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Abstract

What are the economic consequences of policies that follow public opinion? We combine international survey data with fiscal statistics, and find that the public generally favors increased spending on most areas and lower taxes for most citizens. Consequently, in countries where policy follows public opinion, deficits grow and debt accumulates. The results do not mean that the public necessarily is irrational, as these surveys do not task respondents with balancing the budget. However, they do illustrate the limits of democratic models that uncritically value strict congruence between public opinion and policy.

Introduction

Democracies should, according to democratic theory, represent the will of the people (Dahl 1971). But what are the economic consequences of policies that follow public opinion?¹

On the one hand, it is clear that states with democratic modes of governance have led economic, technological, and human development over the last 100 years (Acemoglu and Robinson 2012; Gerring, Thacker, and Alfaro 2012). On the other hand, it is far from certain that the key factor behind this progress is popular control over specific policies. Theoretically, the idea of the ‘wisdom of the crowd’ suggests that the public on average makes sensible decisions. But empirical research shows that voters in practice are often poorly informed and unknowledgeable about public policy (Bartels 1996; Converse 2006). Instead, scholars of long-term development tend to emphasize the importance of rule of law and institutions that constrain the executive (Acemoglu and Robinson 2012; North, Wallis, and Weingast 2009; North 1990).

In this paper, we take a purely empirical approach to the question and examine the fiscal outcomes of economic policy that align with public opinion. Combining survey data on attitudes to taxation and spending in specific areas from the International Social Survey Programme with fiscal statistics, we find that the public generally favors increased public spending in most areas and lower taxes for most citizens. Countries whose policies align with public preferences in the years following the surveys consequently see increased expenditure, without corresponding increases in revenue. This results in larger deficits.

In one sense, the findings are unsurprising, given that public opinion is not responsible for balancing the budget. However, the results also illustrate that the congruence between public opinion and policy cannot be uncritically valued. Good representation entails acting in the public interest (Pitkin 1967), not simply following public opinion.

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Opinion-policy alignment and quality of outcomes

The focus of this paper is on the *consequences* of alignment between public opinion and policy: opinion-policy congruence. Empirical research has concluded that there indeed tends to be a link between opinion and policy. Politicians generally respond to public preferences, particularly on salient issues (Erikson, MacKuen, and Stimson 2002; Stimson, MacKuen, and Erikson 1995; Soroka and Wlezien 2010). Although much of the literature focuses on the US, several studies in Europe also show that political representatives are (at least) fairly responsive to the public (Persson and Sundell 2024; Rasmussen, Reher, and Toshkov 2019). In recent decades a strand of research has emerged that argues that the link between opinion and policy unfortunately is unequal: affluent citizens see their preferences realized in policy more often than less well-off compatriots (Gilens 2005, 2012; Elkjær and Klitgaard 2024; Persson and Sundell 2024). However, only a few studies in this literature discuss fiscal policy, but these also suggest that politicians are responsive to, for instance, demands for more or less spending (Soroka and Wlezien 2010; Elsässer and Haffert 2022). Turning now to the question of whether adherence to public opinion would produce good outcomes, several theories offer insight.

The important Condorcet jury theorem states that when groups take decisions by majority rule, they will be better at picking the ‘correct’ outcome than individuals or smaller groups would be (Bovens and Rabinowicz 2004). If each voter has a probability higher than 0.5 to be correct and decisions are taken independently, the probability that the majority is correct approaches 1 as the size of the group increases. In many democratic decisions, however, there is no objective ‘correct’ answer, such as in value-based questions where strong arguments could be made for either position (i.e., abortion, euthanasia, gun control, etc.), as well as in matters of redistribution where the interests of one group of voters is in conflict with the interests of another.

Moreover, several of the assumptions of the jury theorem can be questioned. It is not clear that voters are more likely than not to pick the correct choice, even when there is

one. Anthony Downs argued that each voter has an incentive to free-ride on the information gathering of others, which would mean that the democratic system as a whole would operate inefficiently (Downs 1957, 148). Empirical research has often concluded that voters are ill informed and myopic, and ‘punish’ politicians for bad events that are beyond the responsibility of the government, suggesting a low level of competence (Achen and Bartels 2017; Brennan 2016). And in the real world voters also do not form opinions independently, as assumed by the jury theorem. The media and public discussion affect large groups of voters at the same time, meaning that misconceptions and biases that proliferate could distort the quality of the collective decision-making process.

Theories in economics focus less on whether the public is ‘correct’ and more on what type of policies the median voter can be expected to prefer. In the classic Meltzer-Richard model (Meltzer and Richard 1981), the *median* voter has an income below the *mean*, and will therefore vote for redistribution through higher taxation and public spending. Other theoretical work contends that as the structure of government revenue often is opaque, citizens will underestimate the costs of public policy, further inflating spending (Buchanan 1987; Dollery and Worthington 1996). Empirically, there is a long-standing finding in the US literature that citizens display seemingly incoherent economic preferences and seem to want both lower taxes and expanded public services (Bremer and Bürgisser 2023a; Sawulski, Szewczyk, and Kielczewska 2024). As one review put it, “the view that the best way to please the voters is to spend more and tax less is so pervasive that it is assumed to be an obvious fact” (Alesina and Passalacqua 2016). A large literature also shows that at least some democracies undergo political budget cycles, in which government spending and deficits increase in election years, presumably because governments expect voters to reward short-term increases in public goods (Shi and Svensson 2006; Dubois 2016).

More recently, studies have challenged the notion of an irrational public (Kölln and Wlezien 2024; Bonica 2015; Tuxhorn, D’Attoma, and Steinmo 2022). Tuxhorn, D’Attoma and Steinmo (p. 584-585) write that “the nature of public opinion polling structures the

respondents’ answers in such a way as to make them seem more incoherent than they are” (Tuxhorn, D’Attoma, and Steinmo 2021). Instead they conclude that when offered better information, citizens are able to provide coherent budget preferences. In a similar vein, Bremer and Bürgisser claim that surveys tend to overstate the level of support for policies if respondents are not being asked about policy trade-offs (Bremer and Bürgisser 2023b).

Inconsistent attitudes expressed in surveys does hence not necessarily mean that citizens are inherently irrational. One could also argue that good representation entails going beyond what can be expressed in a survey; In other words, to represent *interests* rather than preferences. But the fact of the matter is still that, under normal circumstances, the only widely available cross-national indicators of the public will are conventional opinion surveys. In the empirical section of the paper we will therefore investigate the economic consequences of policy that follows public preferences as expressed in such surveys. Our research question is therefore:

- RQ: What are the budgetary outcomes of economic policies in spending and taxation that follows public opinion?

Data

We construct two kinds of measures of congruence: spending congruence and tax congruence.

First, from the ISSP we collect information about spending preferences in different areas. The eight areas that we study are ‘Environment’, ‘Health’, ‘The police and law enforcement’, ‘Education’, ‘The military and defence’, ‘Old age pensions’, ‘Unemployment benefits’, and ‘Culture and the arts’. Respondents could indicate whether spending should be much more, more, the same, less or much less than now, which we combine into a measure that shows aggregate net preference (increase-decrease) ranging from -100 to +100. Regarding taxation respondents answered whether taxes for those with high/middle/low incomes are too high, about right, or too low. This is also converted into an aggregate measure that shows the

net preference for increasing or decreasing taxes for each income group. The distribution of the aggregate measures across countries and years is displayed in Figure 1. Citizens in the surveyed countries overwhelmingly prefer spending increases on law enforcement, environment, pensions, education and health, while being more split on the military, culture and unemployment benefits. This is despite the survey question cautioning that “Remember that if you say ‘much more’, it might require a tax increase to pay for it.”

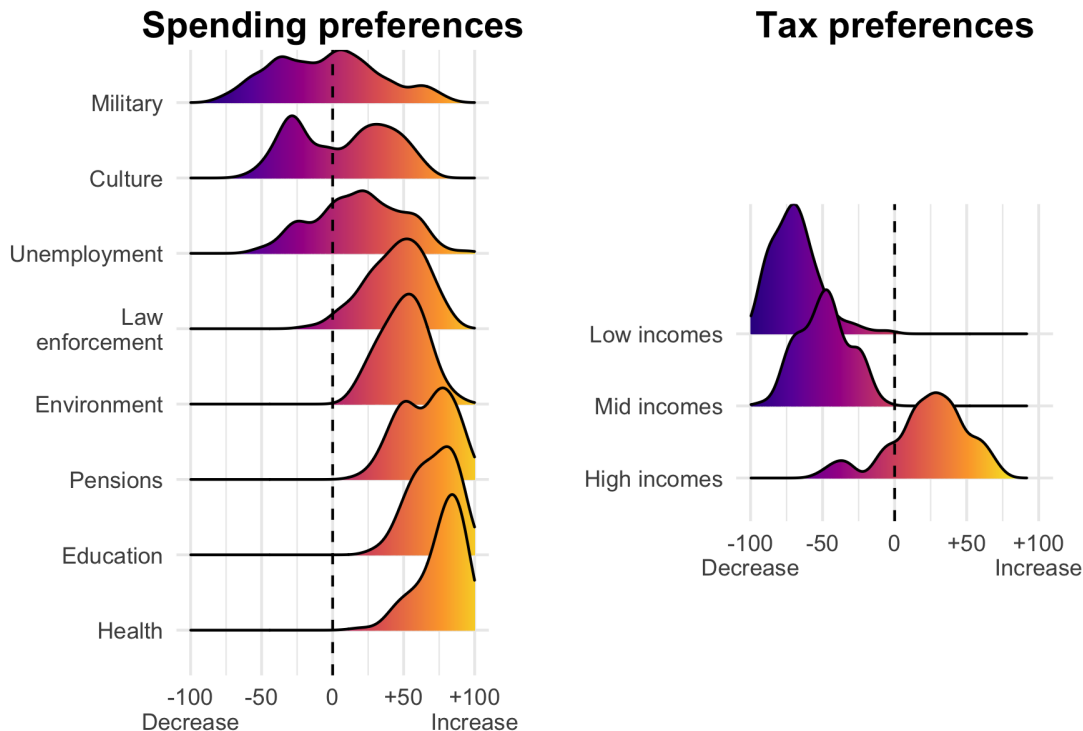
Regarding taxation, people on average prefer lower taxes for low and middle incomes, but raised taxes for those with high incomes. This is in line with previous evidence that shows widespread support for progressivity in taxation (Barnes, Romémont, and Lauderdale 2024). Breaking responses down by individuals, Table S3 in the Supporting Information shows that 49.2 percent of respondents do not want to raise taxes on any income group, while 42.4 percent want to raise it for those with high incomes only. Only 8.4 percent of all respondents have answered that taxes should be raised for either those with low or those with middle incomes.

For each spending area, we then combine the net preference measures with data from the IMF regarding changes to public spending as a share of GDP relative to the year of the survey. If the net preference was in favor of an increase, increases in public spending relative to the baseline year are counted as congruent, and decreases as incongruent. We do this for a time frame window of up five years in relation to the survey, meaning that we get one congruence score for each year in the window.

To calculate congruence for tax preferences we compare preferences with changes in the average tax rate for individuals at 67 percent of the median income (low incomes), 100 percent of median income (middle) and 167 percent of the median income (high).

For both spending and taxation we for each country-year calculate a total congruence score, which is 1 when all spending/tax changes are in the direction favored by the public, and 0 when none are. Larger changes are given more weight in the score. Let d_i be the spending change for area i . C_i is congruence for the area, and is 1 when the change is in the

Figure 1: Average preferences for changes in public spending and taxation across countries and years. Positive values indicate support for higher spending and taxation.



direction people favor, and 0 when it is not. The area weight is given by dividing the absolute spending change for the area $|d_i|$ with the sum of all absolute spending changes $\sum_{j=1}^N |d_j|$. The formula for calculating the total congruence score T is then given by Equation 1:

$$T = \sum_{i=1}^N \frac{|d_i|}{\sum_{j=1}^N |d_j|} C_i. \quad (1)$$

To further illustrate, we take a representative example, which is the United States in 2019. Preferences for six spending areas and taxation were measured in 2016, which therefore is the baseline year. Table 1 shows that respondents favored increases for all areas but culture, and lower taxes for all but those with highest incomes. Health spending and military expenditure increased, contributing to congruence, as did the decrease in spending on culture. Decreases in spending on education and the police decreased congruence. After weighting and summing

the spending changes, the total congruence score is 0.469. For taxation, the total score was 0.598.

Table 1: Example of calculating congruence in changes to spending and taxation. US changes 2016-2019 compared to attitudes in 2016.

Spending area i	Preferences 2016	Change 2016-2019 d_i	Weight $w_i = \frac{ d_i }{\sum_{j=1}^N d_j }$	Congruence in change C_i	Weighted congruence $w_i * C_i$
Education	+75	-0.192	0.358	0 (No)	0
Health	+58	+0.105	0.196	1 (Yes)	0.196
Police	+41	-0.093	0.174	0	0
Environment	+34	0	0.000	0.5	0
Military	+23	+0.140	0.261	1	0.261
Culture	-8	-0.006	0.011	1	0.012
Spending congruence:					0.469
Taxes					
Low incomes	-51	-1.58	0.268	Yes	0.268
Middle incomes	-50	-1.94	0.329	Yes	0.329
High incomes	+27	-2.37	0.402	No	0
Tax congruence:					0.598

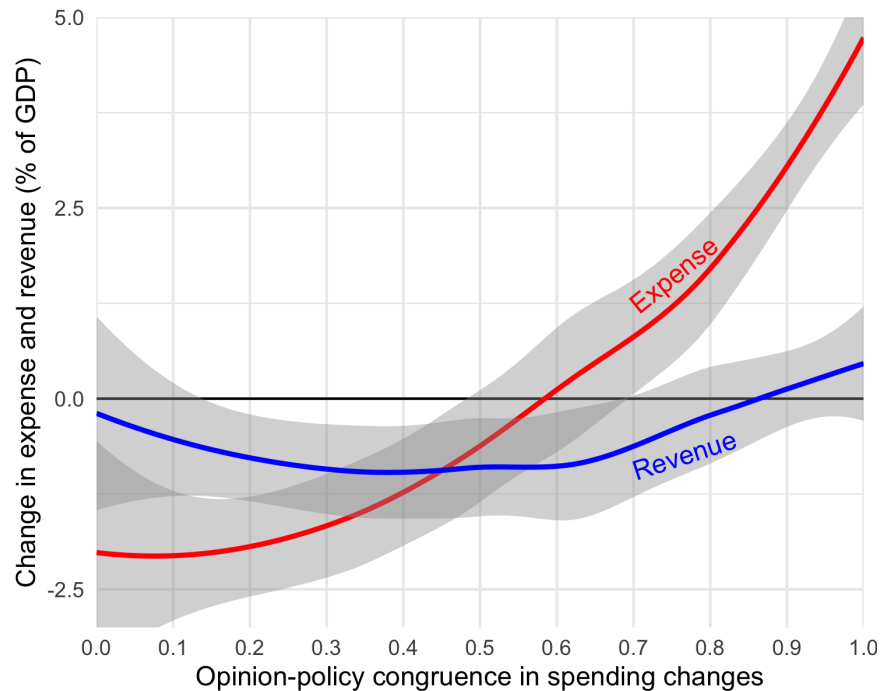
Our main dependent variables are four variables from IMF Government Finance Statistics: ‘General Government Expense’, ‘General Government Revenue’, and ‘General Government Net Operating Balance’ (which is revenue minus expenses), and finally, ‘Net Debt’. (IMF 2014, 68). All variables are measured as changes relative to the baseline year.

It is important to note that we do not argue that policy changes are caused by public opinion. Even though we show in the Supporting Information (Table S4) that spending increases are more common when the public favors them, this need not be evidence of causality. Citizens and decision-makers alike react to the same information (Elkjær 2020). We only examine the budgetary outcomes when policy changes the way citizens wanted it to, no matter the reason.

Results

As a first illustration of the main tendencies we plot the average changes in general government expenses and revenue, over different levels of congruence in spending and taxation. Looking first at congruence in spending changes relative to the baseline year (Figure 2), we see that when spending changes are congruent with public opinion, expenses go up. This is natural, given that public opinion tend to favor increased spending on most areas. Revenues are however largely uncorrelated with congruence in spending changes, which thus gives rise to a deficit when congruence is high, and a surplus when congruence is low.

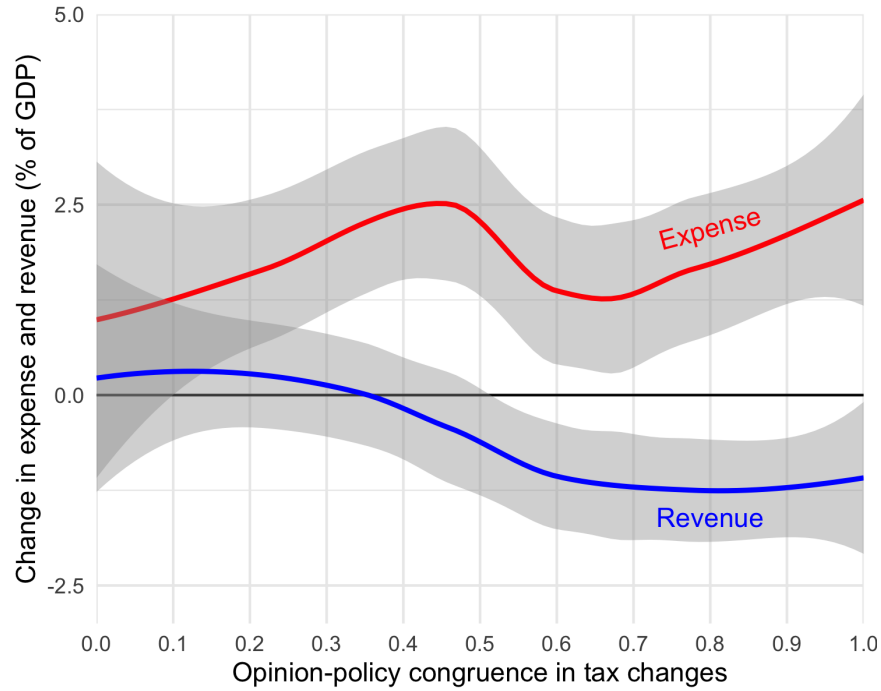
Figure 2: Average changes in general government revenue and expense over different levels of opinion-policy congruence in spending. Loess smooths.



Repeating the analysis for congruence in changes to taxation (Figure 3), we see a slightly different pattern: changes to taxation rates that are congruent with public opinion are associated with decreasing revenue, and with slightly higher expenses. This is also to be expected, as public opinion tends to favor lower taxes for all citizens except those with high incomes. Raised taxes on the affluent do not seem to compensate for the lowered taxes on

the rest. As a result, opinion-policy congruence is again associated with larger deficits.

Figure 3: Average changes in general government revenue and expense over different levels of opinion-policy congruence in taxation. Loess smooths.



We now proceed to a more systematic analysis using regression analysis. Due to varying data availability, we run three sets of analyses on four different fiscal outcomes. First, the main independent variable is spending congruence, together with year fixed effects. Second, the independent variable is tax congruence, and finally, we include both variables together. Year fixed effects are included in all models. Results are presented in Table 2.

The results from the regression analysis confirm the main patterns in the graphs: Better congruence in spending is associated with higher expenses as well as revenue. But since the association is stronger with expenses, congruence is also negatively associated with operating balance, indicating larger deficits. For instance, going from a situation of 0 spending congruence to one with perfect spending congruence (all spending changes align with majority preference) is expected to lower the operating balance with close to 2.2 percentage points of GDP (first panel, third model). As a consequence, spending congruence is also associated with increases in government debt. In the second panel of the table we see that

Table 2: Regression analysis with fiscal outcomes as dependent variables.

	<i>Expense</i>	<i>Revenue</i>	<i>Operating balance</i>	<i>Net debt</i>
Spending congruence	4.625** (0.642)	2.236** (0.651)	-2.174* (0.855)	6.793* -2.713
n	326	330	302	185
Tax congruence	-0.575 (0.757)	-1.746* (0.700)	-1.171 (0.996)	-5.965* 0.818
n	220	220	220	145
Spending congruence	7.543** (0.715)	-0.304 (0.365)	-7.847** (0.831)	13.511** (2.590)
Tax congruence	-0.152 (0.879)	-1.156* (0.449)	-1.004 (1.022)	0.999 (3.291)
n	199	199	199	140

Note: ** $p < 0.01$, * $p < 0.05$. Table shows result of 12 separate regression analyses. The four fiscal outcomes displayed in the header are regressed spending congruence in the first panel, tax congruence in the second panel, then spending congruence and tax congruence together in the third panel. Independent variables range between 0 (no congruence) to 1 (full congruence), and dependent variables are all expressed as percentages of GDP. All models include year fixed effects. Standard errors in parentheses.

tax congruence is associated with lower levels of revenue, and, surprisingly, lower levels of debt. This tax congruence-debt association however disappears when both spending and tax congruence are included in the same analysis, in the third panel.

This provides an answer to our main question — ‘what happens when policy follows opinions?’ — which is not all that flattering to citizens. When politicians produce spending policies that are in accordance with public preferences, there is an increased probability of deficit and debt. Politicians that resist following public opinion are more likely to have a balanced budget.

Conclusion: The Price of Following the Public Will

We provide the first cross-national analyses of the relationship between policy congruence and fiscal outcomes. The central finding is stark: opinion-policy congruence with regard to spending and taxation leads to spending increases without corresponding increases in

revenue. The resulting budgetary deficits will accumulate and increase public debt.

The results have important implications for several debates in political science and adjacent disciplines. First, regarding collective rationality, our findings challenge optimistic interpretations of the ‘wisdom of crowds’ illustrated for example by the Condorcet Jury Theorem and the idea about the Macro Polity (Erikson, MacKuen, and Stimson 2002). At least in fiscal matters, aggregate preferences appear systematically biased toward immediate benefits over long-term costs. However, this kind of temporal discounting and present bias is widely acknowledged in disciplines such as psychology and philosophy Parfit 1987; Prior, Alsharawy, and Andrews 2023, but have not been given enough attention in studies on the opinion-policy link.

Second, we move beyond previous research on policy responsiveness by showing that high congruence can produce suboptimal economic outcomes, suggesting important constraints on democratic representation. Responsiveness to public opinion as it is expressed in widely available surveys may conflict with sustainable public finance. This has long been assumed in economics (Alesina and Passalacqua 2016), but we provide a straightforward test of the evidence.

A main challenge for political representation theory is hence to construct a framework that details when politicians should, and should not, follow public opinion. Political theorist Hanna Pitkin (Pitkin 1967) argued that representation means “acting in the interest of the represented, in a manner responsive to them”. Our results highlight the fundamental contradiction of this definition, as the *interest* of citizens might clearly conflict with their *opinion*. But expressed opinion cannot be ignored either: Pitkin argued that a good representative cannot be “persistently at odds with the desires of his constituency”. And arguments to the effect that the public has a false consciousness and is unable to perceive its true interests risk becoming anti-democratic.

To some extent the apparent fiscal irresponsibility of the public is a consequence of survey design that do not acknowledge trade-offs explicitly. When researchers have tasked

respondents with putting together a balanced budget with the aid of interactive tools, they have generally been able to do so in a largely realistic fashion (Bonica 2015). But it is also likely that respondents in these experiments only developed their preferences for what a balanced budget would look like in the process of doing the task, just as all surveys create preferences on issues that the respondent had not thought about before (Zaller 1992). What are the ‘true’ preferences on spending and taxation of citizens who have not done a concentrated effort to weigh all the trade-offs and balance the budget? This is the key question facing both political representatives and scholars of the opinion-policy link.

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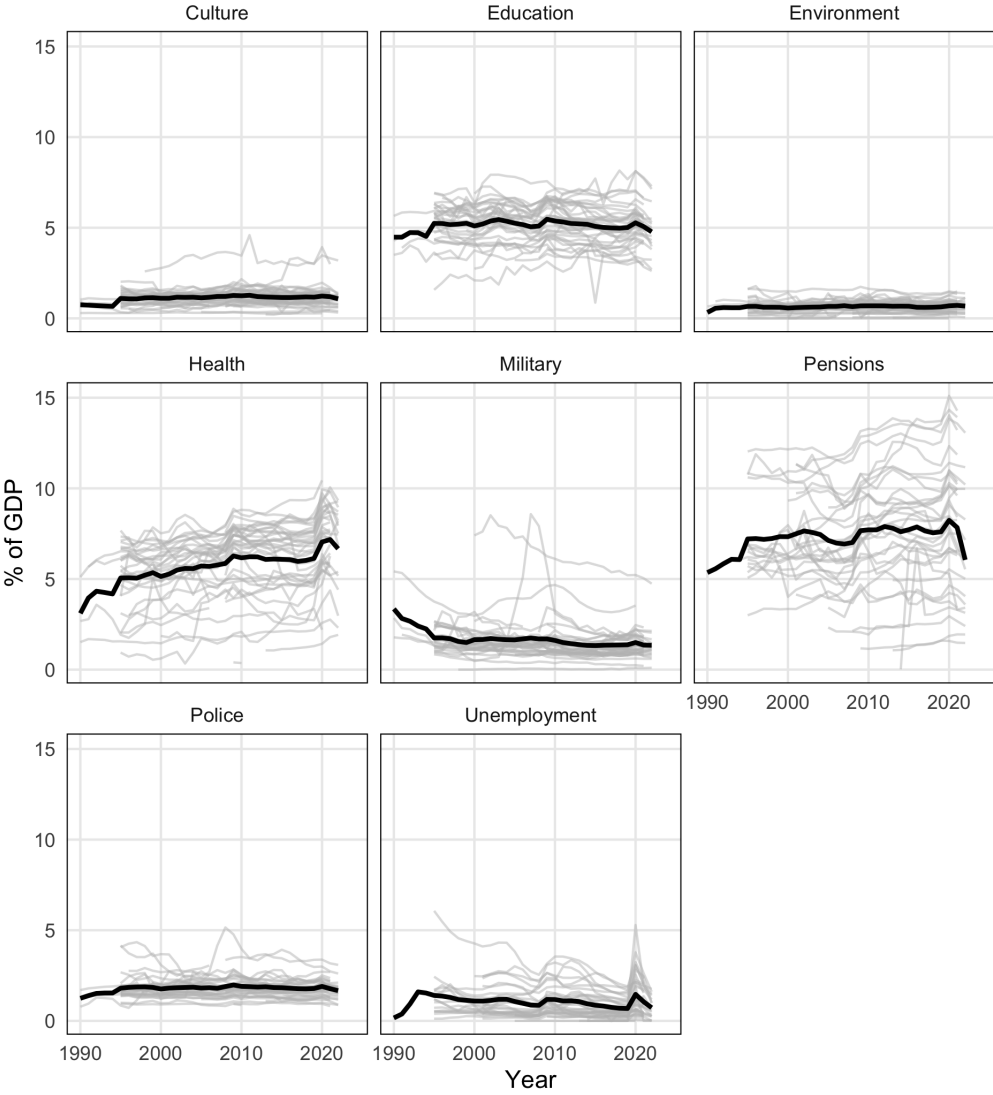
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1 Supporting Information

Table S1: Countries and years included in the analysis, together with net spending attitudes.

Country	Year	Culture	Education	Environment	Health	Military	Pensions	Police	Unemployment benefits
Australia	2006	-30%	79%	54%	90%	4%	51%	65%	-27%
Australia	2016	-28%	71%	39%	78%	5%	53%	53%	-27%
Belgium	2016	-16%	61%	44%	64%	-18%	60%	35%	-31%
Bulgaria	1996	44%	81%	61%	93%	67%	79%	70%	62%
Switzerland	1996	-22%	45%	21%	20%	-73%	29%	5%	-1%
Switzerland	2006	2%	68%	52%	41%	-58%	52%	24%	16%
Switzerland	2016	-7%	63%	46%	37%	-43%	55%	24%	17%
Cyprus	1996	33%	83%	59%	78%	78%	53%	42%	35%
Czechia	1996	14%	64%	66%	81%	-35%	64%	30%	-19%
Czechia	2006	-2%	59%	41%	66%	-35%	53%	17%	-20%
Czechia	2016	-8%	46%	26%	65%	8%	67%	34%	-11%
Germany	2016	-1%	86%	55%	72%	-5%	65%	73%	19%
Denmark	2006	-39%	61%	51%	80%	-50%	49%	61%	0%
Denmark	2016	-41%	50%	36%	71%	-36%	35%	50%	3%
Spain	1996	37%	73%	61%	78%	-39%	65%	60%	44%
Spain	2006	37%	86%	67%	86%	-24%	81%	77%	52%
Spain	2016	29%	89%	48%	88%	-23%	76%	45%	63%
Finland	2006	-34%	39%	38%	79%	-18%	68%	48%	20%
Finland	2016	-40%	52%	26%	60%	13%	47%	57%	-6%
France	1996	-29%	55%	31%	42%	-55%	30%	28%	-8%
France	2006	-24%	53%	44%	51%	-40%	39%	19%	-28%
France	2016	-28%	50%	27%	56%	6%	49%	36%	-31%
United Kingdom	1996	-59%	83%	38%	91%	-15%	77%	71%	15%
Georgia	2016	54%	91%	65%	92%	59%	97%	44%	95%
Croatia	2006	48%	88%	67%	88%	-7%	90%	21%	63%
Croatia	2016	33%	87%	61%	83%	20%	84%	26%	45%
Hungary	1996	40%	81%	61%	93%	3%	84%	58%	5%
Hungary	2006	41%	72%	63%	93%	-4%	73%	38%	22%
Hungary	2016	12%	80%	56%	95%	40%	72%	29%	25%
Ireland	1996	-2%	60%	46%	82%	-4%	74%	73%	35%
Ireland	2006	18%	88%	66%	92%	-3%	90%	79%	40%
Israel	2016	26%	85%	50%	83%	26%	83%	49%	20%
Iceland	2016	-19%	72%	50%	93%		69%	78%	2%
Italy	1996	28%	66%	50%	72%	-64%	62%	10%	29%
Japan	2006	-5%	46%	51%	55%	-17%	50%	5%	9%
Japan	2016	2%	54%	41%	46%	2%	34%	1%	1%
Lithuania	2016	18%	59%	18%	79%	-5%	81%	45%	16%
Latvia	1996	54%	89%	47%	92%	21%	94%	30%	57%
Latvia	2006	34%	77%	53%	87%	-2%	86%	35%	26%
Latvia	2016	29%	81%	18%	89%	11%	90%	40%	30%
Netherlands	2006	-47%	70%	21%	70%	-57%	37%	47%	-25%
Norway	1996	-51%	47%	36%	84%	-39%	55%	59%	0%
Norway	2006	-36%	61%	34%	85%	-26%	57%	69%	-2%
Norway	2016	-31%	53%	27%	72%	27%	41%	55%	-7%
New Zealand	2016	-22%	75%	43%	84%	-6%	42%	60%	-25%
Poland	1996	42%	83%	76%	92%	44%	79%	67%	24%
Poland	2006	42%	78%	59%	91%	36%	91%	59%	40%
Portugal	2006	37%	84%	64%	93%	1%	90%	55%	53%
Russia	2016	9%	56%	19%	72%	30%	68%	-16%	40%
Sweden	1996	-28%	57%	50%	76%	-37%	54%	42%	28%
Sweden	2006	-25%	49%	35%	78%	-36%	58%	66%	2%
Sweden	2016	-20%	65%	38%	84%	24%	69%	73%	4%
Slovenia	1996	42%	84%	72%	79%	-10%	52%	23%	33%
Slovenia	2006	25%	78%	64%	79%	-39%	57%	23%	19%
Slovenia	2016	17%	65%	58%	76%	12%	77%	65%	29%
Slovakia	2006	14%	63%	38%	82%	-32%	75%	-3%	21%
Slovakia	2016	18%	65%	52%	79%	8%	75%	9%	10%
Thailand	2016	51%	87%	54%	83%	13%	77%	7%	51%
Turkey	2016	49%	80%	51%	76%	59%	76%	48%	62%
United States	1990	-27%	72%	51%	69%	-35%	39%	50%	6%
United States	1996	-30%	72%	36%	61%	-12%	41%	51%	7%
United States	2006	-6%	80%	40%	75%	12%	58%	48%	21%
United States	2016	-8%	75%	34%	58%	23%	56%	41%	8%
South Africa	2016	22%	86%	55%	87%	33%	79%	46%	63%

Figure S1: Spending by area. Gray lines show individual countries, black line yearly average of included countries.



Note: Data from IMF, "Expenditure by function of government".

Table S2: Correspondence between ISSP and IMF categories. ISSP variable codes each year in columns.

ISSP area	IMF (Expenditure by function of government)		ISSP variable code				
			1985	1990	1996	2006	2016
Environment	Environmental protection	pro-	V82	V33	V25	V17	V13
Health	Health		V83	V34	V26	V18	V14
The police and law enforcement	Public order and safety	and	V84	V35	V27	V19	V15
Education	Education		V85	V36	V28	V20	V16
The military and defence	Defense		V86	V37	V29	V21	V17
Old age pensions	Old age		V87	V38	V30	V22	V18
Unemployment benefits	Unemployment		V88	V39	V31	V23	V19
Culture and the arts	Recreation, culture and religion	culture	V89	V40	V32	V24	V20

Table S3: Combination of attitudes to taxes on different income groups in the ISSP, pooled across all countries and years. "Lower" = Lower or keep taxes for the income group. "Raise" = Raise taxes for the income group. n=117573.

Low incomes	Middle incomes	High incomes	Percentage
Lower	Lower	Lower	49.2%
Lower	Lower	Raise	42.4%
Lower	Raise	Raise	3.3%
Raise	Lower	Lower	2.6%
Raise	Raise	Lower	0.9%
Lower	Raise	Lower	0.6%
Raise	Lower	Raise	0.6%
Raise	Raise	Raise	0.4%

N=117573. Distribution of tax attitudes based on combinations of three different questions asking whether taxes on those with high/middle/low incomes are too high/about right/too low.

Figure S2: Histogram of independent variables, 1-5 years after survey. Fewer observations are available for measurement of tax congruence.

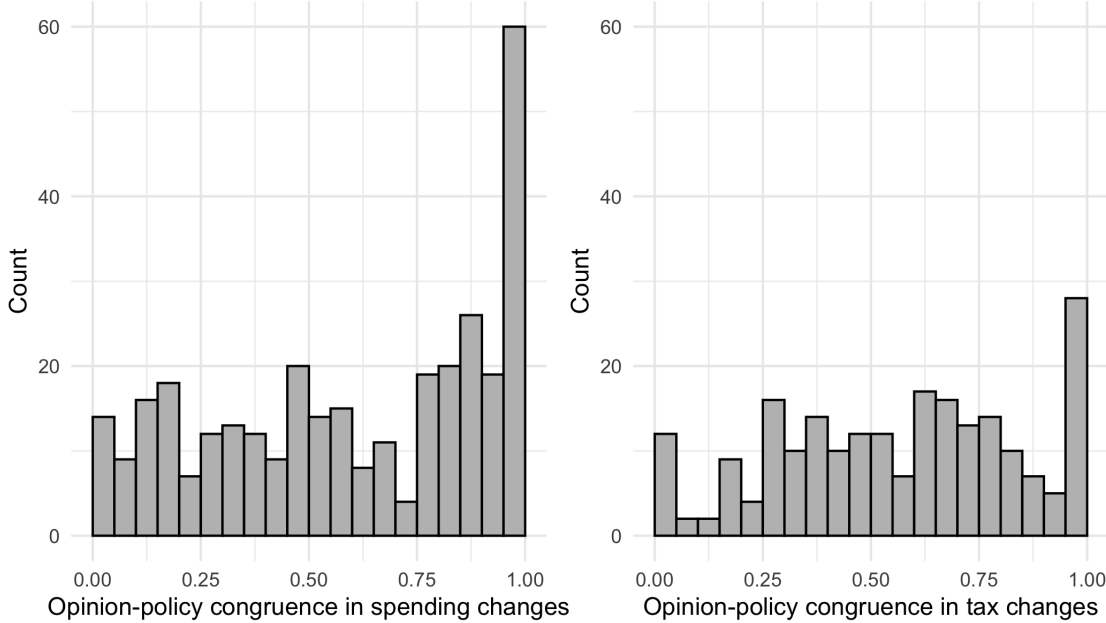


Table S4: Responsiveness: Changes in spending as a function of preferences, at 1-5 years after the survey.

	1 year	2 years	3 years	4 years	5 years
Spending preference	0.047 (0.066)	0.147 (0.084)	0.235* (0.109)	0.295* (0.131)	0.321* (0.141)
n	499	510	510	510	490

Note: ** $p < 0.01$, * $p < 0.05$. Unit of analysis is country-year-area. Dependent variable is change in spending in percent of GDP relative to the baseline survey year. Independent variable is net preference for increased/decreased spending, with positive values indicating support for increased spending. All models include country, year, and spending area fixed effects.

Table S5: Regression analysis with macroeconomic outcomes as dependent variables.

	<i>Mean GDP growth</i>	<i>Log(Mean inflation)</i>	<i>Change in unemployment</i>	<i>Change in GINI index</i>
Spending congruence	-1.721** (0.503)	-0.664** (0.223)	1.336 (0.737)	0.243 (0.399)
Tax congruence	0.068 (0.463)	-0.077 (0.206)	-0.425 (0.679)	-0.076 (0.365)
n	199	197	199	161

Note: ** $p < 0.01$, * $p < 0.05$. Independent variables range between 0 (no congruence) to 1 (full congruence). GDP and inflation are measured as mean values in the years since the baseline survey year. Unemployment and GINI are measured as changes relative to the baseline survey year. All models include year fixed effects. Standard errors in parentheses.