substantive terms. The average offshoring effect constitutes approximately a 15 percent decrease compared to the overall PP vote share in Catalonia in 2004.

Of course, not all offshoring events are alike; some generate more job losses than others. To address this, I re-estimate all four models using the intensity of treatment indicator (Jobs lost). The results are reported in columns 5-8 of Table 1. Figure on four commuter trains heading into central Madrid. The blasts killed 191 people and injured nearly 1,800. Although this event may have affected the outcome of the 2004 election (Bali 2007; Montalvo 2011), it is unlikely to account for my findings, as I demonstrate in Appendix Section A.

Figure 1: Average treatment effect on the treated
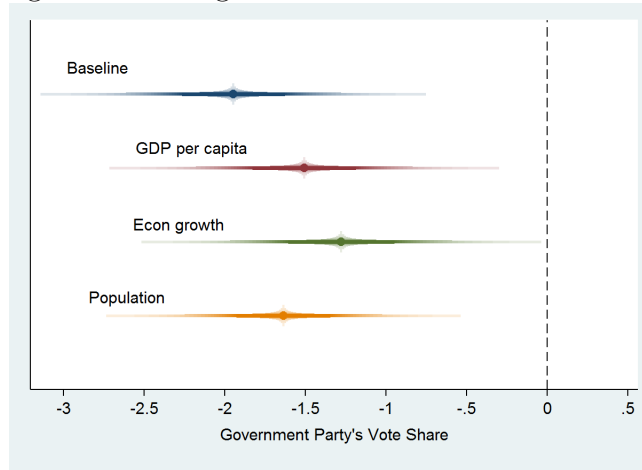
2 displays the average treatment effect on the treated (ATT), measured using the intensity of treatment indicator, with 99 percent confidence intervals. The four ATTs are stacked to facilitate comparison across models with different control variables.

Figure 2: Intensity of Treatment Effect
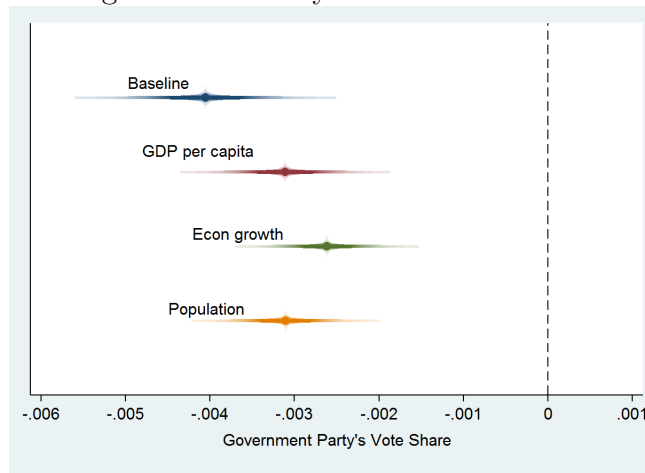
Offshoring events that produce more job losses have a larger reductive effect on the government party's vote share. The median number of direct jobs lost per

offshoring event in the sample is 375, which generates a 1.125 point reduction in the government party's vote shares in treated municipalities. This is likely to be a lower bound estimate because the intensity of treatment indicator measures only the *direct* job losses and not the indirect job losses from offshoring.[13]

Lower bound estimates

There are several reasons to believe the magnitude of the results reported in Table 1 may represent lower bound estimates. First, if I missed any offshoring events in my coding efforts, a municipality might erroneously be included in the control group rather than the treatment group. The estimated difference between the control and treatment groups would consequently be biased downwards, underestimating the electoral effect of offshoring.

Second, the economic impacts of a plant closure in one municipality may spill over into nearby municipalities thereby reducing the estimated magnitude of the ATT. There are more than 900 municipalities in Catalonia and although municipalities vary in size, they tend to be relatively small. The average municipality population is 23,628. The relatively small size of municipalities makes them the theoretically appropriate unit of analysis but raises the possibility of spillover effects. If the economic impacts of a plant closure in one municipality spill over into nearby municipalities, then municipalities coded as being in the control group may, in fact be, (partially)

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[13]Accurately estimating the number of indirect job losses for each offshoring event would be difficult and likely fraught with error.

treated, which would bias downwards any electoral effects of offshoring.

Third, the plant closures I analyze occur during a period of strong economic growth. Voters' responses to offshoring may be more negative in a less vibrant economy.

Forth, Spain is a member of the European Union and as a result, the country's exposure to the global economy lies largely outside the national government's direct control. Given this, voters may not punish incumbents as severely for offshoring as they would in a country where the government had full responsibility for the country's openness to globalization.

Despite these potentially mitigating factors, I find that the incumbent government party's vote shares fall in treated municipalities.

Robustness checks

The negative impact of offshoring on the incumbent government party's vote shares is robust to the inclusion of several control variables including population, economic growth, and GDP per capita – all measured at the municipal level. These data come from the Statistical Institute of Catalonia. Controlling for economic growth helps to distinguish the effects of offshoring from general economic conditions. The magnitude of the ATT is reduced slightly after the inclusion of these variables but remains precisely estimated and statistically significant.

As an additional robustness test, I generate two "matched" samples. First, I match municipalities that experience an offshoring event with control municipalities

Table 2: Municipalities matched on key pre-treatment variables

	(1)	(2)	(3)	(4)
	Δ vote share	Δ vote share	Δ vote share	Δ vote share
Plant closed	-2.190	-1.363		
	(0.454)	(0.403)		
Jobs lost			-0.004	-0.003
			(0.001)	(0.000)
Constant	-6.155	-6.132	-6.155	-6.132
	(0.481)	(0.596)	(0.481)	(0.596)
Observations	943	943	943	943
Matched on	% Manufacturing	# of Companies	% Manufacturing	# of Companies
R-squared	0.010	0.025	0.011	0.025

that have similar shares of their labor force employed in manufacturing in 1996.[14] Second, I match municipalities that have similar numbers of businesses in 1996. I generate 10 categories for each variable that reflect the sample's deciles. I match treated municipalities and control municipalities using these categories and restrict matches to municipalities in the same employment category. Table 2 reports the results from the matched samples with robust standard errors clustered by municipality.

The average treatment effect on the treated in the matched sample is similar in magnitude to that in the unmatched sample. A plant closure due to offshoring reduces the government party's vote share by between one and two percentage points, on average, in the matched sample. The matched sample's treatment effect is highly

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[14]This year is the nearest pre-treatment year for which data are available at the municipal level.

statistically significant.

Descriptive Survey Evidence

The difference-in-differences results suggest that a causal relationship exists between offshoring and voting. To probe the plausibility of these results, I fielded an online survey in Spain in October 8. Results from the survey verify the importance of offshoring for vote choice. Eighty-five percent of respondents said the national government deserves at least some blame if a business in their local area closed to move abroad; 25 percent say that the national government deserves "a great deal of blame". When asked if offshoring would affect their vote choice in the next national election, 54 percent of respondents said offshoring would make them less like to vote for the incumbent government party in the next national election. One in three respondents said they would be *much* less likely to vote for the national government party if a business in their local area closed to move abroad and the closure of this business resulted in job losses.

Twice as many respondents identified offshoring as an event that would make them less likely to vote for the incumbent government party than the closure of a local business to move to a different part of Spain. This survey evidence corresponds with the results reported in Table 1. Recall that I compare changes in vote shares over time in two groups of municipalities: 1) treated municipalities that experienced job losses due to offshoring and 2) control municipalities that experienced job losses for *other* reasons. The results reported in Table 1 indicate that voters punished incumbents

relatively more severely for job losses that occurred because of offshoring.[15]

Are jobs lost due to offshoring different?

Economic logic suggests that voters should react similarly to all types of job losses. Why then do voters seem to react differently to job losses caused by offshoring than other types of job losses?

One possibility is that governments' responses to offshoring differ from their responses to other types of job losses. Governments may do more to minimize the labor market effects of technology, for example, than offshoring. In this case, changes in vote shares due to offshoring may be due to governments' inaction rather than the job losses themselves.

To test this proposition, I collect additional data that allow me to compare job losses from different sources that engender similar government responses. I assemble these data using Spain's applications to the European Globalization Adjustment Fund (EGF). The EGF, which became operational in 2007, is run by the European Commission and provides funding to help EU member-state governments assist unemployed persons.

All of the job losses identified in EGF applications engendered similar government reactions. In all of these cases, the Spanish government: 1) applied for EU funds to

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[15]This result corresponds with evidence from Rodrik and Di Tella (2019). They find that job losses due to offshoring elicit greater demand for government action than job losses due to other factors.

help the displaced workers; and 2) contributed additional money from the national government's budget to top up workers' existing compensation packages.[16] In short, these data allow me to hold constant the government's responses to job losses that occur for different reasons. As a result, any observed changes in vote shares can be attributed to the job losses themselves rather than any (in)action by the government.

I calculate the number of jobs lost due to offshoring and the number of jobs lost for other reasons using evidence from Spain's applications for EGF funds and the related European Commission documents. The European Commission noted, for example, in their decision to award Spain 10 million Euros from the European Globalization Adjustment Fund in 2008 that, "the production of motor vehicle components were relocated to the tax free zone of Tangier (Morocco). This materialized in a Memorandum of Understanding signed the day after the closure of the Delphi factory in Puerto Real (Spain) between Delphi (USA) and the Government of Morocco." (EC 2008, p. 2). This plant closure and the 1521 jobs lost as a result of the plant closure are coded as being due to offshoring.[17]

In contrast, some of Spain's EGF applications relate to job losses that have nothing to do with offshoring. For example, Spain filed several applications seeking assistance for domestic producers of construction materials, such as doors and marble floor tiles. In these applications, the Spanish government argued that the rate of new

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[16]Only national governments can apply for EGF funds. All of Spain's applications during the period under investigation were successful. As stipulated by EGF rules, the Spanish government had to match the funds provided by the EGF.

[17]This case is not included in the sample because it occurred before the 2008 election.

homes being built in the country fell steeply after the 2008 crisis and the construction industry therefore needed assistance. These job losses are coded as being due to other reasons (i.e. not offshoring).

In Catalonia, all of the job losses reported in EGF applications between 2008 and 2011 occurred because of offshoring. This is unsurprising given that Catalonia is the region of Spain most affected by offshoring (Miguélez Lobo 2004).[18] However, to compare offshored jobs to other types of job losses using the EGF data, I have to move beyond Catalonia. I therefore examine changes in the incumbent government party's vote shares in all Spanish provinces. Provinces correspond with electoral districts; they are larger than municipalities but smaller than regions. Catalonia, for example, contains four provinces. Twenty percent of Spain' provinces experienced an offshoring event that generated an EGF application during this period.

As before, I use a difference-in-differences estimation strategy. I consider national parliamentary elections in years t = (2008, 2011) for i = (1, ..., 51) provinces. I cannot extent this analysis backwards to match the previous period under investigation because the EGF did not exist prior to 2007. However, examining different elections in different years sheds light on the generalizability of the 2000-2004 results.

In the 2011 election, the incumbent government party was the Spanish Socialist Workers' Party (Partido Socialista Obrero Español, PSOE).[19] Recall that in the

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[18]However, this makes clear that the EGF data do not capture the universe of job losses. This is why I do not rely on EGF applications as my primary data source.

[19]To assess the empirical validity of the parallel trends assumption, I examine whether the PSOE vote share in municipalities affected by offshoring between the 2004 and 2008 elections followed a similar trend to the control municipalities in

2004 election, the incumbent government party was PP, a center-right party. By comparing the 2008-2011 results to the 2000-2004 results, it is possible to see whether political parties from different sides of the ideological spectrum are equally at risk from offshoring.

Some provinces, such as *A Coruña*, experienced job losses from both offshoring and other sources. I therefore calculate the number of job losses due to offshoring and the number of job losses for other reasons in each province. Using these measures, I estimate two models with standard errors clustered by province. The results are reported in the Appendix Table 5 and displayed graphically in Figure 3.

Figure 3: Average treatment effect of offshored jobs versus other job losses
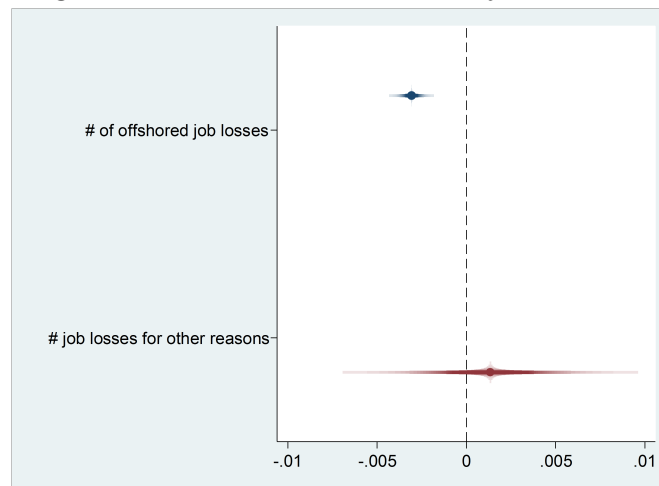
The incumbent party's vote share fell between the 2008 and 2011 elections, as the years prior to the treatment. Reassuringly, trends in the PSOE party's vote shares prior to 2008 are strikingly parallel in treated and untreated municipalities, as illustrated in Appendix Figure A-2.

demonstrated by the negative coefficient on Post Period.[20] Although PSOE lost votes overall between the 2008 and 2011 elections, the party's losses were relatively greater in provinces where offshoring occurred that engendered an EGF application. For every such job loss, the party's vote share fell by 0.003 percentage points. An increase in the number of offshored jobs by one standard deviation above the mean is estimated to reduce the party's vote shares in a treated province by 3.42 percentage points.

I obtained reassuringly similar estimates for the 2000-2004 period (see Column 7 of Table 1). For both the 2000-2004 and 2008-2011 periods, I find that each additional job lost due to offshoring decreases the incumbent party's vote share in treated units by approximately 0.003 percentage points controlling for population. The similarity of the estimated effects is striking given the differences that exist between the two samples.

Incumbent parties' vote shares fall in treated units as the number of jobs lost due to offshoring increase. Local jobs lost for other reasons, however, do not reduce the incumbent's vote shares. This holds for both the 2000-2004 period and the 2008-2011 period. Recall that for the 2000-2004 period, I compared changes in the incumbent

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[20]In fact, the 2011 election resulted in PSOE being swept from power in one of the worst defeats for a sitting Spanish government since 1982. The outcome was not surprising given that the 2011 election campaign was dominated by the ongoing financial crisis, which caused high unemployment, a large public deficit and a soaring risk premium. To address the economic crisis, the ruling Spanish Socialist Workers' Party (PSOE) adopted tough spending cuts and austerity measures.

party's vote shares over time in: 1) treated municipalities that experienced job losses due to offshoring; and 2) untreated municipalities that experienced job losses for reasons *other* than offshoring. Results from that sample show that voters punish the incumbent party relatively more for jobs lost due to offshoring.

Similar results emerge from the 2008-2011 period. In the 2008-2011 sample, I compare job losses that happened for varied reasons but engendered similar government responses. Using these data, I find that job losses due to offshoring reduce the incumbent party's vote shares in treated provinces. However, job losses due to other reasons do not. Other types of job losses have no robust effect on incumbent's vote shares.

The EGF data rule out one possible explanation for the different effects of off-shored jobs, namely varied government responses. For all of the EGF job losses, the government responded similarly: the government applied for EU money to assist the unemployed and matched the EU funds. Having ruled out varied government responses as a possible explanation, the question remains: why do voters punish incumbents more severely for offshoring than for other types of local job losses?

First, existing compensation programs may fail to fully offset the costs of offshoring. The costs of offshoring are relatively high for both affected workers and local areas. Offshored workers typically have a different age and/or skill profile than other unemployed persons and as a result, they often find it relatively harder to become re-employed. If offshored workers face relatively higher costs, compensation may fail to appease them.

Second, different types of job losses have varied labor market effects. If produc-

tion moves within Spain rather than abroad, suppliers may continue to exist and as a result fewer jobs are lost when a plant relocates production to a different part of Spain, as compared to a foreign country. Also, jobs that move abroad are not coming back but jobs that move to a different part of Spain are "recoverable". People can follow the production by moving to a different part of Spain and seeking re-employment. These observations may explain why twice as many respondents identified offshoring as an event that would make them vote against the incumbent government party than a plant closure to move to a different part of Spain.

A third reason why voters hold governments relatively more accountable for jobs lost due to offshoring may be the media and its coverage of offshoring events. How the media covers events influences the how voters assess the incumbent government (Miller and Krosnick 2000). Media coverage of offshoring often describes foreign competition as the cause of the job losses. Media reports sometimes even name a specific foreign country (Margalit 2011, 184). In my sample, I could identify the country to which production was moving from media reports alone in 90 percent of the cases. The most frequent destination was China followed by Eastern Europe (i.e. Romania, Hungary, Czech Republic, and Poland).[21]

The fact that offshoring is closely associated with "others" may trigger voters' nationalism and/or ethnocentrism – and this may explain why offshored jobs have a different effect on incumbents' vote shares than other types of job losses (Mansfield and Mutz 2013). Voters may be especially sensitive to job losses caused by offshoring

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[21]Unfortunately, there are too few cases to leverage the differences in destinations in a meaningful way.

because the losses are associated with overseas competition and sometimes a specific foreign country (Margalit 2011). If a perception that foreigners are taking away "our jobs" stirs nationalist or ethnocentric sentiments, offshoring may instigate a specific electoral reaction among voters.

Regional Elections

Up to this point, I have focused on elections for national office. I turn now to elections for regional office. In Spain, sub-national elections take place in the devolved autonomous regions, like Catalonia. Elections for the Catalan parliament are held using the same rules as national elections but are typically held in different years.[22]

Voters may blame the regional government for offshoring for at least two reasons. First, regional governments often serve as the first line of defense for workers facing dismissal due to offshoring. Spanish law requires companies to inform the regional government of any plans to collectively dismiss workers at a plant in the region. After receiving such a notification, members of the regional government typically meet with representatives from the firm. In early 2002, for example, when the US-

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[22]But some elections are held before their regularly scheduled time. The 2006 Catalan election was, in fact, a snap election. It was held nearly a year early because in May 2006 one of the coalition parties - ERC - left the government over disagreements about the final draft of changes to the region's constitution. Their withdrawal left the government without a majority and forced the regional president to call an early election.

owned firm, Lear, announced plans to close its electrical components plant at Cervera, members of the Catalan government met with the company to discuss the closure. Both print and broadcast media covered this meeting. Given the involvement of regional governments in discussions about plant closures, voters may blame them when offshoring occurs.

Second, regional governments in Spain have decision-making powers over a range of relevant policy areas (León 2014). For example, regional governments develop active labor market policies and have considerable power over taxes and expenditures (Queralt 2012; León 2014). Voters may consequently view regional governments as being at least partially responsible when local plants close to move abroad.

However, voting in regional elections differs from voting in national elections. Turnout rates are persistently lower in regional elections (Riera 2013). And dual voting occurs – that is, people vote for different parties in national and regional elections (León 2014; Riera 2013). Additionally, the composition of the regional government in Catalonia during the period under investigation differs from that of the national government.

While the national government consisted of a single political party, the regional Catalan government included multiple parties. In the 2003 regional parliamentary election, the Catalan Socialists Party (PSC) obtained the largest number of votes but not seats. To govern, they formed a coalition with two left parties: Initiative for Catalonia-Greens (ICV) - the Catalan version of United Left (IU) - and Republican Left of Catalonia (ERC), a nationalist party that advocates independence for Catalonia.

The presence of multiple parties in the regional government blurs the lines of responsibility. If citizens are to cast an "economic vote", they must have "clarity of responsibilities" in terms of which party is responsible for the relevant policy area (Powell and Whitten 1993). Voters generally find it easiest to allocate blame for bad economic outcomes when a single party governs (Powell 2000; Samuels and Hellwig 2010). Faced with a multi-party coalition government, voters often have difficulty allocating blame (Hobolt, Tilley, and Banducci 2013; Powell and Whitten 1993). Consequently, the deleterious effects of offshoring on incumbent government parties' vote shares may not materialize in multi-party governments.

To test this, I again use a difference-in-differences estimation strategy. I consider $i = (1, ..., 943)$ Catalan municipalities for regional parliamentary elections in years $t = (2003, 2006)$. These elections correspond most closely to Spain's first wave of offshoring and the 2000-2004 national elections examined above. Usefully, the 2003 and 2006 elections also predate the 2008 economic crisis as well as the dramatic rise of public support for independence and secessionist parties in Catalonia (Hierro and Queralt 2019).

The outcome of interest is the change in the incumbent government party's vote share. More precisely, let Y_{dit} denote potential outcomes, where Y_{1it} and Y_{0it} indicate the pair of potential vote shares that the party attains in municipality i at time t when exposed to the treatment or the control condition between the two elections. Because there are three incumbent government parties, there are three pairs of Y_{1it} and Y_{0it}.[23] Following Duch and Stevenson (2008), I estimate the three

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[23]Although ERC left the government coalition in May 2006, I code it as an incum-

parties' vote pairs separately. The full results are reported in the Appendix Tables 2, 3 and 4. The stacked estimated ATTs for all three parties are illustrated in Figure 4 with 99 percent confidence intervals.

Figure 4: ATT for regional government coalition parties
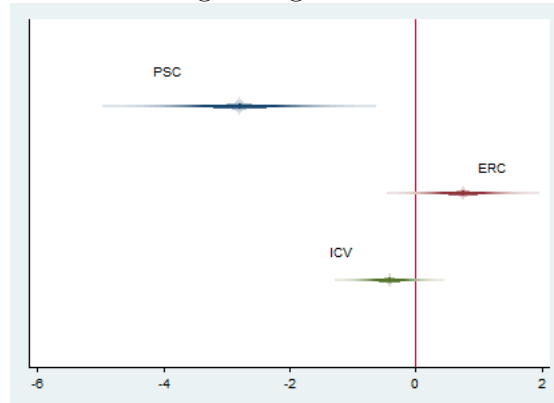
Theories of economic voting in coalition governments are typically derived from and tested at the national level. Such studies show that in national elections not all parties in a multi-party government share the same electoral fate (Martin 2018). The largest party in national government is generally held most to account for poor economic outcomes by voters (Kayser and Peress 2012; Fortunato and Stevenson 2013). And indeed, in this sub-national context, Catalan voters punished the largest coalition party most severely for job losses due to offshoring in regional elections.

From 2003-2006, the Catalan Socialists Party (PSC) held the chief executive position and occupied the largest number of cabinet portfolios. It also controlled the Treasury Department, which oversees subsidies and tax incentives for firms. Presumbent party because voters likely viewed them as part of the incumbent government coalition.

ably because PSC was the largest party in government and had the greatest ability to keep firms onshore, voters punished it most severely when a local plant closed to relocate internationally.

PSC's overall vote share fell between the 2003 and 2006 elections as demonstrated by the negative and significant coefficients on Plant Closed. However, their vote shares fell relatively more in treated municipalities. In treated municipalities, the PSC's vote shares fell by by 1.4 to 2.8 percentage points, on average.[24]

Changes in the junior coalition parties' vote shares were virtually identical in treated and control municipalities. On average, the ERC party lost votes between the 2003 and 2006 elections. However, its losses were similar in treated and control municipalities. None of the estimated ATTs are statistically significant at conventional levels.[25] The fact that this junior coalition party was not punished by voters for offshoring is perhaps unsurprising given that ERC focuses almost exclusively on Catalan independence.

Unlike its two coalition partners, ICV's vote shares increased, on average, between

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[24]To assess the empirical validity of the parallel trends assumption, I examine whether the parties' vote share in municipalities affected by offshoring between the 2003 and 2006 elections followed a similar trend to the control municipalities in the years prior to the treatment. Trends in the Catalan Socialists Party (PSC) party's vote shares prior to 2006 are relatively parallel in treated and untreated municipalities, as illustrated in Appendix Figure A-3.

[25]One of the coefficients on Jobs Lost is statistically significant but this coefficient is positively signed and losses statistical significance when control variables are introduced.

the 2003 and 2006 regional elections. Minor coalition parties like ICV can sometimes increase their vote share when that of the larger coalition parties decline (Duch and Stevenson 2013; Fortunato and Stevenson 2013). Although ICV's vote shares increased overall, their vote gains were broadly similar in both treated and untreated municipalities.

These novel sub-national results make an important contribution to understanding how globalization affects elections at different levels of government. They also contribute to the literature on dual accountability (Rodden and Wibbels 2011), and the clarity of responsibility literature, which argues that economic voting is conditional on voters' ability to assign blame. In this case, voters assigned blame for offshoring to the largest coalition party who had the greatest influence over potentially relevant policies, including subsidies and tax incentives.

Conclusion

Offshoring is one of the most controversial aspects of modern-day globalization. Yet, to date, it has been unclear how offshoring impacts voters' decision in democratic elections, if at all. Using a difference-in-differences estimation strategy, I find that voters punish the political parties in government when businesses move production abroad. Incumbent government parties lose more votes in municipalities where a plant closes to relocate production internationally between elections than in municipalities without such an event. This result holds for different elections, in different years, for different incumbent parties, and at different levels of government. In both

national and sub-national elections, voters punish incumbent government parties for offshoring and parties' vote shares fall as the number of jobs lost due to offshoring increases. In multi-party coalition governments, voters disproportionately punish the largest party in government for offshoring.

Economic logic would suggest that voters should react similarly to all job losses. Yet, I find that voters react differently to different types of job losses. Voters punish incumbents more severely when local jobs are lost to offshoring than when local jobs are lost for other reasons, such as technology or demand shocks. This pattern holds even when job losses engender similar government responses. One reason may be that identical levels of compensation offset the costs of some job losses but not others. Spain's generous compensation programs, for example, fail to eliminate the electoral consequences of job losses from offshoring. But they appear to reduce the electoral effects of other types of job losses. In short, compensation does not seem to work for offshoring; compensation appeases voters affected by other types of job losses but not offshoring.

This implies that the "bargain of embedded liberalism" needs to be revised in light of modern-day globalization. Embedded liberalism suggested that governments could compensate their citizens for the costs of economic openness and sustain public support for globalization by doing so (Ruggie 1982). But despite Spain's generous active labor market programs and strict labor market regulations, which serve to protect citizens from job losses and compensate them for losses that do occur, citizens in areas hit by offshoring vote against incumbent government parties at relatively higher rates. The apparent inability of compensation to fully offset the costs of

offshoring may explain why compensation has become less effective in sustaining public support for globalization in recent years as offshoring has become an increasing important component of globalization.

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Online Appendix

A   Madrid Bombing

Three days before the 2004 national parliamentary election, ten bombs exploded on four commuter trains heading into central Madrid. The blasts killed 191 people and injured nearly 1,800. Although this event may have affected the outcome of the 2004 election (Bali 2007; Montalvo 2011), it is unlikely to account for my findings.

In order to explain my findings, the Madrid bombing would had to have (1) a large negative effect on the government party's votes, and (2) this effect must have exhibited strong heterogeneity in the sense that its size or sign varied systematically between treated and untreated municipalities. The empirical evidence is inconsistent with the second criteria. However, as a robustness check, I include the distance from Madrid as a control variable.[26] Voters in municipalities closer to Madrid may have felt more impacted by the 2004 bombing. Consequently, they may have voted differently from voters in municipalities further away from Madrid. Such a pattern would be problematic for my results if plant closures were clustered in municipalities close to Madrid. However, this is not the case. Nevertheless, I include the geodesic (flight) distance between central Madrid and the geographic center of each municipality as a control variable in Appendix Table 1. This variable also helps to mitigate concerns that the treatment may be spatially correlated.

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[26]As a further robustness check, I also controlled for the presence of a commuter train station in the municipality.

The negative coefficient on the time period variable indicates that fewer votes were cast for the incumbent government party, on average, across Catalonia in 2004, as compared to 2000. The decline in the incumbent party's vote share may have been due to the government's response to the Madrid bombing, as some have suggested (e.g. Bali 2007, Montalvo 2011). However, the party's vote losses were relatively greater in treated municipalities, as compared to control municipalities, as illustrated by the robust negative coefficient on Plant Closed. The change in the government party's vote share between the 2000 and 2004 election was significantly different in municipalities where a local plant closed to move abroad.

On average, the government party's vote share increased in municipalities further away from Madrid in the 2004 election, as illustrated by the coefficient on the product of Distance from Madrid and Post Period. However, no significant difference exists between treated municipalities closer to or further away from Madrid, as illustrated by the statistically insignificant coefficient on the triple interaction term Plant Closed*Distance from Madrid*Post Period.

Appendix Table 1: Controlling for municipalities' distance from Madrid

	(1)
Plant Closed	-11.346
	(6.156)
Distance from Madrid Post Period	0.007
	(0.002)
Plant Closed Distance from Madrid Post Period	0.0186
	(0.012)
Post Period	-9.618
	(0.855)
Constant	17.368
	(0.060)
Observations	1,871
R-squared	0.741
Number of municipalities	936

B Survey questions

Q1: Are you currently employed in the same municipality in which you live?

1. Yes

2. No, I work at a location outside of the municipality I live in

3. I am not currently employed

Q2: Of the events listed below, which one would make you less likely to vote for the Prime Minister's party in the next national election?

1. A local business closes to move to a different country

2. A local business closes to move to a different part of Spain

3. A local business closes and does not re-open anywhere else

4. None of the above

Q3: Have you heard about any local businesses that have closed to move abroad?

1. Yes

2. No

Q4: Do you know anyone who has lost their job because a business closed to move abroad?

1. Yes

2. No

Q5: Imagine a business in your local area closed to move abroad. How much blame do you think the national Spanish government deserves for this?

1. A great deal of blame

2. A fair amount of blame

3. Some blame

4. Very little blame

5. No blame

Q6: Imagine a business in your local area closed to move abroad. The closure of this business resulted in job losses. How would this affect your vote choice in the next national election?

1. I would be much more likely to vote for the Prime Minister's party

2. I would be slightly more likely to vote for the Prime Minister's party

3. My vote choice would not be altered

4. I would be slightly less likely to vote for the Prime Minister's party

5. I would be much less likely to vote for the Prime Minister's party

Q7: Imagine a business in your local area closed to move abroad. How much blame do you think the gobierno autonómico or gobierno de su comunidad autónoma deserves for this?

1. A great deal of blame

2. A fair amount of blame

3. Some blame

4. Very little blame

5. No blame

C   Regional Elections

Three models are estimated for each of the three parties in the regional Catalan government from 2003 to 2006: 1) the Catalan Socialists Party (PSC); 2) the Republican Left of Catalonia (ERC), a nationalist party that advocates independence for Catalonia; and 3) the Initiative for Catalonia-Greens (ICV) - the Catalan version of United Left (IU).

Appendix Table 2: Regional parliamentary elections in Catalonia, 2003-2006

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Socialist Party (PSC)								
Plant closed	-2.789	-1.390	-1.397	-1.805				
	(0.841)	(0.834)	(0.923)	(0.857)				
Jobs lost					-0.011	-0.006	-0.006	-0.007
					(0.002)	(0.001)	(0.001)	(0.001)
Post period	-0.466	-2.453	-2.350	-2.016	-0.467	-2.460	-2.317	-1.999
	(0.133)	(0.313)	(0.234)	(0.265)	(0.132)	(0.312)	(0.234)	(0.262)
GDP per capita (thousand)		-0.059				-0.054		
		(0.047)				(0.047)		
Growth rate			0.098				0.100	
			(0.025)				(0.025)	
Population (thousand)				-0.237				-0.239
				(0.051)				(0.051)
Constant	21.79	30.84	28.78	34.87	21.79	30.74	28.76	34.90
	(0.066)	(0.964)	(0.361)	(1.122)	(0.066)	(0.964)	(0.357)	(1.123)
Observations	1,507	379	334	379	1,507	379	334	379
R-squared	0.030	0.538	0.582	0.579	0.034	0.545	0.592	0.587
Number of municipalities	762	200	179	200	762	200	179	200

Appendix Table 3: Regional parliamentary elections in Catalonia, 2003-2006

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ERC Party								
Plant closed	0.753	0.317	0.343	0.443				
	(0.467)	(0.551)	(0.677)	(0.557)				
Jobs lost					0.002	0.001	0.001	0.001
					(0.001)	(0.001)	(0.001)	(0.001)
Post period	-2.438	-2.375	-1.904	-2.346	-2.435	-2.373	-1.902	-2.342
	(0.119)	(0.219)	(0.174)	(0.219)	(0.118)	(0.219)	(0.175)	(0.217)
GDP per capita (thousands)		0.031				0.031		
		(0.026)				(0.026)		
Growth rate			0.047				0.046	
			(0.025)				(0.025)	
Population (thousand)				0.038				0.038
				(0.044)				(0.044)
Constant	22.20	17.50	17.19	17.29	22.20	17.50	17.19	17.29
	(0.059)	(0.515)	(0.340)	(0.950)	(0.059)	(0.515)	(0.340)	(0.948)
Observations	1,507	379	334	379	1,507	379	334	379
R-squared	0.366	0.564	0.570	0.564	0.366	0.564	0.570	0.564
Number of municipalities	762	200	179	200	762	200	179	200

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Appendix Table 4: Regional parliamentary elections in Catalonia, 2003-2006

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ICV Party								
Plant closed	-0.411	-0.657	-0.782	-0.692				
	(0.336)	(0.356)	(0.362)	(0.352)				
Jobs lost					-0.002	-0.002	-0.002	-0.002
					(0.001)	(0.001)	(0.001)	(0.001)
Post period	2.500	2.249	2.059	2.298	2.502	2.245	2.056	2.295
	(0.072)	(0.184)	(0.129)	(0.146)	(0.071)	(0.184)	(0.128)	(0.145)
GDP per capita (thousand)		-0.004				-0.004		
		(0.031)				(0.031)		
Growth rate			-0.026				-0.025	
			(0.015)				(0.015)	
Population (thousand)				-0.023				-0.023
				(0.024)				(0.024)
Constant	4.79	6.46	6.86	6.88	4.79	6.45	6.84	6.87
	(0.035)	(0.629)	(0.205)	(0.521)	(0.035)	(0.629)	(0.204)	(0.519)
Observations	1,507	379	334	379	1,507	379	334	379
R-squared	0.627	0.722	0.714	0.723	0.627	0.723	0.714	0.724
Number of municipalities	762	200	179	200	762	200	179	200

D Over time trends in vote shares

In all three cases, the pre-treatment trends are largely parallel. However, they are not perfectly so. The PSOE's vote shares from 2004 to 2008 exhibit the most parallel trends. The PP's vote shares from 1996 to 2000 exhibit the least parallel trends. Reassuringly, the ATT is similar in magnitude and statistical significance across all three cases. This is particularly noteworthy given that the pre-treatment trends move in opposite directions. They appear to be moving closer together for the PP party from 1996 to 2000 but look to be moving further apart for the PSC party from 1999 to 2003.

Despite this, the average treatment effect on the treated is negative and statistically significant in all three cases. This should reassure readers that the results are not spurious or unique to a single election. Incumbent government parties of various ideological stripes lose more votes in municipalities where a plant closed to relocate internationally between elections than in municipalities without such an event.

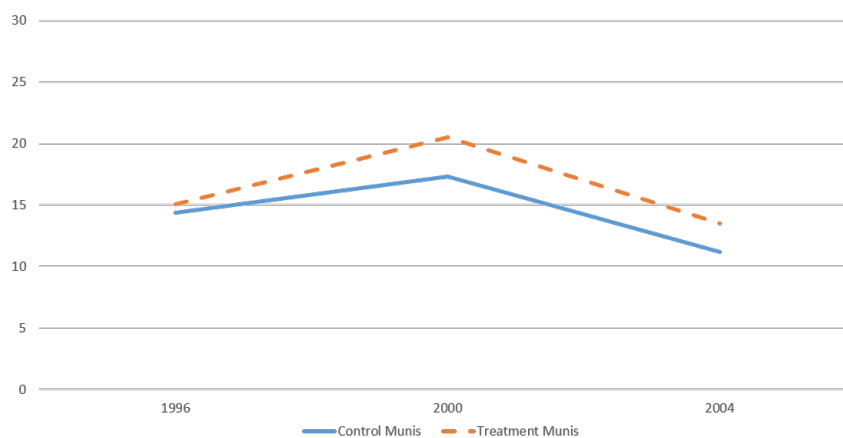Figure A-1: Over time trends in PP vote share
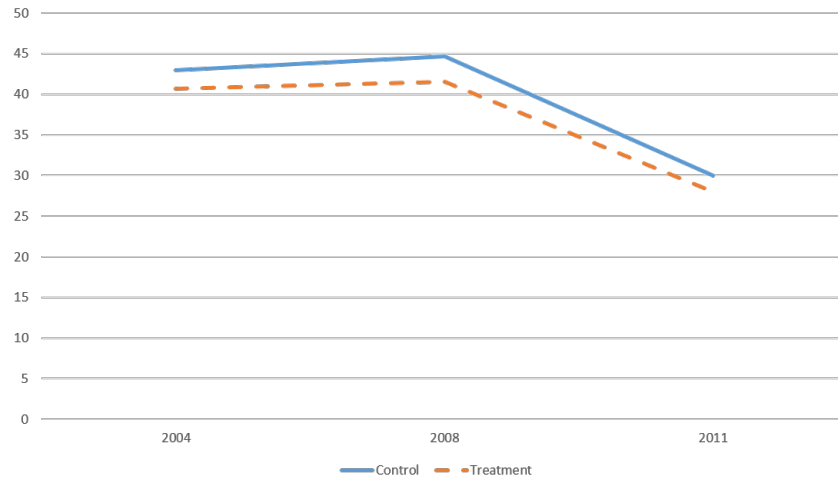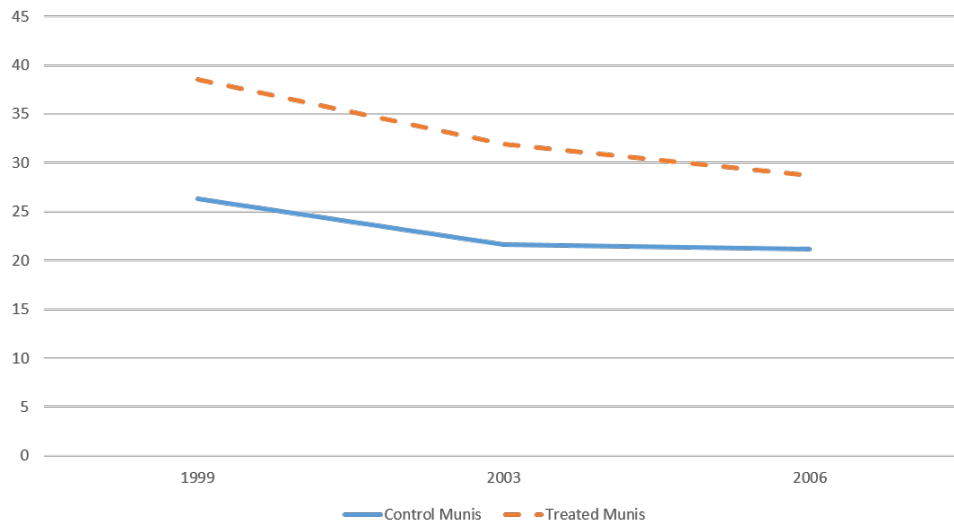
Figure A-2: Over time trends in PSOE vote share

Figure A-3: Over time trends in PSC vote share

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Appendix Table 5: National parliamentary elections in Catalonia, 2008-2011

	(1)	(2)
Socialist Party (POSE)		
# of jobs lost due to offshoring	-0.003	
	(0.0005)	
# of jobs lost for other reasons		0.001
		(0.003)
Post period	-14.781	-14.792
	(0.410)	(0.436)
Population (thousands)	0.001	-0.003
	(0.003)	(0.006)
Constant	42.749	46.051
	(2.714)	(5.239)
Observations	104	104
R-squared	0.975	0.973
Number of provinces	52	52