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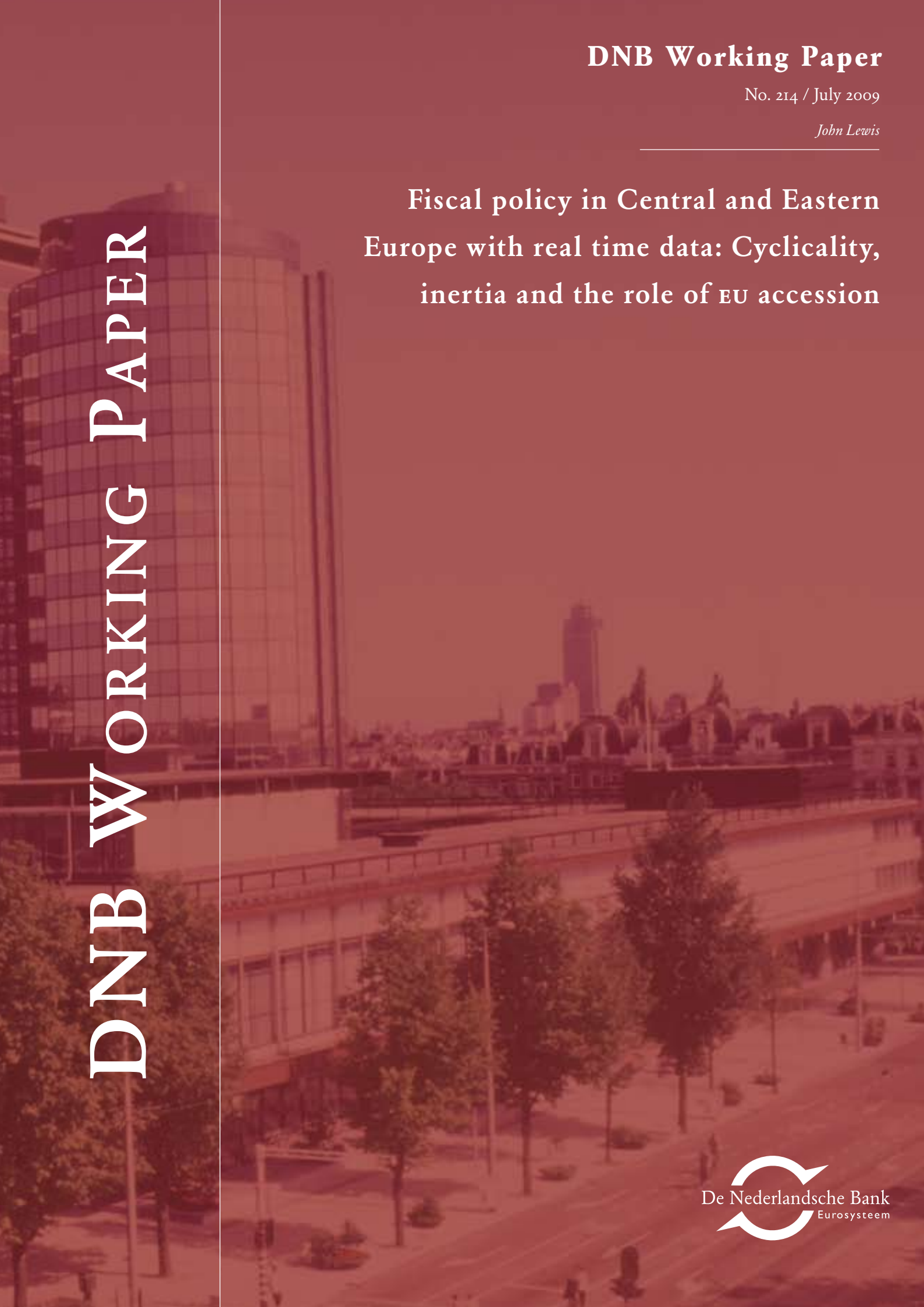

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# Fiscal policy in Central and Eastern Europe with real time data: Cyclicality, inertia and the role of EU accession

John Lewis *

* Views expressed are those of the author and do not necessarily reflect official positions of De Nederlandsche Bank.

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# Fiscal policy in Central and Eastern Europe with real time data: Cyclicality, inertia and the role of EU accession

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**Abstract**

This paper evaluates the cyclicality, inertia and effect of EU accession on fiscal policy in Central and Eastern Europe using a real time dataset. Budget balances are found to react in a stabilising way to economic activity, and they are less inert than is typically found in Western Europe. There is clear evidence of a fiscal loosening in the run-up to EU accession. This began in 1999 in larger central European countries, often identified as "front-runners". The other seven began loosening in 2001, after the Nice Treaty had been agreed and their EU entry confirmed. For both sets of countries, this loosening cumulatively amounts to some 3% of GDP.

**JEL Codes:** **E62** (Fiscal Policy)
**H6**, (National Budget)
**E61** (Policy Objectives, Policy Designs and Consistency),

**Keywords:** **Central and Eastern Europe, Fiscal Policy, Real Time Data, EU Accession**

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# 1. Introduction

In the aftermath of eastward enlargement of the EU and the ongoing financial crisis, fiscal policy in Central and Eastern European countries (CEECs) is attracting increasing attention. Some have blamed fiscal policy for contributing to the build-up of imbalances and exacerbating economic volatility in the region[1]. It has also been claimed that policymakers were guilty of running a pro-cyclical policy, or of responding asymmetrically; loosening fiscal policy in recessions, but failing to make the corresponding contraction in good times[2].

After a period of relatively healthy public finances, budget balances have worsened sharply to the point that five CEECs face procedures under the Excessive Deficit Procedure (EDP)[3], severely limiting the scope for fiscal stimulus measures. The speed at which public finances recover from adverse shocks has implications both for the long run sustainability of public finances and for the ability of CEECs to meet the deficit criterion for euro membership.

Five years after the EU began the process of eastward enlargement, the debate rages about its effects on policymaking in new member states. Some have lauded the role of EU expansion in providing a valuable anchor for macroeconomic policy during the run-up to accession.[4] However, others have claimed that in the rush to expand eastwards, the EU failed to adequately use its "soft power" to stimulate beneficial reforms in aspiring members[5].

These developments raise several key questions: Did fiscal policymakers try to use fiscal policy in a stabilising way? Do budget balances bounce back quickly from adverse shocks or are they very inert? Did EU accession lead to a tightening or loosening in public finances? The goal of this paper is to answer to these three questions by estimating a fiscal reaction function for 10 CEECs.

The results reveal that budget balances moved in a counter-cyclical fashion and there is no evidence of asymmetric behaviour by policymakers. The total response of fiscal policy is roughly the same size as external estimates of automatic stabilisers. That suggests policymakers refrained from discretionary policy measures to combat the cycle and instead relied on automatic stabilisers. The results also show that fiscal policy is considerably less inert in CEE than in Western Europe. However, there is clear evidence of a substantial loosening in fiscal policy occurring prior to EU accession. For the Czech Republic, Poland and Hungary this loosening begins in 1999; and two years later, after the signing of the Nice Treaty for other seven- consistent with the idea that fiscal policy loosened once EU accession was felt to be assured.

[1] See, for example, IMF (2003), IMF (2006) , Munchau (2006), Roubini (2006)
[2] See, for example, IMF (2009), OECD(2009), Eller (2009), Schneider & Zápal (2006), Becker (2009)
[3] At the time of writing, these were Hungary, Latvia, Lithuania, Poland and Romania
[4] Roland & Verdier (2003), Roland (2004), Baldwin et al (1997), Brücker et al (2007)
[5] See Mungiu-Pippidi (2008)

A crucial difference between the approach adopted in this paper and the rest of the literature on CEECs is that the account here is based only on data was available at the time the policy was made (real time data). Orphanides (2001) argues reaction functions are only a valid account of policymakers intentions if they are expressed in terms of data which was available in real time. This point is even more relevant in the realm of fiscal policy, because the policy instrument itself may be measured with error, as well as the variables the policymaker is reacting to. Fiscal policymakers pass a given set of expenditure and tax plans, in the hope of achieving a given deficit/surplus, but the eventual outturn may differ significantly from the projections made during the fiscal year. As Beetsma and Giuliodori (2008a,b) have emphasised, fiscal policymakers' plans (as proxied by the real time data) may give a more reliable picture of policymakers' intentions than estimations based on (heavily) revised data.

This has important consequence for drawing the broader policy lessons from such empirical estimates. Ex post data may suggest governments have followed counter-cyclical fiscal policies. This could have two contrasting explanations- it could stem from a conscious desire to set counter-cyclical policy or it could be a fortunate consequence of higher than expected growth leading to an unintentionally better budget balance, and vice versa in bad times[6]. Similarly, a low coefficient on the lagged dependent variable may simply reflect low inertia in budget setting. One the other hand it could be an artefact of serially correlated data revisions- public finances ended up improving quickly after a shock not because of conscious efforts of fiscal policymakers to consolidate, but simply because economic growth turned out better than expected. In both cases, real time data can be exploited to distinguish between the competing explanations. If low inertia and countercyclicality are merely a fortunate by product of data revisions, then these properties will not show up in a regression baed on real time data. With regard to EU accession, if the real time data fail to show any significant effect of EU accession, then it would be difficult to believe fiscal policymakers consciously changed their behaviour as a result of joining the EU.

There are good grounds for believing that the difference between real time and ex post data will be greater in CEECs than for more mature market economies. In CEECs, economic time series are likely to be more volatile and subject to more frequent structural breaks making it more difficult to correctly gauge the state of public finances and the underlying state of the economy in real time. On the data collection side, statistical agencies, especially in the early years, may have had less experience and resources in data collection their counterparts in richer countries, and the variables themselves may undergo more frequent methodological changes. This conjecture is borne out by the descriptive analysis presented in section 2.

For western Europe, papers which compare fiscal policy reaction functions using ex post and real time data demonstrate that data vintage does matter (Bernoth et al 2008; Cimadomo, 2007; Forni & Momigliano, 2004; Golinelli and Momigliano, 2006). They find discretionary fiscal policy tends to look

[6] Rosenberg (2008) finds evidence for precisely this kind of counter-cyclical bias in revenue projections for Poland.

acyclical based on ex post data, but counter cyclical when real time data is used. Additionally, those papers which consider the role of measurement errors along side ex post data conclude the former are often significant determinants of fiscal policy (Bernoth et al, 2008; Larch and Salto, 2007; Von Kalckreuth and Wolff, 2008).

Several authors have estimated fiscal policy reaction functions in CEECs, but all have used ex post data. Staehr (2008) compares the behaviour of fiscal authorities in "Eastern" and "Western" Europe. Estimating fiscal reaction functions for both groups, he finds CEEC budget balances are relatively less inert, and more responsive to the cycle than those in Western Europe. Fabrizio and Mody (2006) regress budget balances on a variety of institutional and political variables and find that institutional variables such as fiscal centralisation, voter turnover and ethnic fractionalisation all play a role. Because of the nature of their institutional dataset, their sample period (7 years) is necessarily rather short.

Berger et al (2007) find evidence of a significant loosening in the Czech Republic, Poland and Hungary after 1999 coincident with these countries accession to NATO.[7] They develop a game theoretic explanation in which candidate countries have differing bargaining power in their accession negotiations. Countries with less bargaining power have a greater incentive to follow tight fiscal policies in order to boost their standing in accession negotiations[8]. The argument runs that after joining NATO, these three countries believed EU accession was "in the bag" and hence no longer felt compelled to keep their public finances so disciplined, whereas other countries had to maintain discipline for longer[9]. The logic of their model would suggest a similar loosening should be observed later on in other CEECs.

With the exception of Staehr, the empirical papers typically utilise a relatively simple econometric methodology which may have drawbacks. Typically, the lagged dependent variable is omitted from the specification, despite its significance in comparable regressions in Western Europe. This could lead to biased coefficient estimates and incorrect standard errors. Second, the possibility that fiscal policy may itself affect output is usually overlooked. Failure to allow for this simultaneity in the estimation method can also lead to biased coefficient estimates.

Accordingly, this paper makes several novel contributions to the literature. First, it examines whether earlier results are robust to the use of real time data and to econometric methods which take account of persistence in the dependent variable, and the simultaneity between fiscal policy and economic activity.

[7] The literature on Western Europe has found a similar role for time specific variables which have been used to capture political economy factors. Von Hagen et al (2002), Turrini (2008), Tujula and Wolswijk (2004) all find that run-up to EMU was associated with tighter fiscal policies as countries strove to meet the deficit criterion. Hughes Hallett and Lewis (2007) also find a corresponding loosening once EMU membership was assured.

[8] Although there are no formal fiscal entry criteria for joining the EU, the argument runs that sounder public finances bolster external perceptions of a country as a suitable candidate.

[9] Interestingly, Dimitrova (2005) formulates a very similar argument about the lack of credible threat of exclusion in explaining the relatively slow pace of civil service reform in the same three countries.

Second, it extends the literature on real time fiscal policy "eastwards" by examining CEE countries for the first time. It finds that data vintage does matter for the results, but unlike Western Europe, the primary difference concerns the inertia, rather than the cyclicality of fiscal policy.

Third, it revisits Berger et al's claim that fiscal policy loosened prior to formal EU accession. Whereas they were only able to test for this effect of three large central European countries, the dataset used here permits an analysis for all new members from the CEE region.[10]. The pre-accession expansion here is both more robust and of a larger magnitude than in Berger et al's smaller sample. The longer dataset permits the examination of *how long* the expansion lasts- the results here suggest a period of about four years for the three large central European countries, and seven years for the others.

The paper is organised as follows. Section 2 outlines the dataset used and presents descriptive analysis of the magnitude of data revisions between the real time and ex post data. Section 3 discusses the econometric methodology used and presents the estimation results. Section 4 concludes.

## 2. Data

The core economic data is taken from the Transition Report (TR) of the European Bank for Reconstruction and Development (EBRD). This is published annually and contains macroeconomic data at a yearly frequency for all EBRD member countries. To date, the EBRD has not published its own real-time database and hence this dataset was compiled manually. To the author's knowledge, this dataset is unique in the literature. It covers ten CEECs (Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia) and contains observations for GDP growth, total budget balance (as a percentage of GDP) at a yearly frequency. EBRD transition reports do not contain data for the debt:GDP ratio, therefore this variable could not be included in the dataset. Many CEE studies do not include debt (possibly for data availability reasons) and those which do find no significant response to debt (e.g Staehr, 2007).

The earliest transition report was in 1994 and the latest in 2008, giving a total of 15 vintages of data[11]. The real GDP growth figures are the same as IMF staff projections.[12] Other international bodies did not

[10] Their dataset had seven years of data for eight countries, whereas the dataset used here covers 15 years of data for ten countries, giving almost three times as many observations.
[11] For economic growth data is available from 1994 onwards for all countries. For deficit data, some countries coverage is more patchy- In 1994 no deficit figure is recorded for Bulgaria, Poland and Romania; in 1995 no deficit is data is recorded for Bulgaria; in 1996 no deficit data for Poland is recoded, in 1997 no deficit data is recorded for Estonia.

publish data for all CEECs in real time in their regular statistical publications[13], and therefore the EBRD was the only viable source. For political, institutional and governmental variables the Armingeon Comparative Political Dataset[14] was used. These variables are not subject to revision.

[12] The EBRD states in the footnotes to its tables that the source is the IMF and national authority estimates. However, cross referencing the data in EBRD transition reports with those in IMF country reports shows that the two datasets are identical.

[13] The European Commission's "European Economy" does not report figures for CEECs for the period before which they were EU members, which means that prior to 2004, (2007 in the case of Bulgaria and Romania), EC data is patchy or non-existent. A similar story applies to OECD data (for a full tabulation of data availability, please see appendix A). These organisations may have reported data in documents other than their official statistical handbooks, but it was impractical to attempt to compile a dataset from these sources.

[14] The Armingeon (Armingeon & Carreja, 2007) dataset includes data on 28 post-communist countries.. For the most part this dataset runs up to 2006/7. In order to increase the number of observations the dataset was updated manually by the author where practicable. Specifically, election years were updated manually and party fragmentation indices were extrapolated across the term of ongoing parliaments. No party data was provided for parliaments elected in 2008. Latvia, Poland and Romania all had elections that year, and hence the data is missing for these three countries for 2008.

**Table 1: Root Mean Squared Revision in Real Time Data 1995-2007**

| | Economic Growth | Budget Balance |
|---|---|---|
| Bulgaria | 1.77 | 2.56 |
| Czech Republic | 1.15 | 2.40 |
| Estonia | 2.59 | 1.94 |
| Hungary | 0.95 | 2.46 |
| Latvia | 2.45 | 1.08 |
| Lithuania | 2.79 | 2.96 |
| Poland | 0.92 | 1.55 |
| Romania | 2.10 | 1.18 |
| Slovakia | 1.05 | 3.26 |
| Slovenia | 1.11 | 1.27 |
| **CEEC 10** | **1.69** | **2.06** |
| EZ Core | 0.65 | 1.27 |
| EZ Periph | 0.88 | 1.53 |
| Outs | 0.64 | 1.70 |
| **Western Europe** | **0.75** | **1.47** |

Source: Western European Countries: OECD Economic Outlook 1995-2008; CEEC Countries: EBRD Transition Reports 95-07 (all country group figures are unweighted averages)

Notes:
"EZ Core"=Austria, Belgium, France, Germany, Netherlands
"EZ Periphery"=Finland, Greece, Ireland, Italy, Portugal, Spain
"Outs"= Denmark, Sweden, UK
"Western Europe"=EZ Core, EZ periphery, Outs
* For some countries data is missing, (see footnote 5) and in this case these observations have been dropped.

Table 1 presents the root mean squared revision (RMSR) of the real time data on GDP growth and government budget balance for CEE countries, and comparison groups of Western European countries over the period 1995-2007.[15] Overall the data strongly confirm the conjecture of the introduction that data for CEE countries are typically subject to larger real time measurement errors than their Western European counterparts. For GDP growth, the RMSR between time t and the final data vintage is more

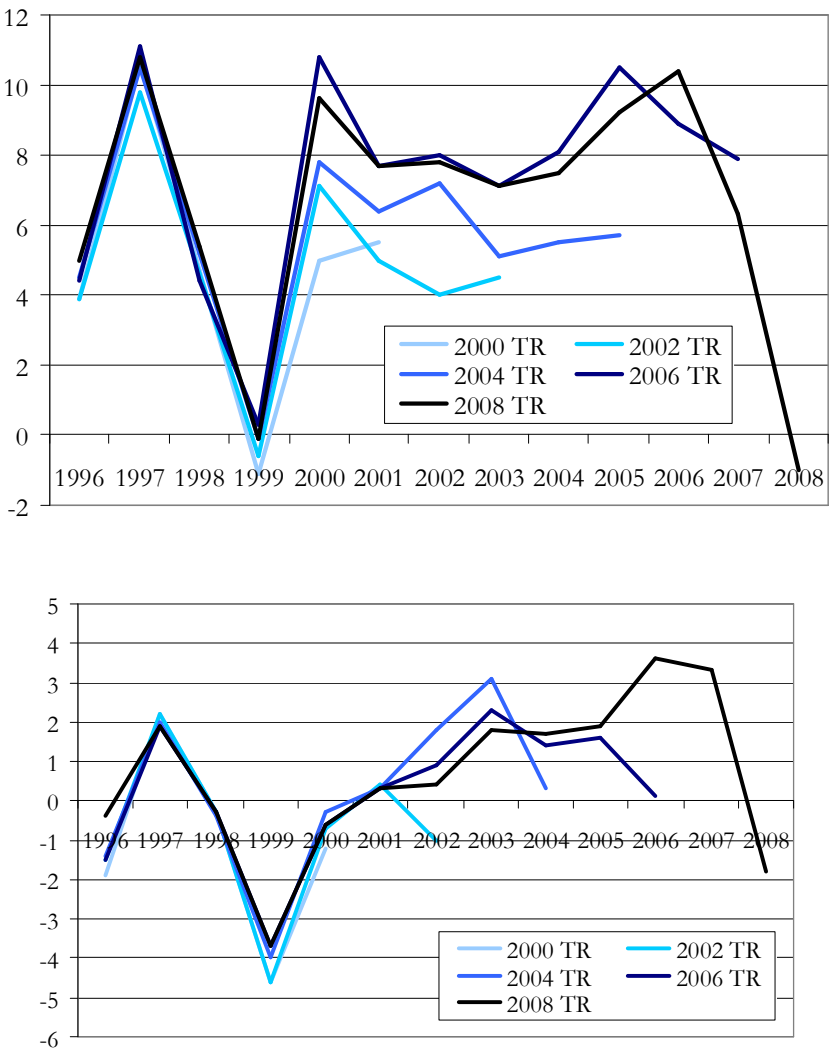
[15] 1995 is the first year in the estimation sample in the following section, and 2008 (the last vintage) is omitted because the real time data is the same as the ex post data for this vintage. To avoid skewing the analysis, two outliers were dropped. These were the Czech Republic in 1995 (a ten percentage point revision was made to the budget balance in the 2000 TR) and Slovakia in 2000 (a nine percentage point revision to the deficit ratio was made in the 2003 TR). Thus the table provides an underestimate of the true data revision process.

than twice as large in CEE than in Western Europe. Moreover, every individual CEEC has a RMSR above the Western European average.

Similarly, for overall budget balance, the RMSR is generally higher for CEECs- seven have a RMSR above the Western European average. Also striking is that many countries which have a relatively high RMSR for GDP growth (e.g. Latvia and Romania) have a relatively low RMSR for budget balances and vice versa.

The differences across vintages are illustrated in figure 2, which graphs five separate vintages of GDP growth (upper panel) and budget balance (lower panel) data for a typical country, Estonia, from the period 1996-2008.

**Figure 1: Five Vintages of GDP Growth and Budget Balances in Estonia**




Source: EBRD Transition Reports 2000-2008
"2000 TR" denotes the vintage according to the 2000 transition report

For the first part of the sample, 1996-1999, the different vintages tell a very similar story. However, the economic growth data from 2000 onwards reveals substantial disagreements across vintages. For example, in the year 2000, the "real time" growth figure was around 4.5%, but this subsequently revised upwards in successive vintages. Six years after the event, the 2006 TR recorded a figure of over 10% growth for the year 2000. For the budget balance data there are notable disagreements between the vintages in the latter part of the sample. In 2006 for example, the newly published TR recorded a figure of close to 0%, but this was revised upwards to a surplus of around 3.5% in the TR of 2008. In addition, the 2004 TR suggested fiscal policy had loosened quite substantially that year (a worsening in the balance of almost 3% y-o-y), yet the 2008 TR indicates the budget balance was virtually unchanged over 2003-4.

## 3. Empirical Estimates of Fiscal Reaction Functions

The basic form of the fiscal reaction function is as follows:

$$bal_{it} = \rho bal_{it-1} + \beta growth_{it} + u_i + v_t + \mathbf{Z}_{it} + \varepsilon_{it} \quad (1)$$

where *bal* is the (total) government budget balance, expressed as a percentage of GDP, *growth* is real GDP growth, $u$ and $v$ are country and time fixed effects and $\mathbf{Z}$ is a vector of additional explanatory variables.

Growth and balance data for year *t* are taken from the year *t* transition report. Some studies use data from the *t-1* vintage, on the grounds that budgets are often set in advance of the fiscal year. However, in the EBRD transition reports, projections for future budget deficits are typically not included and therefore do not feature in the dataset. In any case, taking the *t-1* data would exclude the impact of supplementary measures passed during the fiscal year itself. In practice fiscal policy is not "set in stone" at the start of the year- policymakers can and do amend fiscal policy during the course of the fiscal year.[16]

This functional form has been used in other studies of CEE countries (Staehr, 2008; Berger et al 2007) and its use here facilitates comparison with these. It can also be re-written with the change in the balance as the dependent variable, in common with several papers for Western Europe[17]. Subtracting $bal_{t-1}$ from both sides, yields $\Delta bal_{it} = \alpha + (\rho - 1) bal_{it-1} + \beta growth_t + u_i + v_t + \varepsilon_{it}$. Estimating this equation gives identical estimates for all coefficients except that on $bal_{it-1}$, where the estimate is one plus the estimated coefficient for $\rho$ from equation (1).

[16] Indeed for Western Europe, Beetsma and Giuliodori (2008b) provide evidence that policymakers respond systematically to new data about economic conditions during the year.

[17] For Western Europe, several authors have estimated similar reaction functions with the change in a fiscal variable as a dependent variable, and the change in some measure of economic activity on the right hand side (for example, Hallerberg & Strauch, 2002; Lane, 2003, Mélitz, 2000). Some studies omit a lagged balance term on the right hand side, which could lead to omitted variable bias unless ρ is close to zero.

A key requirement is that data for fiscal variables and for the measure of economic activity be available in real time. That necessitates the use of the overall budget balance as the fiscal variable because EBRD transition reports do not report primary budget balance data, nor do they attempt any cyclical adjustment of government finances. Therefore this specification captures the total response of fiscal policy to economic activity- both automatic and discretionary.

The measure of economic activity used is economic growth, rather than the output gap. Output gaps are not recorded in EBRD transition reports, and their availability (especially in real time) is somewhat patchy for CEECs. From an economic perspective, it is difficult to believe policymakers in CEECs (at least in the early part of the sample) could have formulated an accurate real time measure of potential output, and hence of the output gap. Rapid structural change and limited data would have made the construction of such a measure highly troublesome- a fact backed up by the apparent lack of real time data for output gaps. If policymakers did wish to respond to economic activity, a somewhat cruder measure such as economic growth may have been a more plausible candidate.

*3.1 Estimation Methodology*

A selection of panel unit root tests[18] report no evidence of non-stationarity, therefore estimation proceeds on the basis that the variables are stationary. The equation is estimated used instrumental variables 2 step GMM, with a Bartlett Kernel of bandwidth 2. To deal with potential simultaneity between economic growth and the government budget balance, the level of economic growth is instrumented with its own lag, and the unweighted average of the (ex post) growth rates of the other nine countries. Economic logic suggests this will be exogenous because it is improbable one country's fiscal policy could affect economic growth in the CEE region. Formal confirmation is provided by the Cragg-Donald and Sargan stastistics which show these instruments are both strong and exogenous.

Unlike some recent papers on fiscal reaction functions, this paper does not use the system Arellano-Bond or Blundell-Bond system GMM estimator.[19] One important reason is that these estimators perform better when the dependent variable is moderately persistent (Blundell & Bond, 1998). However, in this dataset the lagged dependent variable, although significant, is notably less persistent than in studies for Western Europe. Also, the dataset here does not meet the "short time period, many cross sections" criterion. Moreover, in system GMM, the inclusion of time and country dummies boosts the instrument count and can lead to over-fitting of the model. Experimental regressions using system GMM typically resulted in a Hansen statistic of one, which Roodman (2006) identifies as "telltale sign" (p.44) of over-fitting. In any

[18] See appendix A for details of unit-root tests.
[19] For example Staehr (2008), Golinelli & Momigliano (2008)

event, estimations of the baseline model using different techniques yield very similar coefficient estimates. (See Appendix A3).

*3.2 Empirical Results: Baseline Specification*

**Table 2: Baseline Fiscal Reaction Function**

| | *Real Time Data* | | | *Ex Post Data* |
|---|---|---|---|---|
| | (I) | (II) | | (III) |
| | | *Good* | *Bad* | |
| GROWTH | **0.341*** ** | **0.288*** ** | 0.268 | **0.276*** ** |
| | *(0.06)* | *(0.06)* | *(0.15)* | *(0.00)* |
| BAL(-1) | **0.454*** ** | **0.481*** ** | | **0.234** ** |
| | *(0.00)* | *(0.08)* | | *(0.08)* |
| $R^2$ | 0.554 | 0.559 | | 0.386 |
| N | 130 | 130 | | 130 |
| KP1 | 21.7 (0.00) | 23.5 (0.00) | | 17.37(0.00) |
| KP2 | 120.73 | 37.4 | | 126.0 |
| Hansen | 2.07 (0.14) | 3.22 (0.35) | | 1.18 (0.55) |

Estimation method: 2 step IV-GMM, using a Barltett Kernel Bandwidth of 2
Heteroscedasticity and autocorrelation robust standard errors in brackets
*N*: number of observations
*KP1*: Kleibergen Paap rank LM statistic, brackets show the p-value of underidentification test (under a null of underidentification)
*KP2*: Kleibergen Paap Wald F statistic
*Hansen*: Hansen J statistic, brackets show p value of overidentification test (under a null of no overidentification)
***,**,***** indicate significance at the 10,5 and 1% significance levels respectively

Instruments used:
(I) and (II): Real time eurozone growth, lagged real time economic growth, average ex post economic growth in other countries
(III): Ex post eurozone growth, lagged ex post economic growth, average real time economic growth in other countries

Table 2 reports the results of the baseline estimations. Column I shows the baseline result- the inertia coefficient is around 0.45, a little lower than is commonly found for Western Europe. The response to growth is 0.34- thus for every extra euro of economic growth, the balance improves by 34 cents; implying fiscal policy is moderately countercyclical. The diagnostic tests show no evidence of under- or overidentifcation. The Kleibergen-Paap F statistic is 120.73, well above the range where it would imply any significant bias[20].

[20] To test for the bias caused weak instruments, Stock and Yogo (2005) tabulate critical values for the Kleibergen-Paap F statistic which are reported in the *xtivreg2* software in stata. These give the value of test statistic below which

Regression II tests for an asymmetry in the reaction of fiscal policy to economic conditions. Two separate coefficients are estimated- one for "good times", defined as economic growth of more than 3%, and one for "bad times" (economic growth of less than 3%). During good times, the response to growth is slightly bigger than in bad times. An F-test of the restriction that "good" and "bad" coefficients are equal returns a p-value of 0.22, suggesting a symmetric response over the cycle. Experiments using different cut-off values to determine "good" and bad" periods (2, 4 and 5 points of economic growth respectively) yielded the same conclusion.

Regression III runs estimates the baseline model using ex post data. The response to growth is slightly smaller than when real time data is used, but essentially very similar. The big difference is on the inertia of fiscal policy- when ex post data is used the coefficient on the lagged balance halves to 0.22. The most notable difference is that the $R^2$ in the ex post equation is much lower- 0.36 as opposed to 0.58. This shows that real time data, although subject to large revisions, can explain much more of policymakers' behaviour than ex post data.

*3.3 Empirical Results: Political Variables*

Table 3 below presents reaction functions which control for election years, the political ideology of the government, the type of the government, and the degree of political fragmentation in the parliament. Since many political variables only run up to 2006, this effectively shortens the sample by two years.

the bias from possibly weak instruments exceeds a certain size. (30%, 20%, 10% and 5%). In all regressions reported in the paper the critical value for a 5% bias is 13.91 In all regressions this statistic, denoted KP2 in the tables, comfortably exceeds this value, implying a bias of (well) under 5%. For reference, the KP1 and KP2 are always reported, but since their values never suggest identification problems they are not commented upon further in the main text.

**Table 3: Reaction Functions Using Political Variables**

| | (I) | (II) | (III) | (IV) | (V) | (VI) |
|---|---|---|---|---|---|---|
| GROWTH | **0.381*** ** | **0.372*** ** | **0.368*** ** | **0.368*** ** | **0.369*** ** | **0.352*** ** |
| | *(0.07)* | *(0.00)* | *(0.07)* | *(0.07)* | *(0.06)* | *(0.08)* |
| BAL(-1) | **0.467*** ** | **0.475** ** | **0.459*** ** | **0.409*** ** | **0.442*** ** | **0.416*** ** |
| | *(0.00)* | *(0.00)* | *(0.09)* | *(0.09)* | *(0.10)* | *(0.09)* |
| EYEAR | | -0.192 | | | | -0.243 |
| | | *(0.242)* | | | | *(0.265)* |
| GOVLEFT | | | -1.02 | | | -1.261 |
| | | | *(1.30)* | | | *(1.32)* |
| GOVRIGHT | | | 0.03 | | | -0.518 |
| | | | *(1.28)* | | | *(1.28)* |
| GOVCENT | | | -0.09 | | | -1.081 |
| | | | *(1.54)* | | | *(1.59)* |
| SINGMAJ | | | | -0.648 | | -0.025 |
| | | | | *(0.73)* | | *(0.71)* |
| MINWIN | | | | 0.576 | | 0.480 |
| | | | | *(0.54)* | | *(0.50)* |
| COALMAJ | | | | 0.800 | | 0.626 |
| | | | | *(0.57)* | | *(0.55)* |
| COALMIN | | | | **1.153*** | | 0.925 |
| | | | | *(0.69)* | | *(0.67)* |
| FRAG | | | | | **6.241*** ** | **5.418** ** |
| | | | | | *(0.01)* | *(2.46)* |
| $R^2$ | 0.538 | 0.538 | 0.567 | 0.585 | 0.577 | 0.625 |
| N | 110 | 110 | 110 | 110 | 110 | 110 |
| KP1 | 20.2 (0.00) | 20.32(0.00) | 21.01 (0.00) | 18.65 (0.00) | 20.13 (0.00) | 18.65 (0.00) |
| KP2 | 55.81 | 55.36 | 55.94 | 44.64 | 54.79 | 43.44 |
| Hansen | 2.87 (0.24) | 2.54 (0.46) | 3.19 (0.20) | 4.65 (0.09) | 3.38 (0.18) | 4.76 (0.09) |

For notes, see table 2

Column I shows the baseline result over the shortened 1995-2006 period, which is very similar to the baseline estimates in table 2. When a dummy for parliamentary election years is added (column II), it enters with a negative sign, but is not significant. Further regressions (not reported in the table), with lags and leads of election years did not yield any significant electoral effects. Column III includes three variables which capture the political composition of the government. Specifically, they record the share of

parliamentary seats times the number of days in office, for left-wing, right-wing, and centre parties respectively. None of these enter with a significant co-efficient. As a robustness check, these variables were replaced by a simple variable measuring the left-right orientation of the government on a scale from 1 to 5[21]. This also returns an insignificant coefficient.[22]

Column IV includes four dummy variables which capture different types of cabinet: a single party with an outright majority, a single party with a small majority, a coalition with a majority and a coalition with a minority respectively. If all four dummy variables equal zero, then a country has a single party minority government. Between them, these five states capture all observed cabinet forms during the sample period. One cabinet type is marginally significant here- minority coalitions- but with a p-value of just under 0.1. However, this result is not robust to the exclusion of the insignificant governmental dummies[23]. In addition, an F-test fails to reject the restriction that the cabinet type dummy variables are jointly zero, returning a a p-value of 0.23.

Column V includes a variable FRAG capturing fragmentation of the parliament. This is measured by the Rae index of fractionalisation of the party system[24], which is a scale between zero and one where a higher value corresponds to greater fractionalisation. The variable enters with a significant positive coefficient, indicating more fractionalised parliaments tend to generate looser fiscal policies.[25]

Column VI shows the results when all political variables are included in the same specification. As with regressions (II to VI), these show the only significant variable is parliamentary fragmentation.

A number of other political variables were experimented with, none of which turned out to be significant. These were the number of changes of government in a year, system, the number of years the government has been in office and the ideological gap between successive governments[26].

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[21] This left-right variable is calculated using GOVLEFT. Values of GOVLEFT of zero and one, correspond to one and five on the left-right variable. If GOVLEFT is less than a third, between one and two thirds, and over a third, then the left-right variable is equal to 2, 3 and 4 respectively.

[22] This could reflect the difficulties of representing CEE parties along a single dimension. As noted by the Economist (2009), "*The political arguments in post-communist countries are not easily reducible into the classic left-right split*". Parties in CEE region typically vary across many dimensions including attitudes to European integration, social conservatism, fiscal prudence and the role of the state, which may be difficult to collapse onto a single left-right continuum.

[23] When SINGMAJ, MINWIN and COALMAJ, are excluded, the coefficient on COALMIN becomes insignificant with a p-value of 0.17. Including FRAG alongside COALMIN, raises the p-value on COALMIN to over 0.2.

[24] The formula is one minus the sum of squared proportion of seats accruing to each party. This was first developed by Rae (1967).

[25] This is consistent with the idea of partisan budget deficits developed by Alesina and Tabellini (1990). In systems where there is greater heterogeneity of preferences, the looser fiscal policy is, as governments seek to constrain their successors with higher debt ratios. For OECD countries, there is some debate about the role of fragmentation, but this work typically focuses on governmental composition, rather than the measure of parliamentary composition captured by the variable here. (See Elgie and McMenamin (2008)).

[26] In years where no change of government occurred, this variable is set to zero.

*3.4 Empirical Results: EU Accession Effects*

Berger et al (2007) use a time related variable to capture fiscal expansion in the three countries which joined NATO in its first wave of Eastward enlargement- The Czech Republic, Poland and Hungary[27]. For these three countries, the variable takes the value of zero prior to 1999, and afterwards is equal to the year minus 1998. For other countries this takes the value of zero throughout. They found this to be significant with a negative sign- indicating a loosening of fiscal policy.

A similar variable, ACC1, was constructed here for these three countries. With a longer dataset (ending in 2008, as opposed to 2002 in the Berger et al paper), a key issue is for how long the loosening lasts. After testing different alternatives, the best fit was found to be from a four year expansion, after which the accession effect levelled off (See Appendix B2 for details of testing methodology and regression results). Thus for the three countries, ACC1 equals zero prior to 1999; from 1999 to 2002 it equals the year minus 1998; and from 2003 onwards it is four.. For the other seven countries, it is set to zero in all periods.

The longer dataset can be used to examine whether a similar loosening happened in the other CEECs at a later date. For all CEECs, accession was finalised by the Nice Treaty, which was signed in February 2001[28]. That points to 2001 as a year in which accession was "assured" and hence the possible start year for similar fiscal loosening in the other seven countries[29]. Accordingly, the variable ACC2 was constructed, which for the seven "second wave" NATO members takes the following values: prior to 2001 it is zero; in 2001-2006 its equals the year minus 2000; from 2007 onwards it is seven. For the three "first wave" countries, this variable is zero throughout the whole period. As for ACC1, the length of the expansion was selected on the basis of comparing the goodness of fit of different specifications. Full details are shown in the appendix B2.

Table 4 presents results for regressions which include variables related to the timing of EU accession alongside FRAG, the only significant political variable from the previous table.

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[27] Aside from their early NATO membership, several other factors suggest these three may have been felt their EU accession prospects were more secure than others. First, Baun (2000) notes that these countries were publically identified by Germany as forerunners. Friis (1998) records that in the mid 1990s, "*a number of [European] commissioners…including Jacques Santer took the view that the EU should only open negotiations with Poland, Hungary and the Czech Republic*". Second, Dimitrova (2005), recalls the "*widespread assumptions that…enlargement would be impossible without Poland, the Czech Republic and Hungary*". Third, these three countries were the first to sign European Agreements, and, along with Slovenia and Estonia, formed the "Luxembourg Group" of countries who began accession negotiations two years before other CEECs. However, Slovenia and Estonia were much smaller (with a combined population of less than half that of Hungary, the next smallest Luxembourg Group country) and hence had less bargaining power.

[28] Entry dates were not agreed until the last minute. Therefore, the EU could still exert soft power via the (credible) threat of delayed entry right up to the point that Nice was agreed (Avery, 2009; Steuenberg & Dimitrova, 2007)). For the three "frontrunners", this threat was less credible.

[29] The Treaty did not come into force until February 2003. The process of ratification was delayed by the initial rejection of the Treaty in a referendum in Ireland, which was subsequently overturned by a second referendum in October 2002. However, 2001 (the signing of the Treaty) represents the date beyond at which EU governments had approved EU expansion.

**Table 4: Reaction Functions with Accession Effects**

| | (I) | (II) | (III) | (IV) | (V) |
|---|---|---|---|---|---|
| GROWTH | **0.325*** ** | **0.300*** ** | **0.291*** ** | **0.293*** ** | **0.331*** ** |
| | *(0.06)* | *(0.05)* | *(0.05)* | *(0.05)* | *(0.06)* |
| BAL(-1) | **0.347*** ** | **0.384*** ** | **0.367*** ** | **0.366*** ** | **0.425*** ** |
| | *(0.08)* | *(0.07)* | *(0.08)* | *(0.08)* | *(0.09)* |
| FRAG | **4.95** ** | **6.17*** ** | **6.025*** ** | **6.168*** ** | **6.447*** ** |
| | *(2.13)* | *(2.23)* | *(2.21)* | *(2.33)* | *(2.06)* |
| ACC1 | -0.463 | **-0.750** ** | **-0.778** ** | **-0.780** ** | |
| | *(0.28 )* | *(0.32)* | *(0.33)* | *(0.33)* | |
| ACC2 | | **-0.379** ** | **-0.398** ** | **-0.400** ** | |
| | | *(0.18)* | *(0.18)* | *(0.18)* | |
| EU | | | -0.689 | -0.709 | -0.694 |
| | | | *(0.467)* | *(0.48)* | *(0.51)* |
| EUTREND | | | | 0.020 | 0.142 |
| | | | | *(0.17)* | *(0.184)* |
| $R^2$ | 0.615 | 0.631 | 0.629 | 0.636 | 0.590 |
| N | 127 | 127 | 127 | 127 | 127 |
| KP1 | 23.04 (0.00) | 20.46 (0.00) | 21.17 (0.00) | 22.15 (0.00) | 23.47 (0.00) |
| KP2 | 103.78 | 70.23 | 69.27 | 68.31 | 77.97 |
| Hansen | 2.39 (0.12) | 3.43 (0.18) | 3.38 (0.18) | 3.43 (0.18) | 4.55 (0.10) |

For notes, see table 2

In column I only ACC1 is added. Its coefficient has a similar magnitude as in the Berger et al work, but it falls just outside the 10% significance level. However, when ACC2 is added (column II), both variables are significant at the 5% level and both have a negative sign- indicating a fiscal loosening over time. This is the preferred specification of the model.

The results demonstrate that in the Czech Republic, Hungary and Poland, this loosening began in 1999, lasted four years, and represented a loosening of 0.75% of GDP per year. In the other seven countries, the loosening was longer- lasting for seven years- but had a smaller annual loosening of around 0.38%. Multiplying the annual loosening by the number of years shows the cumulative fiscal loosening was in both cases similar- between 2.5 and 3 percent of GDP.

This result outperforms a variety of other similar specifications. If accession effects are captured with a dummy equal to one after accession is "assured" and zero before, no significant accession effect is apparent. The same goes when accession effects are captured by a spike dummy: equal to one in the year when accession is "assured" and zero in other years. Specifications which restrict all ten countries to begin loosening at the same time (either all in 1999 or all in 2001) also yield no significant effects. (See appendix B2 for full details and regression results)

Column III includes a dummy variable EU, which takes the value if one a country is an EU member for at least part of the calendar year, and is zero otherwise[30]. The coefficient on this variable is not significant. In Column IV, the membership dummy is interacted with a post accession time trend (i.e. current year minus accession year plus one) to form the variable EUTREND. Again, this is not significant. Taken together these results suggest the actual legal accession of a country produced no discernable effect on fiscal policy. Furthermore, they also indicate there was no attempt to reverse the earlier fiscal loosening.

When ACC variables are omitted (V), neither EU or EUTREND is significant. That means if one simply tests for the effect of joining the EU based on the official accession date, there is no apparent effect on fiscal policy. Only if one allows for the possibility that the fiscal loosening started earlier is the accession effect evident.

## 4. Concluding Remarks

This paper develops an account of fiscal policymaking for a sample of ten CEECs over the sample period 1995-2008. Unlike other papers in the literature on the region, both the policymaker's instrument and the determinants of fiscal policy are expressed in terms of real time data.

On the cyclicality of fiscal policy, the preferred specification (table 4, column II) finds that every extra percentage point of economic growth leads to an improvement in the budget balance of 0.3% of GDP. This is very close to the magnitudes found by Berger et al (2007), but around half the value found by Staehr (2007). Although the data do not permit an explicit analysis of the contributions of automatic and discretionary components, it is worth noting that the European Commission (2005) estimates the average budgetary sensitivity in CEECs to be around 0.35. That is about the same size as the coefficient estimates for the total response of fiscal policy here and would hence imply the intended stance of discretionary policy was acyclical. That result acquits policymakers of the charges of running pro-cyclical fiscal policy and of behaving in an asymmetric way.

[30] All ten countries did not join the EU simultaneously. For the 2004 entrants (Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia) this dummy equals 0 prior to 2004, and one thereafter; whereas for the 2007 entrants- Bulgaria and Romania, this dummy is zero prior to 2007, and one thereafter.

In contrast to the findings for Western Europe, the choice of real time versus ex post data has no discernible effect on the estimated cyclicality of fiscal policy. Where a difference does show up is in terms of inertia. Using real time data the inertia in the budget balance is around double the value than when ex post data is used. The lagged budget balance has a coefficient of around 0.3 after controlling for other variables. This is around half of the typical value found for Western Europe[31] indicating fiscal policy is notably less inert in CEECs. This suggests fiscal balances may recover more quickly in CEE than in Western Europe in the aftermath of the crisis. Comparing real time and ex post results, it is evident that policymakers plans are more inert than the outcome, and hence policymakers cannot claim all the credit for the low inertia in budget balances.

In general, political variables do not seem to exert a significant influence on fiscal policy with the exception of the fragmentation of parliament. Neither the ideology of government, the type of cabinet formed nor the electoral cycle have a significant role in shaping the real time behaviour of fiscal policymakers.

On the role of EU accession, a clear effect is visible, beginning several years prior to official accession. There was a clear loosening in fiscal policy in the Czech Republic, Hungary and Poland beginning in 1999 lasting for four years. This means Berger et al's result holds for a larger dataset and for a more sophisticated econometric approach which takes into account inertia of fiscal policy, time and country fixed effects and the possible simultaneity of economic growth and fiscal policy. The longer dataset reveals new result which also fits their model - a similar expansion also occurred in the other seven countries a couple of years afterwards when they felt their accession was secure. Thus, the projected large deficits in 2009 cannot be wholly explained away by the current crisis- intentional fiscal loosening has also played a role.

The fact that the expansions predate actual EU accession by several years seems to rule out budgetary implications of EU accession as an explanation for the loosening[32]. If direct budgetary costs were to blame, then the loosening would have begun in the year of accession rather than prior to it. Evidently, the need to meet the fiscal criteria to join the euro does not seem to have fostered discipline in fiscal policies over the sample period. In most countries, budget balances complied with, or were not too far from reference value - at least prior to the onset of the current crisis. Those countries who did struggle to meet the deficit reference value (Romania, Hungary) were some of the least enthusiastic about early euro entry and may hence have felt little need to consolidate urgently.

[31] Typically, lagged balances have a co-efficient of around 0.6 or higher when Western European data is used. See for example Galí and Perotti (2003), Balassone et al (2008)- both of which use the overall balance as the dependent variable.
[32] For a thorough calculation of these, see Backé (2002).

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# Appendix A: Unit Root Tests

**Table A1: Panel Unit Root Tests**

| Variable | LLC | IPS | ADF |
|---|---|---|---|
| Bal | 0.00 | 0.01 | 0.01 |
| Growth | 0.00 | 0.01 | 0.02 |

The table records the p-value of the test against the null of a unit root process.
In all tests individual trends and intercepts were included.
LLC is the Levin, Lin & Chu test;
IPS is the Im, Pesaran and Shin test;
ADF is the augmented Dickey Fuller Test; PP is the Philips Perron test;
Tests performed by eviews using an automatic lag length selection based on the Schwarz Information Criterion.

**Table A2: Alternative Estimation Techniques (Baseline Model)**

| | IV | IV-GMM | IV GMM BW(2) | Sys GMM (Level & Diff) | Diff-GMM |
|---|---|---|---|---|---|
| BAL(-1) | **0.437*** ** | **0.454*** ** | **0.454*** ** | **0.426** ** | **0.486*** |
| GROWTH | **0.322*** ** | **0.338*** ** | **0.341*** ** | **0.329**** ** | **0.324*** ** |

***,**,***** denote significance at the 10,5 and 1 % levels respectively
*IV* denotes Instrumental Variables Estimation, using the average of other countries growth and the lag of own growth as instruments
*IV-GMM* denotes 2 step GMM
*IV BW(2)* denotes IV using a Bartlett Kernel with a bandwidth of 2 (as reported in table 2, reg I)
*Sys GMM* denotes Arellano Bond System GMM using two and three lags of economic growth and the budget deficit, plus eurozone growth and the average of other countries growth as outside instruments
*Diff-GMM* denotes difference GMM, same instruments as Sys-GMM

## Appendix B: Alternative Specifications of Time Effects

*B1: End Year of Fiscal Loosening*

For ease of exposition, a richer notation is developed here. Denoting the first year of the expansion with *j*, and the end year of the expansion *k*, the variable $FEXP1_{j,k}$ is defined (for Czech Republic, Poland and Hungary) equal to *year-j+1* between years *j* and *k;* prior to *j* it is zero, and from *k* onwards it is *j-k+1*. For the other seven countries, the variable is always zero. Thus, ACC1 used in the main text, is equivalent to $FEXP1_{1999,2002}$.

To capture fiscal policy in the other seven countries, a variable $FEXP2_{j,k}$ is similarly defined. For these countries, FEXP2 is equal zero prior to year *j, j-k+1* from year *j* onwards, and *year-j+1* in between. For the Czech Republic, Hungary and Poland this variable is set to zero throughout.

Table B1 below shows the $R^2$ arising from different specifications of the expansion length:

**Table B1: Testing Expansion Length**

| | | $FEXP1_{1999,k}$ | | | | | |
|---|---|---|---|---|---|---|---|
| | | k=2000 | k=2001 | **k=2002** | k=2003 | k=2004 | k=2005 |
| | k=2002 | 0.600 | 0.604 | 0.615 | 0.589 | 0.593 | 0.600 |
| | k=2003 | 0.602 | 0.612 | 0.611 | 0.602 | 0.585 | 0.585 |
| | k=2004 | 0.609 | 0.621 | 0.624 | 0.622 | 0.609 | 0.590 |
| $FEXP2_{2001,k}$ | k=2005 | 0.612 | 0.625 | 0.627 | 0.625 | 0.617 | 0.612 |
| | k=2006 | 0.614 | 0.627 | 0.628 | 0.625 | 0.617 | 0.616 |
| | **k=2007** | 0.618 | 0.631 | **0.631** | 0.628 | 0.621 | 0.622 |
| | k=2008 | 0.617 | 0.629 | 0.629 | 0.625 | 0.617 | 0.616 |

The highest overall fit is 0.631, corresponding to a four year expansion in the Czech Republic, Hungary and Poland; and seven year expansion in the other seven countries. This becomes the preferred specification for the length of the expansions

*B2: Functional Form of Fiscal Loosening*

The variable STEPACC1 is equal to one for the Czech Republic, Hungary and Poland from 1999 onwards, and is zero for all other countries and at all other times. Similarly, the variable STEPACC2 is equal to one for the other seven countries from 2001 onwards, and is zero for the other three countries and at all other times.

The variable SPIKEACC1 is equal to one for the Czech Republic Hungary and Poland in 1999, and zero at all other times and for all other countries. Similarly, SPIKEACC2 is equal to one in 2001 for the other seven countries, and zero at all other times and for all other countries.

The variable ACC1ALL represents a four year fiscal loosening which begins in 1999 for all countries. Prior to 1999, it is zero, from 2002 onwards it is four, and in the intervening period it is equal to the year minus 1998. Similarly ACC2ALL is a similar variable, but where the loosening begins in 2001. Prior to 2001 it equals zero, from 2007 onwards it is seven.

The regression results are shown below:

**Table B2: Alternative Functional Forms of Accession Effect**

| | Preferred Specification | Step Dummies | Spike Dummies | All post99 | All post01 |
|---|---|---|---|---|---|
| GROWTH | **0.300*** ***(0.05)*** | **0.310*** ***(0.06)*** | **0.329*** ***(0.05)*** | **0.334*** ***(0.06)*** | **0.334*** ***(0.06)*** |
| BAL(-1) | **0.384*** ***(0.07)*** | **0.369*** ***(0.08)*** | **0.413*** ***(0.09)*** | **0.431*** ***(0.09)*** | **0.432*** ***(0.09)*** |
| FRAG | **6.17**** ***(2.23)*** | **5.166**** ***(2.14)*** | **6.73*** ***(2.31)*** | **6.357*** ***(1.93)*** | **6.357*** ***(1.93)*** |
| ACC1 | **-0.75**** ***(0.32)*** | | | | |
| ACC2 | **-0.379**** ***(0.18)*** | | | | |
| STEPACC1 | | -0.608 ***(0.85)*** | | | |
| STEPACC2 | | 0.748 ***(0.60)*** | | | |
| SPIKEACC1 | | | 0.573 ***(0.86)*** | | |
| SPIKEACC2 | | | 1.76 ***(1.66)*** | | |
| ACC1ALL | | | | 0.642 ***(0.31)*** | |
| ACC2ALL | | | | | 0.715 ***(0.51)*** |
| $R^2$ | 0.631 | 0.600 | 0.616 | 0.583 | 0.583 |

None of the alternative time specifications give a significant coefficient, and all result in a lower $R^2$ than the preferred specification.

# Appendix C: Availability of Data for CEECs from Other Sources

| Source | Variable | Latest Vintage | Earliest Vintage |
|---|---|---|---|
| **OECD (*Economic Outlook)*** | **CAPB Output Gap** | ***EO* 84, December 2008**<br><br>CZ (1999 onwards)<br>HU (1993 onwards)<br>PL (1996 onwards)<br><br>*No data available for other CEECs* | <br><br>CZ: *EO* 78, Dec 2005<br>HU: *EO* 83, June 2008<br>PL: EO 82, Dec 2007<br><br>SK: *EO* 80, Dec 2006[a] |
| | **Real GDP (% ch)** | ***EO* 84, December 2008**<br><br>CZ, HU, PL, SK, (1994 onwards)<br>EE[b] (1993 onwards),<br>SI[b] (1995 onwards)<br><br>*No data available for other CEECs* | <br><br>EE, SI: *EO*84, Dec 2008<br>CZ, HU, PL, *EO 60*, Dec 1996<br>SK: *EO 67*, June 2000 |
| | **Government Balance (% GDP)** | ***EO* 84, December 2008**<br><br>CZ, HU, PL, SK, (1994 onwards)<br><br>*No data available for other CEECs* | <br><br>CZ: *EO* 63, June 1998<br>HU, PL, SK: *EO* 64, Dec 1998 |
| **European Commission *(European Economy Economic Forecasts)*** | **Output Gap CAPB** | ***EEEF, Autumn 2008***<br><br>CZ, EE, HU, LV, LT, PL, SK, SI (1995 onwards)<br><br>BU (1999 onwards)<br>RO (2000 onwards) | <br><br>CZ, EE, HU, LV, LT, PL, SK, SI<br>*EEEF,* Autumn 2004<br><br>RO, BU<br>*EEEF,* Spring 2007 |
| | **Government Balance (%GDP)** | ***EEEF, Autumn 2008***<br><br>LV (1989 onwards)<br>BU, PL, SI (1991 onwards)<br>EE, LT (1993 onwards)<br>CZ (1995 onwards)<br>HU (1996 onwards)<br>RO (1998 onwards) | <br><br>(as above) |
| | **Real GDP (% ch)** | ***EEEF, Autumn 2008*** | (as above) |

Source: OECD, European Commission, IMF, author's own calcluations (as of January 2009)

Legend:

"Earliest Vintage" denotes the first ever data release for a specific country from a given source
"Latest vintage" denotes the most recent data release, data span is shown in brackets for each country

Notes:

a) CAPB and output gap data for Slovakia not available after EO 80
b) Real GDP for Estonia and Slovenia data exists in the OECD's statistical warehouse, but not in the paper copy of EO 84, or on the publically accessible statistical annexe.
c) European Economy tables only report yearly values for last 10 years (prior to that five year averages are given), hence data are taken here from AMECO database (extracted 12/01/09)
d) In general, primary balances data is reported (or are calculable from other time series) with the same availability as overall balance. Similarly, CAPB is generally reported with same availability as cyclically adjusted total balance.
e) This table refers only to figures in official statistical publications. These organisations may have published figures for CEE countries outside of their standard statistical handbooks.

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