**Public Opinion and the Crisis:** **The Dynamics of Support for the Euro**

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**- WEB APPENDIX -**

**NOTE:** This Web Appendix contains additional information about the multilevel logistic regression models predicting support for the euro reported in the paper. All replication files will also be made available online.

1. **Datasets used**

All models are based on Eurobarometer data only. All Standard Eurobarometer spring waves between 2007 and 2013 were used. Additionally, EB 64.2 and EB 80.1 were included as they provide additional data points for the identity item. The following waves were used:

* EB 64.2 ZA4414 (autumn 2005)
* EB 67.2 ZA4530 (spring 2007)
* EB 69.2 ZA4744 (spring 2008)
* EB 71.3 ZA4973 (spring 2009)
* EB 73.4 ZA5234 (spring 2010)
* EB 75.3 ZA5481 (spring 2011)
* EB 77.3 ZA5612 (spring 2012)
* EB 79.3 ZA5689 (spring 2013)
* EB 80.1 ZA5876 (autumn 2013)

*Table A1* reports the data availability across independent variables and Eurobarometer waves. Bold **X**s indicate the availability of the variable in the survey wave. Wherever a variable was available the respective model was estimated and is reported in this appendix.

*TABLE A1:* Data availability of independent variables across Eurobarometer waves

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | EB64 | EB67 | EB69 | EB71 | EB73 | EB75 | EB77 | EB79 | EB80 |
| Benefits from EU | **X** | **X** | **X** | **X** | **X** | **X** |  |  |  |
| Effectiveness of EU |  |  |  | **X** | **X** | **X** | **X** | **X** | **X** |
| Identity  | **X** |  |  |  | **X** |  | **X** | **X** | **X** |

1. **Variable coding and treatment of missing values**

Support for the euro

*"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"*

1 = For 0 = Against . = DK, missing

Occupation and employment

*"What is your current occupation?"*

Managers/Proprietors dummy:

General management, director or top management (managing directors, director general, other director); Middle management, other management (department head, junior manager, teacher, technician); Business proprietors, owner (full or partner) of a company

Professionals dummy:

Professional (lawyer, medical practitioner, accountant, architect, etc.); Employed professional (employed doctor, lawyer, accountant, architect)

Manual workers dummy:

Skilled manual worker; Other (unskilled) manual worker, servant

Unemployed dummy:

Unemployed or temporarily not working

Reference category:

Responsible for ordinary shopping and looking after the home, or without any current occupation, not working; Student; Retired or unable to work through illness; Farmer; Fisherman; Owner of a shop, craftsmen, other self-employed person; Employed position, working mainly at a desk; Employed position, not at a desk but travelling (salesmen, driver, etc.); Employed position, not at a desk, but in a service job (hospital, restaurant, police, fireman, etc.); Supervisor; Never did any paid work

National benefits from EU

*"Taking everything into account, would you say that (OUR COUNTRY) has on balance benefited or not from being a member of the EU?"*

1 = Benefited 0 = Not benefited . = DK, missing

Effectiveness of EU

*"In your opinion, which of the following is best able to take effective actions against the effects of the financial and economic crisis?"*

1 = European Union

0 = The (NATIONALITY) Government; The United States; The G20; The International Monetary Fund (IMF); Other (SPONTANEOUS); None (SPONTANEOUS)

. = DK, missing

Identity (4-level scale)

*"In the near future do you see yourself as ... ?"*

4 = (NATIONALITY) only

3 = (NATIONALITY) and European

2 = European and (NATIONALITY)

1 = European only

. = None\*, Refusal\*, DK\*, missing

Identity (exclusive national)

*"In the near future do you see yourself as ... ?"*

1 = (NATIONALITY) only

0 = (NATIONALITY) and European; European and (NATIONALITY); European only

. = None\*, Refusal\*, DK\*, missing

 \* We coded None, Refusal, and DK as missing

Education

*"How old were you when you stopped full-time education?"*

Medium-level education dummy:

>15 years & <=19 years

High-level education dummy:

> 19 years

Reference category:

<= 15 years

Gender

1 = Female

0 = Male

Age

In years

1. **Model specifications and estimation**

The following models were estimated on each wave, in which the respective question was available. The random intercept on the country level is denoted as $u\_{j}$.

Benefit from EU model

$$Y^{\*}= ∝+\sum\_{k=1}^{2}β\_{1, 2}education\_{i}+β\_{3}gender+β\_{4}age+\sum\_{k=1}^{4}β\_{5, 6, 7,8}occupation\_{i}+β\_{9}EMU+β\_{10}benefits+β\_{11}\left(EMU\*benefits\right)+u\_{j}+ε\_{i} $$

EU effectiveness model

$$Y^{\*}= ∝+\sum\_{k=1}^{2}β\_{1, 2}education\_{i}+β\_{3}gender+β\_{4}age+\sum\_{k=1}^{4}β\_{5, 6, 7,8}occupation\_{i}+β\_{9}EMU+β\_{10}effectiveness+β\_{11}\left(EMU\*effectiveness\right)+u\_{j}+ε\_{i} $$

Identity model

$$Y^{\*}= ∝+\sum\_{k=1}^{2}β\_{1, 2}education\_{i}+β\_{3}gender+β\_{4}age+\sum\_{k=1}^{4}β\_{5, 6, 7,8}occupation\_{i}+β\_{9}EMU+β\_{10}identity+β\_{11}\left(EMU\*identity\right)+u\_{j}+ε\_{i} $$

All models were estimated for identical country samples in all waves. As Romania and Bulgaria joined the EU in 2007, we excluded them from all estimations of the benefit from EU and the identity model that also use the 2005 wave (EB 64). Croatia that joined in 2013 was entirely excluded from all estimations. As described in the paper we hold the EMU variable constant across waves (at Eurozone membership as of January 2013) to exclude the possibility that changes are driven by the composition of the Eurozone club and not by changes over time.

The results of all estimations are reported in *Tables A2*, *A3*, and *A4*.

1. **Calculation of marginal effects and predicted probabilities**

The marginal effects reported in Figures 3.A to 3.C show changes in log odds for a unit change in the independent variable. They are obtained by taking the derivative of the model equations (simplified form of models follows):

$$\frac{dY^{\*}}{dX}=f'\left[∝+ β\_{1}X+β\_{2}EMU+β\_{3}\left(X\*EMU\right)+β\_{4}CONTROL+…+ β\_{n}CONTROL +u\_{j}+ε\_{i}\right]=β\_{1}+β\_{3}EMU$$

Therefore, the marginal effects are simply the coefficient on the independent variable $\left(β\_{1}\right)$ if the EMU dummy is zero (no EMU country), and they are the sum of the coefficients on the independent variable and on the interaction term $\left(β\_{1}+β\_{3}\right)$ if the EMU dummy is one (EMU country).

The differences reported in Figure 4 are percentage point differences in the predicted probabilities of supporting the euro contrasting two hypothetical individuals that only differ in the independent variable of interest (perceived benefits from integration: yes vs. no; EU most effective actor: yes vs. no; identity: national only vs. national and European). Covariates are fixed at: female, age of 47 years, medium education, reference occupation, and being a citizen of an EMU country.

**TABLE A2: Multilevel logistic regression model of euro support (benefit from EU)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | *EB64* | *EB67* | *EB69* | *EB71* | *EB73* | *EB75* |
| Gender | -0.333 | -0.330 | -0.330 | -0.284 | -0.253 | -0.194 |
|  | (0.034)\*\*\* | (0.034)\*\*\* | (0.035)\*\*\* | (0.036)\*\*\* | (0.035)\*\*\* | (0.034)\*\*\* |
| Age | -0.000 | -0.001 | 0.001 | 0.000 | 0.003 | -0.002 |
|  | (0.001) | (0.001) | (0.001) | (0.001) | (0.001)\*\*\* | (0.001) |
| Medium Education | 0.313 | 0.455 | 0.334 | 0.364 | 0.243 | 0.306 |
|  | (0.046)\*\*\* | (0.046)\*\*\* | (0.048)\*\*\* | (0.049)\*\*\* | (0.049)\*\*\* | (0.048)\*\*\* |
| High Education | 0.559 | 0.692 | 0.572 | 0.664 | 0.540 | 0.511 |
|  | (0.053)\*\*\* | (0.053)\*\*\* | (0.056)\*\*\* | (0.056)\*\*\* | (0.056)\*\*\* | (0.055)\*\*\* |
| Manager | 0.272 | 0.222 | 0.257 | 0.281 | 0.213 | 0.282 |
|  | (0.062)\*\*\* | (0.061)\*\*\* | (0.065)\*\*\* | (0.068)\*\*\* | (0.063)\*\*\* | (0.062)\*\*\* |
| Professional | 0.171 | 0.259 | 0.446 | 0.354 | 0.341 | 0.194 |
|  | (0.087)\*\* | (0.093)\*\*\* | (0.098)\*\*\* | (0.100)\*\*\* | (0.094)\*\*\* | (0.094)\*\* |
| Worker | -0.104 | -0.105 | -0.131 | -0.168 | -0.182 | -0.093 |
|  | (0.053)\*\* | (0.051)\*\* | (0.052)\*\* | (0.056)\*\*\* | (0.054)\*\*\* | (0.054)\* |
| Unemployed | -0.068 | -0.160 | -0.075 | -0.300 | -0.191 | -0.200 |
|  | (0.072) | (0.075)\*\* | (0.079) | (0.063)\*\*\* | (0.061)\*\*\* | (0.060)\*\*\* |
| EMU | 0.736 | 0.851 | 0.829 | 0.945 | 1.080 | 1.122 |
|  | (0.273)\*\*\* | (0.284)\*\*\* | (0.292)\*\*\* | (0.268)\*\*\* | (0.276)\*\*\* | (0.219)\*\*\* |
| Benefit from EU  | 1.519 | 1.421 | 1.637 | 1.596 | 1.596 | 1.340 |
|  | (0.059)\*\*\* | (0.060)\*\*\* | (0.063)\*\*\* | (0.061)\*\*\* | (0.064)\*\*\* | (0.060)\*\*\* |
| EMU X Benefit from EU | 0.225 | 0.221 | 0.321 | 0.494 | 0.445 | 0.698 |
|  | (0.074)\*\*\* | (0.077)\*\*\* | (0.080)\*\*\* | (0.078)\*\*\* | (0.079)\*\*\* | (0.075)\*\*\* |
| Constant | -0.817 | -0.929 | -1.056 | -1.073 | -1.430 | -1.268 |
|  | (0.238)\*\*\* | (0.246)\*\*\* | (0.253)\*\*\* | (0.235)\*\*\* | (0.242)\*\*\* | (0.197)\*\*\* |
| Random Intercept | 0.624 | 0.648 | 0.665 | 0.610 | 0.629 | 0.493 |
|  | (0.090)\*\*\* | (0.094)\*\*\* | (0.096)\*\*\* | (0.089)\*\*\* | (0.091)\*\*\* | (0.072)\*\*\* |
| N / groups | 20,638 / 25 | 21,132 / 25 | 20,511 / 25 | 20,911 / 25 | 20,775 / 25 | 21,212 / 25 |

Standard errors in parentheses. Significance levels \* *p*<0.05; \*\* *p*<0.01; \*\*\* *p*<0.00

**TABLE A3: Multilevel logistic regression model of euro support (EU effectiveness)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | *EB71* | *EB73* | *EB75* | *EB77* | *EB79* | *EB80* |
| Gender | -0.332 | -0.316 | -0.264 | -0.198 | -0.192 | -0.278 |
|  | (0.032)\*\*\* | (0.045)\*\*\* | (0.031)\*\*\* | (0.031)\*\*\* | (0.031)\*\*\* | (0.031)\*\*\* |
| Age | -0.002 | 0.001 | -0.004 | -0.000 | -0.001 | -0.002 |
|  | (0.001)\*\* | (0.001) | (0.001)\*\*\* | (0.001) | (0.001) | (0.001)\*\* |
| Medium Education | 0.381 | 0.328 | 0.333 | 0.249 | 0.238 | 0.297 |
|  | (0.044)\*\*\* | (0.064)\*\*\* | (0.045)\*\*\* | (0.046)\*\*\* | (0.046)\*\*\* | (0.045)\*\*\* |
| High Education | 0.776 | 0.874 | 0.682 | 0.540 | 0.504 | 0.635 |
|  | (0.051)\*\*\* | (0.073)\*\*\* | (0.051)\*\*\* | (0.051)\*\*\* | (0.050)\*\*\* | (0.051)\*\*\* |
| Manager | 0.394 | 0.244 | 0.314 | 0.233 | 0.253 | 0.127 |
|  | (0.063)\*\*\* | (0.083)\*\*\* | (0.058)\*\*\* | (0.057)\*\*\* | (0.057)\*\*\* | (0.056)\*\* |
| Professional | 0.435 | 0.243 | 0.239 | 0.341 | 0.132 | 0.284 |
|  | (0.090)\*\*\* | (0.123)\*\* | (0.086)\*\*\* | (0.086)\*\*\* | (0.081) | (0.083)\*\*\* |
| Worker | -0.213 | -0.166 | -0.181 | -0.298 | -0.196 | -0.234 |
|  | (0.050)\*\*\* | (0.071)\*\* | (0.049)\*\*\* | (0.049)\*\*\* | (0.049)\*\*\* | (0.050)\*\*\* |
| Unemployed | -0.353 | -0.298 | -0.260 | -0.331 | -0.350 | -0.366 |
|  | (0.057)\*\*\* | (0.078)\*\*\* | (0.056)\*\*\* | (0.054)\*\*\* | (0.052)\*\*\* | (0.052)\*\*\* |
| EMU | 0.975 | 0.941 | 1.115 | 1.371 | 1.357 | 1.223 |
|  | (0.245)\*\*\* | (0.248)\*\*\* | (0.227)\*\*\* | (0.221)\*\*\* | (0.196)\*\*\* | (0.218)\*\*\* |
| EU Effectiveness  | 0.645 | 0.518 | 0.608 | 0.543 | 0.612 | 0.594 |
|  | (0.060)\*\*\* | (0.083)\*\*\* | (0.058)\*\*\* | (0.058)\*\*\* | (0.056)\*\*\* | (0.055)\*\*\* |
| EMU X EU Effectiveness | -0.102 | 0.211 | 0.137 | 0.300 | 0.225 | 0.180 |
|  | (0.079) | (0.107)\*\* | (0.076)\* | (0.077)\*\*\* | (0.074)\*\*\* | (0.073)\*\* |
| Constant | 0.095 | -0.311 | -0.227 | -0.664 | -0.725 | -0.543 |
|  | (0.207) | (0.221) | (0.194) | (0.190)\*\*\* | (0.171)\*\*\* | (0.188)\*\*\* |
| Random Intercept | 0.607 | 0.606 | 0.561 | 0.547 | 0.482 | 0.540 |
|  | (0.085)\*\*\* | (0.086)\*\*\* | (0.078)\*\*\* | (0.076)\*\*\* | (0.068)\*\*\* | (0.075)\*\*\* |
| N / groups | 22,380 / 27 | 10,837[[1]](#footnote-1) / 27 | 21,817 / 27 | 21,919 / 27 | 21,793 / 27 | 22,180 / 27 |

Standard errors in parentheses. Significance levels \* *p*<0.05; \*\* *p*<0.01; \*\*\* *p*<0.00

**TABLE A4: Multilevel logistic regression model of euro support (identity)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | *EB64* | *EB73* | *EB77* | *EB79* | *EB80* |
| Gender | -0.348 | -0.285 | -0.198 | -0.180 | -0.248 |
|  | (0.032)\*\*\* | (0.032)\*\*\* | (0.032)\*\*\* | (0.031)\*\*\* | (0.031)\*\*\* |
| Age | -0.002 | 0.002 | 0.002 | 0.001 | 0.000 |
|  | (0.001)\* | (0.001)\* | (0.001)\* | (0.001) | (0.001) |
| Medium Education | 0.272 | 0.284 | 0.217 | 0.194 | 0.243 |
|  | (0.043)\*\*\* | (0.044)\*\*\* | (0.046)\*\*\* | (0.045)\*\*\* | (0.045)\*\*\* |
| High Education | 0.542 | 0.607 | 0.443 | 0.402 | 0.522 |
|  | (0.049)\*\*\* | (0.051)\*\*\* | (0.052)\*\*\* | (0.051)\*\*\* | (0.051)\*\*\* |
| Manager | 0.256 | 0.193 | 0.115 | 0.155 | 0.023 |
|  | (0.059)\*\*\* | (0.058)\*\*\* | (0.057)\*\* | (0.057)\*\*\* | (0.056) |
| Professional | 0.154 | 0.378 | 0.249 | 0.090 | 0.170 |
|  | (0.082)\* | (0.089)\*\*\* | (0.091)\*\*\* | (0.085) | (0.085)\*\* |
| Worker | -0.142 | -0.255 | -0.258 | -0.165 | -0.222 |
|  | (0.048)\*\*\* | (0.050)\*\*\* | (0.050)\*\*\* | (0.050)\*\*\* | (0.050)\*\*\* |
| Unemployed | -0.121 | -0.250 | -0.331 | -0.343 | -0.357 |
|  | (0.066)\* | (0.056)\*\*\* | (0.055)\*\*\* | (0.053)\*\*\* | (0.053)\*\*\* |
| EMU | 1.407 | 1.209 | 1.907 | 2.028 | 1.713 |
|  | (0.335)\*\*\* | (0.315)\*\*\* | (0.278)\*\*\* | (0.258)\*\*\* | (0.289)\*\*\* |
| Identity  | -0.798 | -0.681 | -0.725 | -0.716 | -0.728 |
|  | (0.042)\*\*\* | (0.041)\*\*\* | (0.041)\*\*\* | (0.039)\*\*\* | (0.043)\*\*\* |
| EMU X Identity | -0.185 | -0.009 | -0.052 | -0.120 | -0.062 |
|  | (0.054)\*\*\* | (0.051) | (0.052) | (0.050)\*\* | (0.054) |
| Constant | 2.899 | 1.968 | 1.533 | 1.501 | 1.780 |
|  | (0.278)\*\*\* | (0.264)\*\*\* | (0.234)\*\*\* | (0.218)\*\*\* | (0.243)\*\*\* |
| Random Intercept | 0.645 | 0.600 | 0.497 | 0.452 | 0.515 |
|  | (0.093)\*\*\* | (0.087)\*\*\* | (0.072)\*\*\* | (0.066)\*\*\* | (0.075)\*\*\* |
| N / groups | 22,490 / 25 | 22,183 / 25 | 22,216 / 25 | 22,341 / 25 | 22,606 / 25 |

Standard errors in parentheses. Significance levels \* *p*<0.05; \*\* *p*<0.01; \*\*\* *p*<0.00

1. In EB73 the sample was split between two slightly different question wordings, which explains the low number of observations. [↑](#footnote-ref-1)