

Incumbents Beware: The Impact of offshoring on elections

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One of the most controversial aspects of modern-day globalization is offshoring – that is, when firms move their manufacturing operations or business functions abroad for reasons of comparative advantage. Despite the growing salience of offshoring for voters and politicians alike, it remains unclear what, if any, impact offshoring has on democratic elections. Using a difference-in-difference estimation strategy, I find evidence that voters punish political parties in government when plants close to move abroad. 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 government parties in both national and regional elections and government parties' vote shares fall as the number of jobs lost due to offshoring increases. In coalition governments, voters disproportionately punish the largest party for offshoring.

One of the most controversial facets of modern-day globalization is offshoring – that is, when firms move their manufacturing operations or business functions abroad for reasons of comparative advantage.¹ As more and more plants relocate internationally, offshoring grows in salience for politicians and voters alike. Forty-five percent of respondents in Europe said they think about the offshoring of jobs to countries with cheap labor when asked what “globalization” brings to mind.² And politicians often highlight the impact of offshoring on domestic labor markets. US President Donald Trump, for example, often spoke about offshoring during his 2016 campaign and promised to bring back manufacturing jobs that had moved to China and Mexico.

The growing salience of offshoring among voters and politicians raises an intriguing, yet unanswered question: how does offshoring affect democratic elections? Understanding the electoral consequences of offshoring is important because the number and types of jobs that can be performed abroad are growing rapidly due to technological innovations and expanding global production. Offshoring is consequently set to become one of the biggest economic issues facing elected leaders (Blinder 2009).

¹ Offshoring has multiple meanings. In the academic literature, there are primarily two notions of offshoring (Jensen et al. 2017). The first refers to moving particular tasks in the production process (typically back-office service activities) overseas. The second is when a company relocates a production plant abroad for comparative advantage reasons. The second concept most closely approximates the type of offshoring under investigation here. I examine plant closures that occur when firms relocate production outside of the country’s borders. Outsourcing, in contrast, occurs when the activity is subcontracted to another company within the same country, and relocation is when the activity is relocated to another location within the same country.

² European Commission (2005) Eurobarometer 63, question Q6.

Although many studies investigate how international economic integration affects elections, they typically focus on other facets of globalization, such as foreign direct investment (Owen 2018) or foreign imports (e.g. Autor et al. 2013). Yet, offshoring is one of the most visible, salient, and contentious aspects of modern-day globalization. Surveys show more than 95 percent of voters oppose businesses' decisions to move manufacturing operations abroad (Mansfield and Mutz 2013). Given the salience of offshoring to voters, it seems sensible to ask how this phenomenon impacts on democratic elections. Do voters punish incumbents when a local plant closes to move production abroad?

On one hand, voters may not blame incumbents if they see offshoring as being outside the remit of elected officials. The decision to move production abroad is typically made by large, multi-national firms that operate in multiple countries and firms' offshoring decisions are often taken for reasons of comparative advantage. In 2018, for example, the Dutch turbine maker Vestas announced the closure of its plant in the Spanish municipality of León. This plant produced wind turbines for the global market. The Danish firm planned to move production from Spain to China in order to save money on labor and other production costs.

Voters may view global relocations, like Vestas's move, as an inevitable consequence of globalization. Indeed, offshoring itself is possible because of high levels of international economic integration. Precisely because of globalization, firms headquartered in one country, like the Netherlands, can move the production of export goods from a country like Spain to another country, such as China, to take advantage of lower production costs.

Previous research shows that under conditions of high economic internationalization, voters tend not to hold incumbent governments fully responsible for negative economic outcomes (Lewis-Beck and Stegmaier 2000, Kayser 2007, Duch and Stevenson 2008). Although voters punish incumbents for poor economic outcomes under certain conditions

(e.g. Kayser 2007), they may not penalize incumbents for offshoring if they view it as being largely outside the government's control and/or an inevitable consequence of globalization.

On the other hand, however, voters may punish an incumbent government party when plants close to move abroad if they view offshoring as a consequence of insufficient government support. Voters may believe governments can keep plants "onshore" by providing adequate subsidies and/or tax breaks. Indeed, elected leaders themselves often espouse this view – using the threat of offshoring to justify generous subsidies and lucrative tax incentives for firms (Jensen and Malesky 2018). If voters view offshoring as a failure of government policy, they may punish incumbent governments when plants close to move abroad.

Ultimately, how offshoring affects elections is an empirical question – one that has been largely overlooked to date, in part, because of the difficulty of identifying offshoring events. I aim to address this lacuna by using data on geo-located offshoring events in Spain – a country that experienced a wave of offshoring beginning in the early 2000s (Míguez 2004). Using a difference-in-difference estimation strategy, I find that national government parties lose more votes in municipalities where a plant closed to move abroad between elections than in municipalities without such an event. Government parties' vote shares fall as the number of jobs lost due to offshoring increases. The loss of 500 jobs due to offshoring in a municipality reduces the national government party's vote share by 1.5 percentage points, on average.

Similar offshoring effects are observed in sub-national elections. Voters punish incumbent government parties for offshoring by voting against them in the subsequent regional election. When regional governments consist of multi-party coalitions, the largest party in government is disproportionately punished for offshoring. Junior coalition parties largely escape electoral punishment for local plant closures due to international relocation.

These results are consistent with theories of coalition government that have been largely derived from and tested at the national level. The sub-national results bring fresh evidence to debates over how the local economy affects sub-national elections (e.g. León 2014, King 2001, Atkeson and Partin 1995) and further our understanding of voter behavior in multilevel polities.

More generally, the results speak to fundamental questions of democratic representation, such as how voters evaluate their leaders and hold them accountable. The findings reported here show that voters hold incumbents responsible for an increasingly important aspect of globalization, namely offshoring, in both national and sub-national elections.

Innovation

This study's results are striking because they emerge in a context other than the United States. Most evidence connecting globalization to election results comes from the US – a country with single member districts, primary elections, a president, and plurality electoral rules. These institutions maximize leaders' accountability to voters (Rickard 2018). Given this, it is unsurprising that American voters punish incumbents for trade-related job losses (Margalit 2011), import shocks (e.g. Autor et al. 2017, Feigenbaum and Hall 2015, Che et al. 2016), and economic insecurity (Jensen et al. 2017). Observing similar voting behavior in a country with different electoral institutions is more unexpected.

Here, I examine the impact of offshoring in a country whose electoral institutions differ from those in the US, namely Spain. Spain has a parliamentary system of government, more than two political parties, proportional electoral rules, multi-member districts, and closed party lists. Spain consequently provides a suitable opportunity to examine how the effects of globalization vary across different electoral systems. Several additional compelling reasons exist to examine the case of Spain.

Why Spain?

Spain experienced a wave of offshoring starting in the year 2000. This occurred, in part, because of the pending expansion of the European Union (EU) in 2004. This expansion brought ten new countries into the EU. 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. Spain consequently held an intermediate position in the global supply chain.

Spain's position in the global division of labor led some firms to move their manufacturing operations abroad. The Spanish automobile components sector, for example, lost 20 percent of its workforce to central and eastern European countries between 2002 and 2005 (Miguélez Lobo 2004). This wave of offshoring caused alarm among trade unions, politicians, and citizens. In a 2005 survey, thirty-one percent of Spanish respondents said that thought of the offshoring of jobs to countries with cheap labor when they heard the word "globalization".³

Despite the salience of offshoring for Spanish voters, Spain presents a hard case in which to observe electoral impacts from offshoring. Spain is a member of the European Union and as a result, the government has little direct control over the country's trade (or industrial) policies. Previous research shows that voters are less likely to hold governments accountable for economic outcomes when less of the economy is under the national government's control (e.g. Dutch and Stevenson 2008; Hellwig 2001). Because the Spanish government does not directly control its foreign economic policy, voters in Spain may view globalization and offshoring in particular as being largely outside of the national government's remit.

Additionally, Spain's employment protection regulations are among the strongest in the OECD. Employees made redundant due to a plant closure have the right to receive a

³ European Commission, Eurobarometer 63, spring 2005, question Q6.

minimum severance payment equivalent to 20 days of salary per year of service (Menendez 2010). Voters' electoral responses to offshoring may be less pronounced in countries with generous severance pay, like Spain, because the negative economic impacts of job losses are offset by government assistance.

Finally, the plant closures I analyze occur during a period of economic growth in Spain. From 2000 to 2006, the Spanish economy grew 4 percent annually, on average (World Bank 2018). When a country's economy is doing well, voters are less likely to vote against incumbent governments. Because Spain's economy was growing during the period under investigation, voters may be less likely to vote against the incumbent government party – even in response to the offshoring of a local plant. However, in less vibrant economies, voters' responses to offshoring may be more negative.

The strength of Spain's economy during this wave of offshoring demonstrates how the logic of offshoring differs from other types of plant closures. Offshoring is typically the result of a decision taken by parent companies headquartered in third countries as part of their international business strategy. Firms' decisions to offshore production are usually *not* a response to declining local economic conditions (Jofre-Monseny et al. 2018). Instead, firms' international location decisions are primarily driven by local production costs (Helpman 1984). Given this, offshoring may ironically be more likely when a country's economy is growing. Wages tend to rise in growing economies, which in turn makes the country less attractive as a place of production. In this way, offshoring is “countercyclical” – that is, it is more likely to occur when the host country enjoys strong economic and subsequently wage growth.

Further Innovations

Besides moving beyond the United States, this study makes several additional innovations. First, I investigate actual election results. In contrast, most previous studies of

offshoring examine public opinion. Studies of public opinion show how offshoring affects individuals' preferences over political parties and policies (e.g. Chase 2008, Owen and Johnston 2017, Rommel and Walter 2018). But how these preferences translate into actual voting behavior remains largely unknown, particularly outside of the United States. I address this omission by examining the effects of offshoring on actual voting behavior.

Second, this study focuses explicitly on offshoring. In contrast, most previous studies focus on other facets of globalization, such as foreign direct investment (e.g. Owen 2018), or aggregate measures of national economic performance, such as total unemployment (e.g. Duch and Stevenson 2008). Focusing on *national* economic factors leaves little room for the idea that *local* economic conditions systematically affect citizens' voting behavior.⁴ In contrast, I focus on the impact of a local plant closure on voting behavior. In effect, this “flips” the causal chain assumed in most theories of economic voting and asks whether voters hold government parties responsible for local economic outcomes.

Third, I measure directly the number of jobs lost due to offshoring. Measuring job losses due to offshoring, and globalization in general, is a difficult task (Margalit 2011). Many studies simply assume that all individuals with a certain skill set or occupation are at risk of being “offshored”. Such assumptions may be “grossly inaccurate” (Margalit 2011, 169) and even if broadly accurate, these measures indicate only the number of *potential* job losses rather than the number of actual jobs due to offshoring.

In an innovative attempt to overcome this challenge, Margalit (2011) uses applications for the United States' Trade Adjustment Assistance (TAA) program to estimate the number of jobs lost due to offshoring in the US. From 2002 onwards, all successful TAA applications include information about the specific cause of the layoffs (i.e. imports, offshoring, or indirect competition). But not all applications are successful and only a small

⁴ See, however, Autor et al. (2013).

percentage of trade-impacted workers apply for TAA benefits (Baicker and Rehavi 2004). In 2008, for example, just 42,000 new participants received TAA services. (Dolfin and Berk 2010). The inaccessibility of TAA benefits leads most trade-displaced workers to rely on Social Security and disability benefits, rather than TAA support (Autor et al. 2013). Using TAA applications, while innovative, likely underestimates the number of job losses due to offshoring.

Some studies use survey-based measures of respondents' subjective perceptions of a country's economic performance (e.g. Fraile and Lewis-Beck 2010). However, voters' political preferences likely color their perception of economic performance depending on whether or not their preferred party is in office (e.g. Evans and Anderson 2006, Kayser 2007). A relationship between citizens' "perception" of economic performance and voting is not the same as showing electoral accountability for actual economic outcomes, such as offshoring (Kayser 2007). To overcome this challenge, I use objective data on plant closures and job losses to investigate whether and to what extent voters hold leaders accountable for genuine economic outcomes.

As a final innovation, I examine the effects of offshoring on both national and sub-national elections. Most studies focus only on national elections. For example, Autor et al. (2017) examine the impact of trade shocks on US Congressional elections in 2002 and 2010 and on US presidential elections in 2000, 2008, and 2016. Margalit (2011) examines the impact of trade-induced job losses on US presidential elections in 2000 and 2004. While these studies usefully illustrate the importance of globalization for national election outcomes, they fail to illuminate what, if any, effect globalization has on subnational elections and thus potentially underestimate the electoral impacts of globalization.

Empirical Evidence

Data

To examine the potential effects of offshoring, I first need to identify plants that close to move production abroad. This is a difficult task; no single source exists for statistics on offshoring.

Spanish legislation makes it possible to identify offshoring events. Spanish labor law requires companies to file an employment regulation file (ERF) prior to dismissing workers. Employers are required to notify public authorities of planned redundancies 30 days in advance.⁵ Employers must explain why workers will be dismissed and can list offshoring or “delocalisation” as the reason. Employers need to notify the regional authority (i.e. the autonomous community’s government) when the collective dismissal concerns plants based in only one region. However, if the collective dismissal affects more than 200 workers, or is likely to be “very significant”, the Ministry of Labour and Social Affairs can claim responsibility to deal with it. If the dismissal affects plants based in two or more regions then the Ministry of Labour and Immigration must be notified.⁶

Using ERFs, I aim to identify the universe of manufacturing plant closures due to offshoring that occurred in Spain during the period under investigation. Offshoring in Europe, and especially in Spain, is largely concentrated in manufacturing. Of all the jobs that have been lost to offshoring in EU countries, the manufacturing sector accounts for the largest share—56 percent—of all jobs lost (Ørberg Jensen 2006).⁷ I therefore focus on identifying

⁵ <https://www.eurofound.europa.eu/observatories/emcc/comparative-information/legal-framework-for-restructuring>)

⁶ <https://www.eurofound.europa.eu/observatories/emcc/comparative-information/legal-framework-for-restructuring>)

⁷ <https://piie.com/sites/default/files/publications/wp/wp06-3.pdf>

manufacturing-sector plants that ceased production at a location in Spain and moved production outside of Spain. To be included in my data, a firm must close a plant in Spain and relocate production outside of Spain. An example is Braun AG, a German consumer products company, which closed its factory in Esplugues de Llobregat.⁸ Approximately, nine million small appliances, including steam irons and blenders, were produced at the Spanish factory each year. When the Spanish plant closed, nearly all of its production was relocated to China to reduce costs. This relocation resulted in 690 job losses.

Any missing offshoring events, if they exist, will bias against finding effects of offshoring. If an offshoring event is missing, a municipality might erroneously be included in the control group when in fact it is treated. The estimated difference between the control and treatment groups would consequently be biased downwards, underestimating the electoral effect of offshoring.

I collect data on the exact geographic location of plants that closed to move abroad. Using this geo-location data, I identify the municipality in which the plant was located. I then construct two groups of municipalities: 1) a control group that did not experience a plant closure due to offshoring between two election dates; and 2) a treatment group of municipalities that did experience a plant closure due to offshoring between two elections.

Working with municipalities permits a fine-grained analysis of the effects of a local plant closure due to offshoring. This is useful because the impacts of plant closures are often location specific (Holl 2004) and offshoring typically has the largest effect on people living close to the relocated plant (e.g. in the same municipality). Using municipal-level data also avoids possible ecological inference problems that occur when using more aggregate data.⁹

⁸ https://elpais.com/diario/2006/05/20/economia/1148076003_850215.html

⁹ Data for municipalities come from the Statistical Office of Catalonia (<https://www.idescat.cat>).

However, using municipalities as the unit of analysis may bias against finding any electoral effects of offshoring. There are more than 8,000 municipalities across Spain and although municipalities vary in size¹⁰, they tend to be smaller, on average, than “local labor markets” (Boix and Galletto 2006).¹¹ This raises the potential for spillover effects. The closure of a plant in one municipality may have economic impacts not only in that municipality but also in neighboring municipalities if they constitute a “local labor market”. As a result, municipalities coded as being in the “control” group may, in fact be, “treated”, which biases against finding any offshoring effects. As a robustness check, I use larger geographic units, namely provinces, as the unit of analysis. However, provinces may hide important spatial variations (Holl 2004) and therefore are not my primary unit of analysis.

I focus on municipalities in the Spanish region of Catalonia. Catalonia is an “autonomous community” – a territorial entity in Spain with a legal constitutional power. I focus on Catalonia for several reasons.

First, Catalonia is Spain’s most industrial region (Miguélez Lobo 2004). It is also the region most affected by offshoring (Miguélez Lobo 2004). Half of the plant closures that occurred in Spain during this period took place in Catalonia.

Second, comparing municipalities across regions is fraught with challenges because different regions of Spain have very different economies (Cruz-Castro et al. 2017). More accurate inferences can be drawn by comparing municipalities within the same region. By comparing control and treatment municipalities in Catalonia, I hold constant region-specific factors that may affect both voting behavior and offshoring.

¹⁰ In the sample studied here, the average municipality population is 23,628.

¹¹ Using data on jobs, resident employees, and travel-to-work commuting distances from the national censuses, Boix and Galletto (2006) identify just 806 local labor markets in Spain.

Third, Spanish regions have varying degrees of fiscal and political autonomy (Cruz-Castro et al. 2017). Catalonia has a considerable level of autonomy from the national government (Riba and Diaz 2002). In fact, the Catalonia government is endowed with sufficient powers to influence the region's economy. The Catalan government possesses moderate levels of fiscal powers and high levels of autonomy with regard to expenditures (León, 2006). The Catalan government is responsible for active labor market policies, university, and innovation policies. It provides unemployment benefits in addition to those provided by the central government, and has almost full autonomy for spending on education, public health, and security. In addition, 33% of the income tax and 35% of the value added tax raised in Catalonia stays in the region (Queralt 2012, 108).

Model

To generate conservative estimates of the electoral consequences of offshoring, I first consider a binary treatment indicator, (*Plant Closed* [D_{it}]), which is coded one for municipalities that experience a local plant closure due to offshoring between the current and the previous election, and zero otherwise.

Figure 1 displays all of the municipalities in the Catalonia region with the treated municipalities shaded in grey.¹² Although Catalonia is the region of Spain with the most offshoring events, less than 2 percent of Catalan municipalities experienced a plant closure due to offshoring between the 2000 and 2004 national parliamentary elections.

[Figure 1 here]

¹² I exclude the region's largest municipality, Barcelona, as layoffs here are unlikely to represent a relevant shock to local employment. Also, it is impossible to match Barcelona to a similarly sized municipality.

Figure 1: Municipalities in Catalonia with a plant closure due to offshoring



As a second indicator, I measure the “intensity of treatment” using the number of jobs lost as a result of the closure of a plant that relocated abroad. The number of workers laid off due to offshoring ranges from 131 to 1280 with a median of 375.

Given the myriad possible correlates of incumbent vote shares, I use a difference-in-differences estimation strategy. Usefully, the difference-in-differences estimator does not require the voting preferences of both groups 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.

I consider $i = \{1, \dots, 943\}$ municipalities for election years $t = \{2000, 2004\}$. These two elections span Spain's first and largest wave of offshoring. Offshoring began in earnest in Spain only at the beginning of the century. Prior to 2000, there are too few instances of offshoring to conduct a meaningful analysis. And after 2006, it becomes increasingly difficult to sort municipalities into correct treatment and control groups.¹³ I therefore focus on the 2000 and 2004 elections, which span Spain's first and largest wave of offshoring.

Usefully, this period excludes Spain's economic crisis, which began in 2008. During the 2000-2004 period, Spain's economy grew by nearly 4 percent a year on average, which helps to distinguish the effects of offshoring from the effects of weak economic growth.

The outcome of interest is the incumbent government party's vote share. The government party's vote share is the theoretically appropriate variable of interest because Spain uses closed-party lists. In closed list systems, voters cannot express a preference for individual candidates. Instead, they must choose a party. As a result, voters prioritize their party preferences. Voters decide which party to support based on the parties' platforms, their performance in government, and election promises – rather than an individual candidate's personal characteristics.

In 2004, the incumbent national government party was the People's Party (*Partido Popular*, PP). The People's Party is a center-right party that is broadly conservative in orientation and its economic policies are generally pro-market.

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.

¹³ In 2016, for example, some municipalities will have been treated prior to the closest prior election (in 2015). The question then arises as to whether such municipalities should be included in the control or treatment group.

The quantity of interest is the electoral effect of offshoring, which is defined as the average treatment effect on the treated (ATT) given by $\alpha = E [Y_{1i,t} - Y_{0i,t} | D_i = 1]$. 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 $E [Y_{0i,t} | D_i = 1]$, I identify this missing potential outcome based on the usual difference-in-differences assumption of parallel trends. Specifically, I assume $E [Y_{0i,t} - Y_{0i,t-1} | D_i = 1] = E [Y_{0i,t} - Y_{0i,t-1} | D_i = 0]$ where $t-1$ equals the year of the most recent previous election. Based on this assumption, the ATT is identified from observed outcomes as:

$$\alpha = \{E [Y_{i,t} | D_i = 1] - E [Y_{i,t-1} | D_i = 1]\} - \{E [Y_{i,t} | D_i = 0] - E [Y_{i,t-1} | D_i = 0]\}.$$

I estimate α using a standard fixed effects regression given by:

$$Y_{it} = \eta_i + \delta_t + \alpha D_{it} + X_{it}\beta + \varepsilon_{it}$$

where Y_{it} is the incumbent government party's vote share in municipality i at time t . η_i is a municipality-level fixed effect to control for any time-invariant unobserved factors, δ_t is a period fixed effect to control for common trends, α is the treatment effect, D_{it} is the treatment variable, and ε is an idiosyncratic error term with $E[\varepsilon | \eta, D, X] = 0$. X_{it} is a vector of time-varying covariates including a constant.

I first present the main results without time varying covariates (except a constant) to avoid post-treatment bias (Montalvo 2011). I then sequentially add each individual control variable – all of which are measured at the municipality level and include GDP per capita, the economic growth rate, and population. 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 offshoring as measured by the change in the national government party's vote shares from the

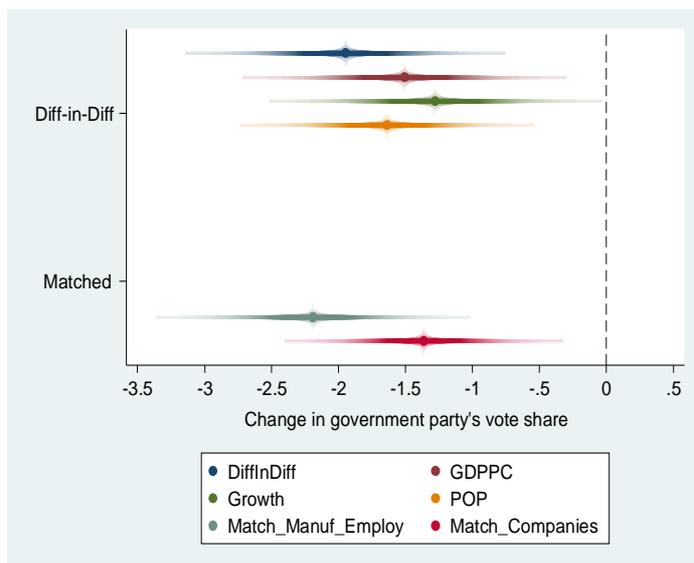
2000 to 2004 election. Figure 1 displays the average treatment effect on the treated (ATT) with 99% confidence intervals.

[Table 1 here]

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

	(1)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Plant closed	-1.947 (0.463)	-1.507 (0.465)	-1.277 (0.477)	-1.636 (0.423)				
Jobs lost					-0.004 (0.001)	-0.003 (0.000)	-0.003 (0.000)	-0.003 (0.000)
Post period	-6.131 (0.121)	-6.933 (0.270)	-6.734 (0.243)	-7.000 (0.224)	-6.135 (0.121)	-6.895 (0.272)	-6.752 (0.241)	-6.967 (0.224)
GDP per capita (thousand)		0.006 (0.037)				-0.004 (0.036)		
Growth rate			0.044 (0.026)				0.043 (0.026)	
Population (thousand)				0.035 (0.036)				0.018 (0.033)
Constant	17.37 (0.060)	21.42 (0.741)	20.98 (0.387)	20.78 (0.767)	17.37 (0.060)	21.63 (0.733)	20.99 (0.389)	21.16 (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

Figure 2: Average treatment effect on the treated (ATT) for *Plant Closed*



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*). However, their vote losses were relatively greater in treated municipalities. On average, the incumbent government party's vote share fell by one to two percentage points in

treated municipalities where a plant closed to move abroad between the elections. This treatment effect is highly statistically significant (with a t-statistic of 4.2) and large in substantive terms. Compared to the overall PP vote share in Catalonia of 11.2% in 2004, the average offshoring effect constitutes approximately a 15% decrease.

The negative impact of offshoring on the incumbent government party's vote shares remains statistically significant after the inclusion of the post-treatment control variables. Although firms that offshore typically produce primarily for export markets rather than the domestic market, I control for municipalities' population, economic growth rate, and GDP per capita to account for potential over-time municipality-level variation in local demand. Controlling for economic growth also helps to distinguish the effects of offshoring from general economic conditions. The magnitude of the ATT is reduced slightly after the inclusion of the post-treatment control variables but remains precisely estimated.

Plant closures that generate more job losses have larger reductive effects on the government party's vote share. For every 500 jobs lost due to offshoring in a given municipality, the incumbent government party's vote share fell by 1.5 percentage points, on average. The mean number of job losses per offshoring event in this sample is 375, which generates a 1.125 point reduction in the government party's vote share in treated municipalities. The magnitude of the job loss effect reflects the small size of Spanish firms. Spanish firms are among the smallest in OECD countries (OECD 2017). The typical manufacturing plant in Spain employs just 14 workers (Jofre-Monseny et al. 2018).

Table 1's results likely represent conservative estimates. Missing offshoring events would bias the magnitude of the reported effect downwards. I have done the utmost to identify the universe of plant closures due to offshoring during the period under investigation. However, if I missed any, some municipalities may erroneously be included in the control group when in fact they were treated. In this case, the estimated difference between the two

groups will be biased downwards. Also, it's possible that the economic impacts of a plant closure in one municipality spill over into nearby municipalities. As a result, some municipalities in the control group may, in fact, be treated (or partially treated). In this case, the estimated difference between the two groups will also be biased downwards. As a robustness check, I re-estimate the models using provinces rather than municipalities as the unit of analysis, as described below. However, I first probe the plausibility of the identification assumption.

Robustness Checks

Identification Assumption

To probe the plausibility of the identification assumption, I conduct a falsification test by estimating a difference-in-differences regression with an identical specification for the earlier 1996 and 2000 elections. I aim to test whether 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. This is known as the common trends assumption. The common trends assumption is more likely to hold when shorter time periods are examined. Given that I investigate changes between elections that are just 4 years apart, the common trends assumption is likely to hold. However, as a robustness check, I estimate a difference-in-differences regression for the 1996 and 2000 elections.

The PP party took control of the national government from the Spanish Socialist Workers' Party (*Partido Socialista Obrero Español*, PSOE) after winning the 1996 election by a small margin. In the 2000 election, the PP party was the incumbent government party (as it was in the 2004 election). Examining the change in the PP party's vote share between 1996 and 2000 allows me to test the common trends assumption by comparing the changes in municipalities that would eventually experience an offshoring event (after 2000) with those that would not. This test examines the extent to which the treatment and control

municipalities were already different prior to any treatment. The results are reported in Table 2.

[Table 2 here]

Table 2: Estimating the change in the national government party's vote share, 1996-2000

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Plant closed (2000-2004)	3.373 (0.549)	1.065 (0.670)	1.099 (0.667)	2.061 (0.791)				
Jobs lost (2000-2004)					0.004 (0.002)	-0.00003 (0.001)	0.00008 (0.001)	0.003 (0.002)
Post period	2.954 (0.127)	5.216 (0.246)	5.553 (0.183)	2.766 (0.144)	2.973 (0.127)	5.225 (0.251)	5.600 (0.181)	2.767 (0.144)
GDP per capita (thousand)		0.037 (0.027)				0.043 (0.028)		
Growth rate			-0.001 (0.015)				0.001 (0.015)	
Population (thousand)				0.729 (0.193)				0.758 (0.192)
Constant	14.39 (0.063)	15.53 (0.382)	15.91 -0.158	11.45 (0.769)	14.39 (0.063)	15.44 (0.385)	15.88 (0.161)	11.33 (0.761)
Observations	1,885	335	297	1,885	1,885	335	297	1,885
R-squared	0.377	0.885	0.894	0.397	0.374	0.884	0.892	0.396
Number of municipalities	943	181	157	943	943	181	157	943

Trends in the PP party's vote shares prior to 2000 are strikingly parallel in treated and untreated municipalities. The treated municipalities are statistically different from the untreated municipalities in just two of the six reported models. The two statistically significant coefficients are positively signed. In other words, the PP party's vote shares may have been higher, on average, in municipalities that would eventually experience a plant closure after the year 2000. This pre-treatment difference biases *against* finding any electoral consequences of offshoring between the 2000 and 2004 elections because citizens who share the partisan affiliation of the incumbent government (i.e. PP voters) are more likely to blame other actors for bad economic outcomes, such as offshoring, rather than the government (Fernández-Albertos et al. 2013). Thus, the potential deviation from common trends reported

in Table 2, if real, biases against finding a reduction in the PP party's vote shares following a plant closure between the 2000 and 2004 elections.

Pre-treatment characteristics

As a further robustness check, I match municipalities using two pre-treatment variables: the percentage of a municipality's population employed in manufacturing and the number of businesses in a given municipality. This strategy helps to ensure that more similar municipalities are compared with one another. It also avoids potential post-treatment bias, which would likely occur if these variables were simply included as controls in a standard difference-in-difference estimation. The "treatment" (i.e. a plant closure) may affect both the number of businesses in a municipality and the share of manufacturing employment. By matching municipalities on these variables prior to treatment, I avoid any potential bias. This strategy is also pragmatic because the data for these two measures are not available at the municipality level after 2001 because the series were discontinued.

Usefully, matching on these pre-treatment variables allows me to account for municipality characteristics that may modify or mediate the impact of an offshoring event on voting behavior. It is possible, for example, that a plant closure in a municipality with many other businesses will have less of a negative economic impact than a plant closure in a municipality with few other businesses. If the number of businesses in a municipality attenuates the negative economic impacts of an offshoring event, voters may not vote against the incumbent government party at the same rate they would in a municipality with fewer employment options. Given this, it is possible that estimates derived from the matched sample will be smaller in magnitude than those from the matched sample. Before describing the results, I first describe the matching technique.

I generate two "matched" samples. First, I match each municipality that experiences an offshoring event to control municipalities with similar shares of their labor force employed

in manufacturing in 1996.¹⁴ Using these data, I generate 10 categories 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. This strategy addresses the possibility that districts with higher manufacturing employment may be disproportionality impacted by plant closures due to offshoring. Recall that all of the plant closures in my sample occur in the manufacturing sector.

Second, I match municipalities with similar numbers of businesses in 1996.¹⁵ As before, I generate 10 categories that reflect the sample's deciles for number of businesses. I match treated municipalities and control municipalities using these categories and restrict matches to municipalities in the same employment category. Table 3 reports the results with robust standard errors clustered by municipality.

[Table 3 here]

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

¹⁵ This year is nearest pre-treatment year for which data is available at the municipal level.

Table 3: 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 (0.454)	-1.363 (0.403)		
Jobs lost			-0.004 (0.001)	-0.003 (0.000)
Constant	-6.155 (0.481)	-6.132 (0.596)	-6.155 (0.481)	-6.132 (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

The average treatment effect on the treated (ATT) in the matched sample is strikingly similar in magnitude to 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 treated municipalities as compared to untreated municipalities with similar numbers of businesses and similar shares of manufacturing employment. The treatment effect estimated using the matched sample is highly statistically significant and large in substantive terms.

The average effect of the “intensity of treatment” (i.e. jobs lost) estimated using the matched sample is virtually identical in magnitude to those from the unmatched sample. For every 500 jobs lost due to offshoring in a given municipality, the incumbent government party’s vote share falls by 1.5 percentage points in a treated district.

These results suggest that key municipality characteristics, such as the number of business in a municipality or the share of people employed in manufacturing, do not significantly modify the electoral effects of job losses due to offshoring on incumbent government party’s vote shares.

Madrid Bombing

Just three days before the 2004 general 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 (e.g. 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, as illustrated by Figure 1.

However, as a robustness check, I include the distance from Madrid as a control variable.¹⁶ Voters in municipalities closer to Madrid may have felt more impacted by the 2004 bombing as may consequently 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, as Figure 1 shows, 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 Table 4. This variable also helps to mitigate concerns that the treatment may be spatially correlated.

[Table 4 here]

¹⁶ As a further robustness check, I control for the presence of a commuter train station in the municipality.

Table 4: 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
Fixed effects	Yes
R-squared	0.741
Number of municipalities	936

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*.

In sum, voters across the region shifted their support away from the national government after the Madrid bombings. However, the treatment effect does not vary systematically between municipalities closer to or further from Madrid. This evidence casts doubt on the plausibility of the Madrid bombing as a rival explanation for the offshoring results.

Provinces

As a final robustness check, I move from municipalities as the unit of analysis to provinces. Provinces constitute larger geographic areas and define national-level electoral districts. Catalonia contains four provinces and at least one offshoring event occurred in each of them during the period under investigation. To use provinces as the unit of analysis, it is therefore necessary to expand the sample beyond Catalonia. I consequently examine vote shares in all of Spain's provinces to see if the results from Catalonia's municipalities generalize to the entire country.

As before, I use a difference-in-differences strategy to identify the electoral effects of offshoring. I consider elections in years $t = \{2000, 2004\}$ for $i = \{1, \dots, 51\}$ electoral districts. Of these districts, more than 20% were "treated" – that is, 20% of Spain's electoral districts experienced at least one plant closure due to offshoring between the 2000 and 2004 national parliamentary elections.

I first consider a binary treatment indicator, (*Plant Closed* [D_{it}]), which is coded one for districts that experience at least one local plant closure due to offshoring between the current and the previous election, and zero otherwise.

The outcome of interest is again the incumbent government party's vote share in a given electoral district.¹⁷ Let Y_{dit} denote potential outcomes, where Y_{1it} and Y_{0it} indicate the

¹⁷ These data are from the European Election and Referendum Database available at

http://www.nsd.uib.no/european_election_database

pair of potential vote shares that the party attains in district (i.e. province) i at time t when exposed to the treatment or the control condition between the current and the previous election.

As before, the quantity of interest is the electoral effect of offshoring, which is defined as the average treatment effect on the treated (ATT) given by $\alpha = E [Y_{1i,t} - Y_{0i,t} | D_i = 1]$. This measures the average difference between the posttreatment vote shares that the affected districts attain with and without the treatment. Since it is not possible to observe $E [Y_{0i,t} | D_i = 1]$, I identify this missing potential outcome based on the usual difference-in-differences assumption of parallel trends. Specifically, I assume $E [Y_{0i,t} - Y_{0i,t-1} | D_i = 1] = E [Y_{0i,t} - Y_{0i,t-1} | D_i = 0]$ where $t-1$ equals the year of the last previous election. Based on this assumption, the ATT is identified from observed outcomes as:

$$\alpha = \{E [Y_{i,t} | D_i = 1] - E [Y_{i,t-1} | D_i = 1]\} - \{E [Y_{i,t} | D_i = 0] - E [Y_{i,t-1} | D_i = 0]\}.$$

I estimate α using a standard fixed effects regression given by:

$$Y_{it} = \eta_i + \delta_t + \alpha D_{it} + X_{it}\beta + \varepsilon_{it}$$

where Y_{it} is the incumbent government party's vote share in district i at time t . η_i is a district-level fixed effect to control for any time-invariant unobserved factors, δ_t is a period fixed effect to control for common trends, α is the treatment effect, D_{it} is the treatment variable, and ε is an idiosyncratic error term with $E[\varepsilon | \eta, D, X] = 0$. X_{it} is a vector of time-varying covariates including a constant. To account for potential serial correlation and heteroskedasticity, I cluster the standard errors by district. The results are reported in Table 5.

[Table 5 here]

Table 5: Country-wide effects by electoral district for 2000, 2004 elections

	(1)	(2)	(3)
Plant closed	-1.481 (1.000)		
# of plants closed		-0.681 (0.402)	
# of jobs lost			-0.002 (0.001)
Post period	-5.529 (0.653)	-5.568 (0.587)	-5.549 (0.590)
Constant	47.83 (0.269)	47.83 (0.267)	47.83 (0.266)
Observations	102	102	102
R-squared	0.710	0.714	0.714
Fixed effects	Yes	Yes	Yes
Number of districts	51	51	51

The incumbent government party's nation-wide performance mirrored its' performance in Catalonia – its vote shares declined between the 2000 and 2004 election, on average. However, their vote losses were relatively greater in treated districts – that is, districts that experienced at least one offshoring event between the 2000 and 2004 election. The dummy treatment variable is not statistically significant at conventional levels, although it is negatively signed and the magnitude of the coefficient is similar to those estimated using Catalan municipalities. Note that the sample is considerably smaller here with just 102 observations, as compared to the 1,843 observations in the Catalan models.

The “intensity” of treatment variables are robust at the 10% level of statistical significance. The first intensity of treatment variable measures the number of plants closed in a treated district. This variable, labelled *# of Plants closed*, ranges from 1 to 7 with a mean value of 2. When two plants close to move abroad in a treated district, the incumbent government party's vote share falls by 1.36 percentage points in the subsequent election.

The second intensity measure calculates the total number of jobs lost in the district due to offshoring. This measure, *# of Jobs lost*, ranges from 149 to 1947 with a mean of 674.

When offshoring results in 674 job losses in a treated district, the incumbent government party's vote share falls by 1.35 percentage points in the subsequent election.

The magnitude of the country-wide effects corresponds to the magnitude of Catalan effects. On average, the closure of a plant to move abroad reduces the incumbent government party's vote share by more than one percentage point but less than two. These results suggest that the findings from Catalan municipalities generalize beyond Catalonia to the entire country.

Regional Elections

Up to this point, I have focused on voting behavior in national elections. I now turn to sub-national elections. In Spain, sub-national elections take place in the devolved autonomous regions, such as Catalonia. In Catalonia, elections for the regional parliament use closed-party lists and votes are aggregated via proportional electoral rules. In other words, the institutions used to elect the Catalan government are identical to those used to elect that national Spanish government.

Regional elections are held in different years than national elections. While national parliamentary elections occurred in 2000 and 2004, the regional elections took place in 2003 and 2006. The staggered election dates help to ensure that no single event in time explains the patterns found in both national and sub-national elections.

Whether offshoring will have a similar impact on sub-national elections as on national elections is unclear. An ongoing debate exists over precisely how sub-national elections are influenced by the economy (Leon 2014, King 2001, Lowry et al. 1998, Svoboda 1995, Anderson 2006, Atkeson and Partin 1995, Carsey and Wright 1998).

With regards to offshoring, it is possible that voters allocate some blame for the closure of plants in their area to the regional government because regional governments in Spain have decision-making powers over a wide range of policy areas (León 2014). Regional

governments are, for example, responsible for developing active labor market policies (OECD 2013). Regional governments also have considerable power over taxes and expenditures (León 2014).

The Catalan government has a considerable level of autonomy from the national government (Riba and Diaz 2002). It is endowed with sufficient powers to influence the region's economy. In particular, the Catalan government possesses moderate levels of fiscal powers and high levels of autonomy with regard to expenditures (León, 2006). The Catalan government is responsible for active labor market policies, university, and innovation policies. It provides unemployment benefits in addition to those provided by the central government, and has almost full autonomy for spending on education, public health, and security. In addition, 33% of the income tax and 35% of the value added tax raised in Catalonia stays in the region (Queralt 2012, 108).

In general, regional governments in Spain serve as a 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.¹⁸ Members of the regional government generally meet with representatives from the firm. In early 2002, for example, when the US-owned multinational, Lear, announced the closure of its electrical components plant at Cervera, members of the Catalan government met with the company to discuss the closure. After the meeting, a spokesperson for the Catalan government lamented

¹⁸ However, if the collective dismissal affects more than 200 workers, or is likely to be “very significant”, the Ministry of Labour and Social Affairs can claim responsibility to deal with it. If the dismissal affects plants based in two or more regions then the Ministry of Labour and Immigration must be notified.

<https://www.eurofound.europa.eu/observatories/emcc/comparative-information/legal-framework-for-restructuring>)

that “the decision of the company is final and the only thing that can be achieved [by the regional government] is to delay it for a few months or phase it over a relatively brief period” (Miguélez Lobo 2004).

Following the wave of offshoring announcements that began in the early 2000s, trade unions demanded that regional governments to do more to stem the tide of international relocations. For example, they asked regional governments to revise the conditions of subsidies they provide to investors (Miguélez Lobo 2004). In the case of Catalonia, the unions proposed a “social agreement for employment and competitiveness” (Miguélez Lobo 2004). The Catalan regional government agreed to review the conditions for the award of subsidies.

Given the involvement of regional governments in plant closures and their responsibilities for active labor market policies, subsidies and tax incentives, voters may view regional governments as being at least partially responsible when local plants close to move abroad. Offshoring may consequently influence not only national elections but also sub-national elections.

However, voting behavior in regional elections differs from voting behavior in national elections. Turnout rates are persistently lower in regional elections (Riera 2013). Dual voting often occurs in Catalonia – that is, when people vote for different parties in national and regional elections (Riba and Diaz 2002, Riera 2013, León 2014).

Also, the composition of the regional governments in Catalonia differs from the composition of national governments, which may affect voting patterns. During the period under investigation, all national governments included a single political party. In contrast, the regional Catalan government was comprised of multiple parties. In the 2003 regional parliamentary election, the Catalan Socialists Party (PSC) obtained the largest number of votes but not seats. To govern, the Catalan Socialists Party 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 coalition governments blurs the lines of responsibility. Voters must have “clarity of responsibilities” in terms of which party is responsible for macroeconomic policy and performance if they are to cast an “economic vote” (Powell and Whitten 1993). When faced with a multi-party coalition government, voters cannot simply reward or punish a single party (Powell and Whitten 1993; Hobolt et al. 2013). Instead, they must try to allocate punishment to the appropriate party. Voters generally find it easier to allocate blame for bad economic outcomes when government coalitions include fewer parties (Samuels and Hellwig 2010; Powell 2000). Given this, the deleterious effects of offshoring on government parties’ vote shares may not emerge in regional elections. I examine this possibility by investigating the impact of plant closures due to offshoring on sub-national elections for the Catalan regional parliament.

In the context of coalition governments, party-specific models are appropriate (Duch and Stevenson 2008). I therefore examine each government party’s vote shares in turn starting with the largest party in the coalition: the Catalan Socialists Party (PSC). From 2003-2006, PSC held the chief executive position in the regional government, occupied the largest number of cabinet portfolios, and controlled the Treasury Department. Given this, I expect any electoral effects of offshoring will be greatest for PSC because in coalition governments, the largest party is most likely to be punished for poor economic outcomes by voters.

Table 6 reports the difference-in-differences estimates for the electoral effects of offshoring as measured by the change in the PSC’s vote shares in elections to the Catalan regional parliament in 2003 and 2006.

[Table 6 here]

Table 6: Regional parliamentary elections in Catalonia, 2003-2006

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Socialists (PSC)								
Plant closed	-2.789 (0.841)	-1.390 (0.834)	-1.397 (0.923)	-1.805 (0.857)				
Jobs lost					-0.011 (0.002)	-0.006 (0.001)	-0.006 (0.001)	-0.007 (0.001)
Post period	-0.466 (0.133)	-2.453 (0.313)	-2.350 (0.234)	-2.016 (0.265)	-0.467 (0.132)	-2.460 (0.312)	-2.317 (0.234)	-1.999 (0.262)
GDP per capita (thousand)		-0.059 (0.047)				-0.054 (0.047)		
Growth rate			0.098 (0.025)				0.100 (0.025)	
Population (thousand)				-0.237 (0.051)				-0.239 (0.051)
Constant	21.79 (0.066)	30.84 (0.964)	28.78 (0.361)	34.87 (1.122)	21.79 (0.066)	30.74 (0.964)	28.76 (0.357)	34.90 (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

Voters punish the incumbent government party for offshoring in sub-national elections. For the largest party in the region's coalition government, the Catalan Socialists, a plant closure due to offshoring in a given municipality reduces their vote share in that municipality by between 1.4 to 2.8 percentage points, on average. These results show that although the attribution of responsibility is diffused in contexts of multilevel governance, voters blame both national and sub-national governments for plant closures to move abroad.

Consistent with theories of coalition government, the largest party in the coalition receives the most severe punishment for offshoring. The two junior coalition parties, Initiative for Catalonia-Greens (ICV) and Republican Left of Catalonia (ERC), experienced fewer, if any, vote losses due to offshoring, as illustrated below.

[Table 7 here]

Table 7: Regional parliamentary elections in Catalonia, 2003-2006

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ERC								
Plant closed	0.753 (0.467)	0.317 (0.551)	0.343 (0.677)	0.443 (0.557)				
Jobs lost					0.002 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)
Post period	-2.438 (0.119)	-2.375 (0.219)	-1.904 (0.174)	-2.346 (0.219)	-2.435 (0.118)	-2.373 (0.219)	-1.902 (0.175)	-2.342 (0.217)
GDP per capita (thousands)		0.031 (0.026)				0.031 (0.026)		
Growth rate			0.047 (0.025)				0.046 (0.025)	
Population (thousand)				0.038 (0.044)				0.038 (0.044)
Constant	22.20 (0.059)	17.50 (0.515)	17.19 (0.340)	17.29 (0.950)	22.20 (0.059)	17.50 (0.515)	17.19 (0.340)	17.29 (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

The Republican Left of Catalonia (*Esquerra Republicana de Catalunya*, ERC), is a nationalist party that advocates independence for Catalonia. On average, the party lost votes between the 2003 and 2006 regional elections. However, its vote losses were virtually identical in treated and control municipalities. None of the estimated coefficients on *Plant Closed* are statistically significant at conventional levels. One of the coefficients on *Jobs Lost* is statistically significant at the 95% level – but this coefficient is *positively* signed and losses significance when control variables are introduced. In sum, this junior coalition party was not punished by voters for offshoring in regional elections – in stark contrast to the largest coalition party which lost votes in municipalities where a plant closed to move abroad.

[Table 8 here]

Table 8: Regional parliamentary elections in Catalonia, 2003-2006

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ICV								
Plant closed	-0.411 (0.336)	-0.657 (0.356)	-0.782 (0.362)	-0.692 (0.352)				
Jobs lost					-0.002 (0.001)	-0.002 (0.001)	-0.002 (0.001)	-0.002 (0.001)
Post period	2.500 (0.072)	2.249 (0.184)	2.059 (0.129)	2.298 (0.146)	2.502 (0.071)	2.245 (0.184)	2.056 (0.128)	2.295 (0.145)
GDP per capita (thousand)		-0.004 (0.031)				-0.004 (0.031)		
Growth rate			-0.026 (0.015)				-0.025 (0.015)	
Population (thousand)				-0.023 (0.024)				-0.023 (0.024)
Constant	4.79 (0.035)	6.46 (0.629)	6.86 (0.205)	6.88 (0.521)	4.79 (0.035)	6.45 (0.629)	6.84 (0.204)	6.87 (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

The Initiative for Catalonia-Greens (*Iniciativa per Catalunya Verds*, ICV) is an eco-socialist party. Unlike its two coalition partners, ICV's vote share increased, on average, between the 2003 and 2006 regional elections.¹⁹ However, the party did relatively less well in treated municipalities. One of the coefficients on *Plant Closed* reaches the 95% level of statistical significance and this coefficient is negatively signed, which suggests voters punished ICV for offshoring. However, the magnitude of the coefficient is only half that of the ATT for the largest coalition party. Although the ICV party was punished by voters for offshoring, it was not punished as severely as the largest coalition party.

The coefficients on *Jobs lost* are robust and statistically significant in all estimated models in Table 8. Again, however, the magnitude of the coefficients is far smaller for this junior coalition party than for the largest party in government. In a municipality where 500 jobs were lost due to offshoring, the largest coalition party's vote share declined by at least 3

¹⁹ Minor coalition parties can sometimes increase their vote share when that of the larger parties decline (e.g. Fortunato and Stevenson 2013, Duch and Stevenson 2013).

percentage points. The same number of job losses reduced this junior coalition party's vote shares by just one percentage point.

These results are fully consistent with theories of coalition government – which are typically tested at the national level. In national elections, not all parties in a multi-party government share the same electoral fate (Martin 2018). The largest party is generally held most to account for poor economic outcomes by voters (e.g. Fortunato and Stevenson 2013, Kayser and Peress 2012). In this sub-national context, Catalan voters punished the largest government party most severely for job losses due to offshoring in regional elections.

These novel sub-national results make an important contribution to understanding the effects of globalization on elections at different levels of government. They also contribute to the literature on dual accountability (Rodden and Wibbles 2011), and the clarity of responsibility literature, which argues that economic voting is conditional on voters' ability to assign blame.

Causal Mechanisms

The estimated effects of offshoring on incumbent government party's vote shares are substantive, robust, and statistically significant. However, a key question remains: what mechanism causally link offshoring to voting behavior? I suggest several possibilities.²⁰

First, a direct pocketbook effect may connect offshoring to voting. Workers who lose their job due to offshoring experience economic losses. These losses are often significant because of “offshored” workers' characteristics and employment history. In Spain, workers fired because of offshoring tend to be middle-aged with 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

²⁰ I do not attempt to empirically mediate between them because I suspect that some combination of them is at work.

accepting worse pay and temporary jobs (Miguélez Lobo 2004). Because voters directly affected by offshoring experience a decline in their personal economic circumstances, they may vote against the incumbent government party.

A second possible mechanism is indirect pocketbook voting. Individuals employed in the local area, but not at the relocated plant itself, may suffer economically from offshoring. A plant closure may reduce wages in the area as more workers become available and jobs become scarcer in the local economy. Workers in auxiliary companies and suppliers, some of which will be losing their main customer, may also be laid off. For example, the closure of Braun AG's factory in Esplugues de Llobregat resulted in 690 direct job losses and estimates suggest that a further 1,500 jobs were eliminated indirectly. These 1,500 jobs were connected to Braun's plant via its network of providers and other services.²¹ Voters whose personal economic situation deteriorates as an indirect result of offshoring may also vote against the incumbent government party.

Third, local sociotropism may link offshoring and voting behavior. Voters may identify with their local community and this "place-based" identity may shape their political preferences (Cramer 2016). Place-based identities may catalyze a feeling of community threat from a local plant closure. This feeling of community threat may lead voters to punish the incumbent government party at the ballot box – even if the voter themselves is not personally affected by the plant closure.

Note that some of these mechanisms require voters who are not directly affected by a plant closure to know about it. This is likely to be the case, particularly in Spain where offshoring threats often trigger public protests. In early 2002, for example, the US-owned multinational, Lear, unexpectedly announced the closure of its electrical components plant at Cervera, Spain. The announcement led to large protests in the Cervera area attended by the

²¹ https://elpais.com/diario/2006/05/20/economia/1148076003_850215.html

plant's workforce of 1,200 people and local trade unions (Miguélez Lobo 2004). This protest was widely covered in the popular press and as a result, people not personally affected by the plant closure knew about it. Similarly, in January 2003, more than 2,000 people protested the offshoring of production from the Moulinex factory in Barbastro, Spain to China, which would result in 150 people being fired. The mayor of Barbastro joined the protest, which helped draw media coverage.²²

How the media covers these events influences the how voters assess incumbent governments (Miller and Krosnick 2000). Media coverage of offshoring often describes foreign competition as the cause of offshoring. Media reports sometimes even name a specific foreign country as a contributing factor to the layoffs (Margalit 2011, 184). In fact, the most distinctive characteristic of media coverage of offshoring is the prominence of the foreign threat as the source of hardship and the mention of a specific foreign country when layoffs were caused by offshoring (Margalit 2011, 184). In my sample, for example, I was able to identify the country to which the plants were moving in 90 percent of the cases from media reports.

The fact that offshoring is closely associated with “others” may trigger voters’ nationalism and/or ethnocentrism – an additional possible mechanism linking offshoring to voting behavior (Mansfield and Mutz 2013). Existing research shows a strong correlation between nationalist and ethnocentric sentiments and opposition to free trade (e.g., Mansfield and Mutz 2009). If a perception that foreigners are taking away “our jobs” stirs nationalist and ethnocentric sentiments, offshoring may instigate a strong electoral reaction among voters. Voters may be sensitive to job losses caused by offshoring precisely because the

²² https://www.diariocordoba.com/noticias/economia/rechazo-ajuste-empleo-moulinex_37789.html

losses are associated with overseas competition and perhaps even with a recognized “villain” in the form of a specific foreign country.

Conclusion

Using a difference-in-difference estimation strategy, I find that incumbent government parties lose more votes in municipalities where a plant closes to move abroad between elections than in municipalities without such an offshoring experience. National government parties’ vote shares shrink as the number of jobs lost due to offshoring increase. Similar effects are observed in sub-national elections. When regional governments consist of multi-party coalitions, voters disproportionality punish the largest party for offshoring.

While these results may be reassuring to democratic theorists, they will be worrisome for incumbents. Earlier research suggested that voters tend not blame incumbents for negative economic outcomes that are due to globalization. Incumbents could therefore hope to avoid punishment for adverse economic outcomes caused by globalization. Yet, this study shows that incumbents cannot entirely avoid blame for economic outcomes engendered by globalization. Voters punish incumbents for job losses – even job losses caused by offshoring.

These results are particularly striking because they emerge in a country with party-centered electoral competition and proportional electoral rules. PR electoral rules improve representation but generally do so at the expense of accountability (Horowitz 2003; Lijphart 1984, 1994; Powell 2000). Accountability exists when there is clarity of responsibility for political outcomes, and voters can effectively sanction those responsible for the outcomes (Powell 2000). Plurality electoral systems tend to score highly on these criteria for two reasons: 1) plurality electoral systems tend to produce single-party majority governments, making it obvious which party is responsible for political outcomes; and 2) the translation of votes to seats under plurality electoral systems often means that a small loss of votes can

result in a significant loss of seats. Voters can thus inflict significant punishment on the incumbent merely by withdrawing a few percentage points of the vote.

Proportional electoral systems do not perform as well on these criteria. As a result, one might reasonably expect voters not to punish incumbent government parties for offshoring. Yet, in Spain – a country with proportional electoral rules and closed-party lists, I find evidence that voters hold incumbent government parties accountable for offshoring by voting against them at higher rates in municipalities that experienced a plant closure to move abroad.

If offshoring entails electoral costs for Spanish governments, as I demonstrate here, why don't governments do more to keep plants onshore? Spain's electoral institutions give leaders few incentives to respond to geographically-concentrated groups, such as an individual plant (Rickard 2018). In PR systems, providing economic benefits to geographically diffuse groups maximizes parties' effective votes and likelihood of being in parliament (Rickard 2018). Every euro spent on support for geographically concentrated groups, such as individual plants threatening to move offshore, is one less euro available for geographically diffuse groups. The opportunity costs of forgone spending on diffuse groups are large for political parties competing in PR systems. Subsidizing a geographically diffuse industry, for example, helps people across all regions of the country. In effect, there is a "dispersion bonus" from subsidizing geographically-diffuse industries. This dispersion bonus is more valuable electorally for parties competing in PR systems than parties in plurality systems. In PR systems, every additional vote won by a party contributes to its electoral success. In contrast, many of the additional votes won by geographically-targeted government assistance are lost to parties and politicians competing in plurality systems because they "over-buy" support.

Candidates in closed list systems, like Spain, have little incentive to champion government support for plants in their districts. Voters cannot express preferences for individual candidates in closed list systems. In fact, candidates' names are often not even included on the ballot in closed list systems. Instead, voters select a party. Party leaders then decide which candidates will fill the seats allocated to the party based on their vote share. Because party leaders have this power, candidates' seek to curry favor with them. Fighting for the interests of their geographically-defined constituents (i.e. plants in their electoral district) does little to improve legislators' re-election chances – especially when the interests of their constituents run counter to the interests of the party.

Closed-party lists generate party-centered electoral competition, high levels of party discipline, and help to align the incentives of legislators and party leaders. As a result, geographically-targeted government assistance for individual firms is unlikely in closed-list systems. A plant threatening to move abroad might lobby their local representative(s) for government support but legislators elected via closed-lists have few incentives to respond to these demands. In this way, localized, geographically-concentrated interest groups often find themselves without a champion in closed-list PR systems – particularly at the national level. As a result, geographically-concentrated producers tend not to win economic support in closed-list PR systems. In sum, Spanish governments have few incentives to work to keep firms onshore – even though they are punished by voters when a local firm closes to move abroad.

These novel results show that the electoral consequences of globalization extend beyond countries with plurality electoral rules to countries with proportional electoral rules. However, it is important to note that among countries with proportional electoral rules, Spain may be a “most likely” case – that is, Spanish voters may be more likely to punish incumbent government parties for offshoring than voters in other PR systems. This is because national

governments in Spain tend to include just one party rather than multiple parties and this characteristic allows voters to easily attribute responsibility to the sole government party (Field 2016). Additionally, a relatively small number of representatives are elected from each district (Carey and Hix 2011). Average district magnitude in Spain is 6.73 and as many as 18% of representatives in the 350-seat Congress of Deputies are elected from districts with a magnitude smaller than five. As a result, accountability tends to be relatively high in Spain, as compared to other countries with proportional electoral rules (Field 2016). An interesting question therefore remains: would a similar connection between offshoring and election outcomes emerge in other PR countries? This is a fruitful topic for future study.

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