After 25 Years as Faithful Members of the EU. Public Support for the Euro and Trust in the ECB in Austria, Finland and Sweden

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September 8, 2020

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Abstract: Austria, Finland and Sweden became members of the EU in 1995. This paper examines how support for the euro and trust in the European Central Bank (ECB) have evolved in these three countries since their introduction at the turn of the century. Support for the euro in the two euro-area members Austria and Finland has remained high and relatively stable since the physical introduction of the new currency nearly 20 years ago, while the euro crisis significantly reduced support for the euro in Sweden. Since the start of the crisis, trust in the ECB was strongly influenced by the pronounced increase in unemployment in the euro area, demonstrating that the ECB was held accountable for macroeconomic developments. Our results indicate that citizens in the EU, both within and outside the euro area, judge the euro and the ECB based on the economic performance of the euro area. Thus, the best way to foster support for the euro and trust in the ECB is to pursue policies aimed at achieving low unemployment and high growth.

JEL code: E42, E52, E58, F33, F45.

Key words: euro, trust, ECB, EU, monetary union, Austria, Finland, Sweden

This paper was initially prepared for the conference *The EU's "Northern" Enlargement 25 Years on: A Comparative Stocktaking and Outlook*, arranged as the 47th OeNB Economics Conference, in cooperation with SUERF, Bank of Finland, Sveriges Riksbank and Norges Bank. The conference was scheduled for May 7th and 8th, 2020 in Vienna. Due to the corona pandemic, the conference was cancelled. This report will be presented at the live online seminar "25 years of EU Northern Enlargement" of the Oesterreichische Nationalbank in cooperation with SUERF on 21st of September, 2020. It will be published in *Conference Volume: 47th Economics Conference 2020 of the OeNB in cooperation with SUERF - 25 years of "Northern" EU enlargement.*

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1. Introduction[1]

In 1995 Austria, Finland and Sweden joined the European Union. A few years later, Austria and Finland joined as founding members of the common currency, the euro, whereas Sweden, following a public referendum in 2003, chose to remain outside and to maintain the krona as its national currency.[2] Now, after a quarter of a century of EU membership, we look back and trace how the public in these three countries has regarded the performance of the common currency and the European Central Bank (ECB). In short, we trace the evolution of public support for the euro and of public trust in the ECB using survey data produced regularly by the Eurobarometer.

These three countries share many traits. They are small open economies, with most of their trade conducted within the EU. Moreover, none of them is party to a military pact. But they differ in their monetary arrangements, with Sweden declining to join the euro area (EA), while Austria and Finland became members from its very start at the turn of the century. We will examine how this fact has impacted the outlook of Swedes compared to the views of Austrians and Finns.

Our paper is organized in the following way. We first describe the data used. Second, we give a short account of the main findings, focusing in particular on the impact of the economic crisis in the euro area and of the post-crisis recovery on the public's response. As a third step, we introduce econometric results to trace the determinants of the views of the public. We explain the different patterns in the three countries, stressing the path dependence created by the prevailing monetary system, and finally offer our conclusions.

To the best of our knowledge, there is no study of a similar kind comparing cross-country patterns among these three countries.

[1] We have received constructive comments from Michael Bergman, Jesper Hansson, Felicitas Nowak-Lehmann D. and Thomas Straubhaar.
[2] For an analysis of the 2003 referendum on the euro in Sweden, see Jonung (2004).

2. Data used

We use survey data from the biannual Eurobarometer for the period 1999 to 2019. These surveys turn to a representative set of respondents with the following question: "*What is your opinion of 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*". There are three alternative responses: "*For*", "*Against*", "*Don't know*" and after Eurobarometer number 90, "*Spontaneous refusal*". The replies to this question are used to construct our series for support for the euro.

Our measure for trust in the ECB is based on responses to the following question: "*Please tell me if you tend to trust or not to trust these European institutions. The European Central Bank.*" Respondents have three choices: "*Tend to trust*", "*Tend not to trust*", and "*Don't know*".

As a measure of net public support, we use the number of '*For*' responses minus the number of '*Against*' responses, according to the expression: Net support = (For – Against)/(For + Against + Don't Know). Net public trust is measured by the number of '*Tend to trust*' responses minus '*Tend not to trust*' responses, according to the expression: Net trust = (Trust – Tend not to trust)/(Trust + Tend not to trust + Don't Know).

3. The main patterns

First, we focus on the public support for the euro across all EU member states by examining the response pattern within the euro area (EA-19) and outside the euro area (non-EA-9) before we turn to the evidence for Austria, Finland and Sweden. We also bring in the average rate of unemployment in the EA-19 because this variable represents the state of the euro area economy for the respondents.

3.1. Support for the euro

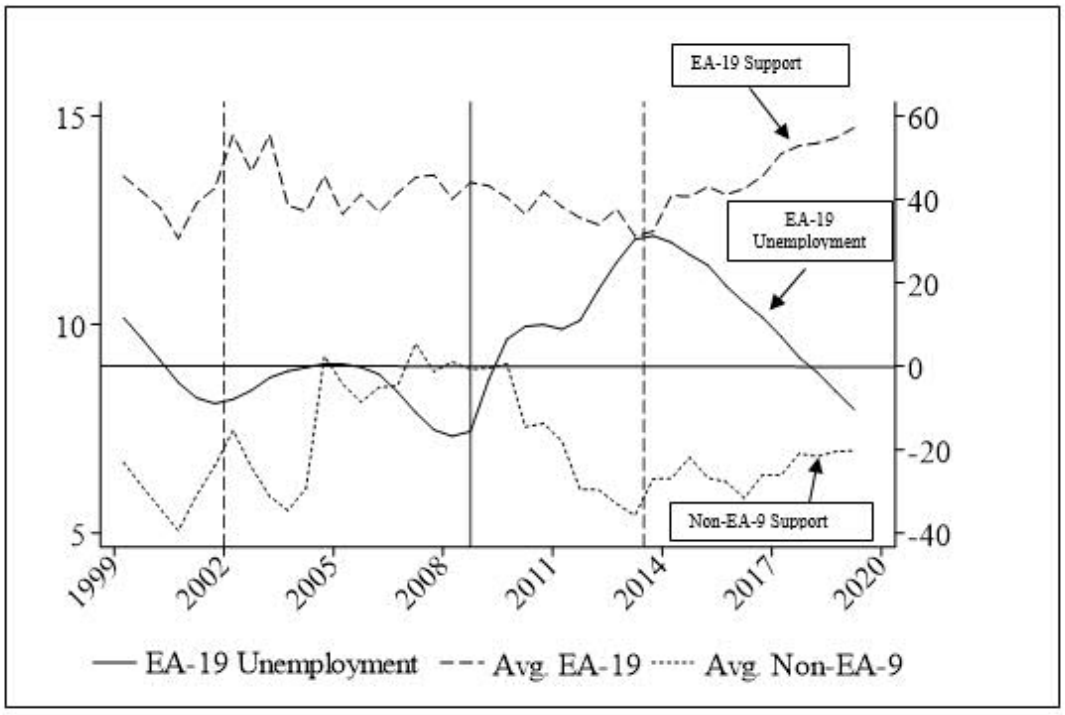
Figure 1 plots the EA-19 unemployment rate against public support for the euro inside the EA-19 as well as public support for the euro in EU member countries outside the EA19 – the non-EA-9. During the crisis of 2008-2013, the EA-19 unemployment rate rose sharply. Whereas this increase of unemployment in the EA-19 only slightly dented public support for the euro *inside* the EA-19, it led to a strong decline in public support for the euro *outside* the EA-19. In contrast, while the fall in unemployment during the recovery 2013-2019 significantly

strengthened public support for the euro *inside* the EA-19, it only led to a minor recovery in support for the euro *outside* the EA-19.

We conclude from Figure 1 that the fact of being *outside* the euro area during the euro crisis had the effect of permanently lowering public support for the euro. The euro was blamed for the crisis, while support for the national currency increased. Thus, there is a strong path dependence in the response of the public. The same reaction is documented for the euro area in the sense that here the euro is the national currency, and thus its support was fostered by the fall in the rate of unemployment during the recovery following the euro crisis.

Figure 1

The rate of unemployment in the EA-19 and net support for the euro in the EA-19 and non-EA-9, 1999-2019



Note: The left-hand y-axis plots the EA-19 unemployment rate in percent. The right-hand y-axis displays net support. As the figure depicts net support, all values above 0 indicate that a majority of the respondents support the euro. The vertical lines represent three milestones in the history of the single currency: the physical introduction of the euro in January 2002, the start of the financial crisis in September 2008 and the start of the recovery at the end of 2013. EA-19 unemployment rates, net support data in the EA-19 and in the non-EA-9 are population-weighted.

Data source: Eurostat and Standard Eurobarometer 51-91. Figure 1 is an updated and modified version of Figure 8.1 in Roth and Jonung (2020).

Next, we turn to the question of how the increase in unemployment affects public support in the individual countries inside and outside the euro area. Figure 2 plots the EA-19 unemployment rate against public support for the euro in the 19 individual euro area member countries.

Given our focus on Austria and Finland, these two countries are highlighted in Figure 2. During the early phase of the euro, only a slight majority supported the new currency in Austria (at 10 percent) in the spring of 2000, and a slight minority supported the new currency in Finland in the autumn of both 1999 and 2000, at -2 and -4 percent, respectively.

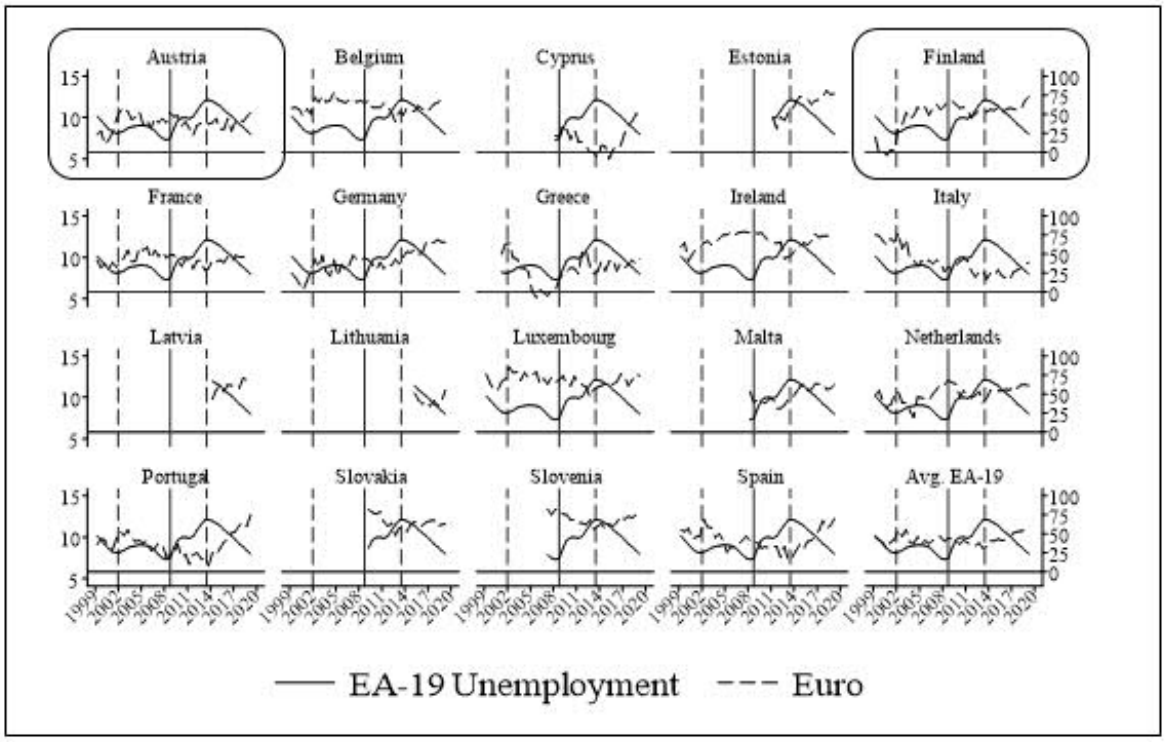
A striking feature is that support for the euro rose sharply in Austria and Finland prior to the introduction of the euro as a physical currency in the start of 2002. It then remained at a high level until 2008, when it fell slightly during the crisis of 2008-2013, and from 2013 to 2018, it stayed relatively stable, at which time it once more rose sharply. In November 2019 public support for the euro has increased to a net support of 52 percent in Austria and to an all-time high of 73 percent in Finland.

Overall, the two euro-area members Austria and Finland have displayed stable support for the common currency since its physical introduction in 2002, remaining higher in Finland than in Austria since 2004. As seen in Figure 2 – in line with the general trend in each of the EA-19 countries – the increase in unemployment in the EA-19 is negatively related to public support for the euro.[3] A detailed picture directly comparing Austria and Finland is found in Figure A1 in the Appendix.

[3] This is also seen from the negative correlation coefficients displayed in Table A1 in the Appendix for Austria and Finland during the crisis of -0.56 and -0.72, and of -0.54 and -0.71 during the recovery, respectively. The overall negative correlation coefficient for the EA-19 is -0.84 for the crisis period and -0.95 for the recovery period.

Figure 2

The rate of unemployment in the EA-19 and net support for the euro in individual EA-19 states, 1999-2019



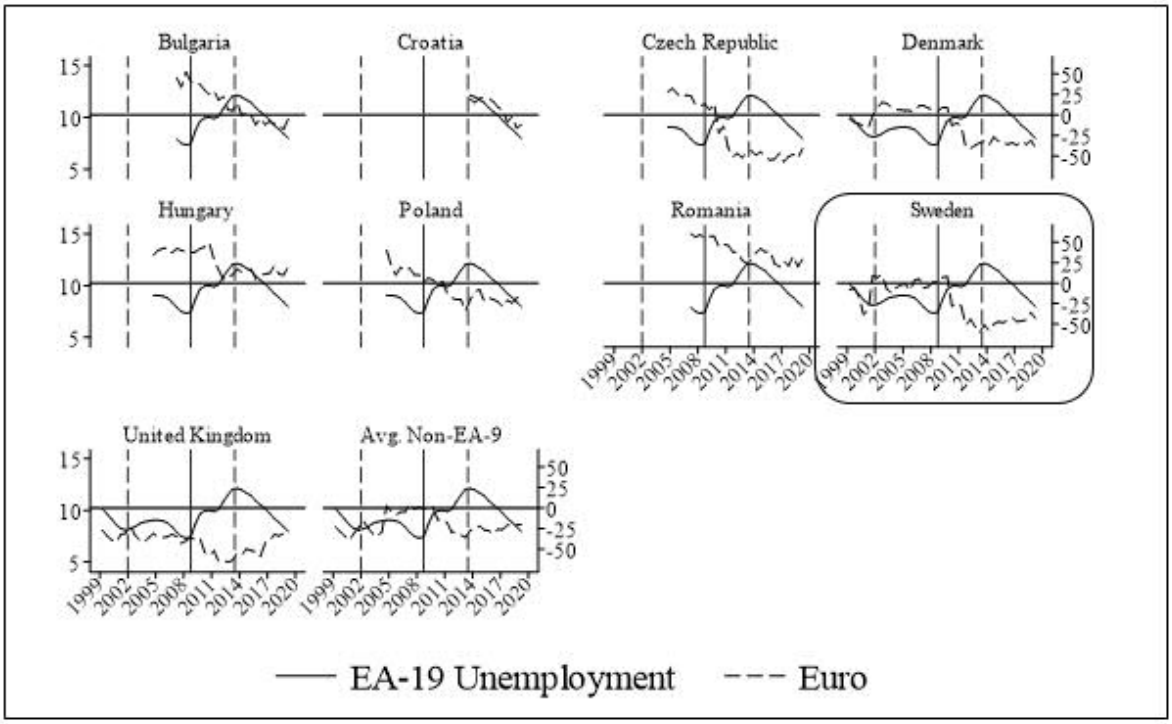
Note: The left-hand y-axis plots the EA-19 unemployment rate in percent. The right-hand y-axis displays net support. As the figure depicts net support, all values above 0 indicate that a majority of the respondents support the euro. The vertical lines represent three milestones in the history of the single currency: the physical introduction of the euro in January 2002, the start of the financial crisis in September 2008 and the start of the recovery at the end of 2013.

Data source: Eurostat and Standard Eurobarometer 51-91. Figure 2 is an updated and modified version of Figure 8.A1 in Roth and Jonung (2020) and Figure A6 in Roth *et al.* (2016).

We now turn our attention to the nine EU member countries outside the EU-19, as shown in Figure 3. The Swedish pattern stands out as significantly different from that of Austria and Finland. Net public support for the euro is barely positive until 2009, when the euro crisis first erupts. In the following years, support falls sharply till 2013, reaching a low of -60 percent. From then on, it displays a small increase but stays in negative territory. The strong negative correlation coefficient of -0.84 (as displayed in Table A1 in the Appendix) suggests that this decline is related to the pronounced increase in the average rate of unemployment *inside* the euro area. In short, the Swedish public associated the rise in unemployment within the euro area with the euro. A detailed picture directly comparing Sweden with Austria and Finland is displayed in Figure A1 in the Appendix.

Figure 3

The rate of unemployment in the EA-19 and net support for the euro in individual non-EA-9 states, 1999-2019



Note: The left-hand y-axis plots the EA-19 unemployment rate in percent. The right-hand y-axis displays net support. As the figure depicts net support, all values above 0 indicate that a majority of the respondents support the euro. The vertical lines represent three milestones in the history of the single currency: the physical introduction of the euro in January 2002, the start of the financial crisis in September 2008 and the start of the recovery at the end of 2013.

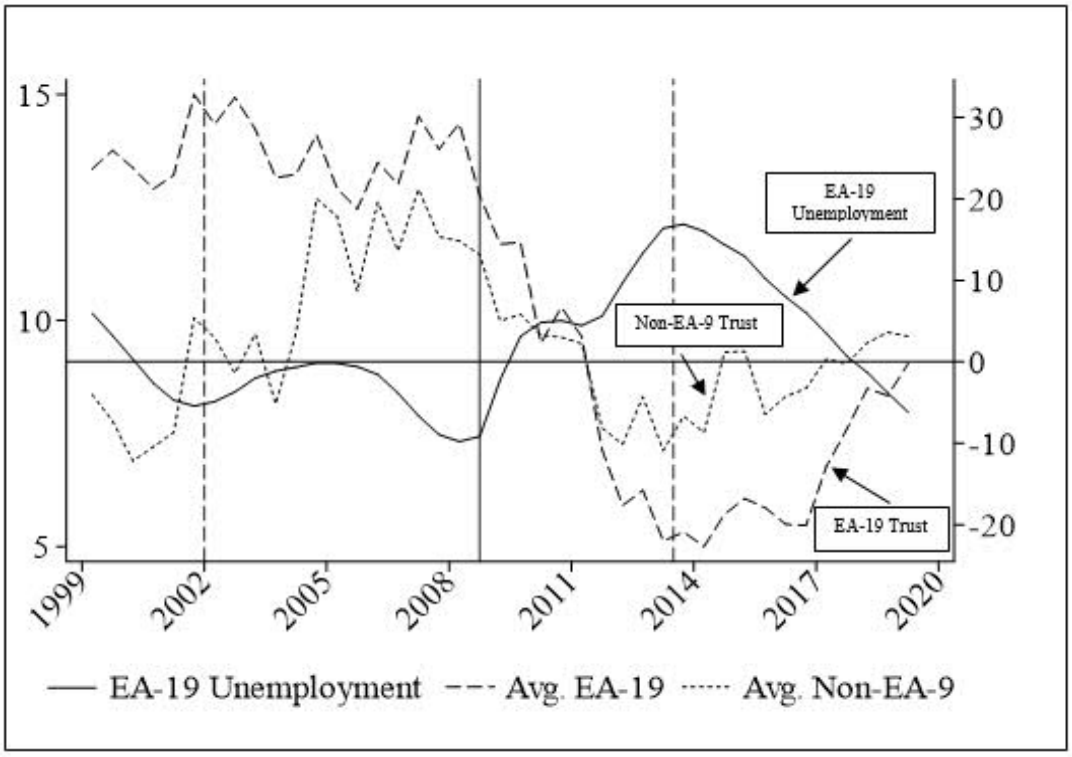
Data source: Figure 3 is an updated and modified version of Figure 8.3 in Roth and Jonung (2020), Figure A2 in Roth *et al.* (2016) and Figure A1 in Roth *et al.* (2019), based on data from Eurostat and Standard Eurobarometer 51-91.

3.2. Trust in the ECB

A different pattern emerges when comparing the EA-19 unemployment rate against net trust in the ECB in the countries inside the EA-19 and outside the EA-19 as displayed in Figure 4. During the crisis period 2008-2013, net trust in the ECB clearly declined. Although we detect a significant decline in net trust in the ECB *outside* the EA, the decline was less pronounced than *inside* the EA. The unemployment recovery 2013-2019 led to a pronounced increase in net trust in the ECB *inside* the EA-19.

Figure 4

The rate of unemployment in the EA-19 and net trust in the ECB in the EA-19 and non-EA-9, 1999-2019

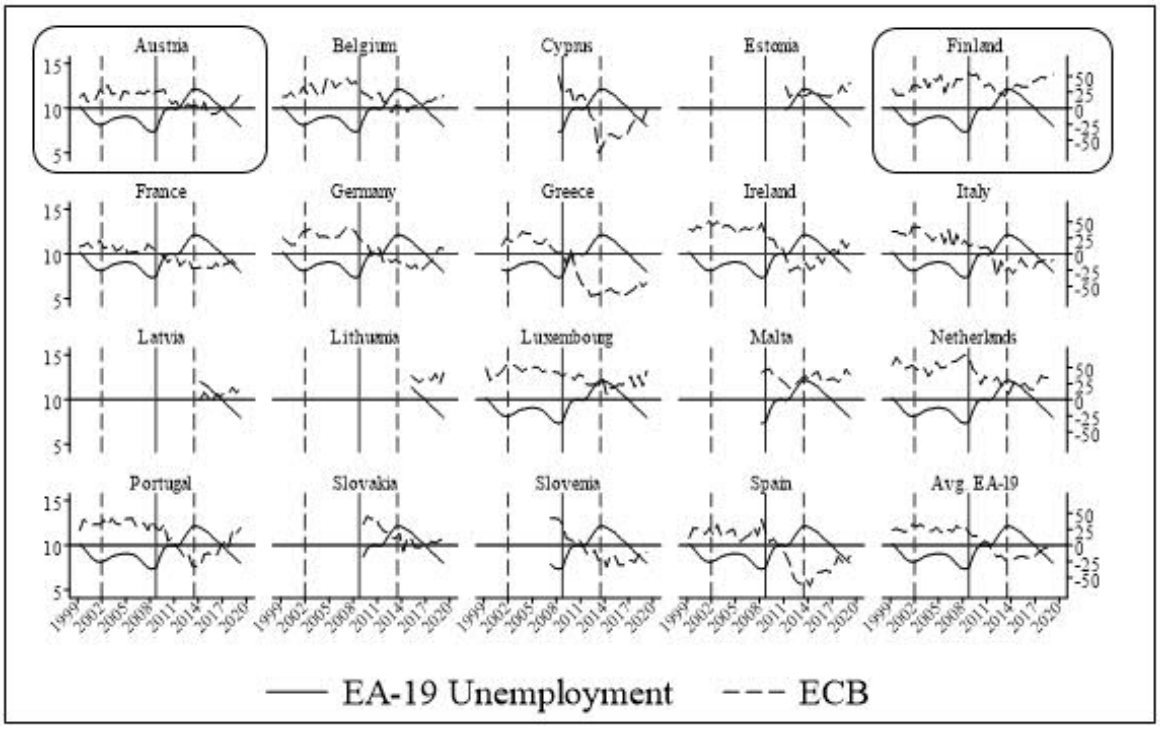


Note: The left-hand y-axis plots the EA19-unemployment rate in percent. The right-hand y-axis displays net trust. As the figure depicts net trust, all values above 0 indicate that a majority of the respondents trust the ECB. The vertical dashed lines represent three milestones in the history of the ECB: the physical introduction of the euro in January 2002, the start of the financial crisis in September 2008 and the start of the recovery at the end of 2013. Unemployment rates and net trust values in the EA-19 and in the non-EA-9 are population-weighted.
Data source: Eurostat and Standard Eurobarometer 51-91. Figure 4 is an updated and modified version of Figure 8.1 in Roth and Jonung (2020).

How has trust in the ECB evolved in the individual countries inside and outside the euro area? The answer is given in Figures 5 and 6. Again, focusing on Austria, Finland and Sweden, we observe that all three countries display a similar pattern. Trust was rising from 1999 to 2008/2009 and then it fell during the euro crisis and began to rise again after 2013/2014. Trust is highest in Finland, followed by Sweden and then Austria. A direct comparison of the three countries is found in Figure A2 in the Appendix.

Figure 5

The rate of unemployment in the EA-19 and net trust in the ECB in the individual EA-19 states, 1999-2019

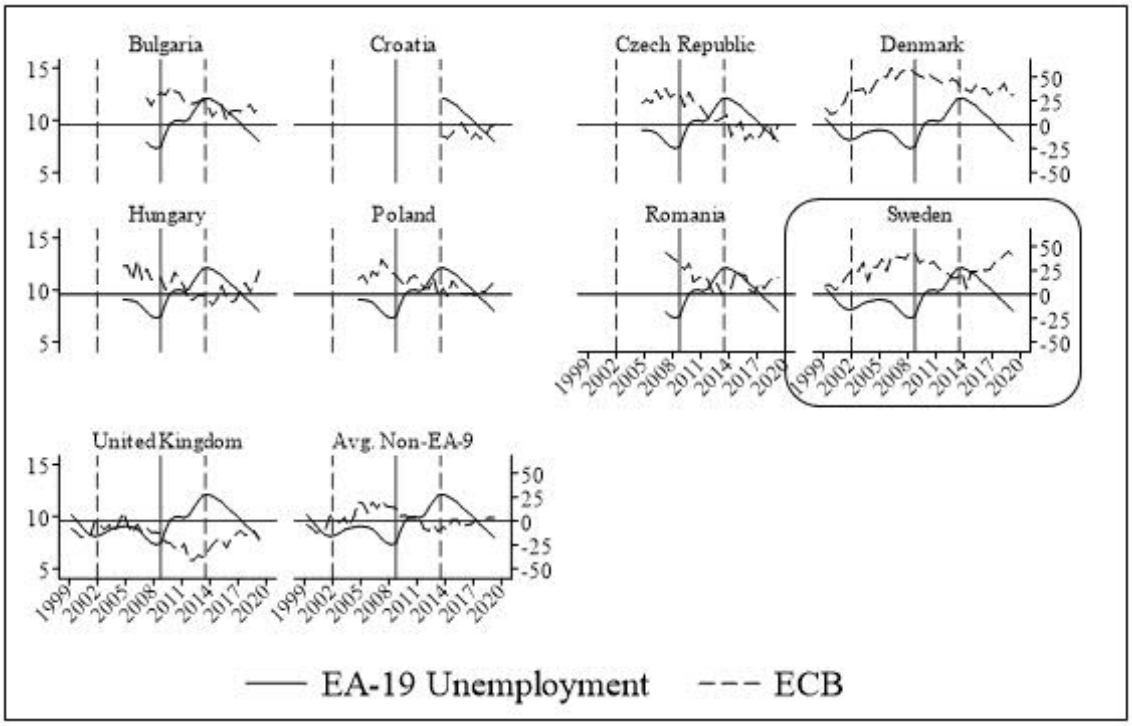


Notes: The left-hand y-axis plots the unemployment rate in percent. The right-hand y-axis displays net trust. As the figure depicts net trust, all values above 0 indicate that a majority of the respondents trust the ECB. The vertical lines represent three milestones in the history of the single currency: the physical introduction of the euro in January 2002, the start of the financial crisis in September 2008 and the start of the recovery at the end of 2013. EA-19 unemployment rates are population-weighted.

Data source: Eurostat and Standard Eurobarometer 51-91. Figure 5 is an updated and modified version of Figure 8.2a and b in Roth and Jonung (2020).

Figure 6

The rate of unemployment in the EA-19 and net trust in the ECB outside the EA-19 states, 1999-2019



Notes: The left-hand y-axis plots the unemployment rate in percent. The right-hand y-axis displays net trust. As the figure depicts net trust, all values above 0 indicate that a majority of the respondents trust the ECB. The vertical lines represent three milestones in the history of the single currency: the physical introduction of the euro in January 2002, the start of the financial crisis in September 2008 and the start of the recovery at the end of 2013. EA-19 unemployment rates are population-weighted.

Data source: Eurostat and Standard Eurobarometer 51-91. Figure 6 is an updated and modified version of Figure 8.3 in Roth and Jonung (2020).

4. Econometric results

Here we take a more systematic look on the data displayed in Figures 1-6. We do so by first estimating support for the euro using the following model:

$$Support\ Euro_{it} = \alpha_i + \beta_1\ EA\text{-}19\ Unemployment_{it} + \chi_1\ EA\text{-}19\ Inflation_{it} + \delta_1\ EA\text{-}19\ Growth_{it} + \phi_1\ EA\text{-}19\ Z_{it} + w_{it}, \quad (1)$$

Next, we estimate trust in the ECB using this model:

$$Trust\ ECB_{it} = \alpha_i + \beta_1\ EA\text{-}19\ Unemployment_{it} + \chi_1\ EA\text{-}19\ Inflation_{it} + \delta_1\ EA\text{-}19\ Growth_{it} + \phi_1\ EA\text{-}19\ Z_{it} + w_{it}, \quad (2)$$

where *Support Euro*$_{it}$ is net support for the euro and *Trust ECB*$_{it}$ is net trust in the ECB for country *i* during period *t*. *EA-19 Unemployment*$_{it}$, *EA-19 Inflation*$_{it}$, *EA-19 Growth*$_{it}$ and *EA-19 Z*$_{it}$ are, respectively, the *EA-19* population-weighted average for unemployment, inflation, growth of GDP per capita and control variables deemed of potential importance, which can be lumped together in Z.[4] α_i represents a country-specific constant term (fixed effect), and w_{it} is the error term.

Table 1 displays the econometric results for a Fixed Effects Dynamic Feasible Generalized Least Square (FE-DFGLS) estimation for our three macro variables on public support for the euro and trust in the ECB inside the EA-19 against the member countries outside the EA-19 – the non-EA-9.

Table 1

The rate of unemployment in the EA-19 and net support for the euro, net trust in the ECB, inside and outside the EA-19, FE-DFGLS Estimation, 1999-2019

Regression	(1)	(2)	(3)	(4)
Dependent variable	Euro	Euro	ECB	ECB
Country sample	EA-19	Non-EA-9	EA-19	Non-EA-9
Period	FS	FS	FS	FS
EA-19 Unemployment	**-4.2*** **	**-7.1*** **	**-11.6*** **	**-6.8*** **
	(0.91)	(1.82)	(1.18)	(1.10)
EA-19 Inflation	**-12.0*** **	**-13.6*** **	**-10.6*** **	**-11.3*** **
	(3.34)	(4.88)	(3.70)	(4.30)
EA-19 GDP per capita growth	2.8	1.5	**10.5*** **	**10.7** **
	(3.52)	(5.39)	(3.91)	(4.65)
Durbin-Watson statistic	2.26	2.06	2.41	2.40
Adjusted R-Squared	0.82	0.93	0.90	0.90
Country fixed effects	Yes	Yes	Yes	Yes
Control for endogeneity	Yes	Yes	Yes	Yes
Elimination of first-order autocorr.	Yes	Yes	Yes	Yes
Observations	527	233	527	233
Time observations T	35	35	35	35
Country observation N	19	9	19	9

Notes: FS=Full sample, 1999-2019. Standard errors are in parentheses. ***p<0.01 and **p<0.05.

[4] 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 A2-A4 in the Appendix), we are confident that these Z-variables do not cause bias in the coefficients of unemployment, inflation and growth.

Regression (1) in Table 1 depicts our econometric results for the EA-19 countries. The results demonstrate that a 1 percentage increase in the average EA-19 unemployment rate is associated with an average decline of 4.2 percentage points in net support for the euro among the 19 individual EA countries. Moreover a 1-percentage point increase in inflation is associated with a decline in net support of 12 percentage points.

Regression (2) in Table 1 depicts the results for the EU member states outside the EA-19. Interestingly, we find that the unemployment coefficient is almost twice as high as inside the EA-19. Outside the EA-19, a 1-percentage point increase in the EA-19 unemployment rate is associated with an average decline of 7.1 percentage points in net support for the euro. With a coefficient of -13.6, inflation exhibits a similar coefficient, as inside the EA. The econometric results support our findings from the graphic analysis in Figures 1-3. Due to a twice-as-large-impact of unemployment on public support for the euro, we conclude that the strong increase of the EA-19 unemployment rate from 2008 to 2013 played a significant role in explaining the pronounced decline in public support in Sweden during the crisis.

Regressions (3) and (4) show that the opposite holds for net trust in the ECB. The unemployment coefficient inside the EA (-11.6) is almost twice as large as outside the EA (-6.8). This pattern explains why trust in the ECB declined more strongly inside the EA than outside the EA.

5. Why is support for the euro more stable than trust in the ECB?

Support for the euro has hovered at a relatively stable level within the euro area throughout the first 20 years of the common currency, while trust in the ECB fell sharply during the crisis years of 2008-2013, followed by a rise during the subsequent recovery. This difference in support raises the question: What were the driving forces behind this pattern? It may at first glance appear to be a riddle: Why did trust in the central bank decline while support for the currency supplied by the very same central bank remained constant?

We have given a reply to this question in an earlier study – see Roth and Jonung (2020). Here we simply reiterate our explanation. The public in the euro area distinguishes between the microeconomic role of the euro as its medium of exchange and its store of value from the macroeconomic role of the euro with the ECB as its central bank. The euro as a currency has given stability to the European public. Inflation has remained at a low and stable level.

Nevertheless, the public associates negative macroeconomic developments, as reflected by high unemployment and low growth, with actions of the ECB. Thus, the trust in the ECB, which was lost during the euro crisis, has not so far been fully regained. This will likely take a long time.

6. Conclusions

We find that support for the euro and trust in the ECB during the first 20 years of the euro were strongly influenced by macroeconomic developments in the euro area, as primarily measured by the rate of unemployment. The effects differ significantly between members of the euro area, such as Austria and Finland, and EU members outside the euro area, such as Sweden.

Concerning public support behind the euro, the negative relationship with the rate of unemployment in the EA-19 is much higher outside the euro area than inside. The pronounced increase of unemployment inside the euro area during the euro crisis led to a strong decline in support for the euro in countries outside the euro area, such as Sweden. In countries inside the euro area, e.g. Austria and Finland, support for the euro declined only slightly during the euro crisis. It increased during the recovery while it remained stable at a low level in Sweden.

Conversely, the opposite holds for trust in the ECB. We find that the unemployment coefficient inside the euro area is almost twice as large as outside. The ECB was thus made accountable for macroeconomic developments within the euro area.

Our results indicate that citizens in the EU, both within as well as outside the euro area, judge the euro and the ECB on the basis of the economic performance of the euro area. Thus, the best way to foster support for the euro and trust in the ECB is to promote policies within the EU that encourage low unemployment and high growth.

Finally, we ask a speculative question: Will Sweden join the euro? Judging from our data, such an event is highly unlikely in the wake of the euro crisis, which undermined support for the euro in that country. Still, Swedish monetary policy has closely followed that of the ECB. In this way, the country is acting as if it were a member of the euro area. Had Sweden joined the euro after the euro referendum in 2003, its support for the euro would most likely have been roughly as high as in Austria and Finland, as there is a considerable path dependence in the choice of national currency. Once a currency is introduced and the public becomes used to it, it

gains support over time, especially if unemployment is kept at bay and if growth develops in a positive way.

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Appendix

Table A1

Correlation Coefficients between the Rate of Unemployment in the EA-19, Net Support for the Euro and Net Trust in the ECB in the Individual EA-19 and non-EA-9 states, 1999-2008 (pre-crisis), 2008-2013 (crisis) and 2013-2019 (recovery)

	Recovery		**Crisis**		**Pre-Crisis**	
	Unemployment EA-19		Unemployment EA-19		Unemployment EA-19	
Country	Net Support	Net Trust	Net Support	Net Trust	Net Support	Net Trust
EA-19	-0.95	-0.68	-0.84	-0.84	-0.13	0.09
Austria	**-0.54**	**-0.58**	**-0.56**	**-0.75**	**-0.34**	**-0.28**
Belgium	-0.82	-0.89	-0.76	-0.88	-0.12	-0.43
Finland	**-0.71**	**-0.93**	**-0.72**	**-0.89**	**-0.31**	**-0.37**
France	-0.76	-0.63	-0.68	-0.8	-0.09	-0.06
Germany	-0.85	-0.71	-0.31	-0.84	-0.44	-0.65
Greece	-0.41	-0.69	0.4	-0.81	0.05	0.76
Ireland	-0.85	-0.91	-0.87	-0.82	-0.33	-0.42
Italy	-0.74	-0.64	-0.32	-0.74	0.36	0.26
Luxembourg	-0.71	-0.55	-0.72	-0.72	0.05	-0.11
Netherlands	-0.82	-0.74	-0.81	-0.92	-0.39	-0.28
Portugal	-0.97	-0.94	-0.29	-0.85	0.28	0.06
Spain	-0.96	-0.92	-0.78	-0.9	0.08	-0.39
Cyprus	-0.93	-0.92	-0.72	-0.8	xx	xx
Estonia	-0.70	-0.63	0.55	-0.51	xx	xx
Latvia	-0.72	-0.72	xx	xx	xx	xx
Lithuania	-0.61	-0.51	xx	xx	xx	xx
Malta	-0.51	-0.15	-0.17	-0.63	xx	xx
Slovakia	-0.38	-0.04	-0.31	-0.78	xx	xx
Slovenia	-0.91	-0.34	-0.87	-0.91	xx	xx
Non-EA-9	-0.22	0.03	-0.86	-0.84	-0.39	-0.65
Bulgaria	0.72	-0.18	-0.91	-0.51	-0.13	0.39
Croatia	0.92	-0.21	xx	xx	xx	xx
Czech Rep.	0.02	0.17	-0.79	-0.76	0.89	-0.51
Denmark	0.41	0.27	-0.78	-0.67	-0.32	-0.57
Hungary	-0.09	-0.75	-0.66	-0.54	-0.04	0.51
Poland	0.46	-0.16	-0.81	-0.56	0.57	-0.68
Romania	0.56	-0.09	-0.87	-0.87	0.48	-0.14
Sweden	**-0.77**	**-0.88**	**-0.84**	**-0.91**	**-0.16**	**-0.58**
United Kingdom	-0.89	-0.68	-0.84	-0.84	0.22	0.09

Note: Correlation coefficients for the recovery sample run from 2013-2019 and are based on 12 observations. The correlation coefficients for the crisis sample run from 2008-2013 and are based on 10 observations. The correlation coefficients for the pre-crisis sample run from 1999-2008 and are based on 19 observations.
Data source: EB51-EB91 and Eurostat.

Table A2

Summary statistics, EA-19 and non-EA-9 countries, 1999-2019

EA-19					
Variable	N	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	-69	70
EA-19 Unemployment rate	578	9.7	1.3	7.3	12.1
EA-19 Inflation	578	0.7	0.6	-0.6	2.1
EA-19 GDP per capita growth	578	0.5	1.1	-4.3	2.3
Non-EA-9					
Variable	N	Mean	Std. dev.	Min.	Max.
Net support for the euro	257	-6.2	31.9	-66	60
Net trust in the European Central Bank	257	14.4	21.1	-41	59
EA-19 Unemployment rate	257	9.7	1.3	7.3	12.1
EA-19 Inflation	257	0.7	0.6	-0.6	2.1
EA-19 GDP per capita growth	257	0.5	1.1	-4.3	2.3

Note: N = Number of observations; Std. dev. = Standard deviation; Min. = Minimum; Max. = Maximum.
Data source: EB51-EB91 and Eurostat.

Table A3

Pesaran's CADF Panel Unit Root Tests, EA-19 and non-EA-9 countries

EA-19			
Variable	Observations	CADF-Zt-bar	Probability
Net support for the euro	563	2.12	0.98
Net trust in the ECB	563	-1.09	0.14
EA-19 Unemployment	563	18.20	1.00
EA-19 Inflation	563	18.20	1.00
EA-19 GDP per capita growth	563	18.20	1.00
Non-EA-9			
Variable	Observations	CADF-Zt-bar	Probability
Net support for the euro	247	0.25	0.60
Net trust in the ECB	247	1.05	0.85
EA-19 Unemployment	247	12.48	1.00
EA-19 Inflation	247	12.48	1.00
EA-19 GDP per capita growth	247	12.48	1.00

Note: H_0: series has a unit root (individual unit root process). H_a: at least one panel is stationary. Table A3 shows that all series have a unit root. A time trend and two or three lagged differences were utilized. Latvia, Lithuania and Croatia were not included due to the brevity of their time series.

Data source: EB51-EB91 and Eurostat.

Table A4

Pedroni residual cointegration test, EA-19 and non-EA-9 countries

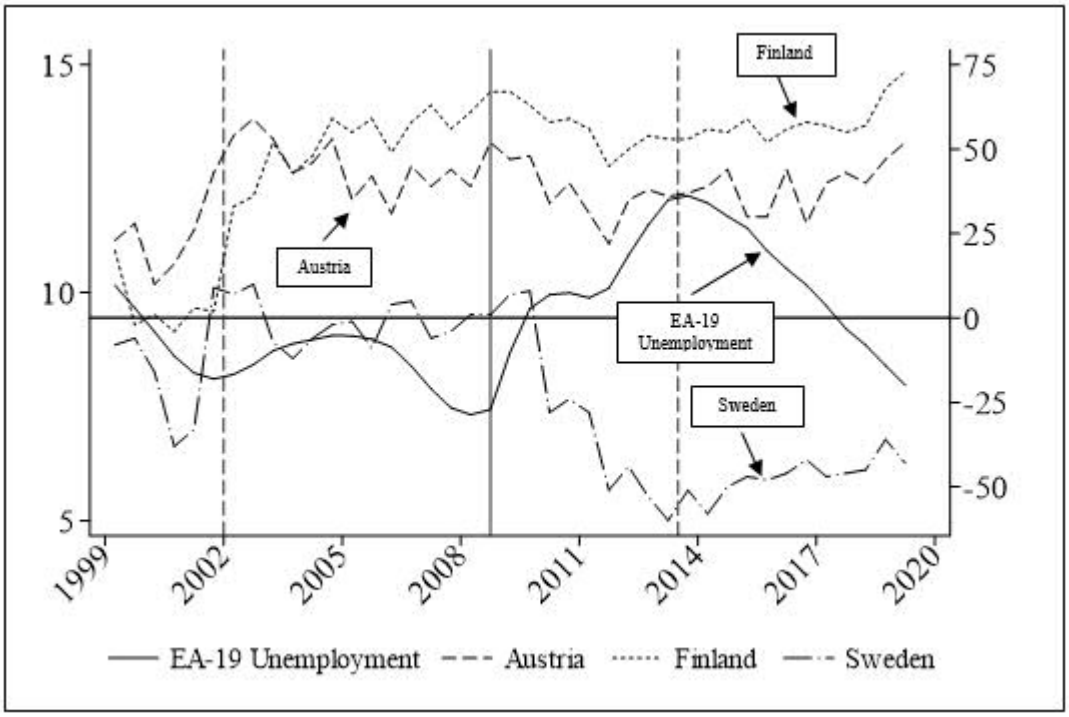
EA-19			
Cointegration between the following set of variables:	Observations	ADF-t-statistic	Probability
Net support for the euro, EA-19 unemployment, EA-19 inflation, EA-19 GDP per capita growth	617	-0.87	0.00
Net trust in the ECB, EA-19 unemployment, EA-19 inflation, EA-19 GDP per capita growth	617	-6.88	0.00
Non-EA-19			
Cointegration between the following set of variables:	Observations	ADF-t-statistic	Probability
Net support for the euro, EA-19 unemployment, EA-19 inflation, EA-19 GDP per capita growth	369	-3.67	0.00
Net trust in the ECB, EA-19 unemployment, EA-19 inflation, EA-19 GDP per capita growth	369	-3.15	0.00

Note: H_0: no cointegration. Table A4 shows that the series are cointegrated and thus stand in a long-run relationship.

Data source: EB51-EB91 and Eurostat.

Figure A1

The rate of unemployment in the EA-19 and net support for the euro in Austria, Finland and Sweden, 1999-2019

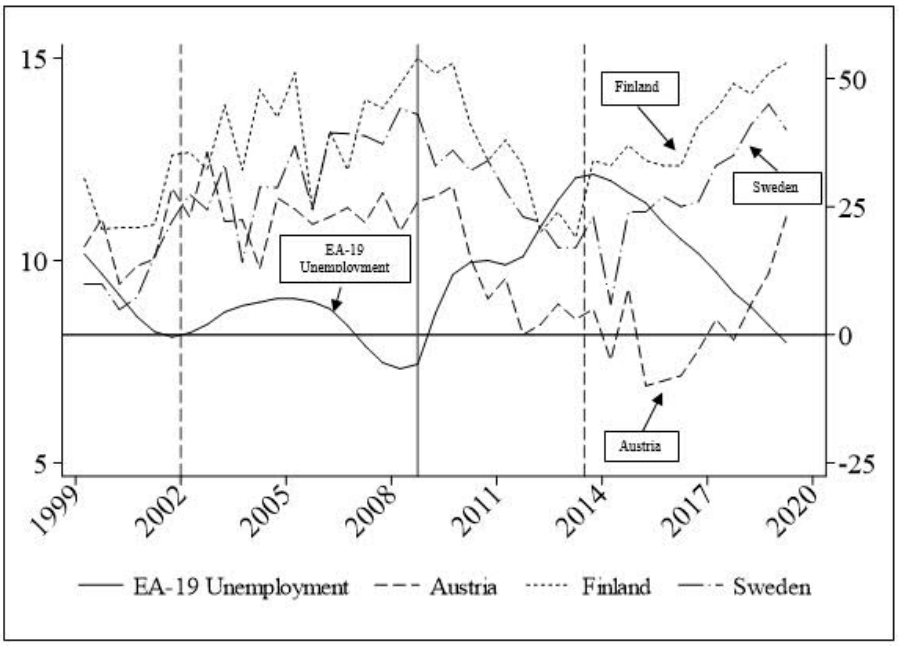


Note: The left-hand y-axis plots the EA-19 unemployment rate in percent. The right-hand y-axis displays net support. As the figure depicts net support, all values above 0 indicate that a majority of the respondents support the euro. The vertical lines represent three milestones in the history of the euro: the physical introduction of the euro in January 2002, the start of the financial crisis in September 2008 and the start of the recovery at the end of 2013.

Data source: Eurostat and Standard Eurobarometer 51-91.

Figure A2

The rate of unemployment in the EA-19 and net trust in the ECB in Austria, Finland and Sweden, 1999-2019



Notes: The left-hand y-axis plots the EA-19 unemployment rate in percent. The right-hand y-axis displays net trust. As the figure depicts net trust, all values above 0 indicate that a majority of the respondents trust the ECB. The vertical lines represent three milestones in the history of the ECB: the physical introduction of the euro in January 2002, the start of the financial crisis in September 2008 and the start of the recovery at the end of 2013.
Data source: Eurostat and Standard Eurobarometer 51-91.