A Common Election Day for Euro Zone Member States?

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Abstract

This paper tests for the Euro zone the hypothesis put forward by Sapir and Sekkat (1999) that synchronizing elections might improve welfare. After identifying a political budget cycle in the Euro zone we build a politico-macroeconomic model and simulate the effects of adopting a common election day in the 12 Euro zone member states. The results support most of the theoretical predictions by Sapir-Sekkat: (i) Synchronizing the elections could enhance GDP growth, reduce unemployment, but leads to increased inflation and in some countries to a deterioration of the budget; higher inflation forces ECB to monetary restrictions. (ii) If the synchronization happens asymmetrically – either only in the large or only in the small Euro zone countries – the result depends on the size of the spillovers. (iii) As anticipated in Sapir-Sekkat a common election day is a further step towards the desired "European business cycle", however, at the cost of increasing its amplitude. Harmonizing elections is another method of policy coordination. Whether this leads to higher welfare is a matter of weighting the different macroeconomic outcomes and it also depends on the model applied.

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1. Introduction

The primary objective of this paper is the empirical evaluation of the theoretical postulate by Sapir and Sekkat (1999) that the adoption of a single election day throughout the Economic and Monetary Union (EMU) of the European Union (EU) might be welfare improving. They find that the desirability of an electoral area (a common or synchronized election day) between two countries is enhanced when the spillovers between these countries are large and positive, and when they face symmetric shocks. EMU with its asymmetric architecture of economic policy making is forced by EU law (EC treaty) to coordinate its economic (primarily fiscal) policy between its politically independent member states in order not to foil the centralized monetary policy by the ECB. The economic policy coordination is exercised in EMU by a whole range of coordination processes and instruments, of which the Stability and Growth Pact (SGP) is the most prominent one in the field of fiscal policy. As a consequence of the economic policy coordination we are already on the right track towards a "European business cycle". However, as economic policy making (with the exception of monetary policy) is still a competence of the EMU member states further areas of coordination are welcome. One area where EMU's member states are still exerting uncoordinated influence (and hence, different shocks) on the economy are the different election dates.

National governments want to be reelected or further their ideology. This behavior can induce "political business cycles". With a high degree of interdependence, these cycles tend to spillover between countries. Such spillovers make economic policy coordination difficult, in particular in the context of the architecture of the EMU. There is a wide range of literature on the issue of political business cycles, starting with the ideas by Schumpeter (1935), Kalecki (1943) and Downs (1957) and continuing with theoretical foundations by Nordhaus (1975) and others (e.g. Alesina, 1987, 1988) as well as many efforts to identify empirically political business cycles in different countries (see Breuss, 1980; Fair, 1978, 1996, 2002; Frey, 1978; Frey and Schneider, 1978a, 1978b). Alesina et al. (1997) give a comprehensive overview on "Political cycles and the macroeconomy". Persson and Tabellini (1999) embed different election-oriented or ideological-oriented considerations in their survey on "Political economics and macroeconomic policy". Research has identified two different types of cycles. One school postulates that governments generate "opportunistic" cycles in order to be reelected. The other assumes that parties voted into power produce "partisan" cycles by pursuing their own ideologies. Opportunistic cycles are

related to elections, while partisan cycles are connected to changes in government. The pioneers of the respective schools were McRae (1977), Nordhaus (1975) and Hibbs (1977). These authors adopted a non-rational expectation approach which later was largely rejected by the profession.

The new types of models incorporating rational expectations started in the mid-1980s. Opportunistic cycles were analyzed by Cukierman and Meltzer (1986), Rogoff and Sibert (1988), Rogoff (1990) and Persson and Tabellini (1990). All these models share the assumption of informational asymmetry, whereby policy makers are better informed than voters about their competence. Partisan models were developed by Alesina (1987, 1988) relying heavily on sluggishness in wage adjustments. Rational expectation models of political business cycles have received strong empirical support in studies by Alesina and Roubini (1992) and Alesina et al. (1997) for OECD countries.

The plan of the paper is as follows. Section 2 reviews the several models of political cycles. First, the major characteristics are presented and second, they are tested for the purpose of evaluating the Sapir and Sekkat's (1999) hypothesis of a common election cycle. Section 3 implements the result of section 2 into a model for 12 Euro-zone countries in order to derive the benefits and costs of adopting a common election cycle. Section 4 concludes.

2. Empirical Implications of Models of Politico-Economic Cycles

After a short characterization of the major theoretical features of the most prominent models of political cycles we test them empirically with panel regressions for the 12 EMU member states. This gives a starting point for evaluating the hypothesis of Sapir and Sekkat (1999) concerning the pros and cons of synchronizing the national election cycles in the EMU member states. In doing so we follow the style of presentation of the relevant models of politico-economic cycles as in Alesina and Roubini (1992) and in Alesina et al. (1997).

A. The theoretical models

2.1 The "political business cycle" (Nordhaus, 1975)

The assumptions underlying Nordhaus' "political business cycle" (henceforth PBC) can be characterized as follows:

A.1. The economy is described by a Phillips curve:

$$u_t = \bar{u} + \alpha u_{t-1} + \gamma(\pi_t - \pi_t^e) + \varepsilon_t; \qquad 0 < \alpha < 1; \ \gamma < 0. \tag{1}$$

where u is unemployment (rate); $\bar{u}/(1-\alpha)$ is the steady state "natural" level of unemployment; π is inflation (rate); π^e is expected inflation; ε is a random shock with zero mean; α, γ are parameters. The autoregressive term in (1) captures various sources of persistence. The "natural" level of unemployment is normalized at zero, with no loss of generality.

By Okun's law, the same model can be written in terms of output growth, y_t, instead of unemployment.

$$y_t = \kappa - \mu \Delta u_t. \tag{2}$$

A.2. Inflation expectations are adaptive:

$$\pi_t^e = \pi_{t-1} + \lambda(\pi_{t-1}^e - \pi_{t-1}); \qquad 0 < \lambda < 1. \tag{3}$$

A.3. Inflation is directly controlled by the policymakers; more precisely, Nordhaus (1975) assumes that policymakers control aggregate demand and, indirectly inflation.

A.4. Politicians are "opportunistic": they only care about holding office or they want to be reelected; they do not have "partisan" objectives.

A.5. Voters are "retrospective": They judge the incumbent's performance based upon the state of the economy during the incumbent's term of office. Their future perspective is myopic, i.e. only very short-lived actions are taken into consideration.

A.6. The timing of elections is exogenously fixed.

Given these assumptions, Nordhaus derives the following testable implications: (i) every government follows the same policy; (ii) towards the end of his term in office, the incumbent government stimulates the economy to take advantage of the "short-run" more favourable Phillips curve; (iii) the rate of inflation increases around the election time as a result of the pre-electoral economic expansion; after the election, inflation is reduced with contractionary policy.

2.2 Rational political business cycle models (Persson-Taellini, 1990, 1999)

Based on Nordhaus (1975) this model has been studied under the assumption of rationality. Persson and Taellini (1990, 1999) propose a simple model which summarizes the basic insights of this approach, due to Rogoff and Sibert (1988). Assumptions A.1, A.3, A.4 and A.6 as in Nordhaus' model are retained. Assumption A.2 is replaced by:

A.2'. $\pi_t^e = E(\pi_t / I_{t-1})$: rational expectations.

A.2''. I_{t-1} includes all the relevant information except the level of "competence" of different policy makers. The original proponents of the "competence" model are Rogoff and Sibert (1988) and Rogoff (1990).

Assumption A.5 is substituted by:

A.5'. Voters choose the candidate which is rationally expected to deliver the highest utility, if elected.

A.5''. There are no differences in voters' utility functions.

$E(.)$ is the expectation operator and I_{t-1} is the information set of the voters at time (*t-1*) when expectations are formed. A.2'' implies an asymmetry of information between the policymakers and the voters: the former know their own competence, but the latter do not. Policymakers' "competence" is defined as their ability of keeping unemployment low (and GDP growth high) with a relatively low level of inflation.

2.3 The "partisan theory" (Hibbs, 1977, 1987)

The strong version of the "partisan theory" (henceforth PT) based upon a non-rational expectation mechanisms, adopts assumptions A.1, A.2, A.3 and A.6. Assumptions A.4 and A.5 are substituted by:

A.4'. Politicians are "partisan", in the sense that different parties maximize different objective functions. Left-wing parties attribute a higher cost to unemployment relative to inflation than right-wing parties.

A.5''. Each voter is aware of these ideological differences and votes for the party which offers the policy closer to this most preferred outcome.

The assumption of partisanship is justified by the distributional consequences of unemployment. In periods of low growth, low inflation and high unemployment the relative share of income of the upper middle class, increases and the other way around (see Hibbs, 1987).

The PT model implies that different parties choose different points on the Phillips curve: output growth and inflation should be permanently higher and unemployment permanently lower when the left is in offices than with right wing governments. If one assumes that politicians are both opportunistic and partisan and voters are retrospective as implied by A.5, one obtains a "weaker" form of PT which coexists with the Nordhaus model (see Frey and Schneider, 1978a and Nordhaus, 1989).

2.4 "Rational partisan theory" (Alesina, 1987)

Alesina (1987, 1988) suggests a "rational partisan theory" (henceforth RPT). This models adopts A.1, A.2', A.3, A.4', A.5'' and A.6. The objective functions of the two parties are as follows:

$$W^i = \sum_{t=0}^{T} \delta \left[-(\pi_t - c^i)^2 - b^i (u_t - K^i)^2 \right], \quad 0 < \delta < 1; \tag{4}$$

where $i = L, R$ identifies the "left" and the "right" parties. The difference between the two parties can be summarized by at least one of these three sets of inequalities:

$$c^L > c^R \geq 0; \quad b^L > b^R \geq 0; \quad K^L < K^R \leq \frac{\overline{u}}{1-\alpha}. \tag{5}$$

c and K are the objectives for inflation and unemployment respective, δ and b are weights. The last double inequality implies the time-inconsistency problem in monetary policy pointed out by Kydland and Prescott (1977) and Barro and Gordon (1983a, 1983b). Since at least one of the two parties targets a level of output growth which is above the natural rate, it introduces an "inflation bias" because of the lack of recommitments in monetary policy.

This model produces a political cycle under the assumption of sluggish wage adjustments and of uncontingent labour contracts signed at discrete intervals which not coincide with the political terms of office. Changes in the inflation rate associated with changes in government create temporary deviations of real economic activity from its natural level. The following testable implications can be derived from the RPT: (i) at the beginning of a right-wing (left-wing) government output growth is below (above) its natural level and unemployment is above (below); (ii) after expectations, prices and wages adjust, output and unemployment return to their natural level; after this adjustment period, the level of economic activity should be independent of the party in office; (iii) the rate of inflation should remain higher throughout the term of a left-wing government.

2.5 Political budget cycle models (Breuss, 1980; Rogoff, 1990)

Breuss (1980) in an extension of Nordhaus's model and Rogoff (1990) have studied the implications of elections and/or partisan behaviour on the development of the budget. Under the assumptions A.1 to A.6 (or in Rogoff (1990) considering A.2', A.2'', A.5', A.5'') and in the case of "partisan" objectives (A.4') if politicians are not identical, these models lead to the following implications. The electoral budget cycles generated in the Breuss (1980) model are called henceforth BC, the equilibrium political budget cycle in the Rogoff (1990) model, EBC.

The government budget balance (d_t) as a share of GDP is divided into a business cycle dependent component (αG_t) and a structural component (d_s).

$$d_t = \alpha G_t + d_s. \tag{6}$$

G is a variable representing the business cycle, either measured by the potential output gap or the GDP growth rate. Politicians can only influence the structural component via discretionary fiscal policy and hence are able to "add" to the normal business cycle an extra "political cycle". Buti and van den Noord (2004, p. 20) report the budget sensitivity to the output gap (α) of around 0.5 in the Euro area, implying that a 1% change in the output gap improves the budget balance as a share of GDP by ½ point. There are, however, differences between Euro area members: from 0.3 in Austria and Portugal to 0.7-0.8 in Belgium, Finland and the Netherlands. These estimates of automatic stabilizers are not uncontroversial. The degree of stabilization provided by automatic stabilizers varies depending on the macro model used and the shocks applied. In general, automatic stabilizers are less effective in smoothing supply shocks than demand shocks (see Buti and van den Noord, 2004, p. 21)

The testable hypothesis follows from the assumptions in Nordhaus (1975) or more explicit in Breuss (1980) and in Rogoff (1990). (i) either every government follows the same policy (A.4) or it has partisan objectives (A.4'); members of left-wing parties are more concerned with unemployment and growth (Keynesian-bias) and relatively less concerned with inflation; members of right-wing parties have opposite preferences; (ii) toward the end of his term in office, the incumbent stimulates the economy by increasing public expenditures and/or reducing taxes (e.g. timing a tax reform so that its impact is felt before elections or in the year of the election) which leads to increased budget deficits; (iii) after the election day at least under the rules of the SGP EMU member states are forced to balance the budget. This election-oriented behaviour of governments leads to a pronounced budget cycle in the case of opportunistic government behaviour following the same policy or in the case of partisan objectives.

2.6 Optimum electoral area: EMU with a single election day (Sapir-Sekkat, 1999)
Sapir and Sekkat (1999) extend the models of Persson and Tabellini (1990) and Alesina (1987) to a situation with two interdependent countries generating either positive or negative international spillovers. For each model they compare welfare under two scenarios: one with a single election

date, the other with different dates. Intuitively, a single election date could be thought of beeing detrimental to welfare, because it synchronizes cycles, thereby increasing their amplitude. In contrast, they find that electoral coordination is never harmful provided international spillovers are positive. Furthermore, they show that the desirability of establishing an electoral area between two countries is enhanced when the spillovers between these countries are large and positive, and when they face symmetric shock. This is reminiscent of the gain from an "optimum currency area" à la Mundell (1961).

There are two economies denoted by A and B (a * refers to economy B), each generating its own cycle which is also transmitted to the other economy via spillovers. In each economy, the cycle is produced by governments attempting to be reelected. The political cycles may be "opportunistic" or "partisan". A three-period model is formulated to investigate two options: one where the two countries hold elections at the same time, the other where elections take place at different dates.

The three-period model is presented for country A. At each election the "incumbent" competes with the "opponent" (denoted by i and o respectively). Voters are rational and forward looking (assumption A.2'). They elect the candidate who minimizes their expected loss function. In the case of "opportunistic" cycles all voters are assumed to be identical.

$$L = E\left[\sum_{t=1}^{3} \delta^{t-1}\left(\frac{\pi_t^2}{2} + \gamma \frac{X_t^2}{2}\right)\right], \tag{7}$$

where π is the inflation rate at time t, X_t the employment at time t (both variables are deviations from desired levels), $\gamma > 0$, and $0 < \delta < 1$.

Both candidates share the same objective. Candidate c minimizes the expected loss function

$$L^c = E\left[\sum_{t=1}^{3} \delta^{t-1}\left(\frac{\pi_t^2}{2} + \gamma \frac{X_t^2}{2}\right) - KZ^c\right], \quad c = i, o, \tag{8}$$

where K denotes the utility from being elected and Z is a dummy variable which has the value one if the candidate is elected and zero otherwise.

The elected government manipulates inflation, which, if unanticipated, generates employment. The latter depends on two other factors: competence and international spillover. Competence reflects the ability to respond to exogenous shocks, while spillover reflects the interdependence between the countries. If candidate c is elected, employment in period t is

$$X_t = (\pi_t - \pi_t^e) + (\mu_t^c + \mu_{t-1}^c) + \beta(\pi_t^* - \pi_t^{*e}), \quad c = i, o, \tag{9}$$

where μ measures "competence", β measures the degree of international spillover (the extent to which unanticipated inflation in one country affects employment in the other) and the superscript e stands for expectations. Like in Persson and Tabellini (1990), competence μ is a random variable.

The degree of international spillover, β can be either positive or negative since expansionary macroeconomic policy (e.g. via an expansionary fiscal policy, hence producing a "political budget cycle) can have two impacts: (i) expansion of aggregate demand increases employment in both countries; (ii) it creates inflation, reduces real wages, and improves competitiveness in the expanding country at the expense of the other country.

The Sapir-Sekkat (1999) model can be applied either for "opportunistic" political cycles or for "partisan" cycles. In the latter case voters have identical preferences towards employment (whose optimal level is assumed to be zero), but differ with respect to inflation.

B. Empirical results

As we are interested only in the evaluation of the synchronizing of election cycles in EMU member states we use annual data only for the 12 Euro zone member states (Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain) for the period 1977-2008. The data for the macroeconomic variables is obtained from the European Commission (AMECO data base as of November 2006). The primary source for the political (election) data is Wikipedia (http://en.wikipedia.org/wiki/Elections_by_country).

Similarly to the procedure applied by Alesina and Roubini (1992) we test the various theories by running the following panel regressions, for instance for output growth:

$$y_t = \alpha_0 + \alpha_1 y_{t-1} + \alpha_2 y_{t-2}....\alpha_n y_{t-n} + \alpha_{n+1} PDUM_t + \varepsilon_t \tag{10}$$

y_t is the stacked vector of time-series data on GDP growth for the 12 EMU countries and PDUM is a political dummy which captures the implications of the different theories. The autoregressive specification for the dependent variable is chosen in the literature as the "best" using standard techniques.

Since all Euro zone countries are open economies (three of them are "large" – France, Germany, Italy; nine are "small"), we control for the effect of the world economy (in our case the aggregate

of the Euro zone) on domestic economies. First, the "partisan" or opportunistic goals of the politicians are defined in EMU in relation to the common coordination goals of economic policy laid down in the EC Treaty. Second, the four freedom philosophy of EU's single market makes EMU countries highly interdependent via intra-EU trade and financial linkages. To capture these effects, Alesina and Roubini (1992, p. 669) use three approaches: (i) each countries variables are defined as a difference between the actual variable and a proxy for the OECD aggregate of the same variable; (ii) the OECD aggregate variable is used as a proxy for the world economy; (iii) time dummies are added in the regressions. We use the Euro zone aggregates for GDP, unemployment and inflation as the potential "world" variable.

We apply essentially only two political dummies for PDUM: one for the election date (EL) und one to capture "partisan" behaviour (PA):

EL = +1 in the year of national elections, and 0 otherwise.

PA = +1 for a right-wing government in office; -1 for a left-wing government in office;

+0.5 for a grand coalition led by a right-wing government;

-0.5 for a grand coalition led by a left-wing government;

+0.8 for a right-wing government coalition with another party (in France the "cohabitation" with a left president and a right-wing government);

-0.8 for a left-wing government coalition with another party (in France the "cohabitation" with a right president and a left-wing government).

In contrast to other empirical studies with quarterly data (e.g., see Alesina and Roubini, 1992 or the studies mentioned in Alesina et al, 1997 or in Persson and Tabellini, 1999), we set the dummies for the "opportunistic" cycles (dummy variable EL) only in the year of elections and not some period before and/or after elections, because elections take place during a year, either at the beginning, in the middle or at the end. Sometimes the timing of voting-optimizing behaviour of the incumbent is retarded for reasons of legal delays in the parliaments. In the case of "partisan" cycles it is very difficult to make forecasts of a swing in the ideology of the government, from right (left) to left (right) wing only based on economic reasons which the PT or RPT suggest. On the one hand in most of the Euro zone member states we have a multi-party government system, which result often in coalition compromises. On the other hand, a party or a candidate may win elections for many other reasons than just economic, be it charisma or other

reasons. In countries with a two party system like in the USA it is easier to forecast a partisan outcome of elections. Fair (1978, 1996, 2002) based on his "presidential vote equation" seems to be successful in forecasting the president in the most recent elections (see also his homepage: http://fairmodel.econ.yale.edu/vote2008/index2.htm).

There is a huge literature on empirical tests of the several politico-economic cycles theories and models (for an overview, see Alesina et al., 1997 and Persson and Tabellini, 1999) with heterogeneous results. Alesina and Roubini (1992) reject the Nordhaus model and find verification for the PT and the RPT models. More recent studies find no verification for the models of political cycles. Andrikopoulos et al. (2004, 2006) test whether incumbent national governments of the EU member states manipulate the fiscal policy instruments in order to create national political business cycles, opportunistic or partisan. Their empirical evidence does not support this hypothesis. Rather, it appeared that governments have pursued stabilization policies in the run-up to fulfil the convergence criteria for entering the EMU. In the 2004 article the authors apply annual data for the period 1970 to 1998 and study five target variables (real GDP, personal disposable income, private consumption, unemployment rate and inflation rate) and eight fiscal instruments (total public expenditure, direct taxes, indirect taxes and subcategories of each variable). These tests are based on the suggestions by Rogoff (1988) in his EBC model. In the 2006 article the authors only look at tax policy instruments. Milesi-Ferretti e al. (2002) present a theoretical model in which voters have an incentive to elect representatives more prone to transfer (public good) spending in proportional (majoritarian) systems. In such systems also higher total primary spending is predicted when the share of transfer spending is high (low).

In order to evaluate the Sapir-Sekkat (1999) hypothesis, one must test whether some kind of political cycle is evident anyway in the Euro zone countries. For this purpose we test the implications of the Nordhaus PBC model (Table 1), the partisan models (Table 2) applying in each case the specific dummy. In the tests of the budget cycle models (Table 3) we apply both dummies (*EL* and *PA*).

As in many other empirical tests the simple Nordhaus PBC model is rejected. The respective political dummy (*EL*) is insignificant in Table 1.

Table 1: Nordhaus' PBC model – Panel regressions for 12 EMU countries: 1978-2008

Dependent Variables:	Explanatory variables				R^2	S.E.
Y	Constant	Y(-1)	YEUR	EL		
Coefficient	-0.29	0.49	0.74	0.20	0.48	1.61
(t-statistic)	(-1.41)	(12.55)	(9.29)	(1.08)		
U-diff	Constant	U-diff(-1)	U(-2)	EL		
Coefficient	-0.02	1.43	-0.46	0.04	0.97	1.00
(t-statistic)	(-0.93)	(30.73)	(-10.04)	(0.89)		
P	Constant	P(-1)	PEUR	EL		
Coefficient	0.59	0.84	0.42	-0.07	0.93	1.00
(t-statistic)	(3.02)	(57.75)	(6.16)	(-0.87)		

Annual data, 1978-2008, where 2007 and 2008 are forecasts; Y = growth rate of real GDP in %; U-diff = difference between the unemployment rate of country *i* und the "Euro zone" unemployment rate" in % points; P = inflation rate in %; YEUR = growth rate of real GDP of the aggregate Euro zone; PEUR = inflation rate of the aggregate Euro zone; EL = election dummy.

Also the test of the partisan models in Table 2 rejects their hypothesis – at least with our political dummy (*PA*) and for our sample of countries and annual data. In contrast to the affirmative test by Alesina and Roubini (1992) with quarterly data, but with a different sample of countries and other time period, no macroeconomic variable (GDP growth, unemployment and inflation) can be explained by the partisan dummy.

Table 2: Partisan models – Panel regressions for 12 EMU countries: 1978-2008

Dependent Variables:	Explanatory variables				R^2	S.E.
Y	Constant	Y(-1)	YEUR	PA		
Coefficient	-0.46	0.43	0.85	0.05	0.57	0.99
(t-statistic)	(-2.42)	(11.18)	(11.06)	(0.92)		
U-diff	Constant	U-diff(-1)	U-diff(-2)	PA		
Coefficient	-0.01	1.44	-0.47	0.00	0.97	1.00
(t-statistic)	(-0.39)	(31.08)	(-10.24)	(-0.02)		
P	Constant	P(-1)	PEUR	PA		
Coefficient	-0.62	0.84	0.42	0.05	0.93	1.00
(t-statistic)	(-3.14)	(56.40)	(6.05)	(1.19)		

Annual data, 1978-2008, where 2007 and 2008 are forecasts; Y = growth rate of real GDP in %; U-diff = difference between the unemployment rate of country *i* und the "Euro zone" unemployment rate" in % points; P = inflation rate in %; YEUR = growth rate of real GDP of the aggregate Euro zone; PEUR = inflation rate of the aggregate Euro zone; PA = partisan dummy.

Table 3: Electoral Budget Cycles – Panel regressions for 12 EMU countries: 1978-2008

Dependent Variables:	Explanatory variables						R^2	S.E.
D (all)	Constant	Y		EL	PA			
Coefficient	-4.09	0.51		-0.88	-0.55		0.65	0.96
(t-statistic)	(-27.24)	(18.47)		(-7.23)	(-8.72)			
D (all)	Constant	Y	D(-1)	EL	PA			
Coefficient	-0.68	0.20	0.87	-0.67	-0.04		0.89	1.00
(t-statistic)	(-5.32)	(7.68)	(45.10)	(-7.39)	(-0.88)			
D (all)	Constant	PO		EL	PA			
Coefficient	-37.05	0.34		-0.59	-0.49		0.66	0.95
(t-statistic)	(-10.19)	(9.44)		(-4.89)	(-8.11)			
D (all)	Constant	PO	D(-1)	EL	PA			
Coefficient	-1.99	0.02	0.90	-0.70	-0.01		0.88	1.01
(t-statistic)	(-0.67)	(0.65)	(43.78)	(-7.46)	(-0.13)			
D (all)	Constant	Y	D(-1)	EL	PA	SGP		
Coefficient	-0.83	0.21	0.86	-0.67	-0.06	0.35	0.90	1.00
(t-statistic)	(-5.76)	(8.09)	(43.43)	(-7.25)	(-1.20)	(2.12)		
D (small)	Constant	Y	D(-1)	EL	PA			
Coefficient	-0.81	0.25	0.88	-0.72	-0.02		0.87	1.53
(t-statistic)	(-5.01)	(6.64)	(39.49)	(-4.26)	(-0.27)			
D (small)	Constant	Y	D(-1)	EL	PA	SGP		
Coefficient	-1.10	0.25	0.84	-0.72	-0.06	0.59	0.88	1.52
(t-statistic)	(-6.06)	(6.84)	(33.93)	(-4.41)	(-0.75)	(3.18)		
D (large)	Constant	Y	D(-1)	EL	PA			
Coefficient	-0.34	0.13	0.93	-0.59	0.00		0.83	1.01
(t-statistic)	(-1.29)	(1.47)	(26.21)	(-2.79)	(0.03)			
D_S	Constant			EL	PA			
Coefficient	-2.53			-0.42	-0.43		0.52	0.85
(t-statistic)	(-17.50)			(-2.22)	(-4.03)			
D_S	Constant		D_C(-1)	EL	PA			
Coefficient	0.01		0.89	-0.77	0.05		0.88	0.96
(t-statistic)	(0.14)		(41.22)	(-6.67)	(0.82)			

Annual data, 1978-2008, where 2007 and 2008 are forecasts; D = budget balance (net lending) of general government in % of GDP; D (all) = 12 Euro zone countries; D(small) 9 small Euro zone countries; D (large) 3 large Euro zone countries (France, Germany, Italy); D_S = structural (cyclically adjusted) budget balance in % of GDP; Y = growth rate of real GDP in %; PO = potential output gap; SGP = Dummy variable for stabilizing impact of the SGP the period of the Euro zone: 1999-2008; EL = election dummy; PA = partisan dummy.

The test for the electoral budget cycle model in Table 3 is affirmative in the case of the dummy approximating the "opportunistic" cycle (*EL*), and does not support the partisan hypothesis,

approximated by the dummy *PA*[1]. A similar equation was used in the case of Austria in Breuss (2001). According to the budget balance equation (6) budget balances depend on a variable representing the business cycle (either GDP growth – *Y*, or potential output gap – *PO*) and a structural component which is explained by either "opportunistic" (dummy *EL*) or "partisan" behaviour (dummy *PA*). In all variants of tests the *EL* dummy has a significant negative coefficient, meaning that the incumbent government makes an expansionary fiscal policy towards the election day. The *PA* dummy is only significant if one estimates equation (6) without the lagged dependent variable *D(-1)*. Interestingly, the sign of the estimated coefficient for the *PA* dummy is negative implying – contrary to the implications of most variants of partisan models – that a right-wing incumbent follows an expansionary fiscal policy stance! As the test with the data for the potential output gap (source is the AMECO data base of the European Commission) is questionable in the following analysis we use only GDP growth as the measure of the business cycle.

Two additional features can be detected: (i) the impact of the budget cycle is stronger in the small Euro zone countries than in large countries. (ii) the restrictions of the SGP led to a reduction of the budget deficits since starting with the EMU in 1999. The budget reducing effect is stronger in the small countries, and absent (insignificant) in the three large Euro zone countries, in particular because France and Germany missed the objectives of the SGP rules for several years (see Breuss, 2007).

Also a direct test, whether only the business-cylce-adjusted or structural component of the budget balance (D_S) (applying data from the AMECO data base of the European Commission) is used, reveals the significant impact of the *EL* dummy.

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[1] Buti and van den Noord (2004) confirm these results for the Euro zone over the period 1999-2003 in panel regressions. They regress their indicator for discretionary fiscal policy (DP) – divided into discretionary expenditure, discretionary revenue, growth dividend and inflation dividend - on the deficit gap (actual minus deficit target) as a variable for the consolidation effort in the context of the SGP commitments, the output gap (effect of the business cycle) and two election dummies (a pre- or early election year dummy, and a full-blown election year dummy – like our *EL* dummy). Interestingly, their estimated coefficient for *EL* is the same as in our regression of only the structural component of the budget balance (D_S), namely 0.4 (see their Table 4 on page 38 and our Table 3).

3. The Costs and Benefits of a Common Election Day in EMU

3.1 A Politico-economic model for the Euro zone

In order to test the Sapir-Sekkat (1999) hypothesis of welfare gains of synchronizing the national election dates in the Euro zone member states we first build a politico-macroeconomic model for the Euro zone. For each of the 12 member states a four-equation system is estimated consisting of the following equations:

(i) *GDP growth (Y):* Here we apply a panel regression explaining GDP growth by the traditional variables investment quota (*I/Y*), growth rate of employment (*E*), the spillover variable aggregate GDP of the Euro zone (*YEUR*), the change in the unemployment rate (*U*), the budget balance in the current period (*D*) and its lagged values (*D(-1)*), the debt to GDP ratio (*S*), the size of the government – public expenditure in % of GDP - *G*), the inflation rate (*P*), the real short-term interest rate in the Euro zone (*R-P*), the political dummies *EL* and *PA*, the GDP growth dampening effect of the fiscal policy stance under the SGP rules (*SGP*) and the lagged dependent variable *(Y(-1)):*

$$Y = const + 0.35 * \Delta(I/Y) + 0.11 * E + 0.56 * YEUR - 0.33 * \Delta U + 0.06 * D - 0.12 * D(-1)$$
$$- 0.006 * S - 0.08 * G - 0.05 * P - 0.11 * (R - P) + 0.24 * EL + 0.0 * PA - 0.78 * SGP$$
$$+ 0.20 * Y(-1) \tag{11}$$

This equation (for which all the coefficients with the exception for those of *PA* are significant) is used for all 12 Euro zone member states with the only difference in the size of the constant. For most countries this equation fits quit well the development of GDP. As one can see in this specification the political dummy *EL* enhances GDP growth whereas the partisan dummy *PA* does not.

(ii) *Budget balances (D):* Here for each Euro zone country a separate equation is estimated in the spirit of those applied in the panel regressions of Table 3. A prototype equation looks like this:

$$D = cons + \alpha Y + \beta EL + \gamma PA + \lambda D(-1), \tag{12}$$

where $\beta < 0$. In some cases also the dummy variable for *SGP* is added. In 5 out of the 12 Euro zone member states, the *EL* dummy is not significant (in Belgium, Ireland, Luxembourg, Portugal and Spain). The political dummy *PA* is only significant in the three large countries France, Germany and Italy.

(iii) Unemployment rate (U): Here the specification of the estimated equation varies slightly from country to country. But in principle the specifications are in line with those used in the panel regressions of Tables 1 and 2.

$$U = cons + \alpha U(-1) - \beta Y + \gamma UEUR \tag{13}$$

In some country specifications we use *U-diff* instead of *U*, namely the difference between the national unemployment rate and the aggregate Euro zone unemployment rate (*UEUR*). Political dummies *EL* and *PA* do play no role in the country equations.

(iv) Rate of inflation (P): Inflation is also estimated separately for each of the 12 Euro zone member states with more or less the same specification, following the approaches of Tables 1 and 2. A representative specification is the following:

$$P = cons + \alpha PEUR - \beta Y \tag{14}$$

In some cases *Y* is substituted by unemployment (*U*) in the inflation equation. The primary influence is captured by the spillover from the aggregate inflation rate of the Euro zone (*PEUR*).

(v) *Euro zone aggregates and the Taylor rule:* In addition we consider the aggregate Euro zone variables *YEUR, UEUR* and PEUR, which are calculated by using the respective GDP weights of the 12 Euro zone member states.

To capture the interest rate behaviour of the ECB for the Euro zone, we estimate the following Taylor rule:

$$R = 3.5 + 1.12 * (PEUR - 2.0) + 0.62 * (YEUR - 3.0) \tag{15}$$

This Taylor rule nicely reflects the primary goal of the ECB, namely price stability, represented by a higher weight to the inflation gap than for the GDP growth gap. An alternative would be a Taylor rule with the lagged short-term interest rate *R(-1)* as an explaining variable representing the interest-rate smoothing process of monetary policy of the ECB. For our simulation purposes we prefer the equation without a lag.

With this Euro zone politico-economic model we can make simulations comparing the case of a single (synchronized) election date with those of the baseline case with different election dates. As we are interested in the period since EMU started we simulate over the period 1999 to 2008. We have chosen three common election years – 1999, 2003 and 2007 – and compare their

economic implications with the baseline scenario which includes the impact of the actual different national election dates.

In order to have some control of our results we also apply the Oxford Economic Forecasting (OEF) World macro model. As the OEF model, however, does not include politico-economic effects we simulate the situation of a fictitious synchronization of the elections in the Euro zone countries under the following assumption. Accepting that there exists a political budget cycle we shock the model with the increase of public expenditures (1/2 a percentage point of GDP) in the years of the common elections – 1999, 2003, 2007 – but only if these years do not coincide with actual election years.

3.2 Simulation results

The results can be summarized as follows:

Table 4: Benefits and Costs of a common election cycle in Euro zone countries: 1999-2008
(Cumulated differences between the scenario with common elections and
the base line scenario in percentage points over 10 years in EMU)

	GDP growth %	Unemployment %	Inflation %	Budget balance % of GDP	Short-term interest rate %
Austria	0.01	-0.06	0.75	0.14	
Belgium	0.03	-0.11	0.45	0.03	
Finland	0.07	-0.82	1.21	0.41	
France	0.48	-0.19	0.64	-1.50	
Germany	0.31	-0.42	0.44	-0.33	
Greece	0.57	-0.77	3.61	-1.71	
Ireland	0.41	-1.07	1.30	0.49	
Italy	0.54	-0.93	1.78	-1.13	
Luxembourg	0.38	-0.73	1.11	0.26	
Netherlands	0.14	-2.19	1.73	0.33	
Portugal	0.16	-0.22	1.77	0.08	
Spain	0.28	-2.90	2.37	0.41	
Euro zone	0.35	-0.91	1.22	-	1.59

Source: Simulations with the politico-economic Euro zone model.

1) The simulations of a common election day in the 12 Euro zone member states with the own politico-economic model (see Table 4) leads to positive GDP effects, cumulated over the 10 years period 1999-2008; the results differ from country to country. The OEF model simulations (see Table 5), in contrast, lead – with the exception of Belgium – to slightly negative GDP effects. The major reason for the different results is caused by the fact that in

the OEF model only the BC effect is inputted in that in this model there is no such growth enhancing effect in the GDP growth equation (11) as in our politico-economic model. Even when considering such effects in the residual of GDP the cumulated sum of GDP growth over the 10 years period remains negative, only the amplitudes increase.

2) In both models unemployment decreases and inflation goes up. This forces the ECB to restrict monetary policy – the short-term interest rates increase.

3) The impact on the budgets varies from country to country and differs also in both model simulations. In some countries the budgetary deterioration could come into conflict with the SGP objectives.

Table 5: Benefits and Costs of a common election cycle in Euro zone countries: 1999-2008
(Cumulated differences between the scenario with common elections and
the base line scenario in percentage points over 10 years in EMU)

	GDP growth %	Unemployment %	Inflation %	Budget balance % of GDP	Short-term interest rate %
Austria	-0.08	-0.32	1.21	-0.63	
Belgium	0.07	-0.36	0.71	0.22	
Finland	-0.02	-0.01	0.34	0.07	
France	-0.19	-0.17	0.88	0.09	
Germany	-0.17	-0.34	0.84	-1.62	
Greece	-0.12	-0.71	1.23	-5.24	
Ireland	-0.07	-0.17	0.59	-1.92	
Italy	-0.33	-0.08	1.58	-2.05	
Luxembourg	-	-	-	-	
Netherlands	-0.15	-0.18	0.80	-0.54	
Portugal	-0.18	-0.03	1.34	-2.34	
Spain	-0.22	-0.58	2.12	-1.11	
Euro zone	-0.18	-0.27	1.12	-1.15	1.88

Source: Simulations with the Oxford Economic Forecasting world model. Latest version.

4) As theoretically postulated by Sapir and Sekkat (1999) the size of the spillovers between the Euro zone member states is important for the outcome. We simulated with the politico-eoconomic model two cases (see Table 6): (i) one where the synchronization of the election day only happens in the three large Euro zone member states (France, Germany and Italy). Due to their large spillovers to the small Euro zone countries and the possible negative spillover from the small countries their impact on GDP is larger in the three countries than in the case of a full harmonization of elections and in some small countries the GDP effect is also

larger. (ii) In the case of the harmonization of elections only in the nine small Euro zone member states the GDP effects are negative in the three large countries and often also in the small countries.

Table 6: GDP effects of an asymmetric synchronization of the elections in the Euro zone
countries: 1999-2008
(Cumulated differences between the scenario with common elections and
the base line scenario in percentage points over 10 years in EMU)

	Common election dates in Euro zone countries:		
	all 12 countries	3 large countries	9 small countries
Austria	0.01	0.12	-0.11
Belgium	0.03	0.09	-0.06
Finland	0.07	0.12	-0.06
France	0.48	0.52	-0.04
Germany	0.31	0.38	-0.06
Greece	0.57	0.27	0.29
Ireland	0.41	0.14	0.27
Italy	0.54	0.57	-0.03
Luxembourg	0.38	0.12	0.25
Netherlands	0.14	0.20	-0.06
Portugal	0.16	0.19	-0.03
Spain	0.28	0.23	0.04
Euro zone	0.35	0.37	-0.02

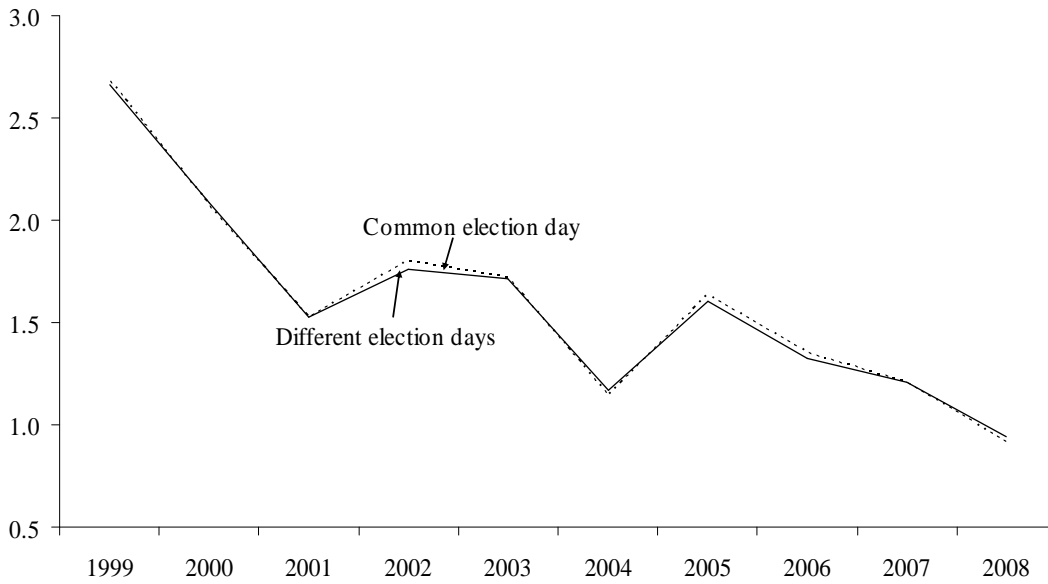Source: Simulations with the politico-economic Euro zone model.

5) Which implications for the "European business cycle" or at least for a common Euro zone cycle? As we can see from Figure 1, we are also on the way towards such a cycle. Since the inception of EMU in 1999, the dispersion of the cycles have decreased, notwithstanding whether the cycles is measured by GDP growth rates or by potential output gaps. One might expect that the shock of generating a common election cycle might deteriorate this trend. Our simulation results, however, show that the dispersion of the Euro zone business cycle is only slightly disturbed by such an exercise (see Figure 2).

Figure 1: European – Euro zone – Business Cycle?
(Standard deviation of GDP growth and Potential output gap of 12 Euro zone countries)
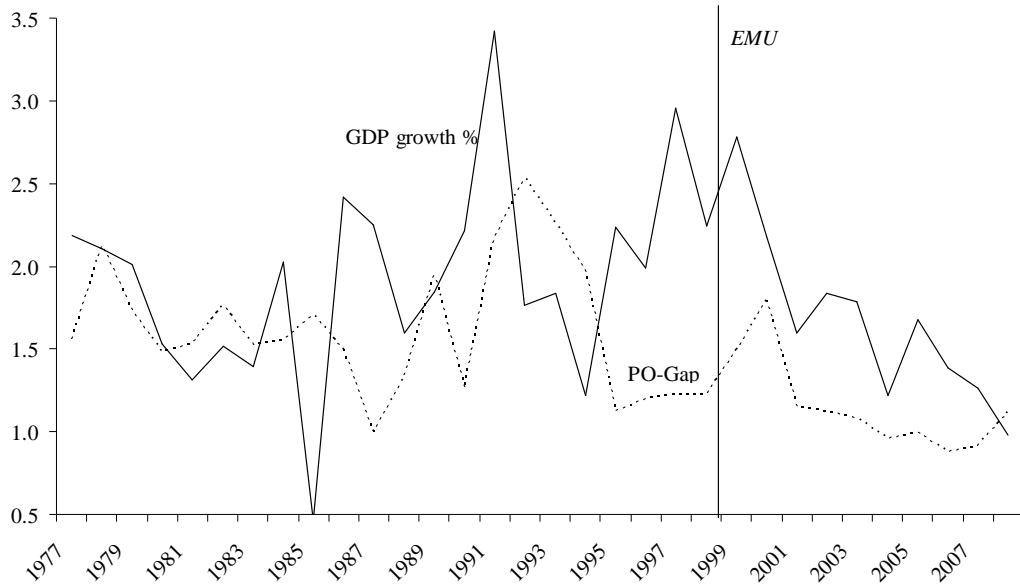
Source: AMECO data base of the European Commission.

Figure 2: Euro zone – Business Cycle before and after the synchronization of elections
(Standard deviation of GDP growth of 12 Euro zone countries)

Source: Results of the simulations with the politico-economic model.

6) Harmonizing the election day in all Euro zone member states also synchronizes the business cycle, however, at the cost of increasing its amplitude (see Figures 3 and 4).

Figure 3: A common election day in the Euro zone: GDP effects
(Deviations of common election scenario from baseline in percentage points)
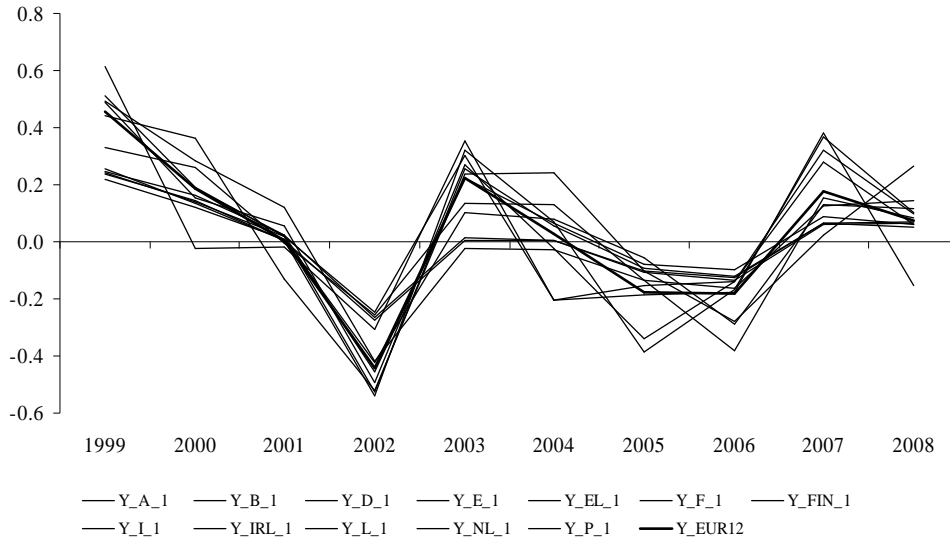
Source: Simulations with the own politico-economic macro model

Figure 4: A common election day in the Euro zone: GDP effects
(Deviations of common election scenario from baseline in percentage points)
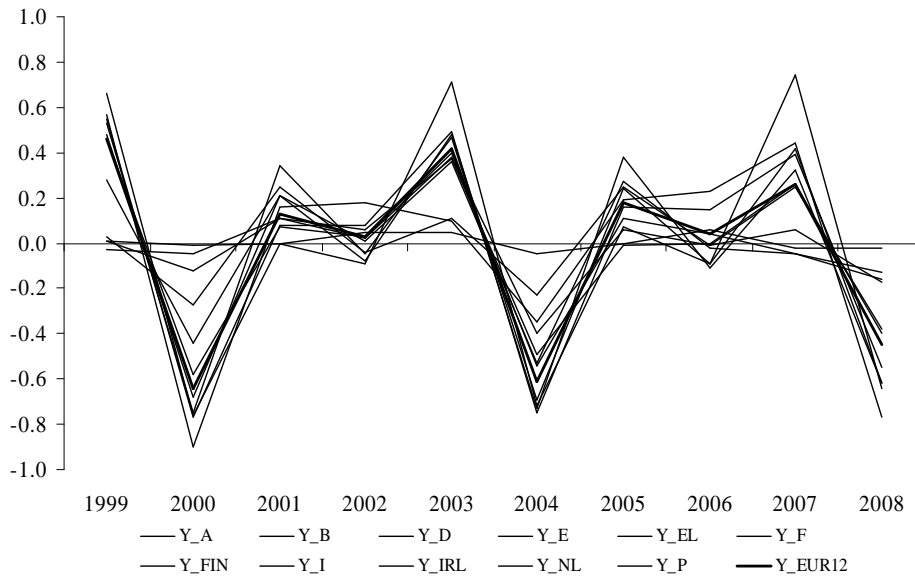
Source: Simulations with the OEF model

4. Conclusions

The relatively poor overall macroeconomic performance of the Euro zone so far in comparison with the whole EU and with the USA in particular seems to indicate that the asymmetric architecture of policy making is not yet optimal. The process of economic policy coordination is complex and expensive. The coordination procedure around the SGP is largely foiled if national governments still pursue national interests. National governments want to be reelected or further their ideology. This behavior can induce "political business cycles". Different national elections impede the achievement of a "European business cycles" or at least one within the Euro zone. Only in the case of a somewhat harmonized business cycle a centralized monetary policy fits to all member states. On hope is that harmonizing the election calendar could improve the overall results of economic policy coordination in the Euro zone.

The primary objective of this paper was the empirical evaluation of the theoretical postulate by Sapir and Sekkat (1999) that the adoption of a single election day throughout the Economic and Monetary Union (EMU) of the European Union (EU) might be welfare improving. After identifying a political budget cycle in the Euro zone we build a politico-macroeconomic model and simulate the effects of adopting a common election day in the 12 Euro zone member states. The results support most of the theoretical predictions by Sapir-Sekkat: (i) Synchronizing the elections could enhance GDP growth, reduce unemployment, but leads to increased inflation and in some countries to a deterioration of the budget; higher inflation forces ECB to monetary restrictions. (ii) If the synchronization happens asymmetrically – either only in the large or only in the small Euro zone countries – the result depends on the size of the spillovers. (iii) As anticipated in Sapir-Sekkat a common election day is a further step towards the desired "European business cycle", however, at the cost of increasing amplitude. Harmonizing elections is another method of policy coordination. Whether this leads to higher welfare is a matter of weighting the different macroeconomic outcomes and it also depends on the model applied.

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