A Common Election Day for the Euro Zone?

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Summary

This paper tests for the Euro zone the hypothesis put forward by Sapir and Sekkat (1999) that synchronizing elections might improve welfare. Implementing political business cycle features into a politico-macroeconomic model of the Euro zone allows us to 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 could force the 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.

Contents

I. INTRODUCTION

The primary objective of this paper is to test 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 (see Breuss, 2007a). As a consequence of the economic policy coordination the EU countries are already on the 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 some further coordination could prove fruitful. 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. The idea that politicians might – intentionally or unintentionally - generate a political business cycle goes back to Schumpeter (1935), Kalecki (1943) and Downs (1957). First theoretical foundations were developed by Nordhaus (1975) and later by Alesina (1987, 1988). Many others then tried to identify empirically political business cycles for different countries (see Breuss, 1980 for Austria; Fair, 1978, 1996, 2002 for the United States; Frey, 1978; Frey and Schneider, 1978a, 1978b for the United States and for the United Kingdom respectively). 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) for the former sort of cycles, whereas Hibbs (1977, 1987) dealt with partisan cycles. Further applications and extensions of the partisan approach were made by Frey and Schneider (1978a) and Nordhaus (1989). 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. Rational *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. In contrast, Andrikopoulos et al. (2004, 2006) tests 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. Breuss (1980) - in an extension of Nordhaus's (1975) electoral budget model - studied the implications of elections and/or partisan behavior on the development of the budget (the *political budget cycle)* in the case of Austria. Milesi-Ferretti e al. (2002) design 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). Rogoff (1990) designed a model with equilibrium political budget cycles under rational expectations. A recent survey of the several types of models of political business cycles is given by Breuss (2007b). He also

empirically tests the different types of political business cycles (opportunistic or partisan) with data for the Euro zone.

The plan of the paper is as follows. Section 2 outlines the model of Sapir and Sekkat (1999) and explains its implications for a single election cycle in the Euro zone. In section 3, firstly a politico-economic macro model for 12 Euro zone countries is developed, taking into account panel estimations of several approaches of political business cycle models. Then simulations with this model let us derive the benefits and costs of adopting a common election cycle. Section 4 draws conclusions.

II. SAPIR-SEKKAT'S HYPOTHESIS OF A SINGLE ELECTION DAY FOR EUROPE

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 being 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 shocks. 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 here for country A. At each election the "incumbent" competes with the "opponent" (denoted by i and o respectively). Voters are rational and forward looking. They elect the candidate who minimizes their expected loss function L. In the case of "opportunistic" cycles all voters are assumed to be identical.

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

where π is the inflation rate at time t (time runs from 1 to 3 periods), X_t is 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

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

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 two countries. If candidate c is elected, employment in period t is

$$X_t = (\pi_t - \pi_t^e) + (\mu_t^c + \mu_{t-1}^c) + \beta(\pi_t^* - \pi_t^{*e}), \quad c = i,\, o, \tag{3}$$

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. In a game-theoretic approach Sapir and Sekkat (1999) analyze their model for opportunistic and for partisan cycles. By comparing two electoral scenarios (different election dates and single-election date) they analyze the costs and benefits of electoral coordination in terms of inflation, employment, and welfare for the case of two *symmetric economies* (A and B are identical in all respects, except for their electoral calendars) and for the case where the two economies are asymmetric (one is large, one is small). They reach the following general conclusions (Sapir and Sekkat, 1999, p. 1613):

- The desirability of coordinating electoral calendars depends on the sign of international spillovers (the parameter β). If $\beta > 0$, coordination is never harmful: welfare is either increased or unaffected. If spillovers are negative, coordination is never beneficial. Coordination is the preferred solution with opportunistic models.

- In the case where the two economies are asymmetric in some respects, electoral coordination is the preferred solution (given that $\beta > 0$) with opportunistic models. With partisan models, economic agents are indifferent between the two electoral scenarios.

- The difference between the symmetric and asymmetric cases rests with the size of the spillovers between the two economies. In the extreme case of one very small and one very large country, the spillovers run only from the large to the small one. The large country is totally unaffected by actions in the small country.

III. COSTS AND BENEFITS OF A COMMON ELECTION DAY IN THE EURO ZONE

3.1 A Politico-Macro model of the Euro zone

In the following we test Sapir-Sekkat's (1999) hypothesis of the welfare improving effect of coordinating the election calendars of the member states of the Euro zone. For this purpose we

build a politico-macroeconomic model for the Euro zone for the period 1977-2008[1]. For each of the 12 member states (Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, Netherlands, Portugal and Spain) a four-equation system is estimated. The model consists of equations for output (real GDP), budget balances, unemployment, inflation and the short-term interest rate. The GDP equation is estimated by a panel-econometric approach and adjusted to the actual growth rate of each Euro zone member state by changing the constant. The other equations are estimated for each member state individually. The interest rate equation is again a single Taylor-rule approach, representing the single monetary approach of the European Central Bank (ECB).

(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*), a spill over variable, defined as the 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*). In order to capture the features of political business cylces we use two kinds of dummies, *EL* for the "opportunistic" cycle[2] and *PA* for the "partisan" cycle[3]; finally we consider also the GDP growth dampening effect of the fiscal policy stance under the SGP rules (*SGP*)[4] and implement also the lagged dependent variable *(Y(-1))*:

$$Y = const + 0.35 * \Delta(I/Y) + 0.11 * E + 0.56 * YEUR - 0.33 * \Delta U + 0.06 * D - 0.12 * D(-1)$$
$$- 0.006 * S - 0.08 * G - 0.05 * P - 0.11 * (R - P) + 0.24 * EL + 0.0 * PA - 0.78 * SGP$$
$$+ 0.20 * Y(-1) \tag{4}$$

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[1] The annual data for the macroeconomic variables are obtained from the European Commission (AMECO database as of November 2006). The primary source for the political (election) data is Wikipedia: http://en.wikipedia.org/wiki/Elections_by_country.

[2] *EL* = +1 in the year of national elections, and 0 otherwise.

[3] *PA* = +1 for a right-wing government in office; -1 for a left-wing government.; +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).

[4] The *SGP* dummy gets 1 for the period 1999-2008, and zero for the period before.

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):* In a more comprehensive panel-econometric analysis Breuss (2007b) finds that for the Euro zone an *electoral budget cycle* model is affirmative in the case of the "opportunistic" cycle (approximated by the dummy *EL*), but the estimates do not support (on average) the partisan hypothesis, approximated by the dummy *PA*. Additionally, the budget cycle is stronger in small Euro zone member states than in large ones. Therefore we estimate for each Euro zone country a separate equation, identifying an electoral budget cycle in the following specification:

$$D = cons + \phi Y - \varphi EL + \eta PA + \lambda D(-1), \tag{5}$$

where the parameter for the "opportunistic" dummy should be $\phi < 0$, meaning that the incumbent government makes an expansionary fiscal policy towards the election day. The parameter η for the "partisan" dummy can either be positive or negative, depending on the government's ideology. The parameter ϕ represents the budget sensitivity to real GDP or the potential output gap. Buti and van den Noord (2004, p. 20) estimate this sensitivity parameter to be 0.5 for the Euro area on average. 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 following basic specifications is used:

$$U = cons + \nu U(-1) - \theta Y + \vartheta UEUR \tag{6}$$

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. This is confirmed by panel-regressions in Breuss (2007b; *Tables 1* and *2*).

(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. A representative specification is the following:

$$P = cons + \sigma\, PEUR - \varsigma\, U \tag{7}$$

In some cases Y is substituted for unemployment (U) in the inflation equation. Then the parameter should be $\varsigma > 0$. The primary influence is captured by the spill over from the aggregate inflation rate of the Euro zone (*PEUR*). Political dummies *EL* and *PA* do not play a role in the country equations. Again, this confirms the panel-regressions in Breuss (2007b; Tables 1 and 2).

(v) *Euro zone aggregates and the Taylor rule:* In addition we aggregate the 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:

$$R = 3.5 + 1.12 * (PEUR - 2.0) + 0.62 * (YEUR - 3.0) \tag{8}$$

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 approach would use 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.

3.2 Simulation Results

With this politico-economic model of the Euro zone we can make simulations comparing the case of a single (synchronized) election date with those of the baseline case with different election dates. We are interested in the period of the EMU, 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 elections days, which are nationally different nowadays.

The results of the model simulations can be summarized as follows:

1) The simulations of a common election day in the 12 Euro zone member states with the politico-economic model outlined in the previous section leads to positive GDP effects, cumulated over the 10 years period 1999-2008; the results, however, differ from country to country (see *Table 1*). The general result of a gain in GDP is primarily due to the business cycle effect considered in the output equation (24). The impact of the *EL* dummy variable is the same for all countries. The variation of the gains in GDP from country to country is caused by the different existence of a political budget cycle, captured in the budget equation (5). As already mentioned, in some countries, there is no evidence of such a cycle.

2) Unemployment decreases because of the GDP gains due to the positive impact of the coordination of the electoral calendars in the Euro zone countries. As a trade-off, inflation goes up. This could force the ECB to restrict monetary policy. A following increase in the short-term interest rates would counteract the GDP improving effect of the synchronization of elections in the Euro zone.

Table 1: Benefits and costs of a common election cycle in the Euro zone: (Cumulated effects over the period 1999-2008)[*)]

	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

[*)] Cumulated differences between the scenario with common elections and the base line scenario (country-specific election dates) in percentage points.
Source: Simulations with the politico-economic Euro zone model.

3) The impact on the budget balances varies from country to country because not all countries exhibit an political budget cycle. In some countries the budgetary deterioration could come into conflict with the SGP objectives.

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-economic model two cases of asymmetry (see *Table 2*):

  (i)   In one case the synchronization of the election days 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 2: GDP effects of an asymmetric synchronization of the elections in large and small Euro zone countries:
(Cumulated effects over the period 1999-2008)[*]

	Common election dates in Euro zone countries:		
	In all 12 countries	In 3 large countries	In 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

[*] Cumulated differences between the scenario with common elections and the base line scenario (country-specific election dates) in percentage points.
[+] Direct GDP effects of countries with common elections; the effects of the other countries result indirectly from spillovers.
Source: Simulations with the politico-economic Euro zone model.

5) *European business cycle:* Which implications of a synchronization of election dates can we expect for the "European business cycle" or at least for a common Euro zone cycle? The development of the output data (GDP growth or potential output gap) demonstrates that the Euro zone is already on the way towards such a cycle (see *Figure 1*). 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*).
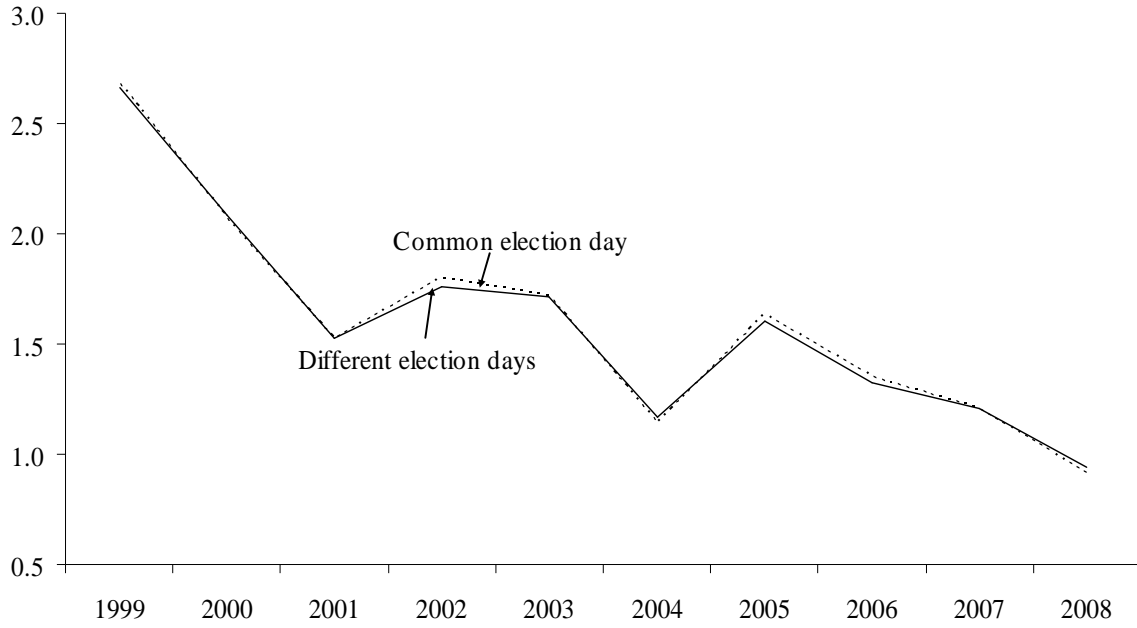
Figure 1: European – Euro zone – Business Cycle?
(Standard deviation of GDP growth and Potential output gap of 12 Euro zone countries)
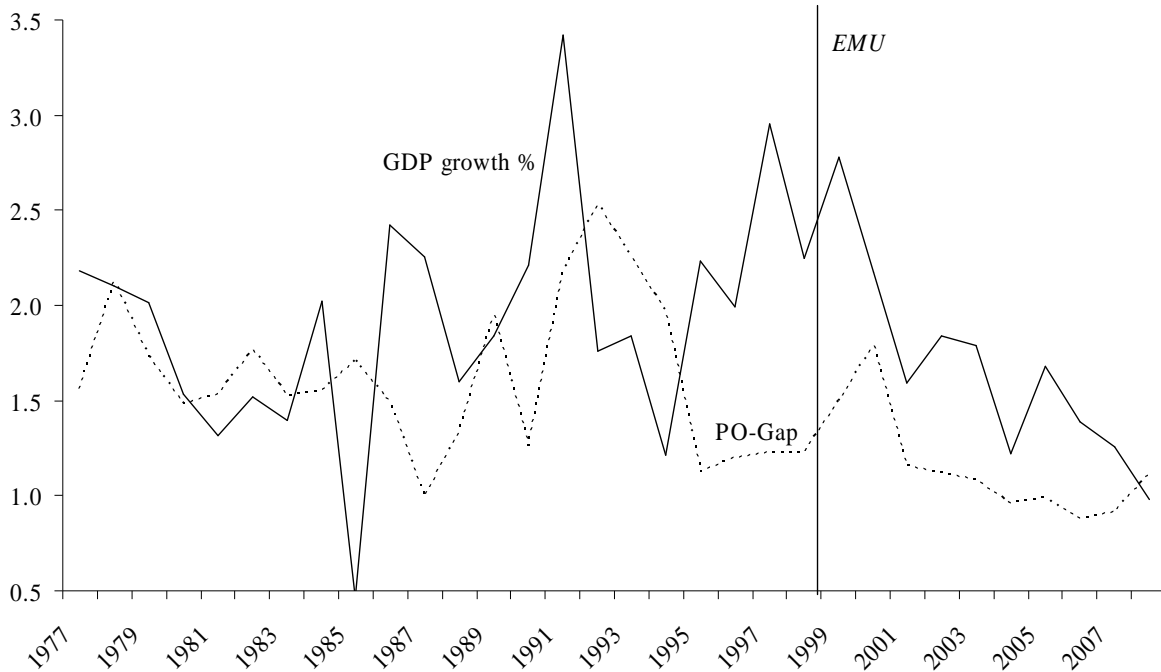
Source: AMECO data base of the European Commission.

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.

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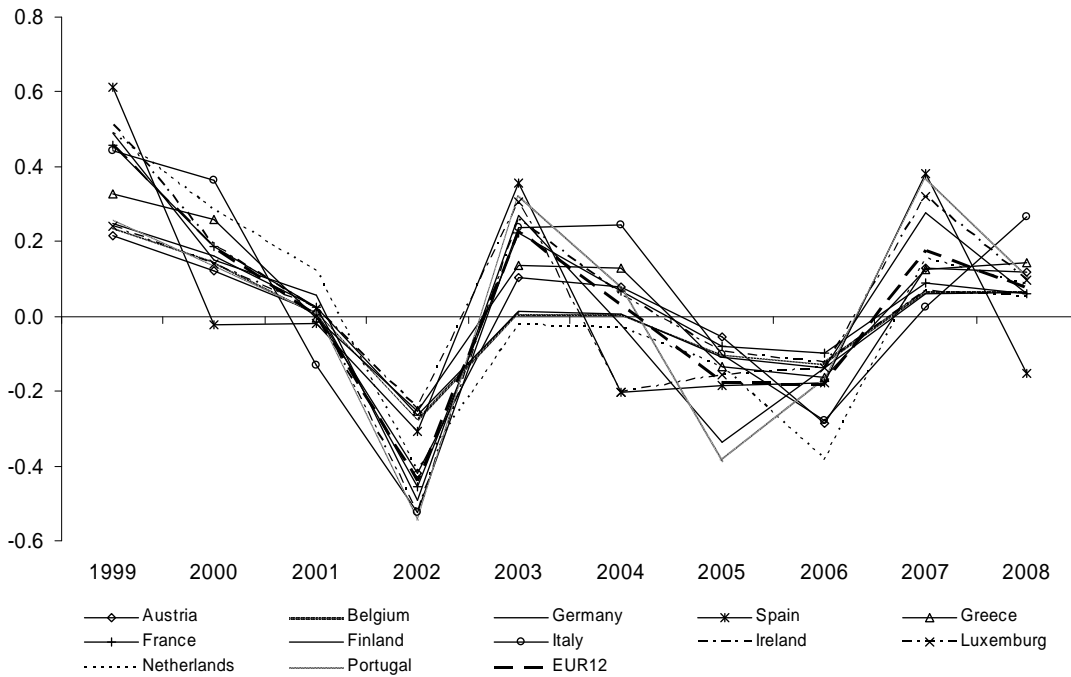
Source: Simulations with the own politico-economic macro model

6) Harmonizing the election day in all Euro zone member states also synchronizes the business cycle, however, at the cost of increasing its amplitude. Due to the implemented political business cycle in equation (1) and the political budget cycle in equation (4) for some countries, we notice common shocks in the common election years 1999, 2003 and 2007(see *Figure 3)*. Although the positive shocks to GDP die away after three years, new common elections stimulate GDP again. On average, this generates a cumulative GDP gain over the period 1999-2008, as documented in *Table 1*.

IV. CONCLUSIONS

Over the last decade, the Euro zone performed poorer relative to EU27 and more so compared with the USA in terms of GDP growth. This 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. One 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 and Sekkat: (i) Synchronizing the elections could enhance GDP growth, reduces unemployment, but leads to increased inflation and in some countries to a deterioration of the budget. Higher inflation could force the ECB to monetary restrictions and hence counteract the GDP-improving effect of coordinating the

elections. (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 and 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. This analysis only considers coordination of elections at a national level. Sub national elections at different dates might foil the ambitions of the coordination of elections in Euro zone member states. But even in strongly federal states like in Germany and Austria, the budgetary autonomy of the Länder is not strong enough to tangibly influence GDP.

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