Online Appendix

The Political Economy of Bilateral Bailouts

Christina Schneider & Jennifer Tobin

*Contents*

Appendix A: PCA Factor Loadings

Appendix B: Summary Statistics

Appendix C.1: Model Specification

Appendix C.2: Spatial Weights

Appendix C.3: Additional Controls

Appendix C.4: Macroeconomic Controls

Appendix D: Missing Observations

Appendix E: First Stage Regression

|  |  |
| --- | --- |
| Appendix A: PCA Factor Loadings |  |
|   |   |   |
| Variable |   | Factor Loading |
| Trade Exposure |  | 0.97 |
| Financial Exposure |   | 0.97 |
| Proportion of Variance Explained |   | 0.9441 |
|  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Appendix B: Summary Statistics |  |  |  |
|   |   |   |   |   |   |
| Variable | N | Mean | Standard Deviation | Min | Max |
|  |  |  |  |  |  |
| Bilateral Bailout | 952 | 0.04 | 0.21 | 0 | 1 |
| Trade Exposure (log)  | 864 | 20.15 | 2.77 | 0 | 27.02 |
| Financial Exposure (log) | 573 | 6.42 | 3.03 | 0.307 | 14.02 |
| Alliance | 952 | 0.16 | 0.36 | 0 | 1 |
| Democracy | 952 | 0.52 | 0.50 | 0 | 1 |
| Preference Similarity | 932 | 1.62 | 0.91 | 0.001 | 4.44 |
| Election Timing | 952 | 0.07 | 0.26 | 0 | 1 |
| Veto Players | 952 | 0.45 | 0.08 | 0.225 | 0.65 |
| GDP Growth (Creditor) | 952 | 2.01 | 2.02 | -5.64 | 7.26 |
| Unemployment (Creditor) | 931 | 7.61 | 2.66 | 2.02 | 12.4 |
| Per Capita GDP (Creditor) | 952 | 30273 | 5318 | 18214 | 45053 |
| Per Capita GDP (Crisis) | 896 | 9387 | 15958 | 166 | 85016 |
| Current Account (Crisis) | 889 | 5.90 | 5.74 | 0.081 | 28.38 |
| Distance | 864 | 8.17 | 0.81 | 5.02 | 9.36 |
| IMF Loan  | 952 | 2.81 | 3.32 | 0 | 10.28 |

|  |  |
| --- | --- |
| Appendix C.1 Sensitivity Analysis: Model Specification |  |
|   |   |   |   |
|  | Model 1 | Model 2 | Model 3 |
|   | (Listwise Deletion) | (Ten Imputations) | (Time Trend) |
| Trade Exposure | 3.625\*\*\* | 3.535\*\*\* | 3.530\*\*\* |
|  | (0.884) | (0.766) | (0.786) |
| Alliance | 1.462\* | 1.500\*\* | 1.440\*\* |
|  | (0.791) | (0.658) | (0.640) |
| Democracy | 0.0842 | 0.0540 | 0.0537 |
|  | (0.800) | (0.700) | (0.670) |
| Preference Similarity | 1.000\*\* | 0.631 | 0.419 |
|  | (0.428) | (0.471) | (0.411) |
| Election Timing | -0.710\* | -0.687\* | -0.732 |
|  | (0.389) | (0.396) | (0.472) |
| Veto Players | 1.186 | 0.355 | 0.626 |
|  | (1.016) | (1.508) | (1.623) |
| IMF Loan/Dummy | 3.496\*\*\* | 3.622\*\*\* | 3.593\*\*\* |
|  | (0.643) | (0.577) | (0.576) |
| IMF First Stage Residuals | -2.730\*\*\* | -2.852\*\*\* | -2.816\*\*\* |
|  | (0.608) | (0.559) | (0.534) |
| Spatial Weight | 1.087\*\*\* | 7.968\*\*\* | 1.080\*\*\* |
|  | (0.371) | (2.476) | (0.344) |
| GDP Growth (Creditor) | -0.455 | -0.483 | -0.577 |
|  | (0.835) | (0.795) | (0.847) |
| Unemployment (Creditor) | -2.299\*\*\* | -1.795\*\*\* | -1.473\*\* |
|  | (0.533) | (0.629) | (0.696) |
| Per Capita GDP (Creditor) | -0.341 | 0.0502 | 2.373 |
|  | (0.606) | (0.622) | (2.626) |
| Per Capita GDP (Crisis) | -1.756\*\* | -1.818\*\* | -1.788\*\* |
|  | (0.773) | (0.840) | (0.871) |
| Current Account (Crisis) | 0.651 | 0.603 | 0.591\* |
|  | (0.495) | (0.381) | (0.358) |
| Distance | -1.054\*\*\* | -0.792\*\*\* | -0.756\*\*\* |
|  | (0.284) | (0.209) | (0.180) |
| Time Trend |  |  | -0.0557 |
|  |  |  | (0.0520) |
| Constant | -5.804\*\*\* | -5.854\*\*\* | 105.0 |
|   | (0.775) | (0.695) | (102.8) |
| Observations | 787 | 952 | 952 |
| F |   | 423.0 | 504.7 |
| Marginal Effects, Standard errors in parentheses |
| p<0.10, \*\* p<0.05 \*\*\* p<0.01 |
| Appendix C.2 Sensitivity Analysis: Spatial Weights |  |
|   |   |   |   |   |
|  | Model 1 | Model 2 | Model 3 | Model 4 |
|   | No SW | SW trade | SW distance*–kj* | SW *trade-kj* |
| Trade Exposure | 3.507\*\*\* | 3.493\*\*\* | 3.388\*\*\* | 3.347\*\*\* |
|  | (0.737) | (0.758) | (0.777) | (0.767) |
| Alliance | 1.846\*\*\* | 1.507\*\* | 1.512\*\* | 1.486\*\* |
|  | (0.552) | (0.639) | (0.643) | (0.652) |
| Democracy | -0.210 | 0.0582 | 0.125 | 0.124 |
|  | (0.677) | (0.697) | (0.694) | (0.693) |
| Preference Similarity | 0.483 | 0.606 | 0.547 | 0.561 |
|  | (0.482) | (0.480) | (0.479) | (0.477) |
| Election Timing | -1.070\*\* | -0.692\* | -0.646\* | -0.649\* |
|  | (0.457) | (0.403) | (0.402) | (0.398) |
| Veto Players | 0.535 | 0.337 | 0.261 | 0.248 |
|  | (1.305) | (1.494) | (1.488) | (1.485) |
| IMF Loan  | 5.559\*\*\* | 3.583\*\*\* | 3.407\*\*\* | 3.369\*\*\* |
|  | (0.542) | (0.579) | (0.590) | (0.603) |
| IMF First Stage Residuals | -4.884\*\*\* | -2.829\*\*\* | -2.725\*\*\* | -2.709\*\*\* |
|  | (0.672) | (0.526) | (0.513) | (0.522) |
| Spatial Weight |  | 7.733\*\*\* | 8.666\*\*\* | 8.832\*\*\* |
|  |  | (2.451) | (2.658) | (2.678) |
| GDP Growth (Creditor) | -0.814 | -0.457 | -0.464 | -0.468 |
|  | (0.645) | (0.816) | (0.804) | (0.809) |
| Unemployment (Creditor) | -1.629\*\*\* | -1.802\*\*\* | -1.843\*\*\* | -1.879\*\*\* |
|  | (0.617) | (0.608) | (0.613) | (0.612) |
| Per Capita GDP (Creditor) | 0.724 | 0.0910 | 0.0914 | 0.0991 |
|  | (0.745) | (0.580) | (0.608) | (0.623) |
| Per Capita GDP (Crisis) | -0.763 | -1.783\*\* | -1.854\*\* | -1.830\*\* |
|  | (0.648) | (0.831) | (0.858) | (0.845) |
| Current Account (Crisis) | 0.990\*\* | 0.604\* | 0.617 | 0.594 |
|  | (0.420) | (0.364) | (0.385) | (0.382) |
| Distance | -0.506\*\* | -0.805\*\*\* | -0.829\*\*\* | -0.867\*\*\* |
|  | (0.231) | (0.181) | (0.176) | (0.175) |
| Constant | -5.649\*\*\* | -5.837\*\*\* | -5.834\*\*\* | -5.827\*\*\* |
|   | (0.707) | (0.696) | (0.703) | (0.703) |
| Observations | 952 | 952 | 952 | 952 |
| F | 213.2 | 592.4 | 574.3 | 576.7 |
| Marginal Effects, Standard errors in parentheses |
| p<0.10, \*\* p<0.05 \*\*\* p<0.01 |

|  |  |
| --- | --- |
| Appendix C.3 Sensitivity Analysis: Additional Controls |  |
|   |   |   |   |   |
|  | Model 1 | Model 2 | Model 3 | Model 4 |
|   | Bailout Fatigue | Crisis Type | Same Region | Greece/Ireland |
| Trade Exposure | 3.216\*\*\* | 3.242\*\*\* | 3.475\*\*\* | 4.374\*\*\* |
|  | (0.776) | (1.128) | (0.768) | (0.869) |
| Alliance | 1.303\*\* | 1.372\*\* | 1.544\*\* | 1.833\*\*\* |
|  | (0.644) | (0.595) | (0.631) | (0.666) |
| Democracy | -0.207 | -0.159 | 0.0518 | 0.167 |
|  | (0.657) | (0.676) | (0.698) | (0.867) |
| Preference Similarity | 0.654 | 0.429 | 0.600 | -0.105 |
|  | (0.463) | (0.465) | (0.472) | (0.644) |
| Election Timing | -0.823\* | -0.805\* | -0.686\* | -1.163\*\* |
|  | (0.446) | (0.453) | (0.418) | (0.530) |
| Veto Players | 0.396 | 0.0843 | 0.308 | -1.516 |
|  | (1.496) | (1.510) | (1.497) | (1.868) |
| IMF Loan  | 4.171\*\*\* | 3.335\*\*\* | 3.633\*\*\* | 1.091 |
|  | (0.674) | (0.607) | (0.621) | (1.894) |
| IMF First Stage Residuals | -3.329\*\*\* | -2.671\*\*\* | -2.858\*\*\* | -0.948 |
|  | (0.557) | (0.475) | (0.553) | (1.802) |
| Spatial Weight | 0.980\*\*\* | 1.204\*\*\* | 1.092\*\*\* | 5.446\*\*\* |
|  | (0.367) | (0.397) | (0.324) | (1.436) |
| GDP Growth (Creditor) | -0.583 | -0.665 | -0.393 | -0.980 |
|  | (0.823) | (0.898) | (0.766) | (0.741) |
| Unemployment (Creditor) | -1.745\*\*\* | -1.887\*\*\* | -1.772\*\*\* | -2.963\*\*\* |
|  | (0.609) | (0.677) | (0.609) | (0.648) |
| Per Capita GDP (Creditor) | 0.829 | 0.619 | 0.0479 | 0.843 |
|  | (0.748) | (0.555) | (0.586) | (0.910) |
| Per Capita GDP (Crisis) | -1.614\* | -1.943\*\* | -1.903\*\* | -5.578\*\*\* |
|  | (0.833) | (0.818) | (0.826) | (1.406) |
| Current Account (Crisis) | 0.856\*\* | 0.488\*\* | 0.580 | 0.288 |
|  | (0.388) | (0.238) | (0.361) | (0.353) |
| Distance | -1.111\*\*\* | -1.057\*\*\* | -0.628\*\*\* | -0.471 |
|  | (0.254) | (0.340) | (0.190) | (0.494) |
|  |  |  |  |  |
| [continued on next page] |
|  |  |  |  |  |

|  |
| --- |
| [continued from last page] |
| Bailout Fatigue | 0.210\* |  |  |  |
|  | (0.124) |  |  |  |
| Banking Crisis |  | 0.343 |  |  |
|  |  | (0.595) |  |  |
| Currency Crisis |  | 0.857\*\* |  |  |
|  |  | (0.423) |  |  |
| Sovereign Debt Crisis |  | 0.167 |  |  |
|  |  | (0.636) |  |  |
| Balance of Payments Crisis |  | -0.366 |  |  |
|  |  | (0.604) |  |  |
| Shared Region |  |  | 0.793 |  |
|  |  |  | (0.509) |  |
| Constant | -6.216\*\*\* | -6.115\*\*\* | -5.731\*\*\* | -6.618\*\*\* |
|   | (0.796) | (0.834) | (0.698) | (0.792) |
| Observations | 952 | 952 | 952 | 938 |
| F | 227.5 | 367.4 | 449.6 | 87.61 |
| Marginal Effects, Standard errors in parentheses |
| p<0.10, \*\* p<0.05 \*\*\* p<0.01 |

|  |
| --- |
| Appendix C.4 Sensitivity Analysis: Macroeconomic Controls |
|  | Model 1 | Model 2 | Model 3 | Model 4 |  |
| Trade Exposure | 3.532\*\*\* | 3.266\*\*\* | 3.454\*\*\* | 3.178\*\*\* |  |
|  | (0.768) | (0.844) | (0.700) | (0.738) |  |
| Alliance | 1.495\*\* | 1.686\*\* | 1.477\*\* | 1.652\*\* |  |
|  | (0.672) | (0.725) | (0.691) | (0.796) |  |
| Democracy | 0.0689 | 0.0944 | 0.204 | 0.287 |  |
|  | (0.710) | (0.704) | (0.802) | (0.859) |  |
| Preference Similarity | 0.624 | 0.633 | 0.792\* | 0.844\* |  |
|  | (0.488) | (0.468) | (0.474) | (0.457) |  |
| Election Timing | -0.712\* | -0.650 | -0.814\* | -0.784\* |  |
|  | (0.395) | (0.413) | (0.439) | (0.438) |  |
| Veto Players | 0.338 | 0.0924 | 0.0152 | -0.235 |  |
|  | (1.512) | (1.565) | (1.542) | (1.571) |  |
| IMF Loan  | 3.688\*\*\* | 3.300\*\*\* | 4.011\*\*\* | 3.622\*\*\* |  |
|  | (0.989) | (0.596) | (0.657) | (1.297) |  |
| IMF First Stage Residuals | -2.931\*\*\* | -2.462\*\*\* | -3.549\*\*\* | -3.120\*\* |  |
|  | (0.923) | (0.558) | (0.579) | (1.227) |  |
| Spatial Weight | 1.062\*\*\* | 1.109\*\*\* | 0.854\*\* | 0.910\*\* |  |
|  | (0.321) | (0.337) | (0.366) | (0.360) |  |
| GDP Growth (Creditor) | -0.470 | -0.409 | -0.446 | -0.326 |  |
|  | (0.835) | (0.834) | (0.800) | (0.866) |  |
| Unemployment (Creditor) | -1.782\*\*\* | -2.008\*\*\* | -2.096\*\*\* | -2.298\*\*\* |  |
|  | (0.625) | (0.627) | (0.649) | (0.656) |  |
| Per Capita GDP (Creditor) | 0.0632 | -0.613 | -1.301\* | -2.077\*\* |  |
|  | (0.622) | (0.811) | (0.724) | (0.895) |  |
| Per Capita GDP (Crisis) | -1.764\*\* | -1.727\* | -1.902\*\* | -1.805\*\* |  |
|  | (0.856) | (0.893) | (0.746) | (0.801) |  |
| Current Account (Crisis) | 0.543 | 0.358 | 1.342\*\*\* | 1.038\*\* |  |
|  | (0.379) | (0.421) | (0.425) | (0.446) |  |
| Distance | -0.836\*\* | -0.697\*\*\* | -1.086\*\*\* | -1.167\*\* |  |
|  | (0.330) | (0.203) | (0.240) | (0.472) |  |
| Short Term Debt to Reserves | 0.109 |  |  | -0.0456 |  |
|  | (0.906) |  |  | (1.230) |  |
| Debt to Exports |  | -0.780 |  | -0.983\*\* |  |
|  |  | (0.463) |  | (0.456) |  |
| Debt to GDP |  |  | -1.552\*\*\* | -1.625\*\*\* |  |
|  |  |  | (0.559) | (0.595) |  |
| Constant | -5.706\*\*\* | -5.605\*\*\* | -5.760\*\*\* | -5.674\*\*\* |  |
|   | (0.701) | (0.709) | (0.708) | (0.698) |  |
| Observations | 952 | 952 | 952 | 952 |  |
| F | 135.0 | 342.2 | 154.7 | 113.8 |  |
| Marginal Effects, Standard errors in parentheses, p<0.10, \*\* p<0.05 \*\*\* p<0.01 |

|  |  |
| --- | --- |
| Appendix D: Missing Observations |  |
|  |  |  |  |  |
|   |   |   |   |   |
| Variable |   | Missing | Total | Percent Missing |
|  |  |  |  |  |
| Bilateral Bailout |  | 0 | 952 | 0 |
| Trade Exposure (log)  |  | 88 | 952 | 9.24 |
| Financial Exposure (log) |  | 379 | 952 | 39.81 |
| Alliance |  | 0 | 952 | 0 |
| Democracy |  | 0 | 952 | 0 |
| Preference Similarity |  | 20 | 952 | 2.1 |
| Election Timing |  | 0 | 952 | 0 |
| Veto Players |  | 0 | 952 | 0 |
| GDP Growth (Creditor) |  | 0 | 952 | 0 |
| Unemployment (Creditor) | 21 | 952 | 2.21 |
| Per Capita GDP (Creditor) | 0 | 952 | 0 |
| Per Capita GDP (Crisis) |  | 56 | 952 | 5.88 |
| Current Account (Crisis) |  | 63 | 952 | 6.62 |
| Distance |  | 88 | 952 | 9.24 |
| IMF Loan  |   | 0 | 952 | 0 |
|  |  |  |  |  |

|  |
| --- |
| Appendix E: First Stage Regression  |
|   |   |  |
| DV: IMF Loan |  |  |
|   | Model 1 |  |
| IMF Instrument^ | 0.410\*\*\* |  |
|  | (0.0150) |  |
| Trade Exposure | -0.0151 |  |
|  | (0.0151) |  |
| Alliance | -0.496\*\*\* |  |
|  | (0.118) |  |
| Democracy | 0.415\*\*\* |  |
|  | (0.0463) |  |
| Preference Similarity | -0.0427 |  |
|  | (0.0547) |  |
| Election Timing | 0.594\*\* |  |
|  | (0.199) |  |
| Veto Players | -1.450 |  |
|  | (1.256) |  |
| GDP Growth (Creditor) | 0.0304 |  |
|  | (0.0221) |  |
| Unemployment (Creditor) | -0.0424\* |  |
|  | (0.0185) |  |
| Per Capita GDP (Creditor) | -0.00143 |  |
|  | (0.00641) |  |
| Per Capita GDP (Crisis) | -0.0381\*\*\* |  |
|  | (0.00178) |  |
| Current Account (Crisis) | -0.000966 |  |
|  | (0.29) |  |
| Distance | -0.241\*\* |  |
|  | (0.0895) |  |
| Spatial Weight | 10.95\*\*\* |  |
|  | (0.529) |  |
| Constant | 4.603\*\*\* |  |
|   | (1.113) |  |
| Observations | 787 |  |
| F | 23.13 |  |
| Prob>F | 0.000 |  |
| Standard errors in parentheses |  |
| p<0.10, \*\* p<0.05 \*\*\* p<0.01 |  |
| ^IMF Liquidity Ratio×Probability under IMF program |  |