Gender and Opinion–Policy Congruence in Europe

European Political Science Review

Supporting Information

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Table S1. Policy issues, survey questions, year, survey, and number of countries

Policy issue	Survey item	Year	Survey	No. of countries
Warnings on alcohol bottles	"Would you agree or disagree to put warnings on alcohol bottles with the purpose to warn pregnant women and drivers of dangers of drinking alcohol?"	2009	EB 72.3	27
Experiments on animals	"Scientists should be allowed to experiment on animals like dogs and monkeys if this can help sort out human health problems"	2010	EB 73.1	31
Smoking ban	"Are you in favour of smoking bans in the following places? Bars, pubs and clubs"	2008	Flash EB 253	28
Tobacco vending machines	"Banning the sales of tobacco products through vending machines"	2012	EB 77.1	27
Embryonic stem cell research	"Research involving human embryos should be forbidden, even if this means that possible treatments are not made available to ill people"	2010	EB 73.1	31
Nuclear power	"Are you totally in favour, […] or totally opposed to energy production by nuclear power stations?"	2008	EB 69.1	27
Minimum wage	"A minimum reasonable wage should be guaranteed in (OUR COUNTRY), even if this would lead to fewer jobs available."	2010	EB 74.1	27
Support for caregivers	"The state should pay an income to those who have to give up working or reduce their working time to care for a dependent [elderly] person"	2007	EB 67.3	28
Detention without charge	"Suppose the government suspected that a terrorist act was about to happen. Do you think the authorities should have the right to detain people for as long as they want without putting them on trial?"	2005-2008	ISSP 2006	18
Same-sex marriage	"Same-sex marriages should be prohibited by law."	2009	EES 2009	27
Adoption by same-sex couples	"Homosexual couples should be able to adopt children"	2008-2009	EVS 2008	31
Abortion	"Women should be free to decide on matters of abortion."	2009	EES 2009	27
Citizenship	"Children born in [COUNTRY] of parents who are not citizens should have the right to become [COUNTRY NATIONALITY] citizens."	2003-2005	ISSP 2003	20
Progressive tax	"Do you think people with high incomes should pay a larger share of their income in taxes than those with low incomes, the same share, or a smaller share?"	1998-2001	ISSP 1999	16
Pension and income	"Pensioners should be allowed to earn as much as they want on top of their pension."	2001	EB 56.1	16
Refugees' right to work	"While their applications for refugee status are being considered, people should be allowed to work in [COUNTRY]"	2002-2003	ESS 1	21
Online voting	"On-line voting should be used for elections and referenda"	2001	EB 54.2	16
Military in Afghanistan	"Send [NATIONALITY] troops to fight with the U.S. forces?"	2001	Flash EB 114	15
Mandatory retirement	"Would you say that people should be allowed to continue working once they have reached the official retirement age, or should they have to stop working?"	2011	EB 76.2	30
Plastic waste disposal	"Disposing of plastic waste in landfill sites should be prohibited"	2013	Flash EB 388	28

Notes: EB = Eurobarometer, ISSP = International Social Survey Programme, EES = European Election Study, EVS = European Values Study, ESS = European Social Survey

Table S2. Mean degree of policy support among men and women by issue

	Proportion of men in support	Proportion of women in support
Warnings on alcohol bottles	0.78	0.82
Experiments on animals	0.62	0.48
Smoking ban	0.64	0.71
Tobacco vending machines	0.56	0.65
Embryonic stem cell research	0.41	0.46
Nuclear power	0.55	0.38
Minimum wage	0.69	0.68
Support for caregivers	0.91	0.93
Detention without charge	0.48	0.50
Same-sex marriage	0.52	0.45
Adoption by same-sex couples	0.29	0.37
Abortion	0.85	0.86
Citizenship	0.81	0.83
Progressive tax	0.80	0.82
Pension and income	0.66	0.65
Refugees' right to work	0.73	0.78
Online voting	0.51	0.47
Military in Afghanistan	0.43	0.35
Mandatory retirement	0.35	0.35
Plastic waste disposal	0.81	0.83
Mean	0.62	0.62

Table S3. Policy scales

Issue	Original scale	Binary scale
Warnings on alcoholic drink bottles	0=no warnings 1=warnings	0=no warnings 1=warnings
Experiments on animals like monkeys and dogs	0=ban on experiments on monkeys and dogs 1=ban on experiments on great apes and gibbons 2=ban on experiments with great apes 3=no ban	0=ban on experiments on any monkeys and dogs 1=no ban
Smoking bans in bars and pubs	0=no ban 1=partial ban with many exceptions or not enforced 2=partial ban with some exceptions 3=ban, but separate smoking rooms (no exceptions for small premises) 4=complete ban	0=no ban / partial ban with many exceptions or not enforced 1=partial ban with some exceptions / partial ban with separate smoking rooms / complete ban
Banning of tobacco sale through vending machines	0=no ban 1=restrictions 2=ban	0=no ban / no ban but restrictions 1=ban
Embryonic stem cell research	0=no ban 1=no ban but restrictive 2=ban but allowed with imported cells 3=absolute ban	0=no ban / no ban but restrictive 1=ban but allowed with imported cells / absolute ban
Nuclear power	0=no nuclear energy with no plans to build or phase-out plan 1=no nuclear energy with no explicit policy 2=nuclear energy and plan to continue or none but explicit plans to build	0=no nuclear energy with no plans to build / phase-out plan / no nuclear energy with no explicit policy 1=nuclear energy and plan to continue / no nuclear energy but explicit plans to build
Nation-wide minimum wage	0=no minimum wage 1=industry-wide 2=national or industry-wide with coverage >90%	0=no minimum wage / industry-wide minimum wage 1=national or industry-wide with coverage >90%
State support to care for dependent persons	0=no support 1=support	0=no support 1=support
Detaining terrorist suspects indefinitely	0=very short detention limit (<=3 days) 1=short detention limit (4-10 days) 2=long detention limit (>10 days) 3=no detention limit	0=detention limit 1=no detention limit
Same-sex marriage	0=marriage legalized 1=registered partnership 2=not legalized 3=prohibited	0=marriage legalized 1=registered partnership / not legalized / prohibited
Adoption of children by same-sex couples	0=not allowed 1=only internal adoption 2=internal and external	0=not allowed / only internal adoption 1=internal and external
Abortion	0=banned 1=only if threat to life of mother	0=banned / only if threat to life or health of mother / only with social and economic reasons 1=on request

	2=only if threat to health of mother 3=for social and economic reasons 4=on request	
Ius soli (citizenship on the basis of birth in a territory)	0=only foundlings 1=only stateless children 2=only facilitated naturalization 3=double *ius soli* 4=weak *ius soli* 5=strong *ius soli* 6=unconditional *ius soli* at birth	0=only foundlings or stateless children / facilitated naturalization 1=double, weak, strong or unconditional *ius soli* at birth
Progressive income tax	0=regressive tax 1=flat tax 2=progressive tax	0=regressive or flat tax 1=progressive tax
The right to earn while receiving a pension	0=not allowed to earn 1=limit on earnings/penalty 2=unlimited earnings	0=not allowed to earn / limit on earnings or penalty 21=unlimited earnings
Refugees' right to work	0=not allowed 1=allowed under certain conditions 2=allowed	0=not allowed / only under strong conditions 1=allowed under (weak) conditions / allowed
On-line voting	0=no 1=yes	0=no 1=yes
Military involvement in Afghanistan	0=no 1=yes	0=no 1=yes
Mandatory retirement age	0=none 1=none, with few exceptions (e.g. military) 2=for public servants and/or a considerable no. of professions based on collective agreements and/or employers may set one 3=yes	0=none / none with few exceptions (e.g. military) 1=for public servants and/or a considerable number of professions based on collective agreements and/or employers may set one / mandatory retirement age
Banning the disposal of plastic waste in landfills	0=no 1=yes	0=no 1=yes

Table S4. Response ratio among women and men

Policy issue	Response ratio $= \dfrac{Response\ rate_1\ among\ women}{Response\ rate_1\ among\ men}$
Abortion	1.028
Same-sex marriage	1.007
Citizenship	1.006
Warnings on alcohol bottles	1.001
Support for caregivers	0.999
Mandatory retirement	0.998
Experiments on animals	0.997
Progressive tax	0.995
Smoking ban	0.994
Tobacco vending machines	0.990
Adoption by same-sex couples	0.990
Embryonic stem cell research	0.990
Plastic waste disposal	0.982
Pension and income	0.980
Military in Afghanistan	0.978
Minimum wage	0.975
Refugees' right to work	0.966
Detention without charge	0.961
Online voting	0.950
Nuclear power	0.944
Total	0.988

[1] Response rate refers to proportion of responses in favor or against a policy as opposed to "neither nor", "don't know", and "no answer"

Table S5. Logistic regression of women's policy congruence on different measures of electoral system proportionality

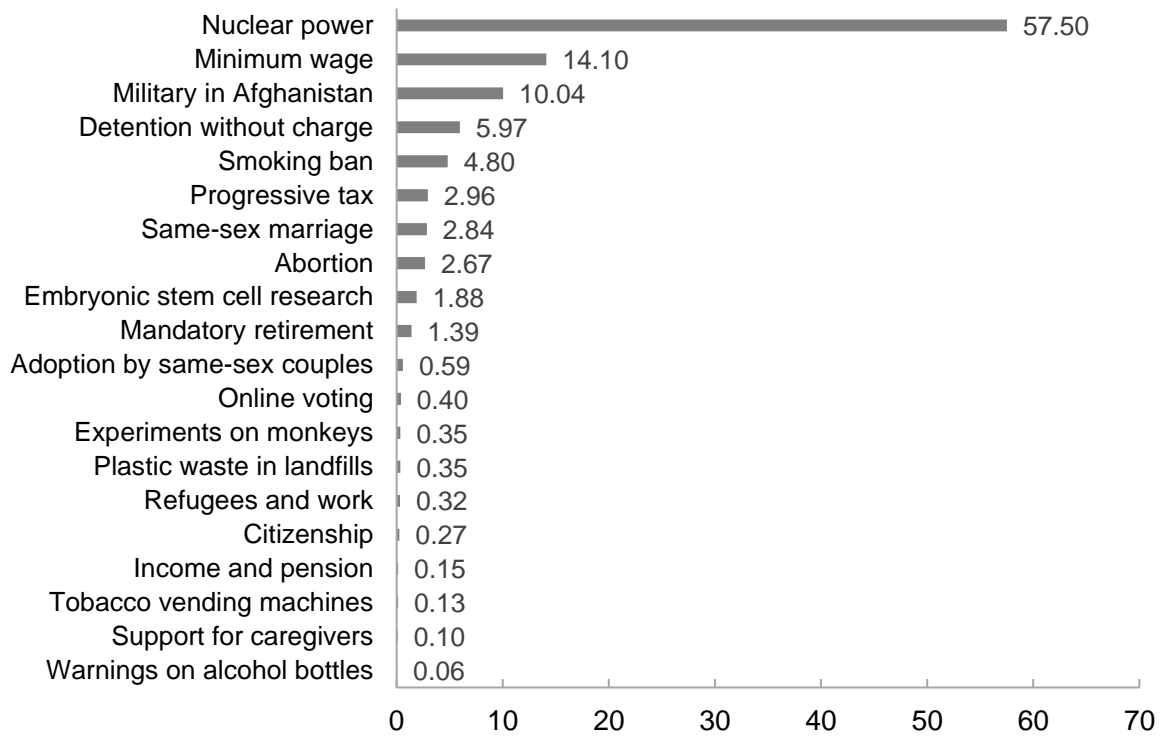|	Average district magnitude		Gallagher Index	
	(1)	(2)	(3)	(4)
Descriptive representation		0.02 (0.04)		0.06 (0.06)
Government ideology (right-wing)		-0.30 (0.35)		-0.46 (0.38)
Average district magnitude	0.00 (0.01)	-0.00 (0.01)		
Gallagher Index			-0.03 (0.07)	0.15 (0.12)
Number of parties (ENPP)		0.69 (0.32)*		0.81 (0.35)*
Response ratio	-16.74 (9.53)	-16.17 (11.09)	-16.97 (9.59)	-15.71 (11.16)
Turnout	0.15 (0.34)	0.29 (0.44)	0.16 (0.33)	0.07 (0.48)
Turnout^2	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)
Age of democracy	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)	-0.00 (0.01)
Year	-0.18 (0.10)	-0.14 (0.13)	-0.19 (0.11)	-0.09 (0.13)
Constant	10.50 (14.94)	4.21 (20.12)	10.80 (14.79)	9.92 (21.09)
Pseudo R-squared	0.18	0.29	0.18	0.31
N	61	61	61	61

* $p<0.05$, ** $p<0.01$, *** $p<0.001$

Figure S1. Issue salience

Notes: Values are proportion of *Financial Times* articles on Europe referring to the policy issue over a three-year period up to measurement of public opinion and policy (*t*-2 to *t*)
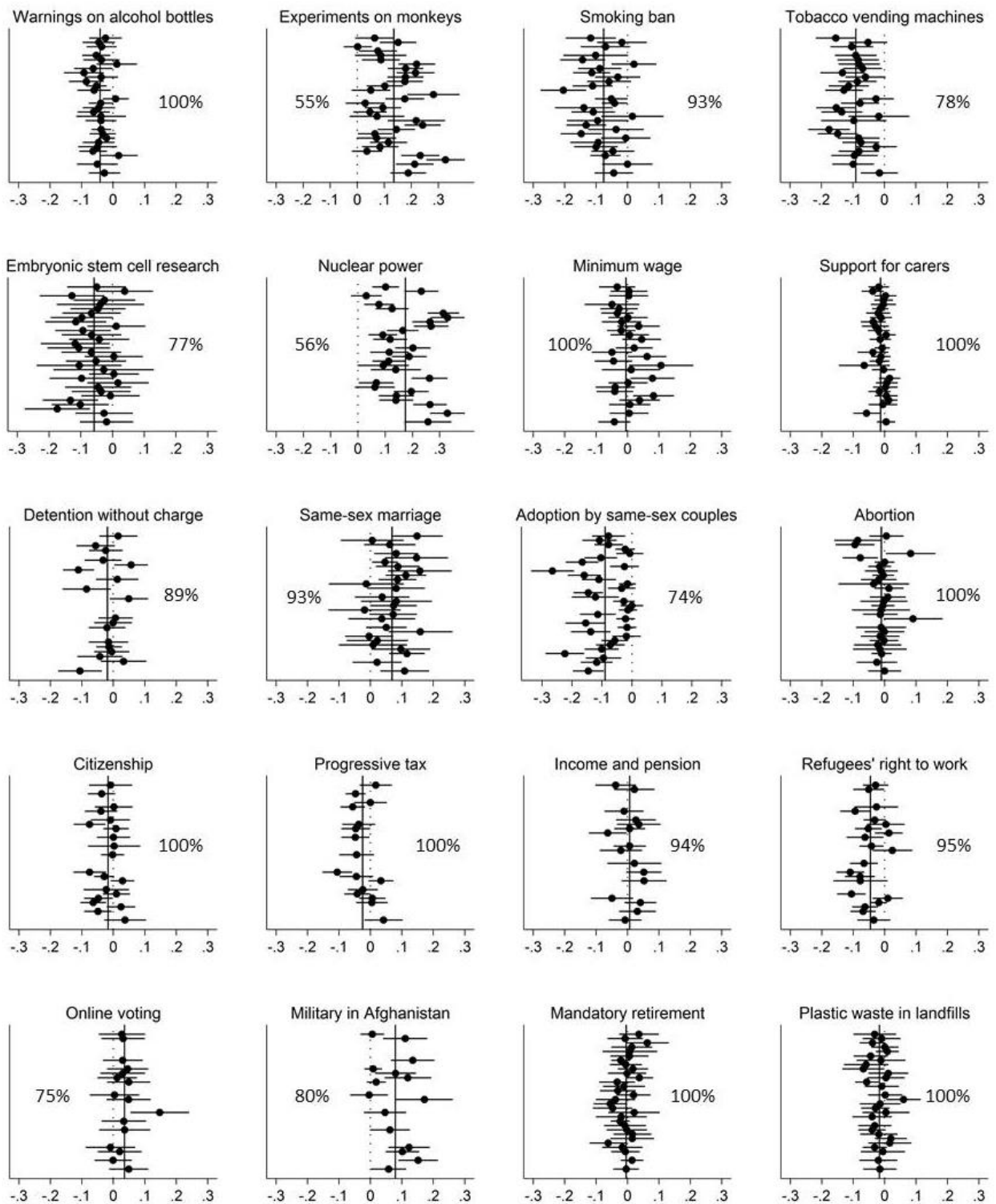
Figure S2. Differences in policy support between men and women across issues

Notes: The dots indicate differences in the proportions of policy support between men and women in a country, with positive values indicating higher support amongst men. The error bars represent 95% confidence intervals. The percentage of countries with majority agreement between men and women is indicated.
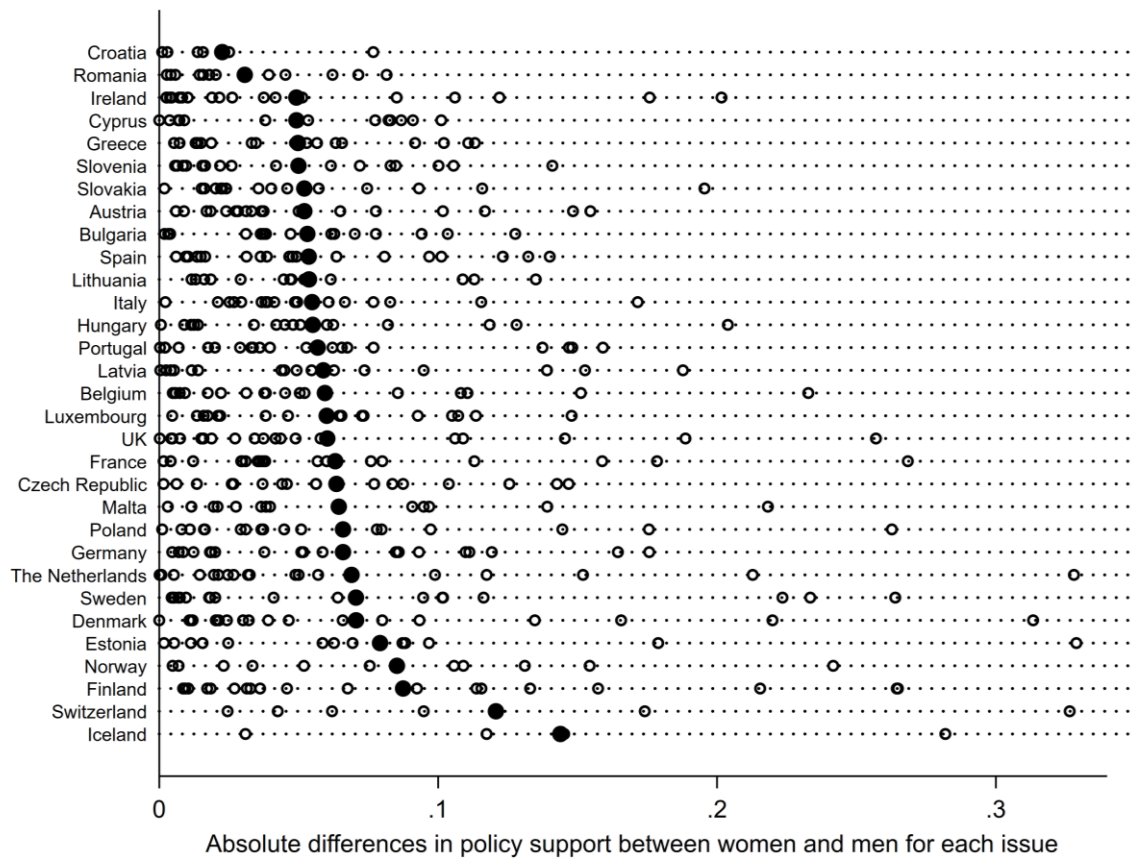
Figure S3. Differences in policy support between men and women across countries

Notes: The hollow circles indicate absolute differences in the proportions of policy support between men and women on each issue. The black dots indicate the mean absolute difference in a country.

SUPPORTING INFORMATION B: Policy mapping procedure

The policy measure used in the analyses reflects whether a policy was in place or not in a country at the point in time when the survey asking respondents' opinion on the issue was conducted. The data on the state of policy was collected by the author and a trained research assistant following the Guidelines for Mapping Policy of the GovLis project.[1] The process started by picking a policy issue at random from the pool of issues for which public opinion survey questions were identified that met the selection criteria (see article). After determining the countries and time period in which the survey was conducted, the coders conducted research to write a description of the issue, delineating the state of the debate at the time and the specific policies to which the survey question refers. Part of this step was to determine whether a policy at the EU level existed at the time. If it did, the issue was dropped and replaced by another randomly selected issue from the pool.

The policy in place at the time in each country with available survey data was determined based on various sources that were found to provide reliable information. The sources included official government documents (e.g. websites and press releases), legal documents, academic publications, newspaper articles, publications and websites of international organizations including the EU, non-governmental organizations etc., and interviews with experts. Information obtained from one source was to be verified by another source if possible. If sufficient information could not be found, the issue was dropped and replaced. Based on the policies in place across countries, a unique ordinal policy scale was developed for each issue. These scales, listed in Table S3 (SI A), were subsequently collapsed into binary scales which match the survey question, and hence the expressed public support, as closely as possible.

For example, the survey question on support for nuclear energy was "Are you totally in favour, fairly in favour, fairly opposed or totally opposed to energy production by nuclear power stations?" (Eurobarometer 69.1; interview period: 18-22/02/2008). The research revealed cross-country variation in both the presence of nuclear energy plants and policies for the future. Examples for the sources for this issue include the websites of the European Nuclear Safety Regulators Group (ENSREG)[2], the World Nuclear Association[3], the Nuclear Threat Initiative[4], and the German Ministry for the Environment, Nature Conservation and Nuclear Safety[5]. On the basis of the presence of plants and government policies, a three-point ordinal scale was developed with the following categories: 0 = no nuclear energy plants and plans not to build any or existing plants but a phase-out plan in place (anti-nuclear energy policy); 1 = no plants and no specific plans to build or to abstain from building plants (no pro-nuclear energy policy); 2 = existing nuclear energy plants and no phase-out plan or no existing nuclear energy plants but plans to build (pro-nuclear energy policy). This three-point scale was then collapsed into a binary scale by coding 0 and 1 as 'policy not in place' and 2 as 'policy in place'.

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[1] www.govlis.eu

[2] www.ensreg.eu

[3] www.world-nuclear.org

[4] www.nti.org

[5] www.bmu.de/en

SUPPORTING INFORMATION C: Regressing policy on public opinion

An alternative way of assessing the link between public policy and public opinion is to estimate the relationship between the degree of public policy support and the likelihood of policy being in place. Rather than assessing whether policy reflects the majority opinion, this approach determines whether a policy is more likely to be in place the stronger the support for it (see Lax and Phillips [2012] and Rasmussen et al. [2018] for discussions of the two approaches). Models 1 and 2 in Table S7 show the results of multilevel logit models with issue-country observations and level 1 and issues at level 2 in which the binary policy measure is regressed on policy support among men and women, respectively.

We find that policy is more likely to be in place the stronger the support for it, for both men and women. However, while the coefficient is larger for men, it is not possible to compare the strength of effects on the basis of coefficients from different logit models. Thus, I also estimate equivalent multilevel linear probability models (Models 3 and 4), which show that the coefficient of men's policy support is larger than that of women's support. I also estimate a multilevel logit model that includes both support measures. While this is problematic given the very high collinearity between them (r=.93), the finding that the coefficient of men's support is positive and statistically significant whereas that of women's support is not significant strengthens the conclusion that the likelihood of policy is more strongly related to men's policy support than women's. This confirms the overall conclusion from the analysis of majority congruence: women's policy preferences are less well reflected in policy than men's in Europe.

Table S7. Multilevel linear and logit regressions of policy on women's and men's support

	(1)	(2)	(3)	(4)	(5)
	Multilevel logit regression		Multilevel linear regression		Multilevel logit regression
Men's support	4.44 (0.81)***		0.77 (0.12)**		5.01 (2.22)*
Women's support		3.94 (0.78)***		0.66 (0.12)***	-0.59 (2.13)
Constant	-2.93 (0.63)***	-0.63 (0.63)***	0.00 (0.10)	0.07 (0.10)	-2.92 (0.63)***
Intercept variance	2.40 (0.99)	2.76 (1.13)	0.07 (0.02)	0.08 (0.03)	2.35 (0.99)
Deviance	525	530	547	553	524
N level 1 (level 2)	491 (20)	491 (20)	491 (20)	491 (20)	491 (20)

p<0.05, ** p<0.01, *** p<0.001

Notes: Level 2 units are policy issues, level 1 units are country-issues.

References

Lax, Jeffrey R., and Justin H. Phillips (2012). The Democratic Deficit in the States. *American Journal of Political Science* 56(1): 148-166.

Rasmussen, Anne, Stefanie Reher and Dimiter Toshkov (2018). The Opinion-Policy Nexus in Europe and the Role of Political Institutions. *European Journal of Political Research.* doi: 10.1111/1475-6765.12286.