Appendix to the article 'The Dynamic Relationship between Asylum Applications and Recognition Rates in Europe (1987-2010)'

Figure A1. Distributions of the variables

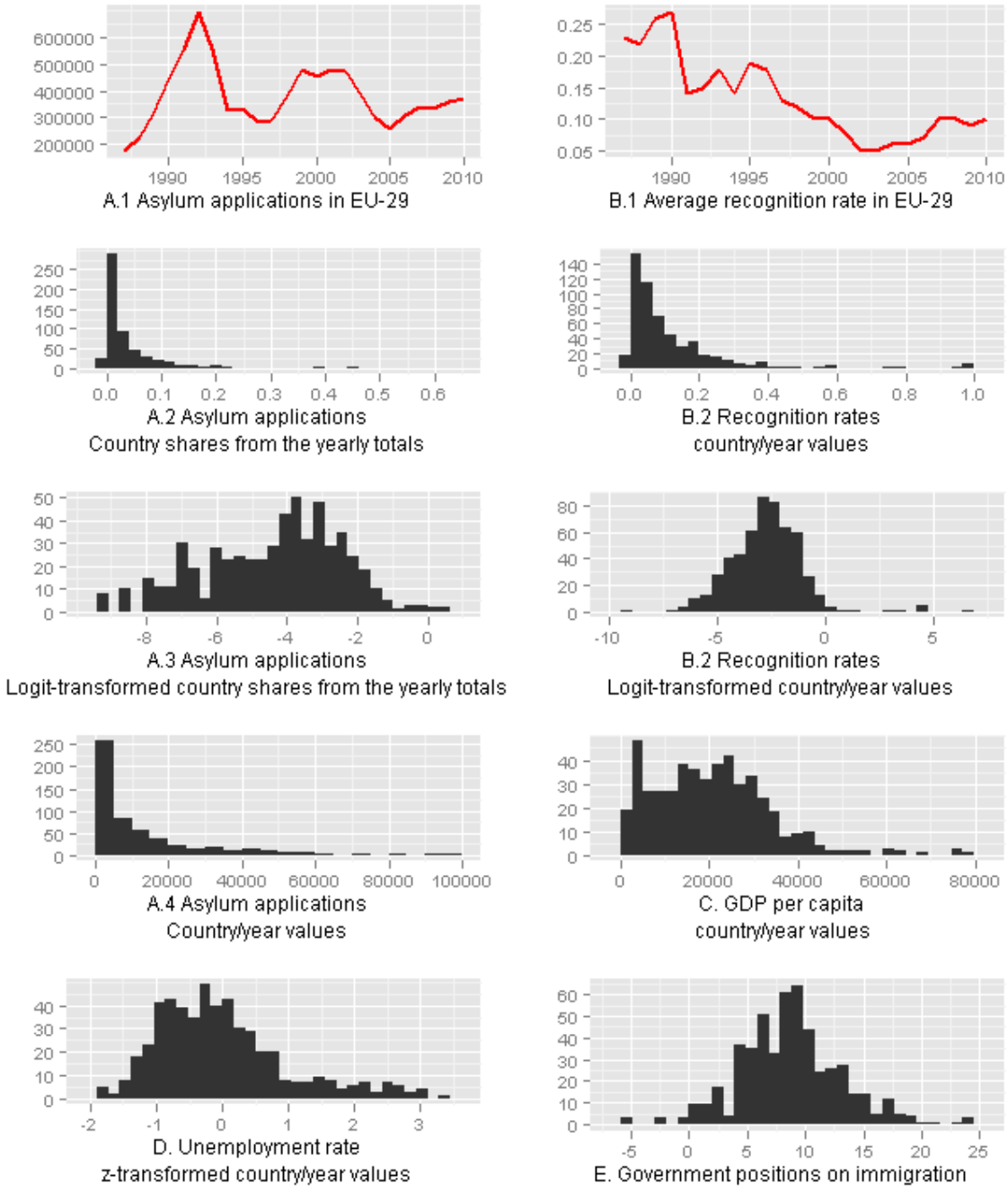

Figure A2. Cross-correlations

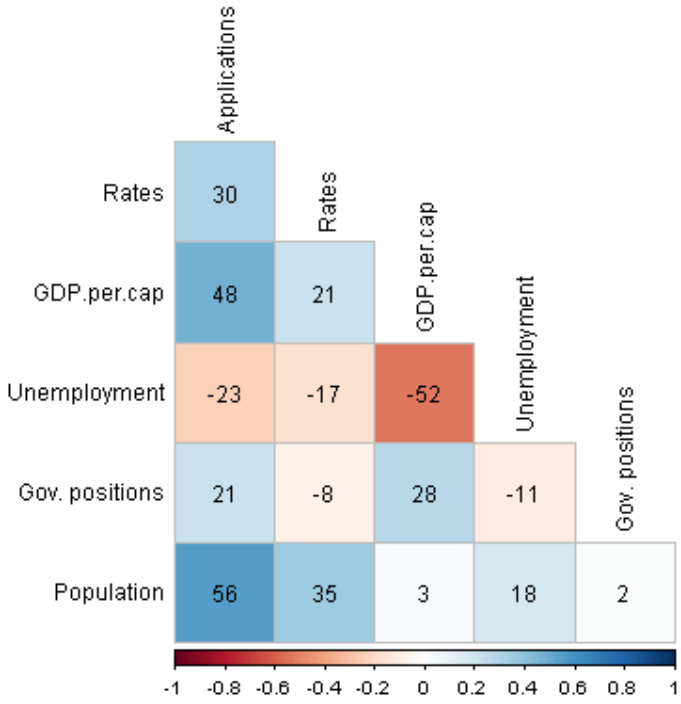

Table A1. Details about models A1:A4 reported in the article.
Dependent variable – Logit-transformed Yearly Share of Asylum Applications (origin specific in the case of A4). Model A1 – complete pooling (OLS). Model A2 – no pooling (OLS). Model A3 and A4 – partial-pooling multilevel models. Unstandardized coefficients.

Variable	**Model A1**			**Model A2**			**Model A3**			**Model A4**		
Fixed effects	**Coef**	**St.e**	**P-v**	**Coef**	**St.e**	**P-v**	**Coef**	**St.e**	**P-v**	**Coef**	**St.e**	**P-v**
Lagged Share of yearly applications	0.892	0.022	***	0.590	0.042	***	0.798	0.030	***	0.851	0.016	***
Lagged Recognition rate (logit)	0.063	0.023	**	0.046	0.032		0.064	0.027	*	0.033	0.015	*
Lagged GDP per capita	5.900	3.395	.	-0.673	13.448		9.876	4.407	*	8.193	5.439	
Lagged Unemployment	0.039	0.038		0.053	0.057		0.048	0.046		-0.101	0.060	.
Lagged Government position	0.012	0.006	*	0.001	0.007		0.010	0.007		0.010	0.007	
Lagged Population	0.002	0.002		0.052	0.045		0.006	0.003	*	0.005	0.002	**
Fixed Destination intercepts		-			included			-			-	
Fixed Year intercepts		-			included			-			-	
Random effects								**St.dev**			**St.dev**	
Destination intercepts		-			-			0.22			0.16	
Year intercepts		-			-			0.10			0.17	
Origin intercepts		-			-			-			0.06	
Residual		-			-			0.53			0.83	
Akaike Information Criterion		-433.82			-457.19			679.8			3380.6	
Number of cases		378			378			378; Destination 27, Year 23			1339; Destination 17, Year 10, Origin 10	

Table A2. Models with alternative specifications of the dependent variable and the main independent variable – lagged recognition rate. Model A3 – the same multilevel model as in Table A.1 (both Applications and Rates are logit-transformed). Model A5 – only Rates are logit-transformed, Model A6 – only Applications are logit transformed, Model A7 – both Applications and Rates untransformed. Model A8 – DV: first difference of Yearly asylum application share; Rates – lagged first difference of Recognition rates.

Variable	**Model A3 logit-logit**			**Model A5 linear-logit**			**Model A6 logit-linear**			**Model A7 linear-linear**			**Model A8 First differences**		
Fixed effects	**Coef**	**St.e**	**P-v**	**Coef**	**St.e**	**P-v**	**Coef**	**St.e**	**P-v**	**Coef**	**St.e**	**P-v**	**Coef**	**St.e**	**P-v**
Lagged Share of yearly applications	0.798	0.030	***	0.832	0.020	***	0.804	0.029	***	0.832	0.020	***	-	-	-
Lagged Recognition rate	0.064	0.027	*	0.002	0.001	*	0.902	0.348	*	0.041	0.012	**	0.050	0.015	*
Lagged GDP per capita	9.876	4.407	*	0.082	0.127		10.096	4.312	*	0.083	0.124		-0.001	0.148	
Lagged Unemployment	0.048	0.046		-0.001	0.002		0.038	0.045		-0.001	0.001		0.001	0.002	
Lagged Government position	0.010	0.007		0.000	0.000		0.009	0.006		0.000	0.000		0.000	0.000	
Lagged Population	0.006	0.003	*	0.000	0.000	*	0.006	0.003	*	0.000	0.000	**	0.000	0.000	*
Random effects		**St.dev**			**St.dev**			**St.dev**			**St.dev**			**St.dev**	
Destination intercepts		0.22			0.00			0.20			0.00			0.00	
Year intercepts		0.10			0.00			0.10			0.00			0.00	
Residual		0.53			0.02			0.53			0.02			0.02	
Akaike Information Criterion		679.8			-1729.2			673.8			-1738.8			-1595.7	
Number of cases		378; Destination 27, Year 23			378; Destination 27, Year 23			378; Destination 27, Year 23			378; Destination 27, Year 23			360; Destination 27, Year 22	
Expected change in the number of asylum applications for a standard deviation change in recognition rates (from the mean). All other variables held at their means, a total number of 380 000 applications in the year assumed.		550			1283			728			2415			1970	

Figure A3. Regression coefficients and 95% confidence intervals for the effect of lagged recognition rate (logit-transformed) on the logit-transformed yearly share of asylum applications for each of the EU-29 countries. Greece, Luxembourg, Malta and Cyprus excluded due to missing observations. Separate regressions fitted for each country. The models include a lagged dependent variable and four covariates – GDP per capita, unemployment and government positions.

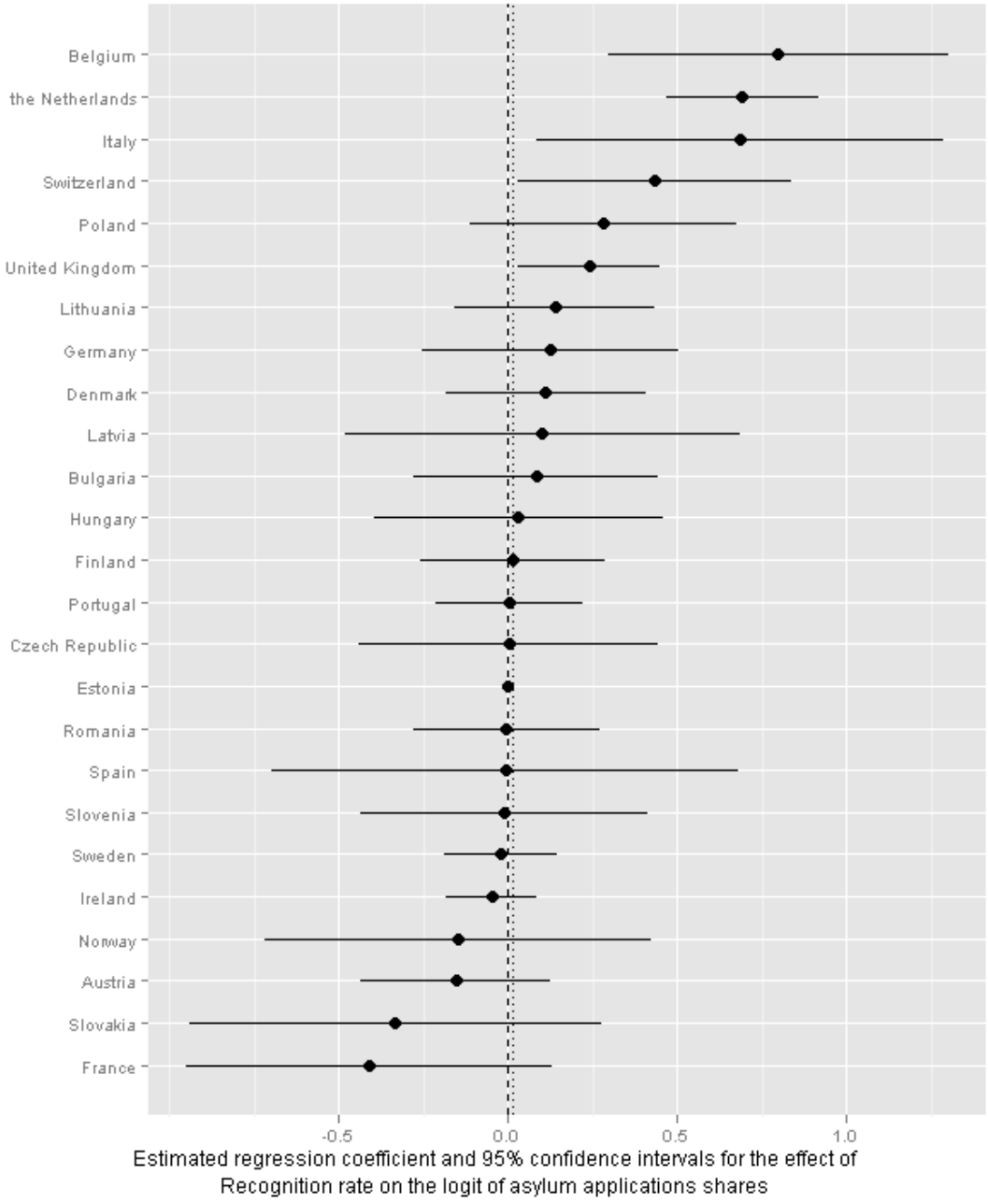

Figure A4. Regression coefficients and 95% confidence intervals for the effect of lagged unemployment rate on the logit-transformed yearly share of asylum applications for each of the EU-29 countries. Greece, Luxembourg, Malta and Cyprus excluded due to missing observations. Separate regressions fitted for each country. The models include a lagged dependent variable, recognition rates, GDP per capita, and government positions.

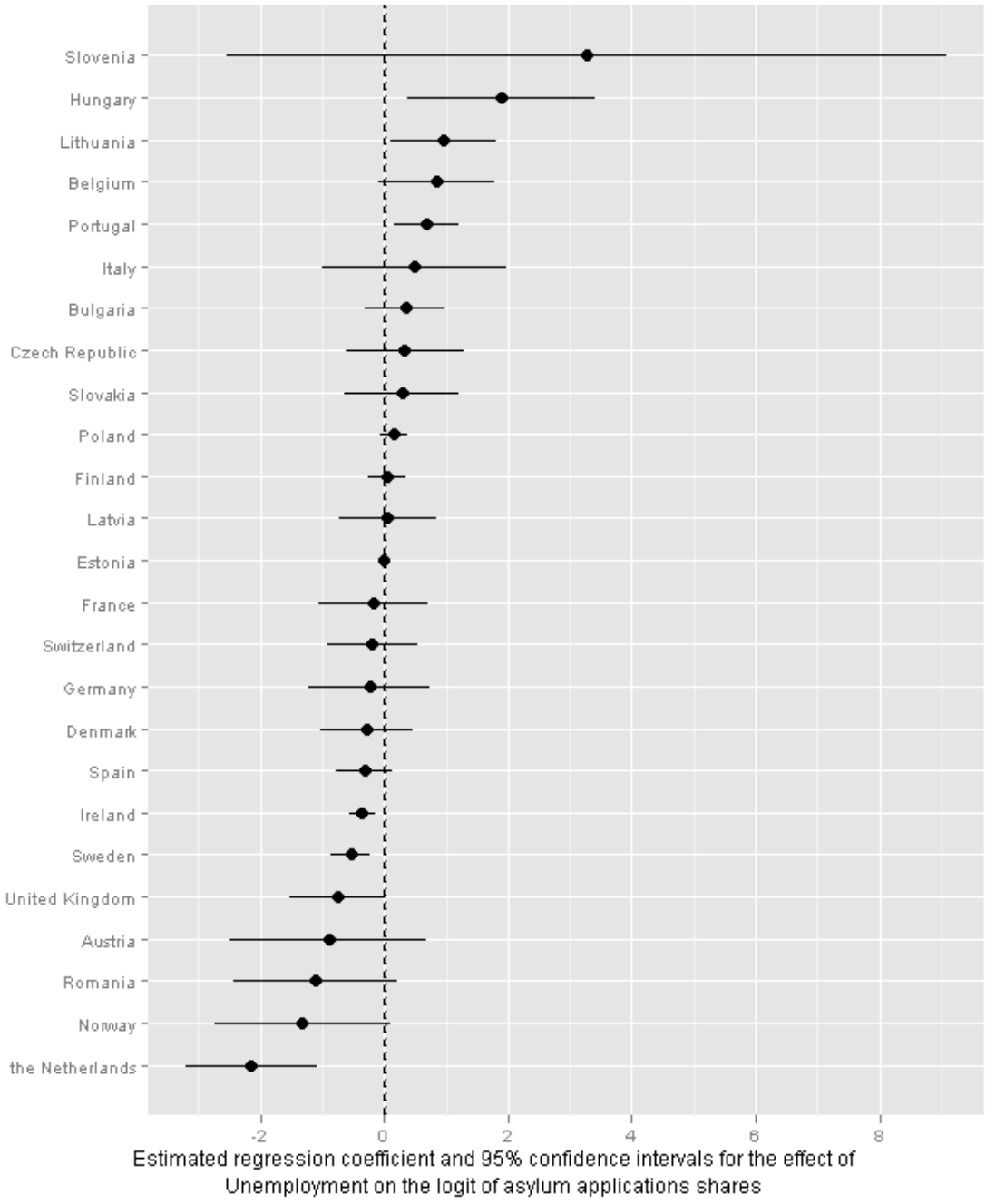

Figure A5. Regression coefficients and 95% confidence intervals for the effect of lagged government positions on immigration/multiculturalism on the logit-transformed yearly share of asylum applications for each of the EU-29 countries. Greece, Luxembourg, Malta and Cyprus excluded due to missing observations. Separate regressions fitted for each country. The models include a lagged dependent variable, recognition rates, GDP per capita and unemployment.

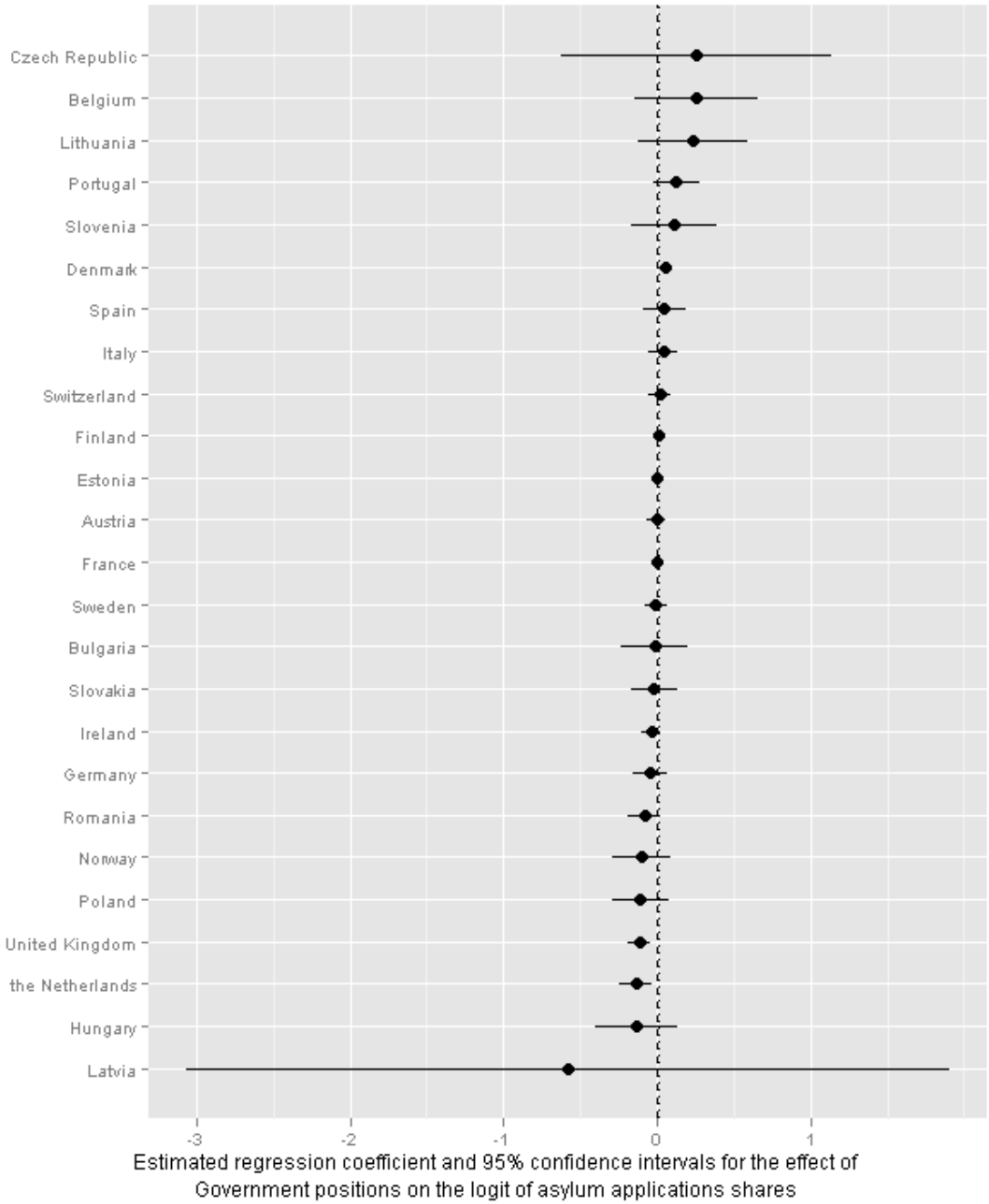

Figure A6. Regression coefficients and 95% confidence intervals for the effect of lagged GDP per capita on the logit-transformed yearly share of asylum applications for each of the EU-29 countries. Greece, Luxembourg, Malta and Cyprus excluded due to missing observations. Separate regressions fitted for each country. The models include a lagged dependent variable, recognition rates, GDP per capita and unemployment.

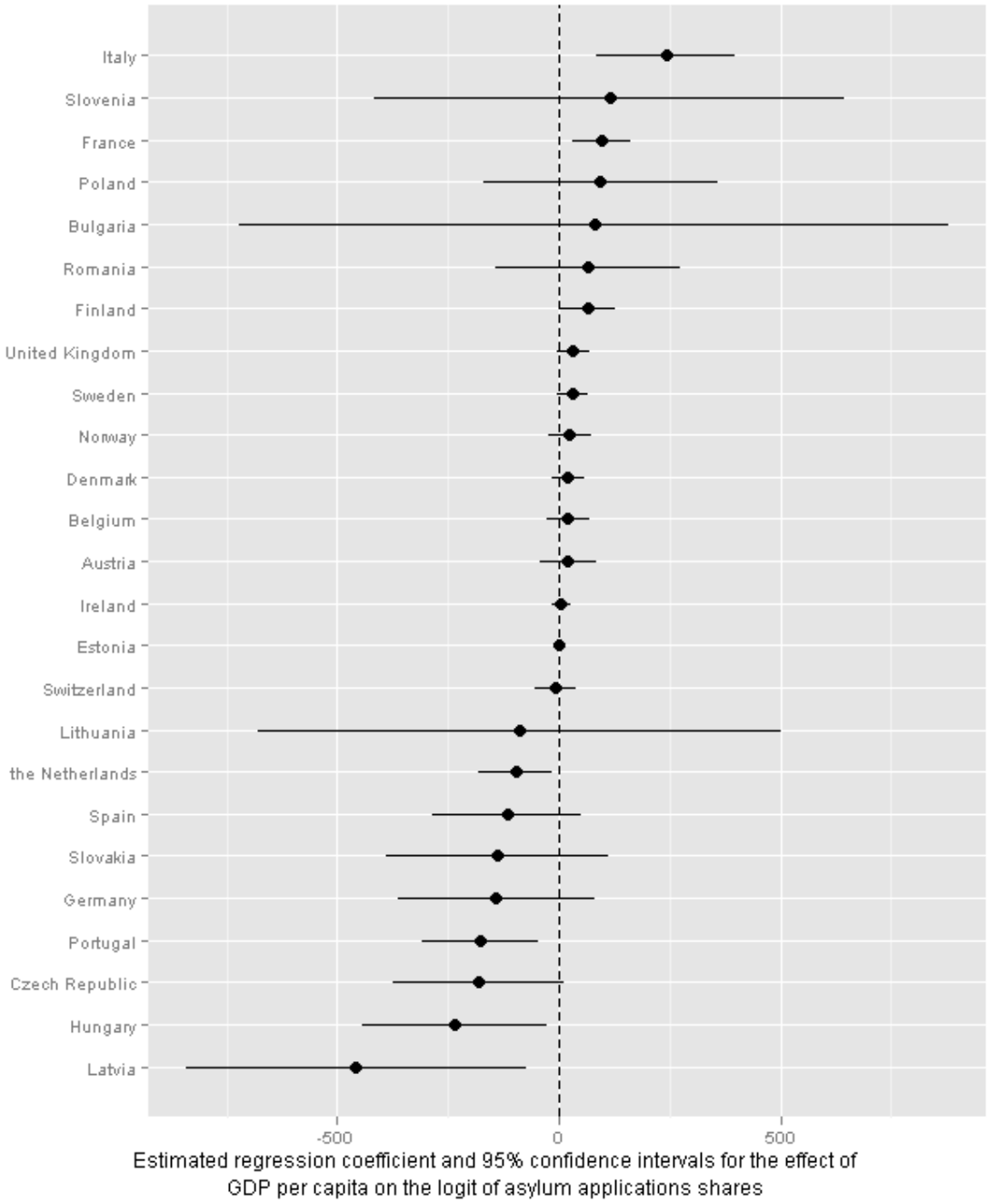

Table A3. Details about models B1:B4 reported in the article.
Dependent variable – Logit-transformed Yearly Recognition Rates (origin specific in the case of B4). Model B1 – complete pooling (OLS). Model B2 – no pooling (OLS). Model B3 and B4 – partial-pooling multilevel models. Unstandardized coefficients.

Variable	**Model B1**			**Model B2**			**Model B3**			**Model B4**		
Fixed effects	**Coef**	**St.e**	**P-v**	**Coef**	**St.e**	**P-v**	**Coef**	**St.e**	**P-v**	**Coef**	**St.e**	**P-v**
Lagged Share of yearly applications	-0.103	0.034	**	-0.265	0.064	***	-0.192	0.047	***	-0.088	0.024	***
Lagged Recognition rate (logit)	0.694	0.034	***	0.405	0.048	***	0.546	0.040	***	0.568	0.023	***
Lagged GDP per capita	14.665	5.140	**	22.588	20.261		21.705	6.958	**	4.928	9.952	
Lagged Unemployment	-0.166	0.056	**	-0.031	0.086		-0.128	0.070	.	-0.087	0.101	
Lagged Government position	-0.004	0.009		0.019	0.011	.	0.007	0.010		-0.012	0.011	
Lagged Population	0.012	0.002	***	-0.123	0.067	.	0.017	0.005	***	0.007	0.004	
Fixed Destination intercepts		-			included			-			-	
Fixed Year intercepts		-			included			-			-	
Random effects								**St.dev**			**St.dev**	
Destination intercepts		-			-			0.40			0.36	
Year intercepts		-			-			0.12			0.24	
Origin intercepts		-			-			-			0.38	
Residual		-			-			0.76			1.10	
Akaike Information Criterion		918.15			896.46			941.3			3912	
Number of cases		372			372			372; Destination 27, Year 23			1252; Destination 17, Year 10, Origin 10	

Table A4. Models with alternative specifications of the dependent variable and the main independent variable – lagged application shares. Model B3 – the same multilevel model as in Table A.3 (both Applications and Rates are logit-transformed). Model B5 – only Applications are logit-transformed, Model B6 – only Rates are logit transformed, Model B7 – both Applications and Rates untransformed. Model B8 – DV: first difference of Recognition rates; Applications – lagged first difference of Yearly application shares.

Variable	Model B3 logit-logit			Model B5 linear-logit			Model B6 logit-linear			Model B7 linear-linear			Model B8 First differences		
Fixed effects	**Coef**	**St.e**	**P-v**	**Coef**	**St.e**	**P-v**	**Coef**	**St.e**	**P-v**	**Coef**	**St.e**	**P-v**	**Coef**	**St.e**	**P-v**
Lagged Share of yearly applications	-0.192	0.047	***	-0.008	0.003	*	-1.140	0.824		-0.100	0.062		-0.466	0.146	***
Lagged Recognition rate	0.546	0.040	***	0.480	0.039	***	0.585	0.040	***	0.490	0.039	***	-	-	-
Lagged GDP per capita	21.705	6.958	**	0.816	0.500		11.368	6.139	.	0.476	0.456		-0.262	0.410	
Lagged Unemployment	-0.128	0.070	.	-0.006	0.005		-0.135	0.069	*	-0.007	0.005		-0.007	0.005	
Lagged Government position	0.007	0.010		0.001	0.001		0.003	0.010		0.001	0.001		0.001	0.001	
Lagged Population	0.017	0.005	***	0.001	0.000	**	0.010	0.004	**	0.001	0.000	**	0.001	0.001	
Random effects		**St.dev**			**St.dev**			**St.dev**			**St.dev**			**St.dev**	
Destination intercepts		0.40			0.03			0.30			0.02			0.00	
Year intercepts		0.12			0.01			0.14			0.01			0.01	
Residual		0.76			0.06			0.78			0.06			0.07	
Akaike Information Criterion		941.3			-942.8			948.8			-1738.8				
Number of cases		372; Destination 27, Year 23			372; Destination 27, Year 23			372; Destination 27, Year 23			372; Destination 27, Year 23			363; Destination 27, Year 22	
Expected change in number of recognized asylum seekers for a standard deviation change in asylum applications (from the mean). All other variables held at their means, a total number of 16 135 applications in the country/year assumed.		-133			-134			-72			-121			-180	

Figure A7. Regression coefficients and 95% confidence intervals for the effect of lagged asylum application shares (logit-transformed) on the logit-transformed recognition rate for each of the EU-29 countries. Greece, Estonia, Luxembourg, Malta and Cyprus excluded due to missing observations. Separate regressions fitted for each country. The models include a lagged dependent variable and five covariates – GDP per capita, population, unemployment and government positions.

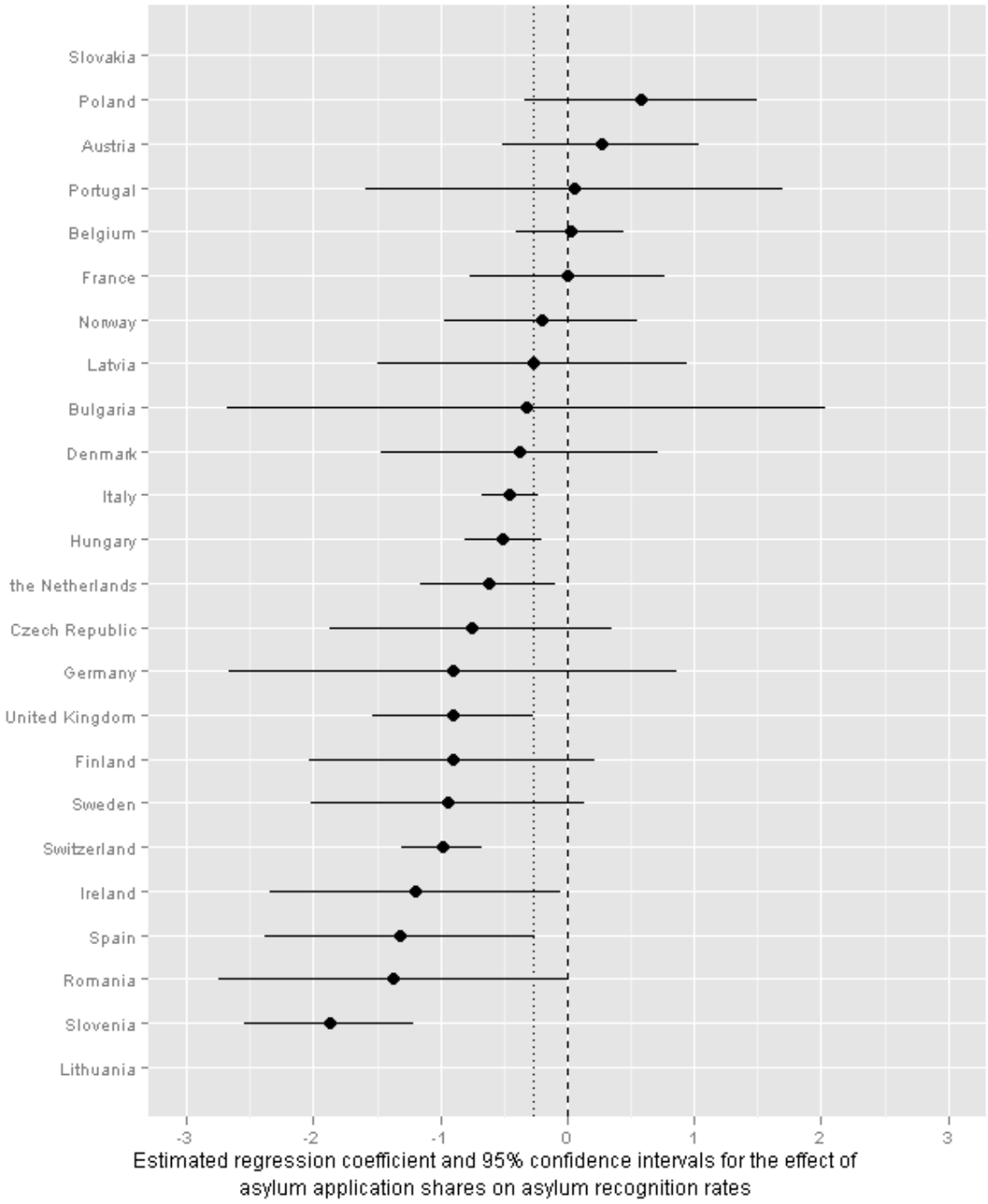

Figure A8. Regression coefficients and 95% confidence intervals for the effect of lagged unemployment on the logit-transformed recognition rate for each of the EU-29 countries. Greece, Estonia, Luxembourg, Malta and Cyprus excluded due to missing observations. Separate regressions fitted for each country. The models include a lagged dependent variable and five covariates – GDP per capita, population, lagged asylum applications share and government positions.

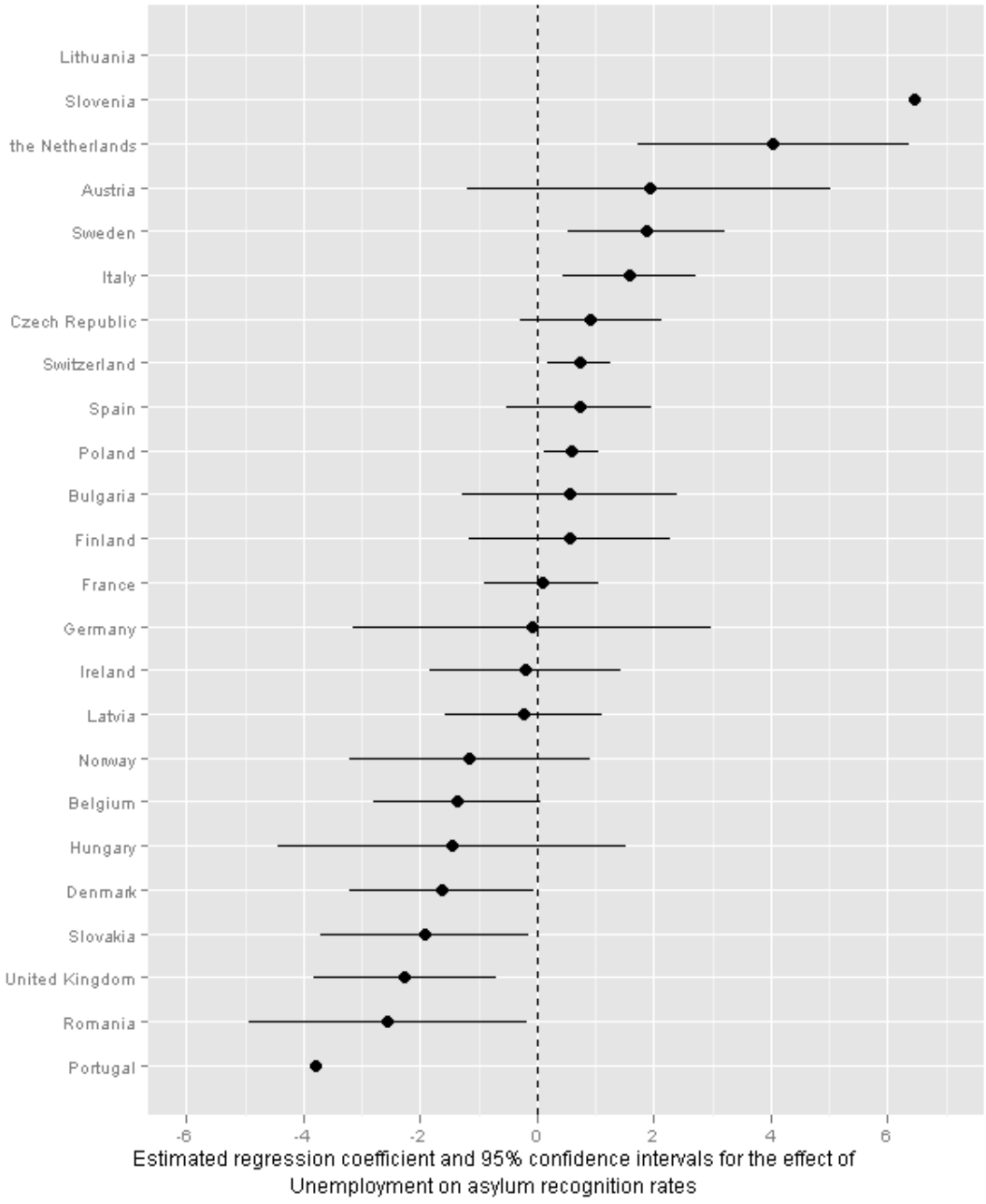

Figure A9. Regression coefficients and 95% confidence intervals for the effect of lagged government positions towards immigration/multiculturalism on the logit-transformed recognition rate for each of the EU-29 countries. Greece, Estonia, Luxembourg, Malta and Cyprus excluded due to missing observations. Separate regressions fitted for each country. The models include a lagged dependent variable and five covariates – GDP per capita, population, lagged asylum applications share and unemployment.

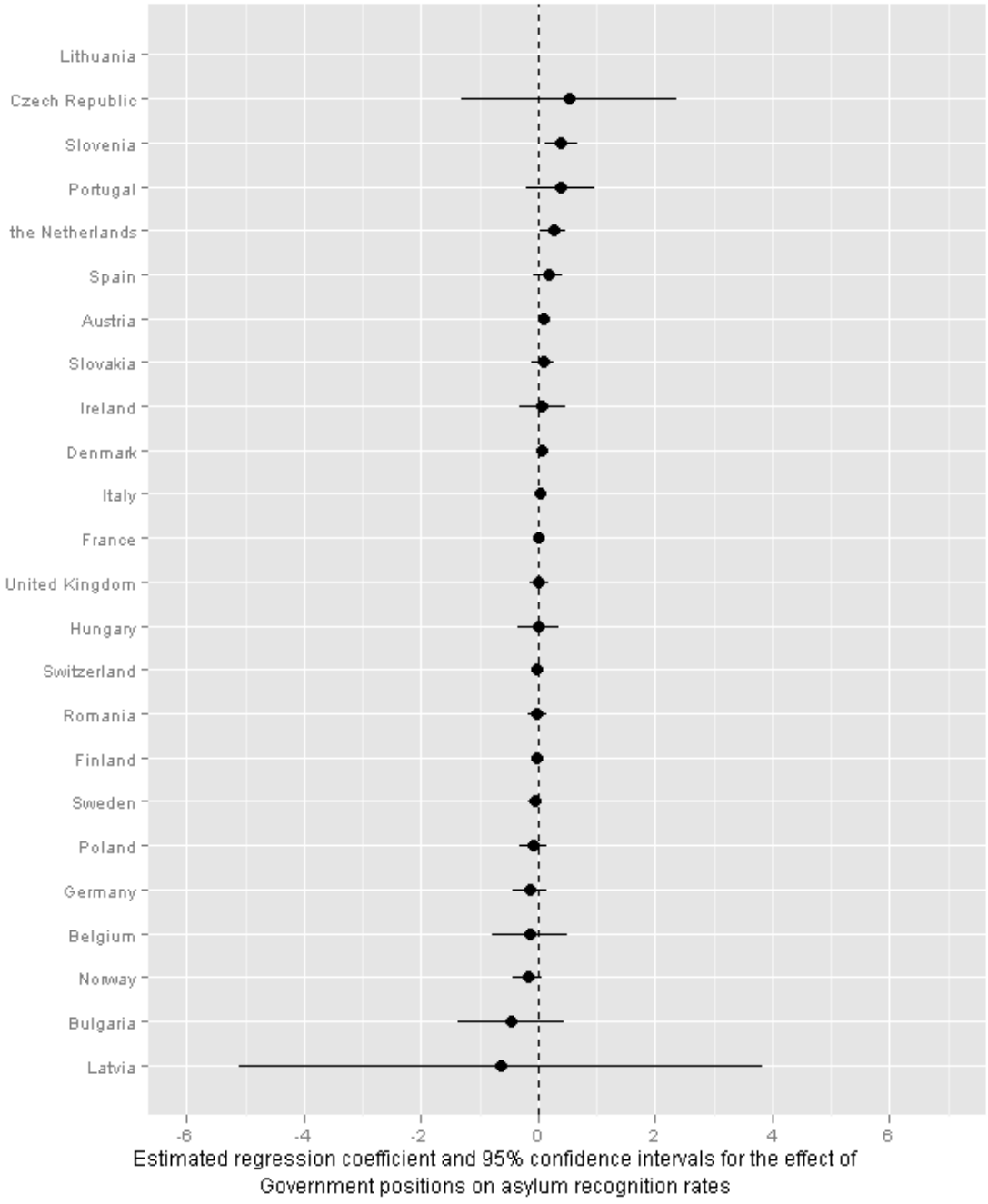

Figure A10. Regression coefficients and 95% confidence intervals for the effect of lagged GDP per capita on the logit-transformed recognition rate for each of the EU-29 countries. Greece, Estonia, Luxembourg, Malta and Cyprus excluded due to missing observations. Separate regressions fitted for each country. The models include a lagged dependent variable and five covariates – unemployment, population, lagged asylum applications share and government positions.