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Abstract

The literature on the political business cycle (PBC) suggests that politicians systematically manipulate economic conditions in order to increase their chances of re-election. The list of variables that have been found to have a significant effect on the probability of re-election includes macroeconomic (inflation rate, unemployment rate, output growth rate) and fiscal (budget balance, level of expenditures and tax revenues) outcomes. This paper focuses on the question whether price and non-price competitiveness indicators together with consumer confidence index have a statistically significant effect. Thus, this paper addresses two empirical questions. First, in light of the globalisation process and on-going comparisons among national economies, could price and non-price indicators serve as a proxy for voters when deciding on whether to penalise or reward the incumbent? And second, based on the economic theory of voting, is consumer confidence index a better indicator of re-election probability compared to unemployment and output growth rates? Using a dataset of EU member states over the 2000-2015 period and by applying probit/logit analysis we test both questions.

Key words

political business cycles, competitiveness, consumer confidence index, EU

JEL classification

D72, H50, P16

Introduction

The aim of this paper is to empirically investigate the relationship between voters and incumbents in 28 EU member states over the 2000-2015 period. We do this by taking into account economic outcomes, consumer sentiments and on-going comparisons among national economies in election years. Thus this paper is holistic by nature, since it is combines economics (macroeconomic outcomes and concepts) and political science (analysis of election results) in political economic analysis on how voters cast their vote. Also, we use sociology inputs on the role of the voters in the political process and every day economic life.

Political literature presents voters as the main actors in the election process, while in sociology we can see that voters are modeled as "temporary" politicians primarily through their impact on public policies (Weber, 1946). In new political economy literature (Persson and Tabellini, 2000) they are assumed to be rational and self-interested individuals comparable to consumers in private markets. However, we can distinguish among three different types of voters: reliable (constant), pivotal and new (Key, 1966). Since new voters are rather a rare breed, we focus on the pivotal voters who are responsible for removing incumbents out of the office and show learning abilities during electoral cycles. The existing research provides substantial evidence that voting patterns are in a certain sense determined by the state of the economy (de Haan, 2013).

In a nutshell, the paper is trying to determine what makes voters' react during election years by broadening the list of possible variables. We add to the existing literature in the following manner. First, by investigating whether the assumptions of the economic theory of voting apply in the whole of the EU28. This is especially important since EU now includes both new and old democracies – based on Brender-Drazen (2004) dichotomy – but also countries that have been divided on centre, semi-periphery and periphery during the Great Reccesion in addition to the initial divide between Eurozone members and other regular EU member states (that do not have a single monetary policy and euro as a currency). Second, we include widely used consumer confidence index together with price and non-price indicators that are highly debated among researchers and public due to array of competitiveness rankings. By doing this we are testing whether alternative measures of economic wellbeing can be used as a proxy for incumbents' re-election. Thirdly, we are trying to establish whether consumer confidence index can serve as a better indicator of re-election probabilities which could have a significant effect due to its monthly availability.

The paper is organized as follows. Section 2 presents literature review, while section 3 describes the methodology. Section 4 discusses the data sources and the empirical results. Finally, section 5 contains the conclusion

Literature review

In political economy literature since 1970s the impact of the economy on election results has received wide theoretical and empirical attention (Drazen, 2000) and it is still the most fluent and productive part of the field. Political business cycle (PBC) theory suggests that politicians systematically manipulate economic conditions in order to increase their chances of re-election (Drazen, 2000, 2008, 2008a; Persson and Tabellini, 2000). They either use macroeconomic variables (growth, inflation and unemployment rates) or fiscal variables[1] (budget balances, level and/or structure of government expenditures and tax revenues, public debt).

Prior to the emergence of PBC theory the government was considered, in economic models, to be a social planner that is solely responsible for maximizing a social welfare function. Also, it was assumed that maximizing this function coincides with the utility function of the so called representative agent in the economy. Further, the theory stipulates that governments are either driven by private interest and care only about their reelection prospects or are driven by partisan interest and thus during term are creating cycles in macroeconomic and fiscal variables. In the first case we are labeling cycles as opportunistic PBCs and in the second as partisan PBCs (Drazen, 2000; Drazen, 2008a; de Haan, 2013, Dubois, 2016). We focus on the first class of models – opportunistic PBCs as well on the assumption of rational voters that are pivotal based on Key's (1996) classification.[2]

The existing empirical evidence supports the view that benign economic conditions help incumbents stay in office (Frey and Schneider, 1978; Akhmedov and Zhuravskaya, 2004, Drazen and Eslava, 2010; Klomp and de Haan, 2013). Papers cover both parliamentary and presidential elections all over the world, and are also focused on local and national elections. On the local level in Israel (Brender, 2003), Russia (Akhmedov and Zhuravskaya, 2004), Portugal (Aidt et al., 2011), Columbia (Drazen and Eslava, 2010) and Argentina (Jones et al.,

[1] If this is the case some authors classify these cycles as political budget cycles (Drazen, 2008; Mačkić, 2014; Dubois, 2016).

[2] The paper focuses on rational models of PBCs that incorporate cycles in outcomes and cycles in instruments.

2012) economic theory of voting was confirmed in the sense that opportunistic model of PBC resulted in incumbents reelection[3]. Pelzman's (1992) research in the USA looked at the presidential, governor and senator elections and actually indicated that voters' dislike opportunistic incumbents who manipulate fiscal policy instruments in the election period which is at odds with Frey and Schneiders' (1978) conclusion that looks at the macroeconomic outcomes for the USA. On the national level, Brender and Drazen (2008) provide evidence for the opportunistic PBC and increased re-election possibilities while in the sample of "new" democracies while Klomp and de Haan (2013) provide it regardless of the maturity of the democracy. It is important to differentiate among the methodology, since Brender and Drazen use logit models and Klomp and de Haan linear panel models.

Finally, many scholars have emphasized that the context plays an important role in creating PBCs and in determining electoral effects through opportunistic manipulation of economic outcomes. These include political alignment or affiliation (i.e., when local and national executives belong to the same party), the strength of political parties and the strength of the incumbent government, a divided or fragmented government being less able to generate a PBC because of coordination costs (Persson and Tabelini, 2000; Drazen, 2008; Drazen, 2008a; Klomp and de Haan 2013, Dubois, 2016). Since we focus exclusively on the election outcomes we have disregarded these context issues and focused on the empirical validation of our additional variables through probit and logit estimates in the panel data settings.

Methodology

To test whether creating PBCs helps incumbents' get re-elected we estimate how the probability of winning depends on the cycle magnitude. In order to do that we use non-linear panel data models, namely logit and probit models. Logit or logistic regression represents a special form of regression analysis in which the independent variable is binary (taking the value of 1 or 0).[4] We model the probability as a function:

[3] Arvate et al (2009) provide evidence that voters are conservatives that actually remove incumbents who create budget deficits in election periods, thus indicating that the level of sophistication among voters is a decisive determinant.

[4] Out of the three different types of models with a binary independent variable: LPM (linear probability model), logit and probit model we exclude the LPM since it assumes that the response probability is linear in a set of parameters β_j.

$$P(y = 1\ I\ x) = G(b0 + \text{xb}) \quad (1)$$

where $0<G(z)<1$. One choice for $G(z)$ is the standard normal cumulative distribution function: $G(z) = F(z) \equiv \int f(v)dv$, where $f(z)$ is the standard normal, so $f(z) = (2p)^{-1/2}\exp(-z^2/2)$. This case is referred to as a probit model, while another common choice for G(z) is the logistic function, which is the cumulative distribution function for a standard logistic random variable: $G(z) = \exp(z)/[1 + \exp(z)] = L(z)$. This case is referred to as a logit model. Both the probit and logit are nonlinear and require maximum likelihood estimation.

The following equation is estimated:

$$\begin{aligned} P(y_{it} = 1) = {} & \mu_0 + \mu_1 CCI_{it} + \mu_2 GVT\_EFF_{it} + \mu_3 ULC\_REAL_{it} \\ & + \mu_4 UNEM_{it} + \mu_5 GROWTH_{it} + \mu_6 BUDGET_{it} + \mu_7 CRISIS \\ & + \varepsilon_{it}, i = 1, \dots N, t = 1, \dots T \end{aligned} \quad (2)$$

for probit random effects and logit random and fixed effects model. The data and results are presented in the next part of the paper.

Findings

Table 1 below shows descriptive statistics for our dependent variable re-election – REEL (taking the value of 1 if incumbents secured re-election and 0 otherwise) – and the remaining seven independent variables in the 2002-2015 time period for our sample of 28 European union member states. These are: consumer confidence index – CCI – collected from Eurostat, government efficiency – GVT_EFFECTIVENESS – part of World Bank's Worldwide Governance Indicator, real unit labour costs – ULC_REAL – collected from AMECO database of European Commission, a dummy variable crisis – CRISIS – taking the value 0 from 2000-2008 and 2014-2015 periods, and unemployment (UNEM) and real GDP growth (GROWTH) rate collected from Eurostat, which was also the source for the budget balance of the general government (BUDGET).

Table 1: Descriptive statistics

	Obs	Mean	Std. Dev.	Min	Max
REEL	448	0.415	0.493	0	1
CCI	434	-14.993	17.351	-74.75	24.158
GVT_EFFECTIVENESS	392	1.153	0.627	-0.435	2.357
ULC_REAL	448	99.079	5.233	82.952	140.079
UNEM	422	5.608	2.692	1.5	17.3
GROWTH	447	2.320	3.745	-14.8	26.3
BUDGET	446	-2.831	3.673	-32.1	6.9
CRISIS	448	0.312	0.464	0	1

Source: Eurostat, World Bank, AMECO

As indicated in the Table 2 both price (ULC_REAL) and non-price (GVT_EFFECTIVENESS) competitiveness indicators significantly influence reelection prospects of incumbents', while consumer confidence indicator (CCI) is not statistically significant. At first this is at odds since we expected that CCI would act as a leading indicator of related macroeconomic variables[5], but since output growth is also not statistically significant the result is not so surprising in the end.

In addition to price and non-price competitiveness indicators, unemployment (UNEM), as the only control macroeconomic variable, also shows significant effect on reelection prospects thus confirming assumptions stated in PBC literature (Drazen, 2000, 2008a; Persson and Tabellini, 2000). The obtained results are robust since they have been estimated by non-linear panel analysis, i.e. probit and logit analysis, based on random and fixed effects models. All other variables do not show statistically significant effect on re-election probability of the incumbent.

[5] Sorić et al (2013) report that Business and Consumer Surveys indicators (including CCI) are in all EU member states equally efficient and their predictive properties go as far as four quarters ahead.

Table 2: Reelection and consumer confidence, price and non-price competitiveness indicators and macroeconomic outcomes

		PROBIT_RE	LOGIT_RE	LOGIT_FE
REEL	CCI	-0.006	-0.010	-0.020
		(0.010)	(0.016)	(0.020)
	GVT_EFFECTIVENESS	1.048	1.758	2.474
		(0.303)***	(0.520)***	(0.989)**
	ULC_REAL	0.050	0.084	0.091
		(0.024)**	(0.040)**	(0.049)*
	UNEM	-0.087	-0.147	-0.223
		(0.046)*	(0.078)*	(0.091)**
	GROWTH	-0.005	-0.008	-0.012
		(0.031)	(0.052)	(0.057)
	BUDGET	0.004	0.008	0.003
		(0.029)	(0.048)	(0.052)
	CRISIS	-0.126	-0.199	-0.180
		(0.191)	(0.320)	(0.329)
	_cons	-5.960	-10.056	
		(2.550)**	(4.301)**	
lnsig2u	_cons	-1.043	-0.017	
		(0.479)**	(0.489)	
N		371.0	371.0	319.0

* $p<0.1$; ** $p<0.05$; *** $p<0.01$

Source: Authors' own calculation

Table 3 shows marginal effects of estimated probit and logit models on our independent variable. They indicate that a rise in the perceived government effectiveness by the electorate results in an increase of the probability that the incumbent stays in the office. This is in line with the view that in the globalized world, where we experience competition not only among companies but also national economies, the key role is given to the state. It is actually the states responsibility to regulate economic activities and provide a stimulating business environment with a sole purpose of increasing national competitiveness. Thus the state is being viewed by the electorate as the so called competitive state (Cerny, 1997) and the incumbent that can increase the observed level of competitiveness will be adequately rewarded and vice versa.

This conclusion goes in line with the negative marginal effect of the unemployment rate. As the less competitive economy loses its market share in the world market so does its unemployment level increases. In return voters' punish incumbents based on the economic theory of voting in the competitive environment that has been provided by the globalization of the world market.

Finally, a rise in an economy's unit labor costs represents an increased reward for labor's contribution to output. A positive sign in front of the estimated marginal effect indicates that voters' use this indicator as a proxy for their disposable income in the international context.

Thus an increase in ULC_REAL results in the increased probability that incumbent stays in the office. As for the other two variables, the estimated marginal effects in probit and logit models with random effects are almost the same, while the effects are smallest in logit model with fixed effect estimates.

Table 3: Marginal effects of consumer confidence, price and non-price competitiveness indicators and macroeconomic outcomes on probability of incumbents' reelection

		PROBIT_RE	LOGIT_RE	LOGIT_FE
REEL	CCI	-0.002	-0.002	-3.01e-07
		(0.003)	(0.003)	**
	GVT_EFFECTIVENESS	0.401	0.416	.000038
		(0.115)***	(0.122)***	*
	ULC_REAL	0.019	0.019	1.40e-06
		(0.009)**	(0.009)**	**
	UNEM	-0.034	-0.035	-3.42e-06
		(0.017)*	(0.018)*	
	GROWTH	-0.002	-0.002	-1.81e-07
		(0.012)	(0.012)	
	BUDGET	0.002	0.002	4.66e-08
		(0.011)	(0.011)	
	CRISIS	-0.048	-0.047	-2.84e-06
		(0.072)	(0.074)	
N		371.0	371.0	319.0

* $p<0.1$; ** $p<0.05$; *** $p<0.01$

Source: Authors' own calculation

Conclusion

This paper addresses the question what do voters in EU28 reward at the polls. Namely, do they take into consideration price and non-price competitiveness indicators together with consumer confidence index when they cast their votes? We find no evidence that consumer confidence index influences the reelection probability of the incumbent. What we do report is that price and non-price indicators, namely real unit labor costs and government effectiveness, serve as a proxy for voters when deciding on whether to penalize or reward the incumbent. Our analysis indicates that voters use these two indicators and that there is a positive relationship between them and reelection probability. In the light of the globalization process and on-going comparisons among national economies this serves as proof that voters' evaluate incumbents' track record relative to the their peers in other countries and reward them accordingly.

Our findings also indicate that unemployment is a better indicator of re-election probability compared to consumer confidence index. Thus, taking into consideration the positive effect of

the rise in the real unit labor costs and the negative effect of the unemployment rate we can conclude two things. First, the economic theory of voting applies to the whole of the EU28 (both new and established democracies based on Brender-Drazen dichotomy) and second, traditional macroeconomic indicators still prevail when it comes to reelection probability. These results are consistent with the prediction of the political business cycle model and our analysis provides possibilities for further research that should focus on the context in which voters cast their votes, e.g. determine various voter sophistication levels among EU28.

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