Electoral Studies 31 (2012) 472–477

Contents lists available at SciVerse ScienceDirect

Electoral Studies

journal homepage: www.elsevier.com/locate/electstud

PIGS or not? Economic voting in Southern Europe☆

Michael S. Lewis-Beck [a,*], Richard Nadeau [b]

[a] Department of Political Science, University of Iowa, 341 Schaeffer Hall, Iowa City 52242-1498, United States
[b] Department of Political Science, University of Montreal, United States

ARTICLE INFO

Article history:
Received 13 February 2012
Accepted 15 February 2012

Keywords:
Economic voting, economics and Southern European elections
Southern European election surveys
Economic crisis and elections in Southern Europe
Economics and elections

ABSTRACT

Economic voting has been little studied in the nations of Southern Europe. Here we examine economic voting in the Southern European countries of Portugal, Italy, Spain, and Greece – the PIGS. Through the analysis of a large, ten European nation survey pool, we establish that economic voting exists in the PIGS, with a strength that significantly exceeds that in non-PIGS of Northern Europe. The explanation for such a difference, we suggest, lies in the generally less complex governing coalitions and the poorer economic performance that characterize these Southern European nations. This relatively greater strength of the economic vote in the PIGS implies their electorates will hold government tightly accountable for management of the ongoing economic crises they face.

In the established, historical democracies of Northern Europe, the economy clearly matters for elections. Of the many studies on this subject, a great portion come from nations in this region – Britain, Denmark, France, in particular (See the literature reviews of Lewis-Beck and Stegmaier, 2000, 2007; Norpoth, 1996; Nannestad and Paldam, 1994). However, in the more fragile, contested democracies of Southern Europe, the economic voting link appears less clear. For example, there have been no published national election studies of economic voting in Greece or Portugal. Some published work on Italy and Spain exists, but is sparse (e.g., Bellucci, 2002; Fraile, 2002). The relative scarcity of economic and elections research for Southern European nations has become especially troubling, in the face of the economic crises they have undergone. Governments in this region have faced deep challenges over economic policy, with the words "debt," "default," and "deficit" frequently on the lips of their leaders. Here we seek to determine, first, the presence of an economic vote in Portugal, Italy, Greece, and Spain – the PIGS countries. Second, we seek to determine how different that economic vote is from the non-PIGS countries of Europe. The inquiry satisfies two utilities: one, it tests the economic voting hypothesis on new terrain; two, it lights up the stage upon which the contemporary economic crises play themselves out.

Investigations of the economy and elections draw on two sorts of data: aggregate and individual. We focus on the examination of individuals, in order to avoid the ecological fallacy of inferring economic voting when there may be none (However, we do eventually tie these individual findings to selected aggregate politico-economic conditions). The data are from the European Election Surveys (EES), for ten nations. This rich data-set permits us to execute an unusual design. Almost all economic voting studies are of two types: examination of one country or examination of a collection of countries in one region. [A notable exception to the regional characterization appears in Duch and Stevenson (2008).] Here we carry out a block comparison within a region (Europe), contrasting the PIGS countries with the non-PIGS countries. After specifying a general model of economic voting applicable in principle cross-nationally, we estimated it for PIGS and non-PIGS countries. In this way, we establish whether there is economic voting in the two blocks, and whether it is

☆ Prepared for Electoral Studies, Special Section, on Economics and Crisis in Southern Europe.

* Corresponding author.
E-mail address: michael-lewis-beck@uiowa.edu (M.S. Lewis-Beck).

0261-3794/$ – see front matter © 2012 Elsevier Ltd. All rights reserved.
doi:10.1016/j.electstud.2012.02.008

different. After careful interpretation and testing of these coefficients, we draw implications for the role of the economic vote in the current period of economic crisis.

1. Theory

Classical economic voting theory can be simply stated: when economic times are good, voters support the government, but when economic times are bad, voters withdraw their support of government (Lewis-Beck, 1988). This reward-punishment proposition has been repeatedly tested (hundreds of times), in many different democratic systems, and virtually always receives empirical confirmation. Such a generalization holds for advanced industrial democracies, in North America and Western Europe. [See the literature reviews in Lewis-Beck and Stegmaier (2000, 2007).] And, it has been found to hold in transitional democracies, including those in Latin America and Eastern Europe, although the work there remains relatively scarce. [See the literature review in Lewis-Beck and Stegmaier (2008).] We have further noted that this research scarcity holds with respect to the PIGS countries, our concern here. For these nations, the fundamental question – does the electorate hold the government accountable for the economy? – still resonates.

Previous work suggests that economic voting could not only be present but perhaps even stronger in the PIGS countries (Lewis-Beck, 1988; Whitten and Palmer, 1999; Nadeau and Yoshinaka, 2002). Two main factors may account for this possibility. The first is clarity of responsibility. Economic voting tends to be stronger when the connection between the economy and the parties is clearer. This is the case when few parties, and even more when one party, form the government, a situation typical of three of the four PIGS countries (Greece, Portugal and Spain). There is also evidence suggesting that economic voting is more intense when the economy is performing poorly, because this issue is more salient to voters. Lewis-Beck (1988, pp 104–110) for instance makes the point that economic voting will be stronger when accountability is high and economic growth is low. The PIGS countries, characterized by their poor economic performance in the recent decades, seem to fit with this pattern more closely than the non-PIGS countries, suggesting that economic voting will be higher in Southern Europe.

2. Data

In comparing economic voting cross-nationally, we seek election surveys that have measurement equivalence on the relevant dependent and independent variables, over space and time. Such data-sets are not abundant, especially given our constraint of meaningfully comparing relevant national blocks (i.e., PIGS versus non-PIGS). Fortunately, the European Election Study (EES) serves, with essentially the same survey repeated four times (1988, 1994, 1999, 2004) across ten Western European nations: Britain, Denmark, France, Germany, Greece, Holland, Ireland, Italy, Portugal, and Spain. These 40 surveys exhibit real variation within themselves, and with external macro-political and economic conditions to which they are exposed. The total $N = 44{,}014$, the largest comparative economic voting survey pool yet analyzed. [For other large comparative economic voting survey efforts, see Duch and Stevenson (2008), and van der Brug et al. (2007).] With respect to measurement of the national economy, we rely on the standard sociotropic retrospective item, regularly asked in the EES: "How do you think the general economic situation in this country has changed over the last 12 months? – better, same, worse." (Measures for the other variables are detailed in the Appendix).

Last, but not least, note that the data by nation are nicely balanced in terms of our block design: PIGS (Portugal, Italy, Greece, Spain) versus Not PIGS (Britain, Denmark, France, Germany, the Netherlands, Ireland[1]). With this division, it will be possible to see clearly whether economic voting differences between the two blocks exist.

3. Model

While economic forces may be important for the vote choice, they are obviously not the only determinant. To assess accurately the electoral impact of economic perception, it is necessary to embed it in a more fully specified model. We employ the following, initially employed by Lewis-Beck (1988), and later adopted by Duch and Stevenson (2008) as a basic specification, in their comparative economic voting analyses. This specification, applied equally across all nations under study, provides a baseline for assessment of economic effects:

$$\text{Vote} = f(\text{cleavages, ideology, economy}) \quad (1)$$

By way of example, we estimate (with logistic regression) the model for the entire pooled sample:

$$\begin{aligned}\text{Vote} = &-2.71^{**}(05) + .35^{**}\,\text{Class}(04)\\ &+ .60^{**}\,\text{Religion}(04) + 3.00^{**}\,\text{Ideology}(05)\\ &+ 1.02^{**}\,\text{Economy}(11) - .77^{**}\,\text{Time}(07) + e\\ &\text{Pseudo} - R^2 = .27. \quad N = 27888. \end{aligned} \quad (2)$$

where vote = 1 for intention to vote for a government coalition party, 0 otherwise; ideology = respondent places self on a seven-point scale (from left to right, rescaled 0–1, and multiplied by −1 when the government is left-wing); class = self-identification (working, lower middle, middle, upper middle, upper, rescaled 0–1, and multiplied by −1 when the government is left-wing); religion = service attendance (no religion, never, once a year, few times a year, once a week, several times a week, rescaled from 0 to 1, and multiplied by −1 when the government is left-wing); economy = sociotropic evaluation (worse, same, better for 1988, 1994, 2004, rescaled 0–1) and (very dissatisfied, somewhat dissatisfied, somewhat satisfied, very dissatisfied for 1999, rescaled 0–1); time = months from the last election (to avoid a biased estimate of incumbent support); e = error. Question wordings are in the Appendix.

[1] Ireland is included because our distinction is between PIGS versus non-PIGS European countries. Excluding Ireland from the comparison leaves our results basically intact.

** = statistically significant at $p < .01$, two-tailed; in parentheses are standard errors; pseudo-*R*-squared = Nagelkerke; *N* = the sample size from all the surveys – 1988, 1994, 1999, and 2004.

Overall, the model fits the data reasonably well, as the pseudo-*R*-squared suggests. With respect to the particular coefficients, they are pretty much as one would expect. Higher class standing significantly increases vote for a right-wing government. Further, greater religiosity produces more support for that right-wing government. Ideology works as expected, with those identifying on the right more likely to express a vote for parties on the right. Economic perceptions, the variable of special concern here, also performs according to script. The more positive the evaluation of the economy over the past year, the more supportive the voter is of the government. In conclusion, the economy seems to be operating on these European voters as classical reward-punishment theory would predict. The question, to which we now turn, is whether this conclusion holds for the individual nations under study.

4. Hypotheses

We have two central hypotheses. The first hypothesis is that economic perception will have a significant positive effect on vote intention, regardless of country context. That is, H1: the population economic voting coefficient, $\beta_i > 0$, for every country $_I$ in the study. In other words, the classical economic voting model will hold across all these nations. The essential argument for this hypothesis is simple: within any democratic political system, voters will generally behave to hold the government accountable for economic performance.

The second hypothesis is that economic perception will have a positive effect on vote choice that is significantly greater in the PIGS countries, when compared to the non-PIGS countries. That is, H2: the population economic voting coefficient, $\beta_p > \beta_{np}$, where $_p$ = Portugal, Italy, Greece, and Spain and $_{np}$ = Denmark, France, Germany, Ireland, the Netherlands, the United Kingdom. This second hypothesis is more controversial than the first. Three arguments support it, as drawn from Lewis-Beck (1988, 96). 1. The economic voting coefficient, as reported, has differed substantively across certain Western European countries. 2. These differences in the strength of economic voting have been explained as a function of the complexity of the ruling coalition, which can weaken the attribution of economic responsibility. 3. These differences in the strength of economic voting have also been explained by differences in the level of macroeconomic performance, with poorer economies exhibiting stronger effects.

5. First results

As a first pass at the data, we estimate (logistic regression) the above model (as expressed and measured in Eqs. (1) and (2)) for each country separately, but pooling the four surveys as we did above. Then, we examine the ten economic voting coefficients, as in Table 1 (column 1). Note that they are all easily statistically significant, so supporting HI, the first hypothesis, regarding the existence of economic voting in each country. Note, further, that the coefficients are ranked (in column 1) from the largest (Greece) to the smallest (Ireland). We observe that the PIGS countries have the top four economic voting coefficients, in terms of size, ranging from 1.82 (Greece) to 1.32 (Portugal). Also, on average, the economic voting coefficient for PIGS = 1.49, for non-PIGS = .82. In addition, these rankings, and average differences, essentially hold up if the analysis is done by ordinary least squares (OLS, in column 2), as a check on concerns about variance differences and non-linearity in the *X* variables. Thus, H2, the second hypothesis asserting economic voting strength is greater in the PIGS countries, also receives support.

Table 1
The Magnitude of the Economic Voting Coefficient, by Country.

	Logit	OLS
Greece	1.82**	.36**
Italy	1.45**	.26**
Spain	1.37**	.28**
Portugal	1.32**	.24**
UK	1.21**	.23**
France	1.06**	.16**
Denmark	.67**	.13**
Germany	.67**	.12**
Ireland	.66**	.15**
The Netherlands	.63**	.12**
PIGS	1.49	.29
Non-PIGS	.82	.15
All	1.09	.21

**$p \leq .01$ (two-tailed test).

Table 2 offers more supporting evidence, but examining the four surveys separately. We observe that economic voting ranks strong in the PIGS countries regardless of survey year. Again, the conclusion is clear: the economic voting coefficient in the PIGS countries appears stronger than in the non-PIGS countries, and consistently so.

6. Second results

The conclusion gains statistical efficiency, and sharpens, when the data are analyzed as a pooled cross-sectional time series (see Table 3, columns 1 and 2). The model specification remains the same, but estimation (logistic regression) now goes forward with a very large *N*, from the full sample of the forty surveys. We observe, in column 1

Table 2
A Comparison of the Strength of Economic Voting for 10 European Countries (2004, 1999, 1994, 1988): PIGS and Non-PIGS Countries.

Panel A. Economic Variable Logistic Regression Coefficient

	2004	1999	1994	1988
PIGS	1.7	2.4	1.1	1.2
Non-PIGS	1.0	1.0	.4	.7

Panel B. Ranking of the Economic Coefficients for the PIGS countries

	2004	1999	1994	1988	Top 4
Portugal	3	3	1	7	3/4
Italy	1	4	2	6	3/4
Greece	2	1	3	1	4/4
Spain	8	2	5	2	3/4
Top 4	3/4	4/4	3/4	2/4	12/16

Table 3
Logistic Regression Models for Voting Intentions in Ten European Countries (2004, 1999, 1994 and 1988).

	1	2	3	4
Ideology	3.00** (.05)	2.98** (.05)	1.88** (.08)	1.83** (.08)
Social class	.35** (.04)	.35** (.04)	.26** (.06)	.24** (.06)
Religion	.60** (.04)	.58** (.04)	.46** (.08)	.42** (.07)
Months since last election	−.77** (.07)	−.89** (.07)	−.66** (.11)	−1.01** (.11)
Economic perception	1.02** (.03)	.85** (.04)	.85** (.06)	.67** (.06)
PIGS	_	−.14** (.05)	_	.09 (.08)
PIGS × econ. perception	_	.58** (.07)	_	.79** (.11)
Vote (lagged)			4.03** (.04)	4.09** (.04)
Constant	−2.71** (.05)	−2.61** (.05)	−4.02** (.09)	−3.93** (.09)
Nagelkerke pseudo-R^2	.27	.27	.71	.71
N	27,888	27,888	25,372	25,372

**$p \leq .01$ (two-tailed tests). See the Appendix for data source and description of variables.

(which for clarity of presentation repeats Eq. (2) above), the highly significant and positive general economic voting coefficient, $b = 1.02$. In column 2, economic perceptions are interacted with a dummy for PIGS status (1 = PIGS country, 0 = otherwise). The interaction term coefficient attains a high level of significance, while the main effect term sustains its level of significance. The two terms (.85 + .58 = 1.43), taken together, make general the much greater effect of economics on the vote choice in the PIGS nations. In fact, the overall effects ratio PIGS/non-PIGS is as follows: 1.43/.85 = 1.68, showing the economic impact in the PIGS is close to seventy percent stronger.

In the third and fourth columns of Table 3, these results are reinforced. In these models, the lagged vote is included on the right-hand side of the equation, to give the specification an extremely rigorous control variable, so capturing the effects of omitted variables. We see that the economic effect difference from PIGS to non-PIGS countries is now even stronger (i.e., from column 4, the PIGS/non-PIGS ratio = 1.46/.67 = 2.18). This result suggests that long-term factors (captured by the lagged dependent variable) play a greater role in the longer-established democracies of the non-PIGS countries. Once this inertia component is factored in, the greater impact of short-term factors (like the economy) in the PIGS countries appears even more clearly.

Table 4
Hypothesis Tests on Economic Voting Strength in PIGS and non-PIGS Countries: Economic and Political Variables.

Panel A. Economic Performance

	Unemployment	Inflation	Misery Index	Economic Perceptions (Worse)
PIGS	10.0	5.0	15.0	37
Non-PIGS	7.9	2.0	9.9	28

Panel B. Clarity of Responsibility

	Clarity of Responsibility
PIGS	Greece (1), Spain (.5), Portugal (.5)
Non-PIGS	United Kingdom (1)

Entries for Economic Perceptions (worse) represent the percentages of respondents thinking that the national economy has gotten worse in the last twelve months. Entries for Economic Perceptions and economic variables are averages for the sampling period (2004, 1999, 1994 and 1988). Clarity of responsibility = 1 for countries with (partial or integral) FPTP system and one party governments for the sampling period (UK and Greece), .5 for countries with one party governments during all or most part of the sampling period (Spain and Portugal), and 0 otherwise.

7. The macro-political economic context

Why is economic voting stronger in the PIGS countries? We suggested earlier that the macro-political economic context might make a difference. In particular, we refer to government coalition complexity and national economic conditions. In Table 4, Panel A, several macroeconomic indicators are reported, for PIGS and non-PIGS countries. The objective indicators of Unemployment, Inflation, Misery all show that the PIGS countries have performed worse economically. Further, these poorer conditions are perceived by the citizenry, as seen the last column, showing the percentage of the public who see the economy as worse is greater in the PIGS. In Table 4, Panel B, data on government coalition complexity, and the ensuing clarity of responsibility for economic policy, are reported. As is shown, in the PIGS nations the attribution of responsibility tends to be clearer, with one-party government for the entire sample period (Greece), or most of the sample period (Portugal and Spain).

These indicators appear to be related to the national strength of the economic vote. We can formally test this notion, regressing the nation's economic voting coefficient on such indicators. In Table 5, Panel A, that coefficient is predicted (OLS) from the measures of Misery, Economic Perception, and Clarity of Responsibility. Each of the variables has a statistically significant coefficient, and the model fits the data almost perfectly, according to the *R*-squared. With such a small sample of nations, we must exercise caution. However, it is encouraging to know that the model can predict rather precisely the particular economic voting coefficient of each nation, as Table 5, Panel B demonstrates. The predictions for PIGS and non-PIGS countries are, on average, off the actual value by only .15 and .09, respectively (.11 overall[2]). It seems that these macro-political economic conditions are able to account for these national differences. The greater weight of the economic vote in the PIGS countries appears almost entirely due to their poorer economic position, coupled with their less complex links between governance and policy execution.

[2] The large residual for Italy may due to the "Berlusconi" factor. The polarization of Italian politics around his personality may have contributed to "clarify" the attribution of responsibility for the economic situation in this country.

Table 5
Economic and Political Determinants of Economic Voting Strength.

Panel A. OLS Regression on the Logistic Regression Coefficient of the Economic Perception Variable, Ten European Countries (2004, 1999, 1994, 1988)

	Regression Coefficient
Misery index	.04* (.02)
Economic perception	.03** (.01)
Clarity	.43** (.14)
Constant	−.29 (.24)
R^2	.91
N	10

Panel B. Within-Sample Prediction of the Logistic Regression Coefficient of Economic Perception, Per Country

Country	Observed Value	Predicted Value	Prediction Error
Greece	1.82	1.98	.16
Italy	1.45	1.23	−.22
Spain	1.37	1.28	−.09
Portugal	1.32	1.19	.13
UK	1.21	1.16	−.05
France	1.06	1.11	.05
Denmark	.67	.71	.04
Germany	.67	.73	.06
Ireland	.66	.86	.20
Netherlands	.63	.62	−.01

Mean absolute error = .10.
**$p \leq .01$, *$p \leq .05$ (one-tailed tests). See Tables 1 and 4 for description of variables.

8. Conclusion

A considerable amount of research on economic voting has been done. But little of it focuses on the countries of Southern Europe, especially individual-level, survey-based elections research. Therefore, the first question we address is whether economic voting exists in Portugal, Italy, Greece, and Spain – the PIGS countries. The second question, dependent on the first, addresses the question of the strength of the economic vote, comparing these Southern European countries to Northern European countries. We answer these questions with a massive, not to say definitive, comparative data-set from ten European nations in the EES. First, after estimating several well-specified logistic regression equations, it is clear that economic voting exists in the PIGS countries. Second, after implementation of an unusual block design, in its various aspects, it is clear that economic voting has greater strength in the PIGS countries, when compared to the non-PIGS countries. In fact, substantively its effect on vote choice is at least 60 percent stronger, on average, for PIGS.

Why do the PIGS exhibit stronger economic voting? We venture two main reasons: for one, their ruling government coalitions are usually less complex coalitions, often dominated by one party, so making attribution of economic policy responsibility rather easy for the electorate; for another, their economies do not perform as well, a condition their electorates are acutely sensitive to. The influence of poor economic performance on the magnitude of their economic vote has immediate contemporary implications. The continuing, not to say increasing, economic crises the PIGS countries are experiencing should trigger a relatively strong economic voting response from these electorates. The ruling governments of the PIGS, by their responses to these crises, can much magnify (or diminish) their chances of staying in power. Good economic performance will be highly rewarded, bad economic performance will be severely sanctioned. Thus, for these nations of Southern Europe, economic accountably will be stricter than ever.

Appendix

I. Data

A. The survey data

The European Election Study data are surveys from the European Union member states. The number of countries surveyed ranged from 12 (in 1988, 1994) up to 24 (2004). The 10 countries chosen were EU member states across the entire period (for the 1989 European election, we used the pre-election wave which took place in the Fall of 1988).

B. Economic data

The economic data are from the OECD, Statistics Directorate, and the Statistical Office of the European Commission. Inflation = Annual growth rate of the consumer price index; Unemployment: Annual rate of unemployment.

II. Questions

The variables are recoded on a 0–1 scale. The wordings are as follows:

Vote: If there were a general election tomorrow, which party would you vote for?

Lagged Vote: Which party did you vote for at the General Election of [Year]?

Ideology: In political matters people talk about "the left" and "the right". What is your position? Please indicate your views using any number on a 10-point scale. On this scale, where 1 means "left" and 10 means "right" which number best describes your position?

Class: If you were asked to chose one of these five names for your social class, which would you say you belong to – the working class, the lower middle class, the middle class, the upper middle class or the upper class?

Religious attendance: How often do you attend religious services: several times a week, once a week, a few times a year, once a year or less, never and no religion?

National Economic Perceptions: What do you think about the economy? Compared to 12 months ago, do you think that the general economic situation in this country is: A lot better, a little better, stayed the same, a little worse, or a lot worse? (2004, 1994, 1988). How about the state of the <Country> economy? Very satisfied, somewhat satisfied, somewhat dissatisfied, very dissatisfied? (1999).

References

Bellucci, P., 2002. From class voting to economic voting: patterns of individualition of voting behavior in Italy, 1972–1996. In: Dorussen, H., Taylor, M. (Eds.), The Changing Economic Voter. Routledge, Basingstoke, pp. 261–283.

Duch, R.M., Stevenson, R.T., 2008. The Economic Vote: How Political and Economic Institutions Condition Election Results. Cambridge University Press, New York.

Fraile, M., 2002. The retrospective voter in Spain during the nineties. In: Dorussen, H., Taylor, M. (Eds.), Economic Voting. Routledge, pp. 284–302.
Lewis-Beck, M.S., 1988. Economics and Elections: The Major Western Democracies. University of Michigan Press, Ann Arbor.
Lewis-Beck, M.S., Stegmaier, M., 2000. Economic determinants of electoral outcomes. Annual Review of Political Science 3, 183–219.
Lewis-Beck, M.S., Stegmaier, M., 2007. Economic models of voting. In: Dalton, R., Klingemann, H.D. (Eds.), The Oxford Handbook of Political Behaviour. Oxford University Press, Oxford, pp. 518–527.
Lewis-Beck, M.S., Stegmaier, M., October 2008. Economic voting in transitional democracies. Journal of Elections, Public Opinion and Parties 18 (3), 303–323.
Nadeau, R., Yoshinaka, A, 2002. "A Cross-national Analysis of Economic Voting: Taking Account of the Political Context across Time and Nations". Electoral Studies 21, 403–423.
Nannestad, P., Paldam, M., 1994. The VP function: a survey of the literature on vote and popularity functions after 25 years. Public Choice 79, 213–245.
Norpoth, H., 1996. The economy. In: LeDuc, L., Niemi, R.G., Norris, P. (Eds.), Comparing Democracies: Elections and Voting in Global Perspective. Sage, Thousand Oaks, California, pp. 299–318.
van der Brug, W., van der Eijk, C., Franklin, M.N., 2007. The Economy and the Vote: Economic Conditions and Elections in Fifteen Countries. Cambridge University Press, New York.
Whitten, Guy D., Palmer, Harvey D., 1999. Cross National Analyses of Economic Voting. Electoral Studies 18, 49–67.