

Economic Outcomes and Voting Behavior: Evidence from Greece

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Abstract: We examine to what extent the main predictions of the punishment-sanctioning model, i.e. that the incumbent parties are supported by voters in good economic times whereas voters deprecate them during bad times, apply in the case of Greece. Using data from 13 peripheries during 2000-2012, we document that bad economic outcomes and rapid fiscal-adjustment measures can be linked to the formation of political agendas through national elections. In particular, we find evidence suggesting that low growth, high unemployment and tight fiscal policy make the electorate move to the opposing parties and reduce support for the incumbent parties. In addition, two Greek parties with completely different rhetoric and political ideology, the left-wing Syriza and the neo-fascist Golden Dawn, seem to get the benefit out of hard economic decisions taken by incumbent parties throughout this period.

Keywords: Economic Crisis, Voting, Elections, Panel Data, System GMM.

Word count: 6,115.

I. Introduction

Greece has been at cyclone's eye since the start of the sovereign debt crisis in 2009, making front-page news across the globe. Greece's public debt and government deficit hit alarming levels especially when the revised economic figures came up after the 2009 elections, highlighting that the Greek crisis was partly the result of past mismanagement. Greece was the first Eurozone member to come under intense pressure and a loss of market confidence as well as the first to turn to other Eurozone member states and the IMF for financial assistance. The Greek economic-adjustment programme was designed in an environment of low growth, wide macroeconomic imbalances, significant market rigidities and a serious gap in competitiveness and productivity. Economic activity dropped further thereafter, as austerity measures and extensive structural reforms were implemented, leading to a severe economic depression that lasted six years, wiping out more than twenty-five percent of GDP and raising the official unemployment rate to over 27%. As Antonakakis & Collins (2014), Economou et.al. (2011) and Kentikelenis et. al. (2011) point out, even more important was the shock that hit people in Greece. In a country with one of the lowest rates of suicide mortality worldwide, the number of people committing suicide increased dramatically in the aftermath of the 2009-2010 crisis, leading to a rise in total suicides by almost 40% .

It is clear that during the period between joining the single currency and implementing the bailout plan, both the economic situation and the overall social structure for Greek voters has significantly changed. Essentially, in political terms, the austerity measures that were adopted as a preconditions for the bailout funds from Troika (European Union, IMF and ECB) led the two parties that held power after Greece's transition to democracy in 1974, New Democracy and Pasok, to watch voters turning sharply to the left and right (Mark Mazower (2015)).

On 25th January 2015, the Greek people voted categorically against the austerity measures that drove the national economy into a deep decline, electing into government a left-wing party, Syriza, which has promised to bring creditors to the negotiating table, something that previous governments kept avoiding as a quite dangerous move. At the same time, Greeks gave a further push to the neo-fascist party Golden Dawn. This party made its first appearance in Parliament in the 2012 elections and held its power steady in the January 2015 election, coming third, despite much of its leadership being behind bars. On the other hand, while achieving a significant increase in its share of votes, Syriza fell one seat short of absolute majority in the 300-seat legislature, forcing the party's leader Alexis Tsipras to form a coalition-government with Independent Greeks, a small anti-memorandum, right-wing party.

Economic issues and electoral outcomes have been extensively analysed in the political-economy literature. According to Simone & Sapio (2013), macroeconomic performance and election outcomes can be seen under three main models, the punishment-sanctioning model, the competence-selection model and the partisan model. The punishment-sanctioning model determines reward or punishment of the incumbent party based on retrospective evaluation (Powell 2000; Powell & Whitten 1991). Essentially, following the responsibility hypothesis originally advanced by Key (1964, 1966), voters are assumed to look back at the performance of those in government and vote asymmetrically, punishing the incumbent governments more than the less policy-coherent parties, without distinguishing between left-wing and right-wing parties (Powell & Whitten, 1993; Lewis-Beck & Stegmaier, 2000). In the context of the competence-selection model, under conditions of uncertainty, voters condition their vote based on whether incumbents are responsible for economic outcomes. In that way, voters are able to identify who is to blame and thus elect the most competent politicians (Duch & Stevenson, 2008). On the other hand, the partisan model assumes that parties switch to certain fiscal, monetary and other policies based on the preferences of their electorate clientele (Hibbs, 1978; Swank, 1993, 1998). This model stresses that voters have different preferences, voting for right- or left-wing parties accordingly, and predicts that right-wing governments would be punished more heavily than left-wing governments for increases in unemployment, and the reverse would be the case for inflation (Fox & Phillips (2003), for example, based on data for the U.S. presidential elections, present evidence supporting the partisan model).

Numerous researchers have addressed issues pertaining to retrospective or performance voting. The vast majority of this literature has followed Kramer's (1971) pioneering work, whose main finding regarding the U.S. presidential elections was that the electorate votes for the President's party only when it judges economic performance to be sufficiently satisfactory. Kramer's general finding has been confirmed by a number of other studies based on data from different countries and time-periods (Lewis-Beck & Stegmaier, 2000, 2007, 2009; Monroe, 1984; Nannestad & Paldam, 1994; Sanders, 2000). The inference from these studies is that democratic voters behave like economic agents, rewarding the government in office during economic upturns and punishing it during downturns, as incumbents are held solely responsible for tough economic times. For example, Fair (2009) finds that the economic environment has significantly affected U.S. Presidential and House elections over the years, while Lewis-Beck (1986) and Pacek & Radcliff (1995) report evidence in favour of this relationship for a number of Western European countries and several developing countries. Examining electoral outcomes in low-income Eastern-Europe democracies, Pacek (1994) and Fidrmuc (2000) obtain analogous results for Poland, Bulgaria, Hungary, Slovakia and the Czech Republic. Overall, much of the recent literature reports results showing that macroeconomic conditions significantly influence the electoral outcome for incumbent administrations. This is consistent with Wilkin's et al (1997) well-known statement, based on evidence from a world's list of developing and developed democracies, that "voters around the world find a way of translating economic demands into partisan support."

Nevertheless, there is limited empirical evidence for small democratic states in Southern Europe. Lewis-Beck & Nedau (2012) recognize the lack of studies on economic voting in Greece and Portugal, the most heavily hit economies by the 2009-2012 crisis. Greece seems ideal for examining the relevance of the performance voting model, given that it has suffered from a tremendous economic crisis while at the same time has witnessed the simultaneous surge of two completely different political parties, Golden Dawn and the recently elected Syriza, the first left-wing government for decades in Europe. Hence, the question remains: To what extent voters are influenced by economic outcomes when casting their vote? And to what extent this changes during hard economic times? According to Bouvet & King (2013), electoral support for the incumbent party falls significantly during bad times. They find that since 2008, only eight incumbent parties out of thirty-five parliamentary elections in OECD countries held their vote steady and were reelected (Canada in 2011, Chile in 2009, Greece in 2012, Japan in 2009, Mexico in 2009 but then lost in 2012, Netherlands in 2012, Turkey in 2011 and the USA 2012. An alternative, yet connected, explanation, put forwarded by Chang & Lee (2013), is that in deep recessions voters usually shift to the party that seems to be the most capable to deal with that particular issue).

Our purpose in this paper is to examine the link between electoral support and the state of the economy, using Greek data from the period 2000-2012. Essentially, standard macroeconomic variables, such as GDP growth and unemployment, as well as standard public-policy variables, i.e. government expenditures, tax revenues and the fiscal deficit, are used as a proxy for the state of the economy and projected on a metric of electoral outcome. During good times, i.e. when growth is increasing, unemployment is falling and fiscal-policy is expansionary, incumbent parties can be expected to get the benefit, while the opposite holds when conditions change to the most negative. Given that between 2000 and 2009, the Greek economy was growing at an average annual rate of 3.1% and governing parties were implementing an expansionary fiscal policy, the memorandum era coincides with a significant drop in economic activity, drastic cuts in public spending and increases in taxes.

Without any intention to downgrade the importance of the vote-performance hypothesis for incumbent parties, we think that the search for evidence for such a mechanism has inadvertently diverted attention from the role of other parties that have never been at the forefront of the political system. Research has indeed been lopsided towards the investigation of electoral outcomes following economic-policy change only for the party in office (Neels et.al. 2007; Hellinek (2005).

In the case of Greece, the role of other parties is of particular importance for at least two reasons. First, the implementation of austerity policies in the memorandum era has drastically changed the

socio-economic structure in Greece, producing an ideological shift of part of the electorate. And second, the emergence of Syriza and Golden Dawn can also be considered as a response to the bipolar system that has dominated Greek politics for over 40 years, with the New Democracy and Pasok alternating in government.

We thus test for the existence of a negative impact of bad economic conditions and tight fiscal policy on electoral outcomes for governing parties in Greece and a positive impact on outcomes for the opposing parties, including Syriza and Golden Dawn. Greece is probably the only example where under very unfavourable economic conditions, both a chauvinistic party, Golden Dawn, and a left-wing party, Syriza, having diametrically opposing beliefs and rhetoric, simultaneously experience a significant poll-surge against the traditional incumbent parties. In the 2009 election, just before the country's credit-rating was downgraded, Golden Dawn won less than 1% of the vote, gaining no representation in Parliament. Yet, after two international bailouts and a government austerity drive, it won 7% in the 2012 twin elections, ending up in fifth-place with 18 seats in Parliament. In the most recent elections of January 2015, it also managed to catch the third place in Parliament, with 17 seats, which has established it as a dominant player in the political stage. It is obvious that Golden Dawn took advantage due to the growing public anger that resulted from the drastic cuts, enforced by international lenders, in jobs, wages and pensions as well as from past mismanagement, an increased crime rate and a large inflow of illegal immigrants seeking access to other EU countries. Syriza also shot from 5 to 26 percent in 2012 and achieved an eight and-a-half point victory over the incumbent conservative party New Democracy in the January 2014 elections. Syrizas' victory, while widely predicted, was nonetheless stunning in scale.

In this context, we track voting in times of economic crisis, as governments in advanced democracies are often thought to be more accountable during periods of falling economic activity (Nadeau et al., 2012), focusing not only on the party in opposition, but also on parties which have experienced a significant increase in their voting power, though not in office.

To test our hypotheses, we use national-election data on 13 regions in Greece at the NUTS-2 level during the period 2000-2012, excluding the January 2014 elections due to lack of comparable data for all the explanatory variables (The European economic crisis has been accompanied by the rise of other European left-wing parties. An example is Podemos, a newly-founded left-wing political party in Spain. In the 2014 European Parliament elections, Podemos received about 8% of the vote, even though the party was merely four-months old at the time). Coalitional complexity and diffusion of government responsibility, i.e. which party to blame (Lewis-Beck, 1988), is not a problem in the Greek case, as both New Democracy and Pasok lost significant power, dropping between 2009 and 2012 by more than 35 percentage points in terms of electoral power, while Syriza and Golden Dawn increased their vote share from 4% to 23% and from below 1% to 7% respectively, significantly changing the balance of the political system.

Our main findings are in accordance with the predictions of the performance-sanctioning hypothesis (Lewis-Beck, 1988; Powell & Whitten, 1993). In particular, we find evidence suggesting that low growth, high unemployment and tight fiscal policy lead Greek voters to reward the opposing parties and reduce support for the party in power. This applies particularly in the case of the left-wing Syriza, which seems to have got the benefit out of hard economic decisions taken by incumbent parties throughout the period under consideration.

The rest of the paper is structured as follows. Section 2 describes the data and the empirical specification, while Section 3 presents the empirical results. We conclude in Section 4.

2. Data and Empirical Specification

We use data from the European Election Database (EED) covering five parliamentary elections, i.e. 2000, 2004, 2007, 2009 and 2012, for thirteen peripheries (NUTS-2) (Anatoliki Makedonia, Thraki, Attiki, Dytiki Ellada, Dytiki Makedonia, Ionia Nisia, Ipeiros, Kentriki Makedonia, Kriti, Notio Aigaio, Peloponnisos, Sterea Ellada, Thessalia, Voreio Aigaio). The sample includes seven political parties

(We include in the analysis parties that have participated in at least 3 parliamentary elections from 2000 to 2012 achieving a vote share more than 1% in at least one election), namely New Democracy, Pasok, Syriza and Golden Dawn (In the 2000 parliamentary elections, Golden Dawn participated as a coalition with the Nationalist Front Line party. For the 2004 elections we use data on the Nationalist Hellenic Front party), as well as the Communist Party of Greece (KKE), the Popular Orthodox Rally (LAOS), and the Ecologists Green Party (OP). Before the 2012 elections, Greece had a tradition of single-party governments. The two parties that dominated the political scene for the greatest part of this period and alternated in office until 2009 were the centre-right New Democracy, and the centre-left Pasok. New Democracy was the leading party in 9 out of 15 Parliamentary elections after the end of the 7-year dictatorship in 1974, while Pasok was the leading party in 6 parliamentary elections, holding office as a single-party government for 22 years between 1981 and 2012. According to Greek constitutional law, opposing parties can be divided into ‘parliamentary’ and ‘non-parliamentary’ opposition. Parliamentary opposition is practiced by parties that are represented in Parliament, while non-parliamentary opposition is practiced by parties that failed to win at least 3% of the vote. Non-parliamentary opposing parties that existed continuously throughout the period we consider are the Communist Party of Greece and Syriza, while the other opposing parties in our sample simply meet the criterion of having participated in at least 3 out of the 5 elections and of having achieved a voting share of at least 1% in at least one election.

As proxies for the state of the economy, we use two of the most frequently-cited indicators by parties and the media, i.e. per-capita (regional) income growth and (regional) unemployment, as well as different proxies for the fiscal-policy stance. Data on unemployment for each region come from Eurostat, while the Hellenic Statistical Authority (EL.STAT.) has provided us with GDP data in current euros at a regional level. To construct series for regional real per-capita GDP, we use a GDP deflator from the EL.STAT. and population data at a regional level from Eurostat. Fiscal-policy stance is proxied by three alternative indicators, representing changes between election years in general-government final consumption expenditures, in tax revenue and in the fiscal deficit. Data for government final consumption expenditures and the tax revenue are obtained from the World Bank (World Development Indicators), while the series for fiscal deficit come from Eurostat. The statistical properties of the dataset are shown in Table I.

<i>Variable</i>	<i>Obs.</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Min</i>	<i>Max</i>
Vote share (%)	338	14.07	16.25	0.03	58.77
Real GDP per capita, growth	338	7.02	18.31	-19.67	40.31
Unemployment rate (%)	338	13.33	6.42	5.40	29.70
Government Consumption Expenditure (% GDP), per. change	338	4.68	7.83	-6.98	14.02
Tax Revenue (% GDP), per. change	338	1.26	12.32	-15.91	17.40
Deficit (% GDP), change	338	1.28	5.89	-6.70	8.80

Table I. Descriptive statistics

Our aim is to explore to what extent per-capita growth, unemployment and fiscal-policy exert a significant impact on the behaviour of Greek voters and whether this impact differs between incumbent and opposing parties. To this end, we use an empirical specification of the form:

$$\begin{aligned}
 (vote)_{j,i,t} = & \delta_0 + \delta_1 (vote)_{j,i,t-1} + \delta_2 (gro)_{i,t} + \delta_3 (une)_{i,t} + \delta_4 (fis)_t^m + \delta_5 (opp)_{j,i,t} * (gro)_{i,t} + \delta_6 (opp)_{j,i,t} * (une)_{i,t} + \\
 & + \delta_7 (opp)_{j,i,t} * (fis)_t^m + \delta_8 (syr)_{j,i,t} * (gro)_{i,t} + \delta_9 (syr)_{j,i,t} * (une)_{i,t} + \delta_{10} (syr)_{j,i,t} * (fis)_t^m + \\
 & + \delta_{11} (gol)_{j,i,t} * (gro)_{i,t} + \delta_{12} (gol)_{j,i,t} * (une)_{i,t} + \delta_{13} (gol)_{j,i,t} * (fis)_t^m + \sum_{t=2000}^{2012} \tau_t (year) + \varepsilon_{j,i,t}
 \end{aligned}
 \tag{I}$$

where j denotes political party, i represents periphery, and t is the election year. The δ 's and τ 's are unknown constant parameters to be estimated, while ε is an unobserved spherical disturbance term. The dependent variable $(vote)_{j,i,t}$ is the vote share across peripheries per election year, whereas $(vote)_{j,i,t-1}$, the lagged value of the voting share, is included to account for ongoing influences and vote-preference persistence. We also add period dummies to control for unobserved common effects of external factors across regions, including pessimistic or optimistic expectations regarding the future state of the world economy.

The variable $(gro)_{i,t}$ is regional per-capita (real) GDP growth between election years, reflecting overall macroeconomic performance, while $(une)_{i,t}$ is the current regional unemployment rate, reflecting labour-market prospects across the different regions. $(fis)_t^m$ is an indicator for the fiscal-policy stance, which, unlike growth and unemployment, is exclusively time-varying, and is measured by: (i) the percentage change of government final consumption expenditures (as % of GDP) between election years, (ii) the percentage change of government revenue (as % of GDP) between election years, and (iii) the fiscal-deficit change (as % of GDP) between election years.

To disentangle the effects of the above economic variables on incumbent parties from those on opposing parties, we include in the set of regressors interaction terms, defining (opp) , (sy) and (gol) as dummies. $(opp)_{j,i,t}$ takes the value of 1 if a political party j , other than Syriza or Golden Dawn, was not part of a government-coalition in the pre-election period and the value of zero otherwise. $(sy)_{j,i,t}$ and $(gol)_{j,i,t}$ take the value of 1 for Syriza and Golden Dawn and the value of zero otherwise. Given the definition of the three dummies, the effect of changes in per-capita growth, unemployment and fiscal policy on the incumbent party is captured, respectively, by the coefficient on (gro) , (une) and (fis) , i.e. by δ_2 , δ_3 and δ_4 , while the corresponding effect on all the opposing parties is captured, respectively, by the coefficient sums $\delta_2 + \delta_5 + \delta_8 + \delta_{11}$, $\delta_3 + \delta_6 + \delta_9 + \delta_{12}$ and $\delta_4 + \delta_7 + \delta_{10} + \delta_{13}$. On the other hand, the effect of changes in growth, unemployment and fiscal policy on Syriza and Golden Dawn is captured, respectively, by the coefficient sums $\delta_2 + \delta_8$, $\delta_3 + \delta_9$, $\delta_4 + \delta_{10}$ and $\delta_2 + \delta_{11}$, $\delta_3 + \delta_{12}$, $\delta_4 + \delta_{13}$.

Statistical significance of the interaction terms $(opp)*(gro)$, $(opp)*(une)$, $(opp)*(fis)$, $(sy)*(gro)$, $(sy)*(une)$, $(sy)*(fis)$ and $(gol)*(gro)$, $(gol)*(une)$, $(gol)*(fis)$ would indicate a heterogeneous impact of changes in the state of the economy on incumbent and opposition parties, along the lines suggested by the punishment-sanctioning model (Lewis-Beck, 1988; Powell & Whitten, 1993; Sanders, 2000; Nezi, 2012). In particular, if during economic downturns, opposing parties are benefited while governing parties incur the cost by losing a portion of their vote share, then regional per-capita growth, $(gro)_{j,i,t}$, would enter the regressions with a statistically significant positive coefficient for the incumbent party (i.e. $\delta_2 > 0$) and with a negative coefficient for all non-governing parties (i.e. $\delta_2 + \delta_5 + \delta_8 + \delta_{11} < 0$). Similarly, a rise in the regional unemployment rate, $(une)_{i,t}$, would affect the electoral decision of voters negatively for the incumbent party and positively for all opposing parties taken together (i.e. $\delta_3 < 0$ and $\delta_3 + \delta_6 + \delta_9 + \delta_{12} > 0$). Turning to fiscal-policy variables, politicians, when in office, have strong incentives to choose policies that will maximise their re-election prospects and promote their partisan agenda. Most categories of government spending, such as unemployment benefits or other social-development measures, are linked to redistributive policies and thus are likely to be especially effective as a vote-generating mechanism for parties in power. This opportunistic behaviour, regardless of ideological orientation,

will increase their chances of being re-elected or at least drastically increase their political influence. Thus, our expectation for the Greek case is that incumbent parties will benefit from a more relaxed fiscal policy, increasing their relative political power, whereas opposing parties as a whole will increase their influence when the implementation of such policies sharply drops. Accordingly, we expect $\delta_4 > 0$ and $\delta_4 + \delta_7 + \delta_{10} + \delta_{13} < 0$ for the government-spending variable and the fiscal-deficit variable and $\delta_4 < 0$ and $\delta_4 + \delta_7 + \delta_{10} + \delta_{13} > 0$ for the tax-revenue variable.

On the other hand, for significantly negative values of $\delta_8, \delta_9, \delta_{11}$ and δ_{12} , rejecting the hypothesis $H_o : |\delta_8| = |\delta_{11}|$ and/or $H_o : |\delta_9| = |\delta_{12}|$ in favour of the alternative $H_a : |\delta_8| \neq |\delta_{11}|$ and/or $H_a : |\delta_9| \neq |\delta_{12}|$ would provide evidence of a different impact of changes in economic growth and/or unemployment on Syriza and Golden Dawn. Similarly, a heterogeneous impact of fiscal-policy changes on these two parties would lead to the rejection of the hypothesis $H_o : |\delta_{10}| = |\delta_{13}|$.

Finally, consistency of the estimates requires rejection of the hypotheses $H_a : |\delta_2| \neq |\delta_2 + \delta_5 + \delta_8 + \delta_{11}|$, $H_a : |\delta_3| \neq |\delta_3 + \delta_6 + \delta_9 + \delta_{12}|$ and $H_a : |\delta_4| \neq |\delta_4 + \delta_7 + \delta_{10} + \delta_{13}|$.

3. Estimation Results

Equation (1) is estimated by applying the system-GMM technique (Arellano & Bover, 1995; Blundell & Bond, 1998). In the context of our model, this technique tackles bias resulting from the possibility of autocorrelation in the error term due to omitted variables and the presence of a lagged dependent variable among the regressors. The system-GMM technique is also particularly appropriate when the period of study is relatively short and the problem of weak instruments causes large finite-sample biases and poor precision of the originally simple first-differences GMM-estimator. The statistical adequacy of the model is established when the generated residuals do not exhibit second-order autocorrelation and the over-identifying restrictions are not rejected.

Estimation results are presented in Table 2. In all three columns, the over-identifying restrictions are not rejected (Sargan statistic), suggesting that the model is well specified. There is also no evidence of second-order autocorrelation in the residuals (m1 and m2 statistic) for two out of three fiscal metrics. At the same time, electoral outcomes show a significantly positive dependence on past voting, with current support for parties deriving to a large extent from past support.

Regressor	Fiscal Consolidation, $(fis)_t^m$		
	Government Consumption Expenditure (% GDP), per. change	Tax Revenue (% GDP), per. change	Deficit (% GDP), change
$(vote)_{j,i,t-1}$	0.865*** (34.82)	0.903*** (48.86)	0.888*** (41.40)
$(gro)_{i,t}$	0.221 (1.57)	0.289 (1.40)	0.263* (1.83)
$(une)_{i,t}$	-0.717*** (-4.45)	-0.782*** (-4.56)	-0.691*** (-4.44)
$(fis)_t^m$	0.491*** (2.70)	-0.183 (-0.55)	0.559* (1.86)
$(opp)_{j,i,t} * (gro)_{i,t}$	-0.232*** (-8.55)	-0.324*** (-11.32)	-0.278*** (-4.77)
$(opp)_{j,i,t} * (une)_{i,t}$	0.813*** (11.28)	0.874*** (6.96)	0.815*** (8.80)
$(opp)_{j,i,t} * (fis)_t^m$	-0.179*** (-2.66)	-0.091 (-0.59)	-0.103 (-0.69)

$(syr)_{j,i,t} * (gro)_{i,t}$	-0.374*** (-11.08)	-0.461*** (-12.48)	-0.453*** (-11.20)
$(syr)_{j,i,t} * (une)_{i,t}$	1.161*** (14.63)	1.067*** (7.73)	1.088*** (11.61)
$(syr)_{j,i,t} * (fis)_t^m$	-0.633*** (-9.21)	0.237* (1.65)	-0.742*** (-5.17)
$(gol)_{j,i,t} * (gro)_{i,t}$	0.085 (0.35)	0.079 (0.29)	-0.090 (-0.51)
$(gol)_{j,i,t} * (une)_{i,t}$	0.690*** (3.99)	0.753*** (4.51)	0.670*** (3.62)
$(gol)_{j,i,t} * (fis)_t^m$	-2.460** (-2.25)	0.905** (2.01)	-2.296** (-2.36)
Number of obs.	299	299	299
m_1 [p-value]	-2.25 [0.02]	-3.58 [0.00]	-2.43 [0.01]
m_2 [p-value]	2.05 [0.03]	-0.17 [0.86]	1.03 [0.29]
Sargan [p-value]	77.16 [0.56]	66.79 [0.85]	74.19 [0.66]
<i>Hypotheses Testing^(a) [p-value]</i>			
$H_0 : \delta_2 + \delta_5 + \delta_8 + \delta_{11} = 0$	1.52 [0.21]	1.36 [0.24]	3.94 [0.04]
$H_0 : \delta_3 + \delta_6 + \delta_9 + \delta_{12} = 0$	137.04 [0.00]	52.86 [0.00]	77.98 [0.00]
$H_0 : \delta_4 + \delta_7 + \delta_{10} + \delta_{13} = 0$	7.50 [0.00]	2.87 [0.09]	8.77 [0.00]
$H_0 : \delta_2 = \delta_2 + \delta_5 + \delta_8 + \delta_{11} $	5.12 [0.02]	6.74 [0.00]	15.94 [0.00]
$H_0 : \delta_3 = \delta_3 + \delta_6 + \delta_9 + \delta_{12} $	100.68 [0.00]	55.90 [0.00]	70.63 [0.00]
$H_0 : \delta_4 = \delta_4 + \delta_7 + \delta_{10} + \delta_{13} $	8.42 [0.00]	3.26 [0.07]	9.81 [0.00]
$H_0 : \delta_8 = \delta_{11} $	3.44 [0.06]	3.75 [0.05]	4.21 [0.04]
$H_0 : \delta_9 = \delta_{12} $	8.61 [0.00]	3.58 [0.05]	5.91 [0.01]
$H_0 : \delta_{10} = \delta_{13} $	2.87 [0.09]	2.24 [0.13]	2.48 [0.11]

Notes: Numbers in parentheses denote z-scores, and are residual first and second order serial correlation tests, while Sargan stands for the over-identifying restrictions test. Single, double, and triple asterisks denote statistical significance at the ten percent, five percent, and one percent level respectively. All models allow for robust standard errors. Time dummies are included in all specifications. (a) The statistic is distributed as a Chi-square with 1 degree of freedom.

Table 2. Electoral outcomes, economic conditions and fiscal consolidation in Greece.
Estimation method: System-GMM (two-step results).

The coefficient on (gro) in Table 2 has a positive sign, and is only marginally insignificant in column (2), implying that per-capita GDP growth benefits the incumbent party. The coefficient on (fis) indicates that higher government spending or a higher fiscal deficit also increases support for the party in government, while higher taxes have no statistically significant impact. On the other hand, the coefficient on (une) is always significantly negative in columns (1)-(3), implying that voters strongly penalize incumbent parties for failing to reduce unemployment during their administration.

This is also reflected in the interaction terms $(opp) * (une)$, $(syr) * (une)$ and $(gol) * (une)$. The coefficients of these terms have positive signs throughout Table 2 and are always significant as a sum at a p-value of less than 0.01, suggesting a strong asymmetric impact of changes in unemployment on voters' support for opposing parties. Indeed, from the value of the coefficient sum $\delta_3 + \delta_6 + \delta_9 + \delta_{12}$, and using the sample's mean for voting shares, Table 2 suggests that an increase in the unemployment rate can lead to a rise in the vote score for non-governing parties.

The effect of GDP growth is equally strong on average for non-governing parties, with the corresponding interaction terms, $(opp) * (gro)$, $(syr) * (gro)$ and $(gol) * (gro)$, being as a sum

significant at a p-value of no more than 5% throughout Table 2, providing support for the hypothesis that during periods of falling economic activity voters turn in general to the opposing parties hoping that they will deliver better growth outcomes. The estimated value for $\delta_2 + \delta_5 + \delta_8 + \delta_{11}$ implies that, holding the other variables constant, a decline in GDP growth would increase the vote share of non-governing parties.

The effect of changes in fiscal policy is on average less strong. As far as government expenditures are concerned, the coefficients on $(opp)*(fis)$, $(syr)*(fis)$ and $(gol)*(fis)$ in column (1) have negative signs and are as a sum significant at p-value of less than 0.01, supporting the hypothesis that reduced public spending generates a switch of the vote towards the opposing parties. In column (2), however, the coefficient on $(opp)*(fis)$ is wrongly signed while the coefficient on $(syr)*(fis)$ is marginally significant, leading to significance of the sum of the three interaction terms at a p-value of only 10%, which implies a weak positive effect of increased taxation on the opposing parties' vote share. In column (3), all three interactions, $(opp)*(fis)$, $(syr)*(fis)$ and $(gol)*(fis)$, have the expected negative signs and we cannot reject their significance as a sum. Thus, given the estimated value for $\delta_4 + \delta_7 + \delta_{10} + \delta_{13}$ and using the sample mean for voting shares, Table 2 implies that a reduction in the fiscal deficit would lead to a vote-switch towards the non-governing parties.

The coefficients on $(syr)*(gro)$ and $(syr)*(une)$ do not seem to differ from those on $(opp)*(gro)$ and $(opp)*(une)$ in terms of sign or significance, suggesting that voters believe that they should punish the incumbent party that has failed to fulfil their expectations regarding growth and unemployment and turn in general to opposing parties that might reward them back. Nevertheless, there is evidence of asymmetry between Syriza and Golden Dawn. Changes in economic variables turn out on average to be statistically more significant for Syriza than for Golden Dawn, indicating that the electorate does not believe that Golden Dawn is capable of tackling Greece's major economic problems. The interactions $(syr)*(gro)$ and $(syr)*(une)$ are both highly significant throughout Table 2, which suggests a strong support of the electorate for left-wing radical parties during periods of worsening economic conditions and/or fiscal consolidation. From the coefficient sum $\delta_2 + \delta_8$ and $\delta_3 + \delta_9$, and using the sample mean for Syriza's voting share, we can infer that a rise in unemployment or a fall in per-capita GDP growth increases support for Syriza respectively. In contrast, $(gol)*(gro)$ turns out to be wrongly signed in columns (1)-(2) and statistically insignificant in column (3), implying that changes in GDP growth have no influence on Golden Dawn's voting share, and leading to rejection of hypothesis $H_o : |\delta_9| \neq |\delta_{12}|$. The effect of unemployment, while of the same significance, is smaller in size for Golden Dawn than for Syriza, and we cannot reject the hypothesis $H_o : |\delta_8| \neq |\delta_{11}|$. This heterogeneous impact of per-capita GDP growth and unemployment across the two parties can be explained by the lack on the part of Golden Dawn of a clear agenda for tackling socio-economic problems in Greece. Golden Dawn seems to promote as a solution the Palingenetic Ultrationalism, an idea developed by Griffin (1991). The key elements are that fascism can be defined by its core myth, namely that of "national rebirth" - palingenesis. Vasilopoulou and Haliopoulou (2015) seem to follow this idea explaining the rise of the far right in Greece since the beginning of the crisis. Golden Dawn's success has been based on its ability to promote a nationalist solution to the economic, political and ideological crises that have occurred in Greece.

On the other hand, as the partisan approach emphasizes, left-wing parties usually favour more state intervention, income redistribution and an expansionary fiscal-policy stance. Thus when expansionary policies need to be stopped, it is to be expected that left-wing parties will get most of the benefit. This is reflected in the coefficient on the interaction term $(syr*fis)$ in Table 2. Changes in government expenditures, taxes, or the fiscal deficit affect Syriza's voting share, with $(syr*fis)$ entering with a significantly negative sign in columns (1) and (3) and a significantly positive sign in column (2). Yet, despite its different rhetoric and political agenda, fiscal-policy variables also seem to have a large and statistically significant effect on the Golden Dawn's voting share. The hypothesis

$H_o : |\delta_{10}| \neq |\delta_{13}|$ cannot be rejected at 5% or 1%. Essentially, this suggests that Golden Dawn took advantage due to the drastic cuts in public-sector services, jobs and pensions in the aftermath of the 2009-2010 crisis.

4. Concluding comments

Much of the political-economy literature reports negative effects of deteriorating economic conditions on electoral outcomes for incumbent parties. Motivated by the recent developments in Greece, and in particular by the rapid rise of two parties with completely different political rhetoric and agendas, Syriza and Golden Dawn, and by the simultaneous decline of two traditional parties, New Democracy and Pasok, we have investigated the impact of economic variables on the behaviour of Greek voters, testing whether the main predictions of the performance-sanctioning model apply in the case of Greece. Indeed, if Greek electoral outcomes are to be in accordance with the performance-sanctioning theory, then one would expect that during unfavourable economic conditions and a tight fiscal-policy stance people will strongly turn to radical parties, such as Syriza and Golden Dawn, hoping for a return to the previous status.

Using electoral outcomes across 13 regions in Greece during five national-election events we find evidence in support of the performance-sanctioning hypothesis. Our estimates reveal an asymmetric impact between incumbent and opposing parties during changing economic conditions. Incumbent parties are found to be negatively affected when the economy is downsized or when there is a need to pursue fiscal-consolidation policies, while opposing parties are benefited. In addition to providing support for the performance-sanctioning hypothesis, we also find evidence indicating an asymmetry within the two newly placed parties, Syriza and Golden Dawn, with the voting share of Syriza found to exhibit greater sensitivity to changes both in GDP growth and in unemployment compared to the Golden Dawn's share.

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Figures

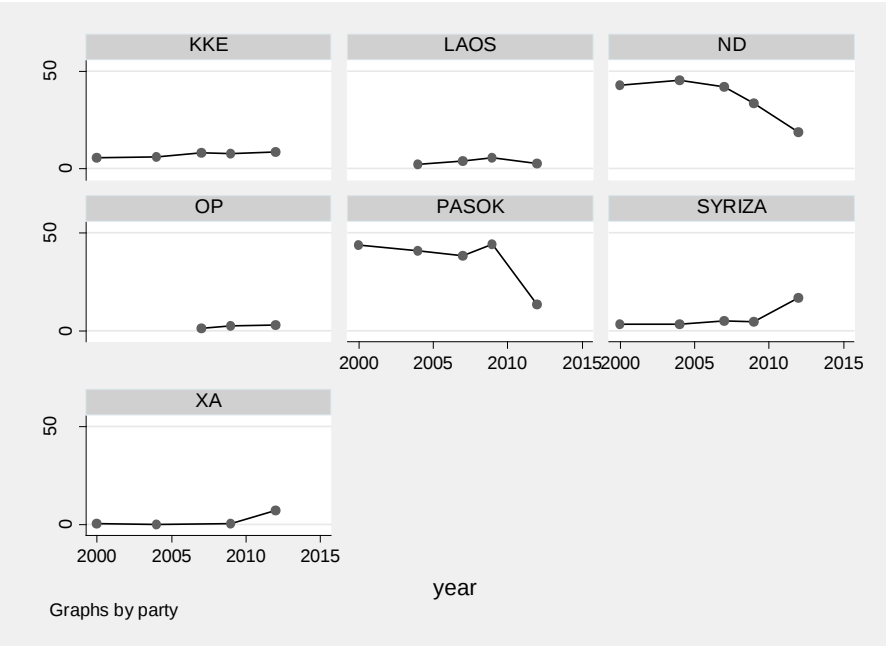


Figure 1: Vote share in Greece, 2000-2012

Notes: New Democracy (ND); Coalition of the Radical Left (SYRIZA); Panhellenic Socialist Movement (PASOK); Communist Party of Greece (KKE); Golden Dawn (XA); Popular Orthodox Rally (LAOS); Ecologists Greens (OP).

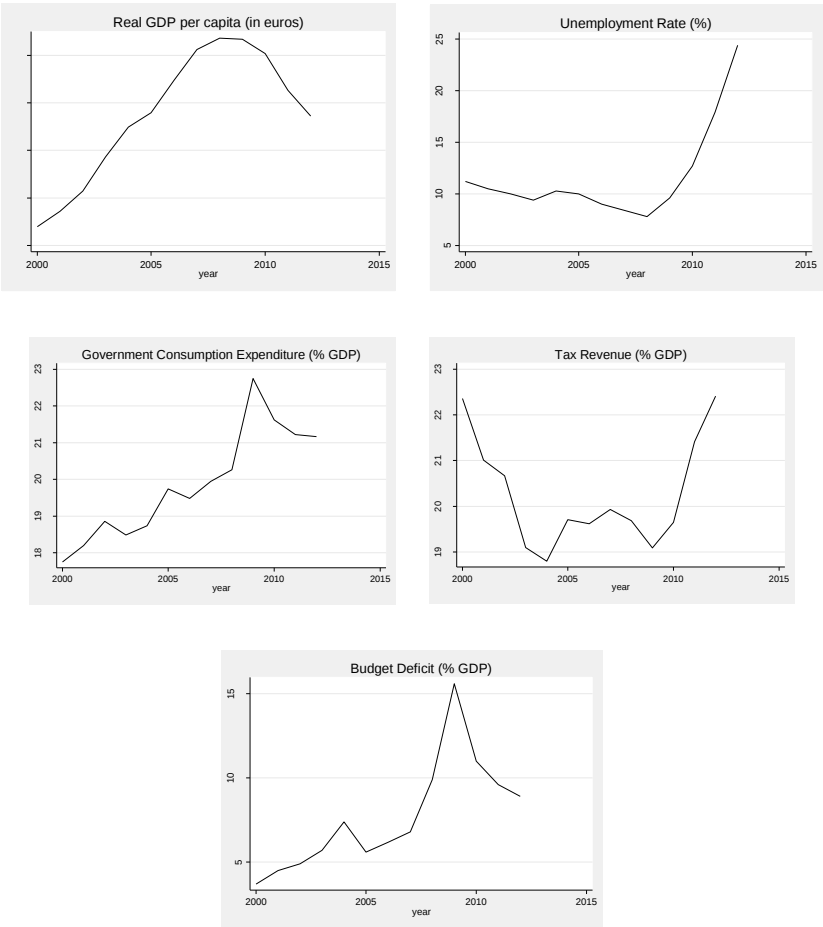


Figure 2. Economic factors and fiscal consolidation in Greece, 2000-2012.