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## Working Paper Public Support for the Euro and Trust in the ECB: The first two decades of the common currency

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# Public Support for the Euro and Trust in the ECB: The first two decades of the common currency

Felix Roth Lars Jonung

Hamburg Discussion Papers in International Economics [No. 2]

University of Hamburg

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## Public Support for the Euro and Trust in the ECB:

## The first two decades of the common currency

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Comments invited!

#### Abstract

This paper examines the evolution of public support for the euro since its introduction as a virtual currency in 1999, using a unique set of data not available for any other currency. We focus on the role of economic factors in determining the popularity of the euro. We find that a majority of citizens support the euro in each individual member country of the euro area (EA). The economic crisis in the EA following the Great Recession led to a slight decline in public support, but the recent economic recovery has strengthened that support, which is now approaching historically high levels after two decades of its existence. We detect a similar, but less pronounced upturn in trust in the ECB during the recovery. Our econometric work demonstrates that unemployment is a key driver of support behind the euro. Given these developments, we discuss whether the large and persistent majority support enjoyed by the euro equips the currency to weather populist challenges during its third decade.

Key words: Euro, public support, trust, unemployment, optimum currency area, monetary union, ECB.

**JEL codes**: E42, E52, E58, F33, F45

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## Public Support for the Euro and Trust in the ECB: The first two decades of the common currency

#### 1. Introduction

The euro, the common European currency was adopted in 1999 and is now entering its third decade. The euro is unique in at least two ways. First, a large number of independent countries, EU member states, have handed over responsibility for their monetary policy to an independent central bank, the European Central Bank (ECB), while maintaining domestic control over fiscal policy. Second, the euro, to the best of our knowledge, is the only currency for which we have a long and consistent time series on public support for the currency and on public trust in the central bank that supplies the currency. No such data exist for the dollar or the pound or any other currency for that matter. This unique data set enables us to study the determinants of support for a currency in use in ways that are novel and path-breaking.

The purpose of this chapter is to examine how the public has viewed the euro throughout its first two decades. We also examine how trust in the ECB and in national governments has evolved. We stress that we are looking at support for the euro and its governance from the perspective of the public as revealed in public opinion polls, which is not the typical approach adopted by economists. The latter tend to study the euro through other analytical methods, such as the optimum currency area (OCA) approach developed by Robert Mundell or the process of divergence and convergence within a monetary union. Our approach should be looked upon as a complementary strategy to these more conventional ways of studying the euro.

Our chapter is structured as follows. Section 2 discusses the role of public support for the sustainability of a common currency within a monetary union. Section 3 summarises previous empirical findings. Section 4 describes the Eurobarometer data used in our study. Section 5 offers a descriptive summary of our measures of popular support and trust. Section 6 discusses macro-econometric findings. Section 7 offers an outlook on the future of Economic and Monetary Union (EMU). How important is public support for the euro? Section 8 concludes.

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#### 2. The Role of Public Support for the Euro

The literature on monetary unions and unification identifies public support for the common currency as a key determinant of its long-term prospects for survival.

First, the literature on the history of monetary unions suggests that these entities depend on public support for their legitimacy and viability. As long as there exists sufficient support for the common currency, policymakers are able to make adjustments and adequately confront the challenges of economic and financial disturbances and crises (Bordo and Jonung, 2000, 2003). According to Bordo and Jonung, the standard OCA criteria are too static to use as a means of evaluating the performance of a monetary union. They stress that ultimately it is the presence of strong political will or glue that holds a monetary union together. An established political bond between European policymakers and their publics/voters guarantees flexible solutions to the coming challenges (Bordo and Jonung, 2003). Strong public support for the common currency acts as a shield deflecting the critical rhetoric and actions of populist parties from both the extreme right and left.

Second, the literature on the political economy in the OCA approach highlights the concept of commonality of destiny as a central concept. Echoing the literature on the history of monetary unions, Baldwin and Wyplosz (2015) argue that it is foremost the political OCA criteria that account for the survival of the euro. A shared common destiny helps to find solutions in difficult times. Such a shared common destiny is of key importance for reconciling the powerful conflicting interests of the EA governments, which represent a significant source of the recent crisis in the EA (Frieden and Walter 2017).

Third, political scientists stress that public support for the euro is crucial for any potential move towards deeper supranational governance (Banducci et al. 2003). In general, public support for the euro is necessary before European citizens will allow a further shift of power from national to European institutions (Kaltenthaler and Anderson 2001). The political science literature concludes that public support is central for the political legitimacy and thus sustainability of the euro (Deroose et al. 2007; Verdun 2016).

So far, we have discussed the role of public support for the long-term survival of the euro. Public trust in the institutions of governance behind the euro, however, is also crucial in this context. For this reason, we also look at two measures of trust: trust in the ECB and trust in the national government.

#### 3. Previous Studies

Empirical studies analysing public support for the euro can roughly be clustered into one of four groups:

i) studies of public support for a common currency in the years *before* the introduction of the euro, that is from 1990 until 1999, e.g. Kaltenthaler and Anderson (2001) and Banducci et al. (2003);

ii) analyses of public support for the euro in the pre-crisis period from 1999 to 2008, such as, among others, Banducci et al. (2009) and Deroose et al (2007);

iii) contributions that analyse the crisis phase from 2008 to 2013, including Hobolt and Leblond(2014), Hobolt and Wratil (2015) and Roth et al. (2016); and

iv) recent papers focusing on the impact of the economic recovery from 2013 onwards, notably Roth et al. (2019).

What do we learn from this substantial body of empirical work? For brevity, we focus on papers published since the introduction of the euro in 1999.

Looking at descriptive statistics, we find mixed evidence concerning majority support for the euro in the individual countries of the EA. Although Roth et al. (2016) show majority support for the euro since its establishment in 1999 in each individual country, Guiso et al. (2016) and Stiglitz (2016) claim only minority support in Italy and Germany. A study by Roth et al. (2019) argues that this discordance is due to the fact that Guiso et al. (2016) and Stiglitz (2016) use opinion poll data, which do not stem from the Eurobarometer data, which to date provide the sole authoritative data source for measuring public support for the euro.

Examining the macro-evidence, the impact that unemployment and inflation have had on public support for the euro is a controversial question. Whereas Hobolt and Leblond (2014) find no significant relationship between unemployment and net support for the euro, Roth et al. (2016, 2019) establish a weak negative relationship during the crisis with an accelerated impact during the post-crisis recovery.

A similar controversial finding applies to the effect of inflation on public support. Whereas Banducci et al. (2003) and Hobolt and Leblond (2014) rule out a significant relationship between inflation and net support for the euro in pre-crisis and crisis times, Roth et al. (2016, 2019), who rely on an econometric analysis for 1999-2017, find a strong negative coefficient between an increase in inflation and a decline in net support for the euro in pre-crisis times and during the crisis. This effect dissipates in times of economic recovery.

Micro data give support to the findings based on macro data. Analysing a micro dataset with 474,712 observations over the time period 1999-2017 for an EA19 country sample, Roth et al. (2019) find that perceptions of inflation and unemployment yield negative coefficients, whereas perceptions of the economic situation yield a positive coefficient. The findings of their socio-economic variables gender, education and employment status in the pre-crisis period are similar to previous results reported by Banducci et al. (2009). They find a stable pattern for education, employment and legal status when comparing the pre-crisis period with the crisis-recovery period. In addition, Roth et al. (2019) detect a halving of the negative female coefficient and report a complete reversal in opinion among the oldest age group (65+) when comparing pre-crisis with crisis times. The authors conclude that the largest effect on public support for the euro is related to education.

Concerning public support for the euro and trust in the ECB, some first results have been published by Roth (2015) who highlights the contrasting evolution of public support for the euro and trust in the ECB. In addition, Roth et al. (2016) compare the effect of the unemployment crisis on public support for the euro with the effect on trust in the ECB. Here an increase in unemployment is roughly four times more negatively associated with trust in the ECB than in public support for the euro.

#### 4. Eurobarometer Data

Our measures for public support for the euro are based upon the biannual Standard Eurobarometer (EB) surveys<sup>1</sup> (European Commission, 2018) from 3-5/1999 (EB51) to 11/2018 (EB90). These surveys ask a representative group of respondents the following question: '*What is your opinion on each of the following statements? Please tell me for each statement, whether you are for it or against it. A European economic and monetary union with one single currency, the euro.*' Respondents can then choose between '*For*', '*Against*' or '*Don't Know*'.<sup>2</sup>

<sup>&</sup>lt;sup>1</sup> For each Standard EB survey, which covers about 1,000 respondents per country, new and independent samples are drawn. Interviews are conducted face-to-face in the respondent's home. A multi-stage and random sampling design is used.

<sup>&</sup>lt;sup>2</sup> In the most recent questionnaire in Standard EB90, respondents can also spontaneously refuse to answer the question.

Measures for trust in the ECB are based on the following question: '*Please tell me if you tend to trust or tend not to trust these European institutions. The European Central Bank*'. Respondents can then choose between '*Tend to trust*', '*Tend not to trust*' or '*Don't Know*'.

Measures for trust in the national government are based on the following question: 'I would like to ask you a question about how much trust you have in certain media and institutions. For each of the following media and institutions, please tell me if you tend to trust it or tend not to trust it. The National Government'. Respondents can then choose between 'Tend to trust', 'Tend not to trust' or 'Don't Know'.

Net public support measures are constructed as the number of '*For*' responses minus '*Against*' responses, according to the equation: Net support = (For - Against)/(For + Against + Don't Know). Net trust measures are constructed as the number of '*Tend to trust*' responses minus '*Tend not to trust*' responses, according to the equation: Net trust = (Trust – Tend not to trust)/(Trust + Tend not to trust + Don't Know).

#### 5. Descriptive Results

Figure 1 plots the unemployment rate against public support for the euro and trust in the institution that carries out monetary policy in the euro area, namely the European Central Bank – and trust in the national governments across the 19 member countries in the euro area. We can report four central findings.

First, we found that a large majority supported the euro (> 30 percent) during the first two decades of its existence. Second, whereas large majorities trusted the ECB before the 2008 crisis, only a minority expressed trust in the national government. Third, while the large majority of support for the euro was only slightly dented by the pronounced increase in unemployment during the crisis of 2008-2013, trust in the ECB and in national governments was negatively affected by the rise in unemployment, with the ECB losing majority trust and the national governments entering the territory of large mistrust (< -50). Fourth, the recent fall in unemployment in the EA has led to a clear rise in support for the euro from 11/2013 onwards, reaching the average value of 55 percent in 11/2018 and thus nearly reaching the peak value of 56 percent from 3-5/2003. The recovery in employment also led to a recovery in trust in the national government to a level higher than in the pre-crisis period and a recovery of trust in the ECB, which has nearly re-established a majority level of trust, but one not high enough to make up for the decline during the crisis (see Table A1 in the Appendix).

#### Figure 1

Unemployment and net support for the euro and net trust in the ECB and in the national government, average EA19, 1999-2018



Source: Standard Eurobarometer Data 51-90.

*Notes:* The left-hand y-axis plots unemployment ranging from 7.3 to 12.1 percent. The right-hand y-axis displays net support/trust in percent. Since the figure depicts net support/trust, all values above 0 indicate that a majority of the respondents support the euro and trust the ECB. The dashed lines distinguish the actual physical introduction of the euro in January 2002, the start of the financial crisis in September 2008 and the start of economic recovery at the end of 2013. Average EA-19 is population weighted.

Figure 1 shows the aggregated picture of public support for the euro and trust in the ECB and the national government. Let us now turn to the data for each member state. What do we learn from the disaggregated pattern? Figure 2a displays the pattern in each member state of the EA19, split into an EA12 country sample in Figure 2a and the EA7 countries in Figure 2b, which joined the EA later than 2001 (for a figure showing all 19 individual members, including the unemployment rate, see Figure A1 in the Appendix). We identify three striking results.

First, with the exception of Greece and Finland in pre-crisis times and Cyprus in the time of crisis, a majority support for the euro has always existed in each individual EA economy. Second, while there is only a slight decline in support for the euro during the crisis, we detect

pronounced losses in the trust in the ECB and the national government, in particular in the periphery countries of the EA, i.e. in Spain, Greece, Ireland, Portugal and Cyprus (see also Table A1 in the Appendix). Third, during the recovery, a pronounced increase of public support for the euro is apparent in almost all countries. A strong recovery in trust in the ECB as well as in the national government is also registered in some periphery countries. The decline in trust was more than compensated for in two countries, Portugal and Ireland, but this was not the case in Spain and Greece.

#### Figure 2a

Net support for the euro and net trust in the ECB and in the national government, EA12,

1999-2018



Source: Standard Eurobarometer Data 51-90.

#### Figure 2b



Net support for the euro and net trust in the ECB and in the national government, EA7, 1999-

2018

Source: Standard Eurobarometer Data 51-90.

#### Support and trust outside the euro area:

How did public support for the euro and trust in the domestic central bank and the national government evolve outside the Euro Area? Figure 3 gives the answer. We find four noteworthy patterns.

First, public support for the euro is substantially lower outside the EA than inside, particularly in the UK, Sweden, the Czech Republic and Denmark. Perhaps most noteworthy is the case of Denmark which de facto has tied its currency to the euro since the start of the common currency. Second, support for the euro declined in a pronounced manner following the sovereign debt crisis (the euro crisis) in all non-euro member states. Third, we detect a recovery of support after 2014; in particular, in the UK. The euro currently enjoys a fairly high level of support – compared to its own historical time series pattern - although it is still negative. Fourth, in the three EU member states, Sweden, Denmark and the United Kingdom, trust in the national central bank and in the national government is higher than in the euro area. In the new member states, trust in the national government is significantly lower than in the ECB.

#### Figure 3

Net support for the euro and net trust in the ECB and in the national government, outside the euro area, 1999-2018



Source: Standard Eurobarometer Data 51-90.

#### 6. **Econometric Results**

We now turn to some econometric evidence. To analyse the channels that influence public support for the euro and trust in its governance we adopt a model specification used by Roth et al. (2016, 2019). We estimate support for the euro and trust in the ECB as a function of unemployment, inflation, growth in real GDP per capita and control variables deemed of potential importance in explaining the *within* variation of support. Our baseline model (1) reads:

$$Support/Trust_{it} = \alpha_i + \beta_1 Unemployment_{it} + \chi_1 Inflation_{it} + \delta_1 Growth_{it} + \phi_1 Z_{it} + w_{it},$$
(1)

where Support/Trust<sub>it</sub> is the net support for the euro and net trust in the ECB for country i during period t. Unemployment<sub>it</sub>, Inflation<sub>it</sub>, Growth<sub>it</sub> and Z<sub>it</sub> are respectively unemployment, inflation, growth of GDP per capita and control variables deemed of potential importance, which can be

lumped together in Z.<sup>3, 4</sup>  $\alpha_i$  represents a country-specific constant term (fixed effect) and  $w_{it}$  is the error term.

Following recent research in the field we estimate equation (1) by means of dynamic ordinary least squares (DOLS), a method that permits full control for endogeneity of the regressors. In order to correct for autocorrelation,<sup>5</sup> we apply a FGLS (Feasible General Least Squares) procedure.<sup>6</sup> Both applications lead to the following equation (2), representing our FE-DFGLS (Fixed Effect Dynamic Feasible General Least Squares) approach - for a detailed explanation of the FE-DFGLS approach see Roth et al. (2016, 2019):

$$Support_{it}^{*} = \alpha_{i} + \beta_{1}Unemployment_{it}^{*} + \chi_{1}Inflation_{it}^{*} + \delta_{1}Growth_{it}^{*} + \phi_{1}Z_{it}^{*} + \sum_{p=-1}^{p=+1} \beta_{2p}\Delta Unemployment_{it-p}^{*} + \sum_{p=-1}^{p=+1} \chi_{2p}\Delta Inflation_{it-p}^{*} + \sum_{p=-1}^{p=+1} \delta_{2p}\Delta Growth_{it-p}^{*} + \sum_{p=-1}^{p=+1} \phi_{2p}\Delta Z_{it-p}^{*} + u_{it}$$
(2)

with  $\alpha_i$  being the country fixed effect and  $\Delta$  indicating that the variables are in first differences. Applying DFGLS, Unemployment, Inflation and Growth turn exogenous and the coefficients  $\beta_1$ ,  $\chi_1$ ,  $\delta_1$ , and  $\phi_1$  follow a t-distribution. This property permits us to derive statistical inferences on the causal impact of unemployment, inflation and growth. The asterisk (\*) indicates that the variables have been transformed and that the error term  $u_{it}$  fulfils the requirements of the classical linear regression model. In addition, DFGLS estimations are very robust against the omission of other potentially relevant variables and therefore permit unbiased and consistent estimates of all right-hand side (RHS) variables.

<sup>&</sup>lt;sup>3</sup> The components of Z could potentially be macroeconomic or socio-political control variables. However, given the cointegrating relationship between support for the euro and our macroeconomic variables (see Tables A3 and A4 in the Appendix), we can be confident that these Z-variables do not cause bias in the coefficients of unemployment, inflation and growth.

<sup>&</sup>lt;sup>4</sup> Data on inflation (the change in the harmonized index of consumer prices), seasonally adjusted unemployment rates, as well as seasonally and calendar adjusted data on GDP per capita (European System of Accounts 2010) are taken from Eurostat. A summary of the data utilized can be found in Table A1. The matching methodology between our macroeconomic variables and public support for the euro and trust in the ECB follows the approach of Roth et al. (2016, 2019).

<sup>&</sup>lt;sup>5</sup> We found first-order autocorrelation to be present.

<sup>&</sup>lt;sup>6</sup> FGLS (in the ready-to-use EViews commands) is not compatible with time-fixed effects. It picks up shocks and omitted variables in the period of study. In addition, it has been found that running the regression with time-fixed effects (without applying FGLS) does not tackle the problem of autocorrelation of the error term.

Regression	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Dependent Variable	Euro	Euro	Euro	ECB	ECB	ECB	NG	NG	NG
Period	FS	BC	CR-RE	FS	BC	CR-RE	FS	BC	CR-RE
Unemployment	-1.3***	-1.7	-2.1***	-4.2***	1.1	-3.4***	-4.6***	-3.1*	-3.7***
	(0.41)	(2.14)	(0.37)	(0.54)	(0.88)	(0.61)	(0.41)	(1.80)	(0.59)
Inflation	-4.9***	-14.9***	-4.8***	0.3	-2.0	-1.4	-0.1	1.2	-0.6
	(1.74)	(5.75)	(1.47)	(1.90)	(3.59)	(1.91)	(2.28)	(7.25)	(2.50)
GDP per capita growth	-0.5	-2.1	0.0	1.2	0.1	0.7	1.2	7.7**	0.2
	(0.78)	(2.33)	(0.71)	(0.84)	(1.58)	(0.89)	(1.10)	(3.49)	(1.24)
Durbin-Watson statistic	2.25	2.49	2.13	2.46	2.49	2.36	2.09	1.96	2.13
Adjusted R-Squared	0.81	0.79	0.85	0.90	0.79	0.91	0.84	0.78	0.85
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control for endogeneity	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
El. of first-order autocorr.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	548	218	330	548	218	330	479	149	330
Number of countries	$19^{\dagger}$	19	$19^{\dagger}$	19†	19	$19^{+}$	19†	19	$19^{\dagger}$

Table 1Net support for the euro, FE-DFGLS Estimation, EA-19, 1999-2018

*Notes*: Standard Eurobarometer Data 51-90. ECB=European Central Bank. NG=National Government. FS=Full Sample. BC=Before Crisis. CR=Crisis-Recovery.

Table 1 shows the econometric results for equation (2) within our EA-19 country sample. Analysing the full period from 3-4/1999 to 11/2018, we detect unemployment to be a significant driver of public support for the euro, trust in the ECB and trust in the national government (regressions 1, 4 and 7 in Table 1). A 1-percentage point increase in unemployment is associated with a decline in net support by 1.3 percentage points. The effect is threefold in trust in the ECB and in the national government, with an estimated coefficient of -4.2 and -4.6, respectively.

Analysing the pre-crisis sample (regressions 2, 5 and 8 in Table 1), we detect unemployment to be insignificantly related to public support for the euro and trust in the ECB and the national government. However, we find a highly significant and strong effect of inflation on public support for the euro (-14.9). Studying periods of crisis and recovery (regressions 3, 6 and 9 in Table 1), it is clear that the negative unemployment coefficient from the full sample is driven by the crisis-recovery period, whereas we detect a negative coefficient between unemployment and net support (-2.1) and trust in the ECB and the national government (-3.4 and respectively -3.7) during the crisis.

#### Table 2

Unemployment and net support for the euro, FE-DFGLS Estimation, EA-19, 2008-2018

Regression	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Dependent Variable	Euro	Euro	Euro	ECB	ECB <sup>‡</sup>	ECB	NG	NG	NG
Period	CR-RE	CR	RE	CR-RE	CR	RE	CR-RE	CR	RE
Unemployment	-2.1***	-0.8**	-3.6***	-3.4***	-5.3***	-2.2***	-3.7***	-3.5***	-4.1***
	(0.37)	(0.38)	(0.60)	(0.61)	(0.72)	(0.68)	(0.59)	(0.67)	(1.48)
Inflation	-4.8***	-11.2***	-0.6	-1.4	-10.8***	1.5	-0.6	-10.2**	3.6
	(1.47)	(2.58)	(2.06)	(1.91)	(3.85)	(2.33)	(2.50)	(4.74)	(4.99)
GDP per capita growth	0.0	-1.6	0.0	0.7	0.7	0.1	0.2	0.7	-1.0
	(0.71)	(1.07)	(0.97)	(0.89)	(1.44)	(1.11)	(1.24)	(2.00)	(2.28)
Durbin-Watson statistic	2.13	2.14	2.03	2.36	2.11	2.11	2.13	2.27	2.19
Adjusted R-Squared	0.85	0.85	0.90	0.91	0.88	0.94	0.85	0.84	0.87
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control for endogeneity	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
El. of first-order autocorr.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	330	164	166	330	164	166	330	164	166
Number of countries	19†	19	19†	19†	19	$19^{\dagger}$	19†	19	$19^{+}$

*Notes*: Standard Eurobarometer Data 51-90.  $\ddagger$  = Inflation Coefficient lacks robustness. Excluding the two time periods (EB 70 and 71) in the direct aftermath of the financial crisis renders insignificant coefficients if tested in sensitivity analysis. ECB=European Central Bank. NG=National Government. CR=Crisis-Recovery. CR=Crisis. RE=Recovery.

To untangle the effects of the crisis-recovery, Table 2 splits the crisis-recovery period into a crisis phase 2008-2013 and a recovery phase 2013-2018. In analysing the crisis period 2008-2013 (regressions 2, 5 and 8 in Table 2), we find that whereas the unemployment increase in times of crisis slightly dented public support for the euro (-0.8), it had a six-fold impact on trust in the ECB (-5.3) and a four-fold impact on trust in the national government (-3.5).

In analysing the recovery period (regressions 3, 6 and 9 in Table 2), we detect a four times larger coefficient for public support for the euro (-3.6), which indicates a rising effect during the recovery in which a 1-percentage point of decline in unemployment leads to an increase of 3.6 percentage points of public support. The unemployment decline during the recovery more than fully make up for the decline during the crisis. The same pattern holds for trust in the national government. The compensation effect (-4.1) during recovery is larger than the losses during the crisis (-3.5). Only when analysing trust in the ECB, we find a different pattern. The

pronounced losses during the crisis due to the sharp rise in unemployment (-5.3) have only partially been compensated for during the recovery (-2.2).

To sum up the econometric work, the rate of unemployment is a key determinant behind support for the euro and trust in the ECB and national government.

#### 7. Why is popular support of the euro so important? Two recent cases

We have argued that popular support of the common currency is crucial for its sustainability. Here we illustrate this argument by discussing two recent cases.

*The case of Italy in 2018.* The case of Italy in 2018 offers a powerful example of why majority public support for the euro is a key determinant to its long-term survival, even if there is a loss of trust in the ECB and the national government. After more than a decade of economic distress, higher than EA-average unemployment and lower than EA-average trust in the national government, a coalition government of major populist parties was formed in May 2018. The new coalition government intended to nominate a finance minister known to be critical of the euro. Such a nomination would have significantly damaged cooperation among European policymakers. The Italian president ultimately prevented the nomination.

Most likely, the political legitimacy for such an action is based on the fact that a majority of Italian citizens has supported the euro for over three decades, since the first plans of monetary unification were floated in 1990. Similarly, announcements of a potential Italian referendum on the euro by the populist government never occurred due to the popularity of the currency.

In short, the attempt by the Italian populist coalition government to dismantle EA cooperation was effectively countered by the popularity of the euro, serving in this way as a shield against populism. A similar story can be told in the case of France. The populist party of Marie Le Pen has dropped its critique of the euro.

*The case of the ECB to become the lender of last resort in the government bond market*. It took the ECB four years after the start of the crisis in 2008 to turn into the lender of last resort in the government bond market of the EA in 2012. The announcement by the president of the ECB in July 2012 to "do whatever it takes" swiftly resolved the sovereign debt crisis in the EA. The quantitative easing (QE) programme implemented from 2015 to 2018 paired with a European Investment plan contributed to the recovery from 2013 onwards. Given the loss of majority

trust in the ECB during the crisis, the large public support for the euro granted the ECB political legitimacy to secure its independence against growing criticism against its actions.

#### 8. Conclusions

In our analysis of the Eurobarometer database for the first two decades of the euro's existence, from 1999 to 2018, we find that a majority of the respondents supports the euro in each member country of the euro area. Although the crisis in the EA led to a slight decline in public support, the recovery since 2013 has triggered an upturn in support. As the euro turns 20, the currency enjoys historically high levels of support among the citizens of the EA. We detect a similar, although less pronounced rise in trust in the ECB.

Looking ahead, we argue that the high esteem in which the euro is held by a persistent majority makes it well equipped to weather the challenges it will surely face in its third decade. Our results suggest that keeping unemployment and inflation at bay, particularly the former, will be important for sustaining public support for the euro and public trust in the ECB. Ultimately, the public judges the euro and the ECB on the basis of the economic performance within the euro area. This gives policymakers in the member states an important responsibility to design measures that succeed in enhancing both growth and employment.

References

- Baldwin, R.E. and Wyplosz, C. (2015). *The Economics of European Integration* (London: McGraw-Hill).
- Banducci, S.A., Karp, J.A. and Loedel, P.H. (2003). 'The Euro, Economic Interests and Multi-Level Governance: Examining Support for the Common Currency'. *European Journal of Political Research*, Vol. 42, No. 5, pp. 685–703.
- Banducci, S.A., Karp, J.A. and Loedel, P.H. (2009). 'Economic Interests and Public Support for the Euro'. *Journal of European Public Policy*, Vol. 16, No. 4, pp. 564-81.
- Bordo, M.D. and Jonung, L. (2000). *Lessons for EMU from the History of Monetary Unions*, with an introduction by Robert Mundell, IEA, Readings 50, London.
- Bordo, M.D. and Jonung, L. (2003). 'The Future of EMU—What Does the History of Monetary Unions Tell Us?'. In Capie, F. and Woods, G. (eds) *Monetary Unions, Theory, History, Public Choice* (London: Routledge), pp. 42-69.
- Deroose, S., Hodson, D. and Kuhlmann, J. (2007). 'The Legitimation of EMU: Lessons from the Early Years of the Euro'. *Review of International Political Economy*, Vol. 14, No. 5, pp. 800–19.
- European Commission (2018). 'Standard Eurobarometer Nos. 51-90'.
- Frieden, J. and Walter, S. (2017). 'Understanding the Political Economy of the Eurozone Crisis'. Annual Review of Political Science, Vol. 20, pp. 371-90.
- Guiso, L., Sapienza, P. and Zingales, L. (2016). 'Monnet's Error?'. *Economic Policy*, Vol. 31, No. 86, pp. 247-97.
- Hobolt, S.B. and Leblond, P. (2014). 'Economic Insecurity and Public Support for the Euro: Before and During the Financial Crisis'. In Bermeo, N. and Bartels, L.M. (eds) *Mass Politics in Tough Times* (Oxford: Oxford University Press), pp. 128-47.
- Hobolt, S.B. and Wratil, C. (2015). 'Public Opinion and the Crisis: The Dynamics of Support for the Euro'. *Journal of European Public Policy*, Vol. 22, No. 2, pp. 238–56.
- Kaltenthaler, K. and Anderson, C. (2001). 'Europeans and Their Money: Explaining Public Support for the Common European Currency'. *European Journal of Political Research*, Vol. 40, No. 2, pp. 139–70.
- Roth, F. (2015). Political Economy of EMU: Rebuilding Systemic Trust in the Euro Area in Times of Crisis, DG ECFIN's *European Economy Discussion Paper 16*.
- Roth, F., Jonung, L. and Nowak-Lehmann, F. (2016). 'Crisis and Public Support for the Euro, 1990-2014'. *Journal of Common Market Studies*, Vol. 54, No. 4, pp. 944-60.
- Roth, F., Baake, E., Jonung, L. and Nowak-Lehmann, F. (2019). 'Revisiting Public Support for the Euro: Accounting for the Crisis and the Economic Recovery, 1999-2017'. *Journal of Common Market Studies*, forthcoming.
- Stiglitz, J.E. (2016). The Euro (London: Penguin Books).

Verdun, A. (2016). 'Economic and Monetary Union'. In Cini, M. and N. Borragan (eds) European Union Politics (Oxford: Oxford University Press), pp. 295-307.

## Appendix:

Country	CR-RE	Euro	ECB	NG	CR	Euro	ECB	NG	RE	Euro	ECB	NG
Austria	2018-2008	8	-8	20	2013-2008	-3	-17	11	2018-2013	11	9	9
Belgium	2018-2008	2	-29	22	2013-2008	-15	-38	14	2018-2013	17	9	8
Cyprus	2018-2008	28	-69	-82	2013-2008	-22	-120	-92	2018-2013	50	51	10
Germany	2018-2008	25	-25	37	2013-2008	-4	-44	19	2018-2013	29	19	18
EA19	2018-2008	15	-33	3	2013-2008	-8	-50	-25	2018-2013	23	17	28
Estonia	2018-2008	-	-	-	2013-2008	-	-	-	2018-2013	25	8	47
Greece	2018-2008	35	-51	-39	2013-2008	22	-63	-50	2018-2013	13	12	11
Spain	2018-2008	20	-67	-77	2013-2008	-26	-100	-103	2018-2013	46	33	26
Finland	2018-2008	7	2	-7	2013-2008	-8	-30	-7	2018-2013	15	32	0
France	2018-2008	3	-28	-5	2013-2008	-16	-32	-11	2018-2013	19	4	6
Ireland	2018-2008	-4	-37	2	2013-2008	-32	-72	-46	2018-2013	28	35	47
Italy	2018-2008	9	-34	21	2013-2008	2	-48	-12	2018-2013	7	14	33
Lithuania	2018-2008	-	-	-	2013-2008	-	-	-	2018-2013	-	-	-
Luxembourg	2018-2008	10	-20	18	2013-2008	-10	-19	5	2018-2013	20	-1	13
Latvia	2018-2008	-	-	-	2013-2008	-	-	-	2018-2013	-	-	-
Malta	2018-2008	4	5	18	2013-2008	-10	-9	14	2018-2013	14	14	4
Netherlands	2018-2008	0	-35	29	2013-2008	-23	-56	-11	2018-2013	23	21	40
Portugal	2018-2008	40	-20	19	2013-2008	-5	-70	-49	2018-2013	45	50	68
Slovenia	2018-2008	-7	-58	-17	2013-2008	-26	-64	-45	2018-2013	19	6	28
Slovakia	2018-2008	-	-	-	2013-2008	-	-	-	2018-2013	4	-3	11

Table A1: Changes in net support for the euro, EA-19, 2018-2008, 2013-2008 and 2018-2013

Data sources: EB69-EB90 and Eurostat.

Table A2: Summary statistics for the macro analysis, 19	999-2018
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Variable	Ν	Mean	Std. dev.	Min.	Max.
Net support for the euro	578	47	18.7	-9	85
Net trust in the European Central Bank	578	14.3	27.1	-69	70
Net trust in the national government	533	-17.4	32.4	-85	61
Unemployment rate	578	8.8	4.5	1.9	27.7
Inflation	578	0.8	1.0	-3.7	5.2
GDP per capita growth	578	0.7	1.8	-7.4	17.0

*Notes:* N = Number of observations; Std. dev. = Standard deviation; Min. = Minimum; Max. = Maximum.

Data sources: EB51-EB90 and Eurostat.

#### Table A3: Pesaran's CADF panel unit root tests, EA-19 countries

Variable	Observations	CADF- Zt-bar	Probability	
Net support for the euro	562	2.05	0.98	
Net trust in the ECB	562	-1.06	0.15	
Net trust in the national government	517	-0.18	0.43	
Unemployment	562	2.72	0.99	
Inflation	562	0.77	0.78	
GDP per capita growth	562	0.62	0.73	

*Notes*: H<sub>0</sub>: series has a unit root (individual unit root process). H<sub>a</sub>: at least one panel is stationary. Table A3 shows that all series have a unit root. A time trend and two lagged differences were utilized. Three lagged differences were utilized for inflation, GDP per capita growth and Net trust in the ECB. Latvia and Lithuania were not included due to the brevity of their time series.

#### Table A4: Kao's residual cointegration test, EA-19 countries

Cointegration between the following set of variables:	Number of included observations	ADF-t-statistic	Probability
Net support for the euro, unemployment, inflation, GDP per capita growth	579	-1.8	0.034
Net trust in the ECB, unemployment, inflation, GDP per capita growth	579	-1.3	0.090
Net trust in the national government, unemployment, inflation, GDP per capita growth	579	-1.7	0.041

Notes: H<sub>0</sub>: no cointegration. Table A4 shows that the series are cointegrated and thus stand in a long-run relationship.

## Figure A1





Data sources: EB51-EB90 and Eurostat.