

Has the financial crisis shattered citizens' trust in national and European governmental institutions?

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Abstract

The financial crisis has differently affected trust in national and European governmental institutions. Our paper analyses the determinants of trust in national and European institutions over the last decade – with particular focus on the 2007-09 period – and comes to the conclusion that citizens' declining trust in national governments is related to an increase in unemployment in the EU-15 and EU-25. In the EU-25, falling trust levels in national parliament are also associated with an increase in government debts. Trust in the European Commission and European Parliament seems strongly associated with the situation in the real economy (growth of GDP per capita). Furthermore, our analysis confirms that trust in national institutions has actually increased in the direct aftermath of the financial crisis.

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HAS THE FINANCIAL CRISIS SHATTERED CITIZENS' TRUST IN NATIONAL AND EUROPEAN GOVERNMENTAL INSTITUTIONS?

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Introduction

The financial crisis has severely affected citizens' trust in the European institutions in the direct aftermath of 16 September 2008. Citizens' net trust in the European Central Bank (ECB) (Roth, 2009a; Roth, 2009b; Gros and Roth, 2009; Gros and Roth, 2010; Roth, 2011) has dramatically declined, despite partly recovering from June 2009 onwards. In contrast to citizens' net trust in European institutions, citizens' net trust in national governments initially increased in most EU countries in the direct aftermath of the financial crisis (Roth, 2009a). This Working Document analyses the determinants of trends in citizens' net trust in the national and European political institutions. More precisely it analyses the determinants of citizens' net trust in the national governments and parliaments, as well the European Commission and European Parliament, for the last decade and particularly before and after the financial crisis.

1. Theoretical links

Since late 2008 governments and supranational institutions have had to face severe challenges arising from critical economic (financial and growth crises) and social events (the social impacts of the economic crisis). In consequence of these events, trust and confidence in national governments and European institutions (the European Commission and European Parliament) are changing visibly. These trends bring to the fore questions regarding the determinants of trust and its performance during periods that are rather determined by crisis than by normality. Given the global financial and political challenges, citizens' scepticism towards major economic and governmental institutions has been increasing. But what is behind this scepticism?

Extensive literature shows that people have confidence in their leaders (people or institutions) when the government is working well. Uslaner (2003) argues that their perceptions and opinions about government performance reflect their evaluations of specific personalities, institutions and policies. Thus, when the government does not produce the outcomes envisaged, trust is expected to be lower.

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1.1 Trust in government

Since the late 1960s and early 1970s, public trust in government and political institutions has been falling in all advanced industrialised democracies (Blind, 2006, citing Wattenberg and Dalton, 2000). Additionally, Dalton and Wattenberg (2000) show that in industrialised democracies as well the trust in political parties is eroding. And related to this, public confidence in parliaments has similarly decreased in the recent decade (Blind, 2006, citing Dalton, 2004, chapter 2). The general decline in trust covers several areas, government, parliament and political parties (Blind, 2006). In a later work, Dalton shows that even if the pattern and the pace of the fall in trust are dissimilar across countries, the downward trend is generalised (Blind, 2006, citing Dalton, 2005). “Except for the Netherlands, which showed increased trust in the government from the 1970s until the mid-1990s, all of the other advanced industrialised democracies recorded a decline in the level of trust” in government (Blind, 2006).

In his literature review, Blind (2006) argues that “[s]ome of the symptoms of this so-called “democratic malaise” of declining of trust in advanced industrialized democracies (Tanguay, 1999, 325-26) are the declining voter turnout (Gray and Caul, 2000, Eagles, 1999), youth disinterested in politics (Adsett, 2003) and decreasing levels of civic involvement (Saul, 1995, Putnam, 2000)”. Blind adds that of course symptoms do not explain the causes of the declining trust, and many different factors may be behind the decline. Periods of low economic growth and public fear that governments have been incapable of dealing with previous or current fiscal and financial challenges are among them (Blind, 2006, citing Mansbridge, 1997; Newton and Norris, 2000).

People trust more in governments that have shown the capacity to generate economic growth, create jobs, provide access to social services and perform in a transparent manner (Fiorina, 1978; Mackuen, Erikson and Stimson, 1992). Nye (1997) argues that citizens’ negative perceptions of their national economy and governments’ ability to respond to these challenges could create even more distrust in the age of globalisation.

Dalton (2005) argues that a decline in trust is happening across countries with diverse institutional structures, historical and cultural roots and determinants. He argues that even if some characteristics of social and political trust are country-specific, the possible explanations for this decline and potential solutions to the declining trust in government might very well be grounded in the new requirements imposed by globalisation (Dalton, 2005).

1.2 Trust in European institutions

Bonet, Munoz and Trocal (2007) argue that when using explanations of changing levels of political confidence in the European Parliament, we must keep in mind the supranational character of this institution. They also hold that in recent years, public opinion regarding the work of the EU is more and more important for its legitimacy, in consequence of the transfer of competencies from the member state to the European level.

The same authors mention that a different approach conceives support for European integration as a result of a cost benefit analysis perceived by citizens. The scholars in this tradition have developed several models mainly relating economic variables to represent the benefit, as determinants for citizens’ support for European integration (Hooghe and Marks, 2005). Bonet, Munoz and Torcal (2007) maintain that one of the most robust economic models is Gabel’s (Gabel, 1998b; Gabel, 1998a) distributional theory. Gabel’s argument, which supports the importance of economic benefits as an outcome of EU integration, centres on the low affective identification citizens have with EU institutions.

2. Previous findings

2.1 Trust and support for governments

Many findings regarding trust in governments have already been reported in the previous section. A similar but slightly different approach is known under the name of 'popularity functions', which aims at explaining the determinants of support to governments, whereby a positive attitude towards support supposes the existence of a required existing level of trust. Nannestad and Paldam (1994) review 25 years of research and literature on voters and popularity (VP) functions, which explain the support for the government at elections and public opinion polls using economic and political variables. Most studies apply time series methodologies, with the usage of macroeconomic variables. Nannestad and Paldam (1994) argue that the VP theory starts from the hypothesis that voters hold the government responsible for economic conditions. The authors find that such a system "works in two-party/block systems, but nowhere else. Voters in most countries are found to be sociotropic. Egotropic voting also occurs. Voters' myopia is well established. Voting is retrospective as expectations are static" (Nannestad and Paldam, 1994: 213).

In their review, Nannestad and Paldam find that "nearly all studies made have found highly significant VP functions, and a clear pattern appears in the results. Only a few studies, such as Dinkel (1982) and Norpoth and Yantek (1983a and 1983b), have denied the very existence of the VP function" (Nannestad and Paldam, 1994: 214). For our paper the most relevant findings in literature, reported by Nannestad and Paldam, are i) "voters hold the government responsible for the development in the economy" and ii) "a good economic development increases the popularity of the government, while a bad development decreases the popularity" (both findings in Nannestad and Paldam, 1994: 215). Their third important finding for our study is that most econometric models on VP functions that have been reviewed find usually a very limited number of macroeconomic variables really in the sense of the responsibility hypothesis. For industrialised countries the two most important variables are unemployment and inflation (Nannestad and Paldam, 1994: 216).

Using data from the last government change in Germany, Kirchgässner (2009) finds some evidence that even if the impact of unemployment and inflation on the electoral success (or failure) of German governments from the 1950s to the 1990s can be taken for certain, more recent electoral results seem to show a changing trend. Unemployment no longer seems to have the same strong impact as before. Considering these results, Kirchgässner raises the question of how far voters really hold the government responsible for economic developments. To better analyse future VP functions, he proposes to distinguish three different situations: "i) governments are really responsible, ii) governments claim to be responsible, and iii) governments are held responsible by the electorate for economic development" (Kirchgässner, 2009: 14).

Roth (2009a, 2009b) finds that net trust in the national government and parliament has actually increased in the direct aftermath of the financial crisis. This finding that citizens' trust increases in times of crisis has already been elaborated upon by Chanley (2002) and is called the "rally around the flag" effect (Hetherington and Nelson, 2003).

2.2 Trust and support for EU

Sinnott and Lyons (2003) find that increasing people's knowledge and understanding of EU institutions and of the European Parliament makes it much more likely that they will notice and respond to appeals, or make use of their votes for European elections. In the same sense, Constantelos and Diven's (2010) analysis of European public opinion indicates that citizens'

confidence in the EU depends on their general trust in major social and political institutions, such as national governments, rather than on a general propensity to be trusting of other people.

Biernat (2007) finds¹ that there is no homogeneous level of trust towards EU institutions in the different member states. Even if it is difficult to find clear, unique patterns of factors related to political support there seem to exist spatial structures, which mark some differences in trust levels and its characteristics towards the EU. In Western and southern Europe, the EU seems to be perceived more like an institution with characteristics similar to the national political system. In contrast, in Britain and Eastern Europe, a much clearer perception of a non-national European sphere can be observed. The author identifies three main factors that determine general trust in the EU: “trust in national parliament, satisfaction with EU democracy, and trust in the social security system” (Biernat, 2007, p. 7). Additionally, the author finds that trust in national governments and satisfaction with national systemic performance reinforces trust in the EU.²

The results by Hooghe and Marks (2005) confirm the importance of economic factors in determining citizens’ trust in the EU. They use Eurobarometer data to measure the relative impact of economic aspects and of community identity on European public opinion. They find that both factors are important. Nevertheless, identity has a more profound impact on trust levels in the EU than economic self-interest.

Roth (2009a, 2009b) finds that trust in the European Parliament and European Commission have quite significantly decreased due to the financial crisis.

3. Data and measurement

3.1 Operationalisation

Trust in the national governments, national parliaments, the European Commission and the European Parliament was measured by asking citizens the following question: “For each of the following European bodies, please tell me if you tend to trust it or not to trust it.” The respondent was then presented with a range of European institutions.³ Next to the answers “[t]end to trust it” and “[t]end not to trust it”, the third category “[d]on’t know” (DK) was also given by the respondent.⁴ The best measure of trust seems to be ‘net trust’, which is obtained by subtracting the percentage of those who trust from those who do not trust the institution.⁵

3.2 Model specifications

Our model specification includes the classical macroeconomic variables as specified in the popularity function literature (Nannestad and Paldam, 1994)⁶ plus the additional variable of debt

¹ The author used data from the European Values Survey and the Eurobarometer 62 (2004) for 14 EU countries.

² When all plausible economic and political explanations are accounted for, identity (let alone religion) have but minor additional influence. The implication is that neither culture, identity nor religion poses a long-term threat to the consolidation of popular support or the level of trust.

³ Next to the European Commission and the European Parliament, a range of other European institutions such as the ECB are included in the Eurobarometer’s trust item battery.

⁴ DK answers can easily reach values of 20 percentage points and more. Furthermore, the DK answers fluctuate over time.

⁵ This approach is used in public opinion research in particular and is able to control for the fluctuations in the DK answers. The same approach of using net trust in the ECB was also chosen by Gros & Roth 2009, Roth (2009a) and Roth (2009b).

⁶ The popularity function literature normally additionally includes political variables (Nannestad and Paldam (1994), p. 218).

per GDP in order to address the dramatic increases of debt in the aftermath of the financial crisis. In the baseline model with an unbalanced panel, net trust in the national government/parliament and net trust in the European Commission/Parliament are estimated as a function of inflation, growth of GDP per capita, unemployment, debt per GDP and important control variables. The baseline growth model for the fixed-effects estimation is as follows:

$$\text{Trust in national and European governmental institutions}_{i,t} = \alpha_i + \beta \text{Inflation}_{i,t-1} + \chi \text{Growth}_{i,t-1} + \delta \text{Unemployment}_{i,t-1} + \varepsilon \text{Debt per GDP}_{i,t-1} + \phi Z_{i,t-1} + w_{i,t}, \quad (1)$$

where i represents each country and t represents each time period; $\text{Trust}_{...i,t}$ is the net trust amount for country i during period t ; $\text{Inflation}_{i,t-1}$, $\text{Growth}_{i,t-1}$, $\text{Unemployment}_{i,t-1}$, $\text{Debt per GDP}_{i,t-1}$ and $Z_{i,t-1}$ are, respectively, inflation, growth of GDP per capita, unemployment, debt per GDP and important control variables such as public expenditure, the debt level of GDP and the US dollar/euro exchange rate for country i during period $t-1$; α_i represents a country-specific constant term and $w_{i,t}$ is the error term. For analytical reasons, we allow the error term to be composed of an error due to omitted variables v_{it} and an i.i.d. error $w_{it} = v_{it} + u_{it}$. This point becomes relevant when we present our estimation technique.

3.3 Measurement of data

Data on trust in the national government, the national parliament, the European Commission and the European Parliament are based upon the biannual Eurobarometer survey.⁷ The first observation, using the information from spring 1999, is derived from the Standard Eurobarometer 51.⁸ From then onwards the Standard Eurobarometer data until Eurobarometer 72 is taken. Furthermore, to precisely measure the effect of the financial crisis on net trust in the ECB, the observation from the Special Eurobarometer 71.1 in January–February 2009 is taken into consideration.

- Data on GDP are taken from Eurostat's quarterly data. The data are chain-linked with 2000 as the reference year.⁹ As the Eurobarometer fieldwork normally takes place around April–May and October–November,¹⁰ we constructed GDP semester data by adding the two previous quarters (e.g. April to September 1998 (second plus third

⁷ The raw data are available on CD-ROM from Gesis ZA Data Service for Standard Eurobarometers 51-62 (Gesis, 2005a, 2005b) and received on request from Gesis ZA Data Service for Standard Eurobarometers 63-69 (<http://www.gesis.org/en/services/data/survey-data/eurobarometer-data-service/data-access/>). Data for the Standard Eurobarometer 70 were taken from Eurobarometer (2008, 2009a). Data for the Special Eurobarometer 71.1 were taken from Eurobarometer (2009b). Data from the Eurobarometer 71 were taken from Eurobarometer (2009c). Data from Eurobarometer 72 were taken from Eurobarometer (2009d).

⁸ As the data were originally constructed for the project "Who can be trusted after this financial crisis?", which strongly centred on trust in the ECB, the time period of 1999 onwards was chosen.

⁹ Chain-linking is a methodology to calculate GDP values at constant prices. In particular the previous year is used as a base year instead of a single fixed year, which is moved every five years. The year 2000 is used as a reference year, for which the deflators are expressed as equal to 100.

¹⁰ The fieldwork most often takes place in April–May or October–November. However, although this fluctuates and as it is not possible to change the research design throughout the dataset, it was assumed that the Standard Eurobarometer in spring was polled in April–May and the one in autumn polled in October–November. More precisely, the polling for the Standard Eurobarometers took place in the following months: 05/1999, 11/1999, 05/2000, 12/2000, 05/2001, 11/2001, 05/2002, 11/2002, 04/2003, 11/2003, 03/2004, 10/2004, 05/2005, 10/2005, 04/2006, 09/2006, 04/2007, 10/2007, 04/2008, 11/2008, 2/2009, 06/2009 and 10/2009.

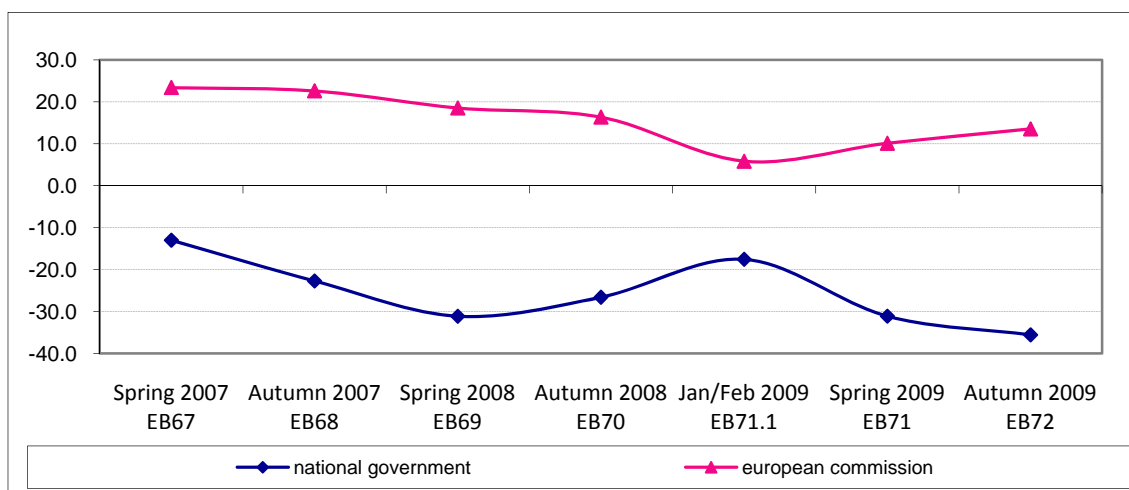
quarter of 1998) plus October 1998 to March 1999 (fourth quarter of 1998 and first quarter of 1999) to match it with the Standard Eurobarometer observation in May 1999). As in 2009, we had three observations for net confidence/trust in the ECB – the Standard Eurobarometer 71, conducted in June 2009, was exceptionally matched with the first and second quarters of GDP in 2009. Data on GDP are missing for Bulgaria, for Romania and for the first two semesters for Greece and Malta.

- Data on inflation rates are based on Eurostat’s monthly HICP indicator. Semester data were constructed by averaging monthly data, in accordance with the construction of GDP, from March to September and from October to the end of February. As discussed above, the Standard Eurobarometer 71, conducted in June 2009, was exceptionally well matched with the first and second quarters of GDP in 2009.
- Data on population, unemployment, government debt and the final government consumption expenditure have been derived from Eurostat. Semester data were constructed in a similar manner as for GDP and inflation. Data are missing on government debt for the first two semesters except for Belgium, France and Romania. Furthermore, the values for unemployment are missing for the first two semesters for Bulgaria, Cyprus, Estonia and Malta. The quarterly population data was inter- and extrapolated to replace the missing values.

4. Descriptive statistics

Figure 1 shows the time trend in net levels of trust in the European Commission and national governments for the 27 member states of the euro area as measured by the twice-annual Eurobarometer surveys since the beginning of the financial crisis. Whereas one detects a continuing decline in trust in the European Commission from spring 2007 until February 2009, with an increase in net trust from February 2009 onwards,¹¹ citizens’ trust in national governments follows a diametric trend in the aftermath of the Lehman crisis in autumn 2008 and February 2009, in which citizens’ trust actually increased.

Figure 1. Trust trends in national governments and the European Commission in the aftermath of the financial crisis in the EU-27

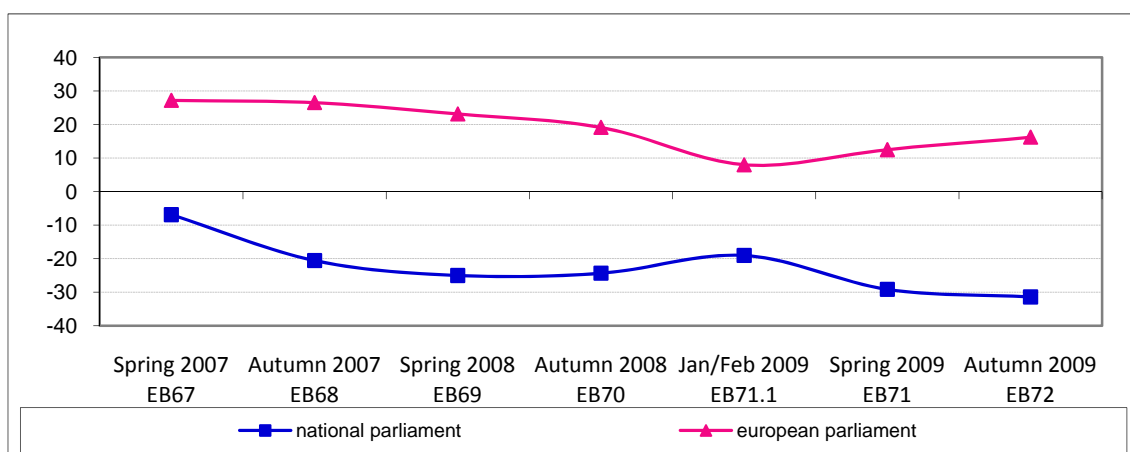


Source: Own calculations; Eurobarometer: Standard EB Nos. 67, 68, 69, 70, 71, 72 and Special EB 71.1.

¹¹ The most recent evidence from the Standard Eurobarometer 73 indicates a drop in the trust trend.

This finding has already been shown by Roth (2009a, 2009b) and can generally be identified as the rally-around-the-flag phenomena (Hetherington and Nelson, 2003), which means that in times of crisis citizens' trust in the national institutions actually increases on a short-term basis (see here also Chanley, 2001). The same pattern can be detected when analysing the trust trends in the national parliament and the European Parliament in Figure 2, which shows the time trend in net levels of trust in the European Parliament and national parliament for the 27 member states of the euro area as measured by the twice-annual Eurobarometer surveys.

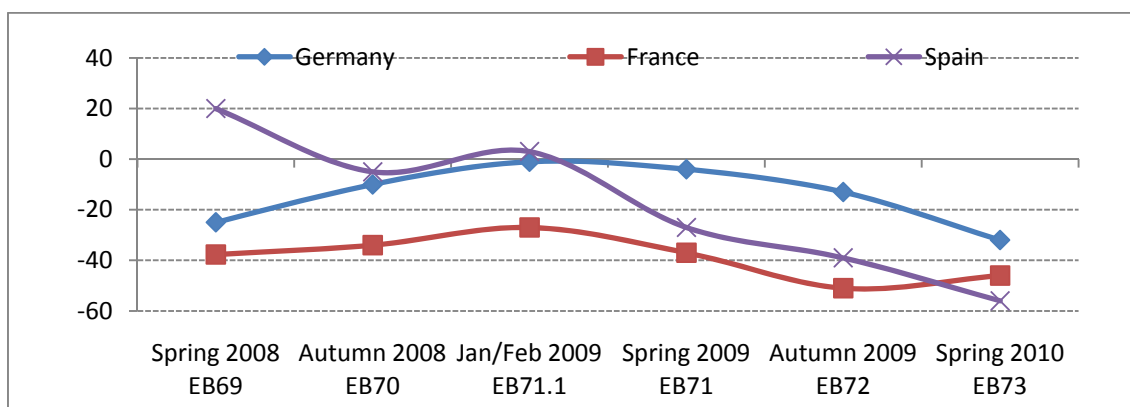
Figure 2. Trust trends in national parliaments and the European Parliament in the aftermath of the financial crisis in the EU-27



Source: Own calculations; Eurobarometer: Standard EB Nos. 67, 68, 69, 70, 71, 72 and Special EB 71.1.

Figure 3¹² shows the trust trends in the national governments for the three European economies Germany, France and Spain. The figure visualises once more the rally-around-the-flag effect in January/February 2009, where we can even observe an increase in the trust of Spanish citizens. Whereas in the core countries Germany and France the trust level in the national government (and as well national parliament – see Roth, 2011) remained at the same level as before the financial crisis, in the peripheral country Spain the trust level decreased by a staggering 76%, from a trust level in spring 2008 of +20% to a level of -56%.

Figure 3. Trust in national parliaments in Germany, France and Spain

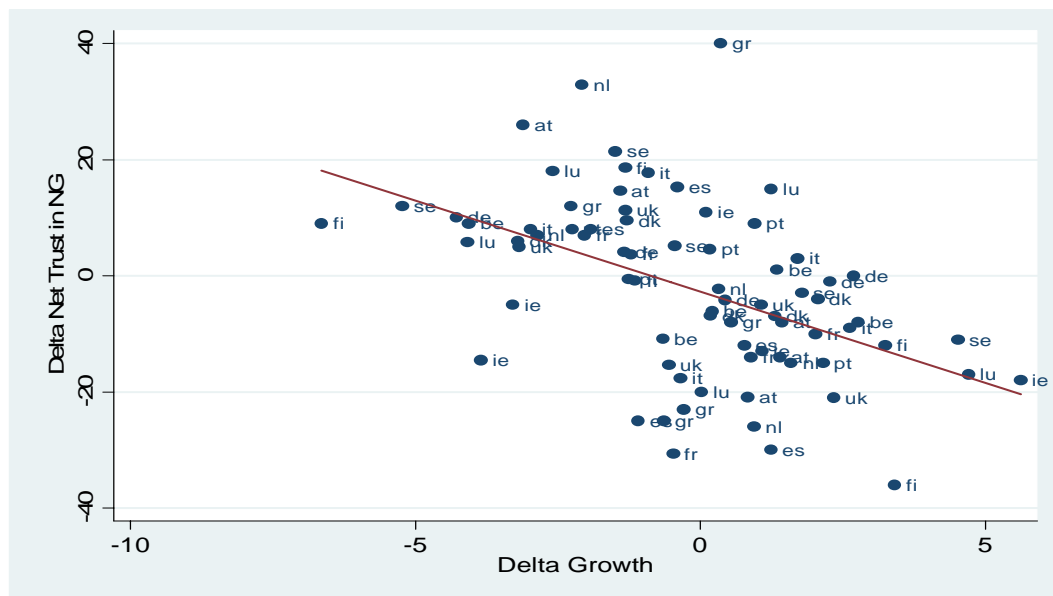


Source: Own calculations; Eurobarometer: Standard EB Nos. 69, 70, 71, 72, 73 and Special EB 71.1.

¹² Figure 3 already shows observations from Eurobarometer 73. Figures 1, 2 and 4 and the econometric analysis have not yet utilised the data of Eurobarometer 73. This will be done in upcoming months.

Figure 4 visualises the above-mentioned rally-around-the-flag effect in the aftermath of the financial crisis for an EU-15 country sample. The picture clarifies that in the direct aftermath of the crisis a decline in growth of GDP is associated with an increase of net trust in the national government, whereas an increase in growth of GDP per capita (in the period of economic recovery) is associated with declining trust in the national government. This finding already indicates that not only does a politically motivated crisis, such as the attacks on the twin towers on 9/11 (Chanley, 2002), but also an economically motivated crisis triggers a rally-around-the-flag effect.

Figure 4. Scatterplot between delta growth and delta trust in the national government in the direct aftermath of the financial crisis



Source: Own calculations; Eurobarometer: Standard EB Nos. 69, 70 and Special EB 71.1.

5. Econometric analysis

To analyse the determinants of net trust in the national government/parliament and European Commission/Parliament over a longer time horizon, the fixed effects dynamic ordinary least squares (DOLS) or a feasible generalised least squares (FGLS) estimation method is used (see Table 1). There are basically three econometric issues that deserve discussion beforehand. One is whether and how to control for omitted variables and whether the inclusion of time fixed effects is an adequate approach; the second issue is about structural breaks or whether inflation, growth and unemployment influence trust in the national and European institutions the same way under normal economic conditions and in times of crisis. The third issue concerns the endogeneity of the explanatory variables.

5.1 The issue of dealing with unexpected events and/or omitted variables

In econometric modelling we have to deal very often with unquantifiable or unobservable events (or both). In the panel data literature it has become very common to work with fixed time dummies in order to proxy events that are identical for all countries in the sample but change over time. In contrast to traditional panel data studies, we do not favour the use of time dummies. We have reason to believe that countries (our cross-sections) are usually very differently affected by the same 'general' event. With respect to the 25/15 EU economies under

study, e.g. the EU enlargement strongly affects the neighbouring countries in Central Europe and less so the countries farther away. Moreover, the state of the world economy affects especially those countries having commercial and investment banks with considerable international exposure or a strong dependency on exports, and tight financial markets do more harm to countries with a housing bubble, such as Spain, Ireland and the UK. By plugging in time dummies one would mimic the same exposure to an unspecified risk in all 25 EU countries under investigation. We therefore find it more appealing to control for unknown omitted variables that are country-specific and that change over time (v_{it}) through FE-FGLS. FGLS works with transformed variables (characterised by an asterisk (*)). It is realistic to assume that today's disturbances are somehow related to past values of the disturbance term w_{it} , i.e. variables are omitted over the entire sample period. The new equation reads as follows:

$$\begin{aligned} Trust_{it}^* &= \alpha_i + \beta_1 Inflation_{it-1}^* + \chi_1 Growth_{it-1}^* + \delta_1 Unemployment_{it-1}^* + \varepsilon_1 DebtperGDP_{it-1}^* + \\ &\phi_1 Z_{i,t-1}^* + \beta_2 \Delta Inflation_{it-1}^* + \chi_2 \Delta Growth_{it-1}^* + \delta_2 \Delta Unemployment_{it-1}^* + \varepsilon_2 \Delta Debt..._{it-1}^* + \\ &\phi_2 \Delta Z_{it-1,i,t-1}^* + u_{i,t} \end{aligned} \quad (2)$$

with Δ indicating that the variables are in the first differences; * indicating that the variables have been transformed (purged from autoregressive processes) and that the error term u_{it} fulfils the requirements of the classical linear regression model (it is free from autocorrelation).

$$\begin{aligned} Trust/Nat/Euro_{it}^* &= Trust/Nat/Euro_{it} - \rho_1 Trust/Nat/Euro_{it-1} - \rho_2 Trust/Nat/Euro_{it-2}, \\ Inflation_{it-1}^* &= Inflation_{it-1} - \rho_1 Inflation_{it-2} - \rho_2 Inflation_{it-3}, \\ Growth_{it-1}^* &= Growth_{it-1} - \rho_1 Growth_{it-2} - \rho_2 Growth_{it-3}, \\ Unemployment_{it-1}^* &= Unemployment_{it-1} - \rho_1 Unemployment_{it-2} - \rho_2 Unemployment_{it-3}, \\ DebtperGDP_{it-1}^* &= DebtperGDP_{it-1} - \rho_1 DebtperGDP_{it-2} - \rho_2 DebtperGDP_{it-3} \end{aligned}$$

$$Z_{it-1}^* = Z_{it-1} - \rho_1 Z_{it-2} - \rho_2 Z_{it-3} \text{ and } u_{it} = w_{it} - \rho_1 w_{it-1} - \rho_2 w_{it-2} = w_{it}^* \quad (3)$$

Note that the new error terms u_{it} are free of autocorrelation and that the omitted variable problem is reduced – if not eliminated – by transforming the variables. Since the coefficients ρ_1 and ρ_2 are usually unknown (as in our case), they have been estimated by means of, for example, the Cochrane-Orcutt method, an FGLS procedure. In addition, we use country-specific fixed effects in our analysis.

5.2 The issue of structural break

Given that we would expect a structural break caused by the economic crisis, a test for parameter stability is indicated. The Chow test showed a structural break between the pre-crisis

period (spring 1999–autumn 2007) and the post-crisis period (spring 2008–autumn 2009). Even though we always present results for the full sample period (spring 1999–autumn 2009) in column (1) of each table, emphasis should be placed on the separate regressions for the pre-crisis period (column (2)) and the post-crisis period (column (3)). It also becomes evident that a regression over the full sample period can produce misleading results, e.g. the price level seems to be of importance in the spring 1999–autumn 2009 period, but it is never significant in the sub-periods (pre-crisis and post-crisis) in (columns (2) and (3)).

5.3 The issue of endogeneity

When running regressions one must be aware of the possibility that the left-hand side and the right-hand side variables influence each other, i.e. the right-hand side variables (inflation, growth and unemployment) might be endogenous (affected by a common event) and/or stand in a bi-directional relationship with trust (a low level of trust might lead to a self-fulfilling prophecy and might thus speed up and worsen an existing downturn). Therefore, we estimated the model for the pre-crisis and the post-crisis periods by means of DOLS, a method that controls for the endogeneity of the regressors. DOLS is also known as the leads-and-lags approach proposed by Stock and Watson (1993) and described by Wooldridge (2009). It can be shown that by inserting the leads and lags of the right-hand side variables in the first differences the explanatory variables become (super)-exogenous and the regression results thus become unbiased. Due to a multicollinearity problem, we included only the first differences of the explanatory variables. As we also eliminate autocorrelation – whenever necessary – the DOLS estimation turns into a dynamic feasible generalised least squares (DFGLS) estimation. One should note that the DOLS/DFGLS estimation technique requires the series to be integrated of e.g. order 1 (I(1)) and cointegrated, i.e. to stand in a long-term relationship.

5.4 Regression results

All the tables contain results for the full sample, the pre-crisis and the post-crisis periods. Table 1 shows the results for the EU-15 country sample concerning citizens' trust in the national government and parliament. Inflation has the expected, negative impact on trust in the national government and parliament, in both the full sample and the pre-crisis period. As inflation does not play a role in the post-crisis period, the full sample result is driven by the pre-crisis period. Growth is an important determinant of trust only in the pre-crisis period,¹³ whereas unemployment has a significant, negative impact on trust in all the sample periods (pre-crisis, post-crisis and the full sample period). Government debt influences trust only in the national parliament in the pre-crisis and full sample periods. Overall, we can conclude that the increasing/decreasing rate of unemployment is very strongly associated with citizens' trust in the national government and parliament.

¹³ In the direct aftermath of the financial crisis (Standard Eurobarometers 69-71.1 or spring 2008 to January–February 2009), growth was significantly and negatively related to trust in the national government and parliament, supporting the descriptive results of Figures 3 and 5 showing a rally-around-the-flag effect in the direct aftermath of the financial crisis. As the post-crisis sample in regressions 3 also includes observations from Standard Eurobarometers 71 and 72, in which growth and trust increased, the overall statistical effect turns insignificant as the two effects even themselves out.

Table 1. Trust in the national government and parliament, EU-15 country sample, controlling for endogeneity (FE-DFGLS or FE-DOLS estimation)

	(1)	(2)	(3)	(1)	(2)	(3)
	Government trust	Government trust	Government trust	Parliament trust	Parliament trust	Parliament trust
	Spring 1999- autumn 2009	Spring 1999- autumn 2007	Spring 2008- autumn 2009	Spring 1999- autumn 2009	Spring 1999- autumn 2007	Spring 2008- autumn 2009
<i>Inflation</i>	-0.79*** -2.71	-0.99*** -3.00	1.44 0.74	-0.53** -2.41	-0.54** -2.12	-1.31 -0.83
<i>Growth</i>	-0.94 -0.89	5.66*** 2.59	-2.15 -1.45	0.04 0.04	5.23*** 2.82	-1.95 -1.51
<i>Unemployment</i>	-4.38*** -3.87	-7.35*** -4.49	-6.10*** -3.46	-2.84*** -2.89	-3.59*** -2.68	-5.42*** -3.66
<i>Government debt</i>	-0.25 -0.95	0.07 0.19	0.10 0.20	-0.56*** -2.54	-0.54** -1.90	0.08 0.20
Durbin-Watson statistic	1.73	1.72	1.88	2.12	2.21	2.07
R-squared	0.81	0.81	0.91	0.84	0.83	0.94
Adjusted R ²	0.79	0.78	0.87	0.83	0.80	0.90
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Control for endogeneity through a simple DOLS	Yes	Yes	Yes	Yes	Yes	Yes
Elimination of first order auto correlation	Yes DFGLS	Yes DFGLS	No DOLS	Yes	Yes	No DOLS
Observations	240	165	75	252	177	75
Number of countries	15	15	15	15	15	15

t-values in parentheses

***p<0.01, **p<0.05, *p<0.10

Source: Own calculations.

Table 2 shows the results for the EU-15 country sample concerning citizens' trust in the European Commission and European Parliament. The two variables inflation and government debt (and to a somewhat lesser extent growth) are strongly associated with trust in the European Commission and European Parliament in the full and pre-crisis samples, but not in the post-crisis period. The positive association between growth and trust in the European Commission and European Parliament was driven by the strong association in the aftermath of the financial crisis, where a dramatic economic downfall was associated with a severe drop of citizens' trust in the two European institutions. The increase of unemployment during and after the crisis has led to a decrease in trust in both the European Commission and the European Parliament.

Table 2. Trust in the European Commission and European Parliament, EU-15 country sample, controlling for endogeneity (FE-DFGLS or FE-DOLS estimation)

	(1)	(2)	(3)	(1)	(2)	(3)
	European Commission trust	European Commission trust	European Commission trust	European Parliament trust	European Parliament trust	European Parliament trust
	Spring 1999-autumn 2009	Spring 1999-autumn 2007	Spring 2008-autumn 2009	Spring 1999-autumn 2009	Spring 1999-autumn 2007	Spring 2008-autumn 2009
<i>Inflation</i>	-0.55***	-0.72***	0.13	-0.76***	-0.88***	0.47
	-4.13	-4.06	0.14	-5.58	-4.60	0.47
<i>Growth</i>	1.39***	3.23***	1.18	1.01*	1.96***	1.64**
	2.45	3.16	1.52	1.71	1.79	2.10
<i>Unemployment</i>	0.16	0.32	-2.40***	0.33	0.04	-2.72***
	0.26	0.35	-2.78	0.53	0.04	-2.90
<i>Government debt</i>	-0.44***	-0.72***	0.30	-0.45***	-0.63***	0.32
	-3.34	-3.87	1.20	-3.29	-3.13	1.17
Durbin-Watson statistic	2.18	2.23	2.00	2.16	2.17	2.09
R-squared	0.85	0.87	0.92	0.85	0.86	0.93
Adjusted R ²	0.84	0.85	0.89	0.84	0.84	0.89
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Control for endogeneity through a simple DOLS	Yes	Yes	Yes	Yes	Yes	Yes
Elimination of first order auto correlation	Yes DFGLS	Yes DFGLS	No DOLS	Yes DFGLS	Yes DFGLS	No DOLS
Observations	287	212			212	
Number of countries	15	15	15	15	15	15

t-values in parentheses

***p<0.01, **p<0.05, *p<0.10

Source: Own calculations.

Up to now we have only considered an EU-15 country sample for the reason that with an EU-15 country sample it is possible to extend the timeframe until 1999. We now shift our analysis to an EU-25 sample. As the EU-25 has been in place since 2004 our timeframe focuses on the period from 2004 to 2009. Thus Table 3 shows the results for the EU-25 country sample concerning citizens' trust in the national governments and parliaments.

It is interesting to note that in the EU-25 sample inflation does not play a role in either trust in the European Commission or trust in the European Parliament when we run separate regressions (which are indicated by the test on structural break) for the pre- and the post-crisis periods.

Hence, the full sample result becomes misleading. Growth is not of importance for trust in the EU-25. The negative impact of unemployment on trust in the full sample period is fully driven by the significance of unemployment in the post-crisis period, when unemployment increased dramatically in all EU-25 countries. The increase in debt has led to a decrease in trust in national parliaments (but not national governments) in both the pre-crisis and the post-crisis periods. This econometric result confirms the first empirical evidence given by Roth (2011).

Table 3. Trust in the national government and parliament, EU-25 country sample, controlling for endogeneity (FE-DFGLS or FE-DOLS estimation)

	(1)	(2)	(3)	(1)	(2)	(3)
	Government trust	Government trust	Government trust	Parliament trust	Parliament trust	Parliament trust
	Autumn 2004-autumn 2009	Autumn 2004-autumn 2007	Spring 2008-autumn 2009	Autumn 2004-autumn 2009	Autumn 2004-autumn 2007	Spring 2008-autumn 2009
<i>Inflation</i>	-0.54**	-0.35	0.81	-0.66***	-0.34	0.29
	-2.05	-0.69	0.87	-3.15	-0.91	0.40
<i>Growth</i>	-0.35	1.94	-1.38	-0.26	1.92*	-1.24
	-0.52	1.39	-1.33	-0.45	1.71	-1.45
<i>Unemployment</i>	-2.51***	-2.21	-3.30***	-1.90***	-1.13	-2.39**
	-3.56	-1.53	-2.51	-3.39	-1.13	-2.31
<i>Government Debt</i>	-0.70***	-0.77	-0.38	-0.87***	-1.00***	-0.56**
	-2.78	-1.52	-1.09	-4.39	-2.82	-2.04
Durbin-Watson statistic	1.99	2.05	1.72	2.06	2.20	1.78
R-squared	0.87	0.86	0.91	0.92	0.92	0.95
Adjusted R ²	0.85	0.82	0.88	0.91	0.90	0.94
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Control for endogeneity through a simple DOLS	Yes	Yes	Yes	Yes	Yes	Yes
Elimination of first order auto correlation	Yes DFGLS	Yes DFGLS	No DOLS	Yes DFGLS	No DOLS	No DOLS
Observations	290	165	125	290	165	125
Number of countries	25	25	25	25	25	25

t-values in parentheses

***p<0.01, **p<0.05, *p<0.10

Source: Own calculations.

Table 4 shows the results for the EU-25 country sample concerning citizens' trust in the European Commission and European Parliament. Regression 1 shows the results when

employing the full sample from 2004 to 2009. If inflation increases during good times (pre-crisis period), European institutions lose trust. A decline in growth diminishes trust during an economic crisis and unemployment and government debt must be considered harmful for trust in European institutions if the economy does well.

Table 4. Trust in the European Commission and European Parliament, EU-25 country sample, controlling for endogeneity (FE-DFGLS or FE-DOLS estimation)

	(1)	(2)	(3)	(1)	(2)	(3)
	European Commission trust	European Commission trust	European Commission trust	European Parliament trust	European Parliament trust	European Parliament trust
	Autumn 2004 1999-autumn 2009	Autumn 2004-autumn 2007	Spring 2008-autumn 2009	Autumn 2004-autumn 2009	Autumn 2004-autumn 2007	Spring 2008-autumn 2009
<i>Inflation</i>	-0.18	-0.62**	0.18	-0.17	-0.58**	0.27
	-1.07	-2.25	0.36	-1.02	-2.00	0.52
<i>Growth</i>	0.66	0.60	1.27**	0.70*	0.32	1.47***
	1.62	0.81	2.21	1.67	0.41	2.56
<i>Unemployment</i>	-0.03	-2.21***	-0.43	0.14	-2.20***	-0.46
	-0.08	-3.00	-0.60	0.34	-2.83	-0.62
<i>Government Debt</i>	-0.43***	-0.70***	-0.06	-0.47***	-0.66**	-0.07
	-2.79	-2.68	-0.28	-3.10	-2.40	-0.34
Durbin-Watson statistic	2.01	2.18	2.11	2.03	2.16	2.18
R-squared	0.83	0.86	0.89	0.83	0.86	0.90
Adjusted R ²	0.80	0.82	0.85	0.81	0.82	0.86
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Control for endogeneity through a simple DOLS	Yes	Yes	Yes	Yes	Yes	Yes
Elimination of first order auto correlation	Yes DFGLS	No DOLS	No DOLS	Yes DFGLS	No DOLS	Yes DFGLS
Observations	290	165	125	290	165	125
Number of countries	25	25	25	25	25	25

t-values in parentheses

***p<0.01, **p<0.05, *p<0.10

Source: Own calculations.

6. Conclusion

We have estimated the relationship between inflation, growth, unemployment, government debt and trust in both the national and European governments and in parliament. We have done so for the EU-15 and the EU-25 countries as well as for the pre-crisis and the post-crisis periods. We have found that it is crucial to look at the two periods separately and to run separate regressions, as the full sample period sometimes delivers misleading results. That is, results do not change so much with the countries sampled, but rather with analysing the pre-crisis or post-crisis periods. Four results seem to be particularly noteworthy.

First, we detect that unemployment leads to a fall in trust in national and European institutions, especially during times of crisis and especially in the EU-15 countries. It is important to understand that our econometric results refer to real unemployment and not to the fear of losing a job. In other words, as long citizens manage to keep their jobs, trust in national governmental institutions can be maintained. Thus, government actions that supported enterprises to sustain employment levels through short-term work schemes, as have been implemented in Germany and Italy, have positively contributed to maintaining citizens' trust.

Second, we find that inflation reduces trust in the national and European governmental organisations in the EU-15 and the EU-25, but only under good economic conditions. If the economy runs poorly, inflation is never an issue.

Third, we detect a negative association between an increase of debt over GDP and trust in the national parliament. This association is apparent during the pre-crisis period in the EU-15 and during all time periods in the EU-25. We assume that a negative association between debt over GDP and trust in the national parliament would also occur in the EU-15 country sample in the post-crisis period, when taking into consideration the newest data from the Standard Eurobarometer 72, which was polled in May 2010 in the midst of the eurozone crisis (see also Roth, 2011).

Fourth, in analysing the direct aftermath of the financial crisis our econometric results confirm that the immense decline in the real economy (decline in GDP per capita) was associated with an increase in citizens' trust in the national institutions, thus corroborating a rally-around-the-flag effect. When analysing the entire post-crisis period, this association levels out. This rally-around-the-flag effect can only be detected for the national institutions, but not for the EU institutions.

Trust levels in the national governments and national parliaments have fallen to historical low points in many European countries, especially in the peripheral countries Ireland, Spain, Greece and Portugal, which have been the most exposed to the financial crisis (and the ongoing eurozone crisis) and experienced strong increases in both unemployment (especially in Ireland and Spain) and the levels of debt over GDP (notably in Ireland and Greece) in the aftermath of the financial crisis. Hence, several policy steps seem crucial for European policy-makers.

As unemployment and debt over GDP seem to be crucial explanatory variables for the declining trust in national governments and parliaments, European policy-makers should first solve the eurozone crisis immediately by ending the strategy of the three no's: no bail-out, no sovereign default and no exit. Helping the periphery countries lower their debt levels and increase their employment rates would most likely stabilise citizens' trust in their national governments and parliaments. In particular the falling trust levels in the national parliaments are worrisome as this process points to longer-lasting political costs of the financial (and eurozone) crisis. Moreover, citizens' increasing alienation towards their political representatives will result in the election of more populist governments (see also Lachmann, 2010) that will be supportive of purely national rather than EU interests. While the core countries Germany and France have successfully managed to avoid an unemployment crisis, the unemployment rates in Ireland and

Spain, at approximately 14% and 20% (and around 40% youth unemployment) respectively, are unsustainable for social and political cohesion.

Still, to better evaluate the extent to which the eurozone crisis has influenced citizens' trust in national and European governmental organisations, our future research will have to extend the analysis by the latest observations from Eurobarometer 73 (May 2010) and the upcoming Eurobarometer 74. The initial empirical evidence (Roth, 2011) points to a dramatic fall in trust in the four peripheral countries, Greece, Ireland, Portugal and Spain.

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Appendix

Table A1. Descriptive statistics, EU-25 country sample

Variable	Obs	Mean	Std.Dev.	Min	Max
<i>Net trust in the national government</i>	324	-16.087	31.00427	-84	61
<i>Net trust in the national parliament</i>	324	-14.6931	36.1299	-90	70.7
<i>Net trust in the European Commission</i>	324	26.14281	16.31247	-32	55.6
<i>Net trust in the European Parliament</i>	324	29.76692	16.97112	-36	62.9
<i>GDP per capita growth</i>	300	0.541489	2.570732	-11.0286	6.388967
<i>Unemployment rate</i>	324	7.462191	2.942832	2.75	18.9
<i>Inflation</i>	324	104.5	7.5	90	141.6
<i>Government consumption in % of GDP</i>	300	19.13637	2.98805	13.28673	28.0771
<i>Government debt in % of GDP</i>	324	47.43194	27.37148	3.5	115.55

Source: Own calculations.

Table A2. Descriptive statistics, EU-15 country sample

Variable	Obs	Mean	Std.Dev.	Min	Max
<i>Net trust in the national government</i>	286	-5.57868	25.85205	-64	61
<i>Net trust in the national parliament</i>	299	3.692238	25.82533	-58	70.7
<i>Net trust in the European Commission</i>	345	21.65702	18.65586	-40.2	57.4
<i>Net trust in the European Parliament</i>	345	27.67313	18.38821	-36	61.7
<i>GDP per capita growth</i>	341	0.664309	1.593545	-7.02541	4.79103
<i>Unemployment Rate</i>	345	6.902464	2.645603	1.85	18.3
<i>Inflation</i>	345	98.0	7.58	78.9	112.37
<i>Government consumption in % of GDP</i>	342	20.01607	3.25287	13.4379	28.0771
<i>Government debt in % of GDP</i>	319	59.25502	27.50598	5.55	119

Source: Own calculations.

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