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**Article**

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CESifo Forum

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*Suggested Citation:* Berlemann, Michael (2011) : ECB Presidency and Inflation Aversion among the Citizens of European Countries: An Empirical Assessment, CESifo Forum, ISSN 2190-717X, ifo Institut - Leibniz-Institut für Wirtschaftsforschung an der Universität München, München, Vol. 12, Iss. 2, pp. 88-92

This Version is available at:

<https://hdl.handle.net/10419/166441>

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## ECB PRESIDENCY AND INFLATION AVERSION AMONG THE CITIZENS OF EUROPEAN COUNTRIES: AN EMPIRICAL ASSESSMENT

MICHAEL BERLEMANN\*

### Introduction

In October 2011 the regular term of office of the current President of the European Central Bank (ECB) Jean-Claude Trichet expires. Somewhat unexpectedly, the favorite candidate as successor, Bundesbank President Axel Weber, declared his resignation in early February. In the aftermath speculation has been mounting about who will take over the job as the head of the ECB. As it is often the case in international organizations and especially the European Union, the discussion about the candidates was dominated by their nationalities. While many specialists considered the Bank of Italy chief Mario Draghi to be the best qualified and most natural candidate for the ECB presidency, others argued that Italy's record of high inflation and massive debt would make Draghi an unacceptable candidate, especially for countries claiming to have a deeply rooted stability culture like Germany. Consequently, German Chancellor Angela Merkel initially hesitated to support Draghi and considered supporting another Dutchman, Nout Wellink, coming from a country with (perceived) similar macroeconomic preferences. Even when Silvio Berlusconi and Nicolas Sarkozy announced to support Draghi in late April it took another 3 weeks before Angela Merkel was willing to support the Italian candidate. The major reasoning behind the discussion of the candidates' nationalities bases on the expectation that citizens from different European countries exhibit differing degrees of inflation aversion which carry over to the presidents of their central banks.

In fact, there is some empirical evidence in favor of the hypothesis that the degree of inflation aversion differs between countries. For example, Shiller (1997) finds the average percentage of US and Brazilian citizens fully agreeing with the statement that controlling inflation to be one of the most important tasks of economic policy to be 56 percent while the referring percentage of the German citizens is 76 percent and thus considerably larger. Similarly, Scheve (2004) finds significant national differences in inflation aversion in his study of 20 countries around the globe. However, empirical evidence on the degree of inflation aversion among EU member states is yet not available.

In this article we aim at shedding some light on the degrees of inflation aversion among the citizens of EU member countries. We therefore employ aggregate data collected from the Eurobarometer Survey of the European Commission covering 2007 to 2010.<sup>1</sup> After briefly discussing possible causes for inflation aversion, presenting the utilized data, explaining the empirical approach and presenting the estimation results we turn to a discussion of the implications of our results for the question who should become the next ECB president.

### Possible Causes of Inflation Aversion

Inflation aversion is the result of the likely effects of both anticipated and unanticipated inflation. The effects of inflation on microeconomic behavior and macroeconomic outcomes have been subject to excessive discussions among economists (see e.g. Briault 1995; Edey 1994). There is little disagreement on the effects of inflation on nominal variables. Most economists agree that higher inflation leads to one to one increase in nominal wages or nominal interest rates, provided that there are no institutional barriers to adjustments (Parkin 1994). Most economists will also agree that inflation causes different sorts of transaction costs such as shoe-leather costs (Bailey 1956; Briault 1995), menu costs (Manki 1992)

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<sup>1</sup> Focusing on this period allows covering all actual EU member countries plus Turkey as an EU candidate.

or bureaucratic costs (Karmann and Graff 1997). However, it is less clear in how far inflation exerts effects on economic growth and/or unemployment. While some authors argue that inflation positively affects economic growth (Mundell 1963 and 1965), the opposite view results from overlapping generations models (see e.g. Samuelson 1958; Wallace 1980). However, there are also models in which inflation is ‘super-neutral’ (Sidrausky 1967). The empirical evidence is also somewhat mixed (see e.g. Kormendi and Meguire 1985; Grimes 1991; Barro 1995; Sarel 1996). Inflation might also have re-distributional effects. According to the wage-lag hypothesis prices tend to run ahead of increases in money wages, leading to lower real wages and increased profits (Keynes 1940). According to the transfer-income-lag hypothesis market incomes (wages, profits) react considerably quicker on inflation than primarily politically or institutionally determined transfer incomes like pensions, unemployment benefits or welfare aids (Pohl 1981). The debtor-creditor hypothesis argues that wealth is redistributed from creditors to debtors whenever inflation is not fully anticipated in loan contracts. Again, the empirical evidence is mixed (Li and Zou 2002).

Interestingly enough, a significant share of the population seems to have neither a clear idea of what the typical causes of inflation are nor which consequences result from inflation (see Shiller 1997). Nevertheless, the public is typically much concerned with inflation. For example, DiTella, MacCulloch and Oswald (2001) find inflation to contribute significantly to explain life satisfaction on the cross-country level when studying data for 12 European countries from the Eurobarometer Database over the period 1975 to 1991.

## Data

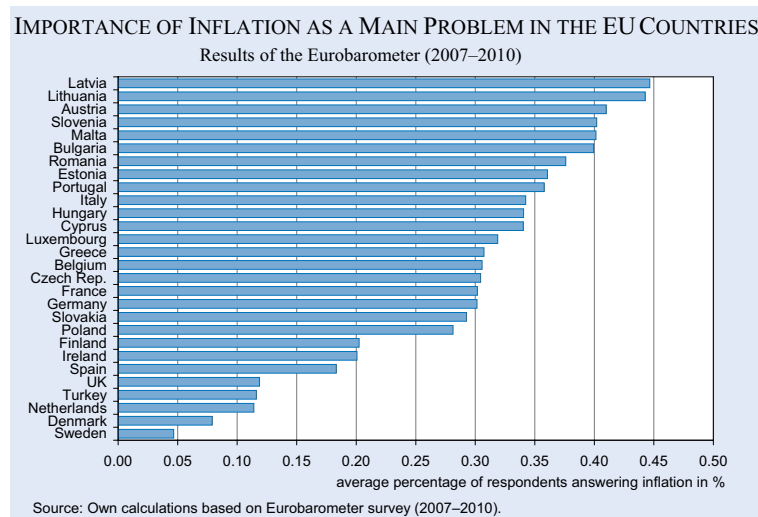
For our study we employ data from the Eurobarometer, a survey conducted biannually by the European Commission. The standard Eurobarometer was established in 1973. Each survey consists of approximately 1,000 face-to-face interviews per member

state.<sup>2</sup> Since the number of member states increased in the course of time and also some of the accession countries are included, the number of surveyed countries varies from survey to survey. We make use of aggregate data from the Eurobarometer provided by Zentralarchiv für Empirische Sozialforschung (ZA).<sup>3</sup>

Our dataset covers the 7 waves of the Eurobarometer survey: Spring 2007 (EB 67) to Spring 2010 (EB 73). In order to measure inflation aversion we focus on the answers on the question: ‘what do you think are the two most important issues facing (OUR COUNTRY) at the moment?’ This question was asked in all 7 waves and every EU member country. The respondents could choose up to two answers from the following catalogue: crime, economic situation, rising prices\inflation, taxation, unemployment, terrorism, defence/foreign affairs, housing, immigration, health-care system, educational system, pensions, environment and energy.

In Figure 1 we show the average percentage of respondents per country answering ‘rising prices\inflation’ to be among the two most important problems. Obviously, the percentages differ considerably between the EU member countries. The citizens of the Scandinavian EU member countries mention inflation quite rarely among the most important problems. On average only 1 out of twenty respondents from Sweden answered inflation to be one of the most important problems. The percentages are only slightly higher in Denmark (8 percent), the Netherlands (11 percent), Turkey (12 percent), Britain (12 percent), Spain (18 percent), Ireland (20 percent) and Finland (20 percent). The countries with the citizens most often answering inflation to be among the most

Figure 1



<sup>2</sup> Exceptions are Germany (2,000), Luxembourg (500) and Britain (1,300 including 300 in Northern Ireland).

<sup>3</sup> We make use of the Eurobarometer waves EB 67 to EB 73.

important problems facing the country are Latvia (45 percent), Lithuania (44 percent), Austria (41 percent), Slovenia (40 percent) and Malta (40 percent). Germany, which is often judged to be one of the countries with the most inflation-averse citizens, ranges in the middle of the field of the members states of the European Union (31 percent).

However, the pure percentage of citizens, identifying inflation as major problem is not informative with respect to their inherent degree of inflation aversion. This becomes obvious when considering the usually employed loss function in macroeconomic models. Typically, this loss function is assumed to be of the type

$$(1) \quad l_t = \frac{1}{2} \cdot \alpha \cdot (\pi_t - \pi^*)^2 + \frac{1}{2} \cdot \beta \cdot (y_t - y^*)^2$$

with  $l_t$  = the loss in period  $t$ ,  $\pi$  = inflation,  $\pi^*$  = socially optimal inflation,  $y$  = output, and  $y^*$  = socially optimal output. The parameters  $\alpha$  and  $\beta$  are weighting factors with  $\alpha$  being the degree of inflation aversion.

Whenever a respondent answers inflation to be among the most important problems this answer might mean two different things. It is well possible that the respondent has the intention to reveal a high degree of inflation aversion, i.e. a comparatively high value for  $\alpha$ . However, it is also possible that his answer is reflecting the opinion that the current inflation rate deviates excessively from its socially optimal value. As Figure 2 reveals, there seems to be in fact a positive correlation between actual inflation (measured as the average

inflation rate in the three months before the Eurobarometer wave was completed) and the answers of the respondents.

**Uncovering citizens' inflation aversion**

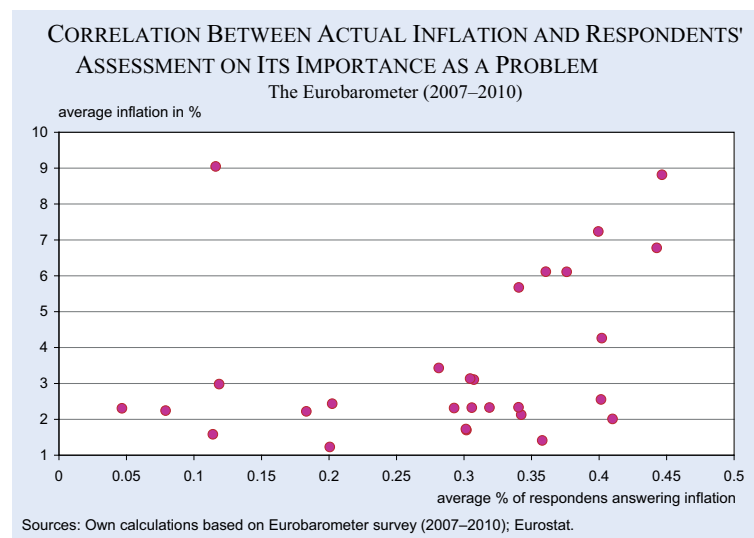
In order to uncover the true degree of inflation aversion among the citizens of the EU member countries it is thus necessary to relate the answers of the respondents to the inflation performance at the time and place when the survey was conducted. In order to do so, we employ a two-step procedure. In the first step we pool the data and then regress the percentage of citizens, answering inflation to be among the most important problems ( $m$ ), on the average inflation rate ( $\pi$ ) in the three months before the referring Eurobarometer wave was completed. Thus, the equation to be estimated is

$$(2) \quad m_{i,t} = c + \gamma \cdot \pi_{i,t} + \varepsilon_{i,t}$$

In the second step we employ the estimated constant  $\hat{c}$  and the parameter  $\hat{\gamma}$  to calculate the unexplained residuals  $\varepsilon_{i,t}$ . We then use the average unexplained residual as indicator for country  $i$ 's inflation aversion.

As an alternative to the described procedure we could also estimate the regression with country-fixed effects and interpret the fixed effects as measure of inflation aversion. Since the results turn out to be very similar we refrain from reporting the results here in length.

**Figure 2**



**Estimation results**

The estimation results of step 1 are shown in Table 1. Both the regression constant and the coefficient turn out to be significant at the 99%-confidence-level. As expected, the coefficient of inflation turns out to be positive. The regression equation explains roughly 25 percent of the observed variation of the dependent variable.

The resulting measures of inflation aversion are presented in Figure 3. For 18 out of the

Table 1

## Estimation results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant (c)	0.201753	0.012489	16.15416	0.0000
Inflation ( $\pi$ )	0.024586	0.002897	8.487803	0.0000
Adjusted $r^2$	0.247252			
F-statistic	65.05071			
Prob(F-statistic)	0.000000			

Notes: Dependent variable = Respondents stating inflation to be among the most important problems in percent (m). We report White-corrected standard errors.

Source: Own calculations.

28 sample countries we end up with positive average estimation errors, indicating that the citizens of these countries belong to the above average inflation averse ones. The countries with the highest degrees of inflation aversion turn out to be Austria, Malta, Portugal, Slovenia and Italy. The lowest degrees of inflation aversion can be found in Turkey, Sweden, Denmark, the United Kingdom and the Netherlands. While the German citizens show above-average inflation aversion, Germany is not among the most inflation-averse countries.

### Conclusions

In the light of the presented empirical results, the recent discussion about the succession of Jean Claude Trichet as the next ECB President appears to be misleading. At least two aspects should be mentioned.

First, one might ask the question, why the nationality of the candidates should play a role for the decision at all. While from a political perspective it might be necessary to divide up the influential jobs

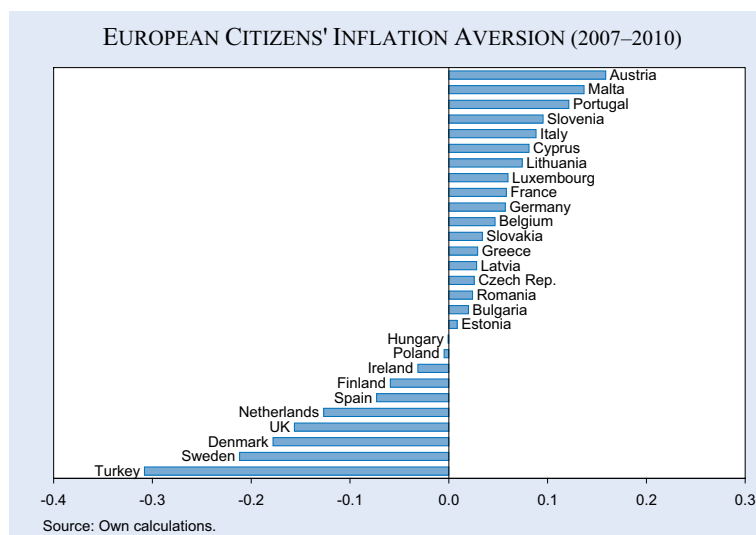
in the EU administration equally or at least proportionally among the member countries, it makes little sense to base the decision solely or primarily on the presumption of the degree of inflation aversion among the citizens in the country of origin of the candidate. Since Rogoff's (1985) seminal contribution it is well-known that countries typically are better off when choosing a weight-conservative central bank president. One might expect that many EU member countries made use of this option. Thus, the citizens' and the central banker's degree of inflation aversion might differ considerably in most (European) countries.

Second, when in fact the citizens' degree of inflation aversion would be connected to the preferences of the referring central banker, the recent discussion was quite misleading. While Italy's citizens are among the 5 most inflation averse EU member countries, Bank of Italy's President Mario Draghi was suspected for being not enough averse to inflation to become the ECB President. Instead, Finland's Erkki Liikanen and the Dutch Nout Wellink were discussed intensively as candidates for the job. However, the reported empirical results indicate that both countries rank among the below-average inflation-averse EU member countries. Thus, Mario Draghi might turn out to be much more 'hawkish' than many expect.

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Figure 3



and Unemployment: Evidence from Surveys of Happiness”, *American Economic Review* 91, 335–341.

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