

Freedom of the Press and Public Responsiveness

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Sept 2019, Forthcoming in *Perspectives on Politics*

Abstract: Public responsiveness to policy is contingent on there being a sufficient amount of clear and accurate information about policy change available to citizens. It is of some significance, then, that there are increasing concerns about limits being placed on media outlets, around the world, and recently in the US as well. We examine the impact of these limits on the public's ability to respond meaningfully to policy change by examining cross-national variation in the opinion-policy link. Using new measures on spending preferences from Wave 4 of the Comparative Study of Electoral Systems, merged with OECD data on government spending and Freedom House measures of press freedom, we assess the role of mass media in facilitating public responsiveness. We find evidence that when media are weak, so too is public responsiveness to policy change. These results highlight the critical role that accurate, unfettered media can play in modern representative democracy.

Keywords: mass media, press freedom, public opinion, public policy, thermostatic response

There is little doubt that mass media play a central role in representative democracy. This has been broadly recognized for some time. Our argument, too, is that mass media are essential to a well-functioning representative democracy, primarily because they facilitate accountability. Without a public at least partly informed about what government is doing, it is not clear how large-scale representative democracy can work.

It is of some significance, then, that the US is witnessing increasing public and professional consternation about limitations to journalists' access to information, and their protection through libel laws. This has been driven in large part by the belief that the current administration has sought to change the relationship between the White House and the press corps.¹ Similar concerns are readily evident elsewhere too, most recently in Poland, Turkey, and Hungary. An analysis of the effects of press freedoms cross-nationally seems especially timely.

Our perspective on the issue is motivated by the existing literature on thermostatic public responsiveness to policy. Past work (reviewed below) has found evidence of such responsiveness in some policy domains, and it also highlights real variation across policy domains and institutional arrangements. Our aim is to add media freedoms to the list of institutional factors that enhance or constrain public responsiveness to policy. Representative democracy requires not just a mass

¹ Consider just a small collection of recent headlines: "Donald Trump's threat to press freedom: why it matters" (Mirren Gidda and Zach Schonfeld, *Newsweek*, 11 December 2016); or "On freedom of the press, Donald Trump wants to make America like England again" (Callum Borchers, *The Washington Post*, 24 October 2016).

media, but one that is sufficiently free to act as an effective Fourth Estate. Independent media should enhance public responsiveness to policy; government-constrained media should impede it.

We examine this possibility below. To begin, we review the literatures on public responsiveness to government actions and especially work on the thermostatic relationship between policy and preferences. We also look at the role of media in representative democracy. We then turn to an analysis of a new dataset capturing relative preferences for spending across 35 countries, merged with data on government spending and press freedoms for 24 of those countries. We find some evidence of the expected relationship between media freedom and public responsiveness: in countries where press freedom is high, there is evidence of thermostatic public responsiveness; in countries where press freedom is low, citizens appear less able to notice and respond to government policy. These results suggest a consequential role for mass media in representative democracy – one that has been often discussed but rarely subjected to empirical testing. We thus regard this as a notable and timely result, with potentially important implications for the current state of affairs both in the US and other nations.

On Public Responsiveness

Representative democracy depends on an informed public. This is necessary to hold governments accountable, the primary mechanism for incentivizing effective representation. There is accordingly a large body of work focused on, and often found evidence of, public response to government actions. Stimson's (1991, 1999) account of shifts in "policy mood" suggests that when governments move outside the public's "zone of acquiescence," public opinion offers negative feedback (also see Erikson et al. 2002). Durr's (1993) exploration of "What Moves Policy Sentiment?" reveals a systematic pro-cyclical impact of macroeconomic conditions on aggregate-level policy preferences. Page and Shapiro's (1992) influential work identifies "rational" trends in aggregate-level public opinion, in reaction to economic and policy change, across a wide range of policy domains.

This work has much in common with the literature on "thermostatic" public responsiveness (see, e.g., Eichenberg and Stoll 2003; Erikson et al. 2002; Jennings 2009; Jennings and John 2009; Pacheco 2013; Page and Shapiro 1992; Stimson et al. 1995; Soroka and Wlezien 2010; Wlezien 1995; 2004). The basic thermostatic model is straightforward, wherein the public's preference for "more" policy – its relative preference – represents the difference between the public's preferred level of policy and the level it actually gets. If the public is informed about policy, the public will adjust its preferences accordingly, signaling support for more (less) policy when the policy "temperature" is too low (high), and adjusting in response to policy change.

The typical conception of the thermostatic model views the relationship as unfolding through time; the public's relative preferences change when either the public's preferred level of policy changes or policy itself changes, unless of course those changes cancel out. While there is a great deal of research using the thermostatic model in longitudinal analyses, the model also applies across space, as has been shown in past work comparing states and countries (i.e., Goggin and Wlezien 1993; Wlezien and Soroka 2012). Similar to the over-time model, preferences for more or less policy in each place depend on whether, and the extent to which, the public's preferred level is greater than

policy itself in the different contexts. This cross-unit variance is critical to the analysis that follows, as we shall see.²

As noted above, effective representative democracy depends on a public that is at least minimally informed, and at least partly responsive to policy produced by governments. In the absence of thermostatic responsiveness, it is not clear that governments would seek to represent public opinion: not only would expressed opinion be ill-informed, and so of limited use to policymakers, but the public would be incapable of holding governments accountable for their actions.³ It is of some significance, then, that the existing literature (cited above) finds evidence of thermostatic responsiveness across a range of countries and domains.

That said, the degree to which “thermostatic responsiveness” characterizes measured opinion-policy relationships varies widely across publics, policy domains, and political institutions. This is in large part because policy is not always clear – citizens do not always know about past and recent changes in policy. There are several reasons why we might expect that to be the case. First and foremost is issue salience. How much the public cares about and is attentive to an issue influences the demand for policy information, which presumably also influences the supply. An increased supply of information, in turn, augments the degree to which a public is informed about a policy domain. It thus makes sense that past work finds limited public responsiveness in low-salience domains (Wlezien 1995, 2004; Soroka and Wlezien 2010; see also related work by Burstein 2013). Second, government institutions matter. For instance, federalism appears to be of special importance. Here, the influence is not on the quantity of information but on the quality, particularly insofar as multiple levels of government are involved in the same policy areas. When various layers are involved in policymaking, the policy “signal” sent to the public is more complicated, and public responsiveness can be muted accordingly (e.g., Soroka and Wlezien 2010; Wlezien and Soroka 2011; Wlezien and Soroka 2012; Pacheco 2013).

In sum, public responsiveness depends on a sufficiently large stream of accurate information about what governments are doing in policy domains that matter to the public. While past work has focused on the role that political institutions play, research exploring public responsiveness has dealt with mass media only in passing, with two notable exceptions (Williams and Schoonvelde 2018; Neuner, et al. 2019). This is true in spite of (a) the fact that public responsiveness to policy – often well beyond citizens’ own personal experiences – almost certainly must rely, at least in part, on mass-mediated information, (b) the long-standing and vast literature arguing for the importance of mass media in representative democracy (e.g., McQuail 1997; Iyengar and Kinder 2010, and see citations in the section that follows), and (c) growing concern about press freedoms in the US and elsewhere.

The Role of Mass Media

What is required of mass media in order for there to be public responsiveness to policy? One requirement is that media coverage include a sufficient amount of information about policy – a sufficient number of accurate and timely cues about changes in public policy. Existing work

² Note that the application of the thermostatic model does not require that levels of relative preferences actually tap whether people want more or less policy but that the variation in those preferences is meaningful, for example, reflecting variation in the (underlying) preferred levels of policy and policy across countries. See Soroka and Wlezien (2010); also see Wlezien (2017).

³ Note that the information also may be important for positive feedback, at least insofar as individuals respond to collective policy and not their personal consumption. See, e.g., Béland and Schlager (2019).

indicates a relatively high frequency of policy-related stories in US newspapers (e.g., Boydston 2013); and there is a surprisingly high number of cues about the direction of policy change, at least in some domains (Neuner et al. 2019). Williams and Schoonvelde's (2018) recent work also highlights issue salience in media coverage as a critical precursor of public responsiveness in the US. This fits with work suggesting that people can and do learn about policy when there is sufficient media coverage (e.g., Barabas and Jerit 2009), with research that finds some areas in which the public actually has relatively high policy-specific knowledge (e.g., Delli Carpini et al. 1997), and with evidence that information-rich environments tend to reduce the knowledge gap between the information-rich and the information-poor (Fraile 2013).

We focus here on a different but related concern about mass media, one that is higher up the causal chain: freedom of the press. Limitations on the press may constrain both the availability *and* accuracy of information about government policy. Mass media thus may be less able to report on policy, either due to restrictions on access to information or publication constraints, limiting the amount of information that is available to citizens. An unfree press or media (we will use the terms interchangeably here) might alternatively provide a good deal of policy information, but the accuracy of that information is more suspect. Either way, it makes sense that there is work suggesting that political knowledge increases alongside freedom of the press. We know that media coverage can inform citizens about policy (Neuner et al., 2019), after all, and there is a well-established literature on the role that a free press plays in informing citizens and holding government accountable (Mulgan 2003; Coyne and Leeson 2004; Besley and Prat 2006; Norris 2006; Leeson and Coyne 2007).

To be clear: we do not argue that press limitations are the only, or even most serious, threat to effective journalism. There are reasons to suspect that the changing economic models of press outlets pose a very serious challenge to the free flow of information, even (or perhaps especially) in countries with ostensibly high freedom of the press. We also acknowledge that press coverage of policy issues will be imperfect in a number of ways that may be entirely independent of limits on freedom of the press. Media coverage is necessarily a sample, and so it contains the error associated with sampling. There are also vast literatures chronicling a range of systematic biases in news coverage (e.g., Altheide 1997; Meyrowitz 1994; Patterson 1994; Bennett et al. 2008; Groeling 2013; Soroka 2012; Dalen et al. 2015; Shoemaker and Vos 2009) and a dearth of information about policy (e.g., Lawrence 2000), particularly on complex scientific issues (e.g., Friedman et al. 1999; Stocking and Holstein 2008). We nevertheless think that governmentally-imposed constraints on the flow and accuracy of information can be critical, both within and outside representative democracies.

In sum, drawing on past work highlighting the importance of a free press to representative democracy, as well as recent concerns about press freedoms, we explore below the possibility that thermostatic responsiveness to policy is contingent on a robust, free media. Put succinctly: we suggest that more controls on press freedoms will be associated with less accurate (and perhaps also less frequent) signals about policy change, and that this will make it more difficult for citizens to hold informed opinions and, consequently, more difficult for citizens to hold their governments accountable. It is our expectation that thermostatic responsiveness will be greatest in an environment with few press limits. Conversely, increased controls on the press will lead to muted thermostatic responsiveness.

Data

Our analyses focus on the final (June 2018) release of Wave 4 of the Comparative Study of Electoral Systems (CSES), a cross-national survey that thus far includes over 70,000 individuals in 39 countries, 24 of which are included in the analyses that follow.⁴ The survey was administered between 2011 and 2016 through a collaboration between the Center for Political Studies at the University of Michigan and the GESIS - Leibniz Institute for the Social Sciences. CSES Wave 4 data are unique in that they include a series of questions on respondents' preferences for government spending change. These questions are vital to our inquiry, and they are not, to our knowledge, included in any other cross-national dataset of similar size and scope:

For the next questions, please say whether you would like to see more or less government expenditure in each of the following areas. Remember if you say "more" it could require a tax increase, or "less," it could require a reduction in those government services.

(Response categories: Much more than now, Somewhat more than now, The same as now, Somewhat less than now, Much less than now)

...Health, Education, Unemployment Benefits, Defense, Old-Age Pensions, Business and Industry, Policy and Law Enforcement, Welfare Benefits

The CSES interviewer instructions include descriptions of each domain, used to clarify the questions for respondents. We include the full question wording in the Appendix. Responses are recoded from -2 to +2, where low values indicate support for less spending, high values indicate support for more spending, and zero indicates support for the "same as now."

We focus first on the welfare domain, due both to past work that finds strong public responsiveness in this domain, and to the availability of relevant and reliable spending data (discussed below). Our individual-level models include the following demographic variables: gender (binary, where female=1), age (in years), and education (binary, where some university or more=1). Respondent income is not asked in all countries, so we rely on a different question asking how likely it is that respondents' standard of living will improve in the next 10 years. Responses range on a 4-item scale from "very likely" to "very unlikely." We rescale responses from 0-1, where 1 is "very likely;" the mean is 0.50. Insofar as demographics are related to preferences for welfare spending, we regard them as (partial) proxies for people's *underlying* preferred levels of spending. We have the same view of the standard of living measure, and we expect that those who are less well-off will, *ceteris paribus*, be more supportive of welfare spending (e.g., Hasenfeld and Rafferty 1989; Cook and Barrett 1992; Page and Shapiro 1992).

We include several other individual-level measures intended to capture underlying preferred levels of spending in each country. First, we use respondents' belief that government should reduce differences in income. Response options are on a 5-point scale from "strongly agree" to "strongly disagree." We recode these responses to range from 0-1 with higher levels indicating stronger agreement; the mean for all respondents is 0.71. Second, we use the 11-point self-identified left-right ideological scale. We recognize that the variable does not clearly tap policy preferences and,

⁴ Seven countries have two elections included in the dataset, and for the sake of simplicity we begin by dropping the second election for each. These countries are: Mexico, Taiwan, New Zealand, Russia, Canada, Greece, and Latvia. There are several countries for which there is missing data on either survey or aggregate-level variables important to our analysis; in particular, we cannot use countries for which we do not have OECD spending data (see below). The countries that remain in our sample are then follows: Australia, Austria, Canada, Czech Republic, Finland, France, Germany, Great Britain, Greece, Ireland, Israel, Iceland, Japan, Korea, Mexico, Norway, New Zealand, Poland, Portugal, Slovenia, Sweden, Switzerland, Turkey, and the US.

even to the extent it does, the meaning varies across countries, but we regard it here only as one (admittedly rough) indication of a commitment to the redistributive state. The variable is coded 0-10 (left to right). Like demographics, we view these variables as measures of respondents' underlying preferences for policy; they thus are important controls for models that seek to identify the impact of spending on preferences.

We add to these individual-level data a number of country-level variables. First and foremost is our measure of government spending, drawn from the Organisation for Economic Co-operation and Development's (OECD) Social Expenditure database (SOCX). That database includes indicators of social spending for 25 of the 39 countries in the Wave 4 of the CSES as a per cent of GDP. Our analysis of welfare relies not on total social spending, which includes health, pensions, unemployment, etc., but rather on "other" spending – the subdomain in the SOCX database that captures most social assistance and welfare programs.⁵ In order to account for the fact that the election studies are in the field in different years and at different times within years, we take the following approach: if an election study occurs in the first four months of the year, we use the previous year's spending; if the study takes place after April, we use the current year's spending. There are five countries whose inclusion depends on an additional lag in spending, since subdomain spending data is not yet available for all countries after 2013. We thus use an additional lag for the following countries: Finland, Great Britain, Portugal, Sweden, and Turkey. This is not ideal, since preferences may adjust quickly in response to spending, i.e., within a year (see Soroka and Wlezien 2010). That said, diagnostic models suggest that using one-year lags for all countries does not fundamentally change the results below, which we attribute to the fact that the cross-national variance of spending is much greater than that occurring from year-to-year within countries.

Although we expect the individual-level variables described above to work as proxies for the public's preferred levels of spending, they may not completely account for cross-national differences. To more fully capture these tendencies, we control for each country's long-term commitment to welfare spending. This idea is that the average level of support for welfare spending will be "baked in" to average level of spending, tapping otherwise uncontrolled-for differences in support (e.g., Brooks and Manza 2007). We accordingly include a measure of mean social assistance spending, based on the same domain definition described above, averaged from 1990 to 2006 – a period well before the period for which we use current spending across all countries. (Current spending is based on the survey year, which ranges from 2010 to 2015. See Appendix Table 5). Note that this variable is intended to control for variation in public support across countries, not explain it; and our expectation is that there will be a positive estimated effect of long-term spending on preferences, even as current spending has a negative effect. The difference in the two coefficients is quite important for our drawing inferences about both effects, as they are not competing but complementary, with one tapping long-term positive effects and the other short-term negative ones.

Finally, we include measures of freedom of the press. To begin with, we rely on the annual Freedom of the Press index from the Freedom House. The index combines measures that fall into three categories: economic environment, legal environment, and political environment. Each sub-index is highly correlated with the overall measure (Pearson's $r = 0.96-0.98$ in our sample), and so

⁵ Detailed descriptions of the SOCX subdomains are readily available at: https://www.oecd.org/social/soc/SOCX_Manuel_2019.pdf.

we rely on the total index in our analyses below. Data are available for all countries in the appropriate year, depending on the timing of elections as described above.

The Freedom House measure is not the only possible indicator of press limits and, given the importance of the measure for our analysis, we also consider two others. The first is from Reporters Without Borders (Reporteurs Sans Frontiers, RSF; <https://rsf.org/en/ranking>), and the second is a measure combining a series of related questions about press freedom from the V-Dem dataset (from the V-Dem Institute at the University of Gothenburg, <https://www.v-dem.net/en/>; see Coppedge et al. 2018). Both measures capture somewhat different elements of media systems. The RSF index focuses more on the treatment of journalists, both domestic and foreign, than the Freedom House index does. V-Dem data are based on surveys of country experts, and so focus more on general perceptions of press limitations, the frequency with which critiques of government are evident in media coverage, and so on. There is no single measure of press freedoms in the V-Dem data, so we take an average across seven different items, described in detail in the Appendix.

The Freedom House measure most directly captures laws, regulations, and access – aspects of the government-media relationship that we suspect bear most closely on the availability of accurate information. Even so, the indices are highly correlated. Figures in the Appendix show scatterplot of all countries for which data are available for (a) the Freedom House and RSF measures, and (b) the Freedom House and V-Dem measures. Across the first pair of measures, the Pearson's r for all countries is .89, and .95 for the in-sample countries; across the second pair, the respective correlations are .88 and .80.

We thus focus our analyses on the Freedom House measure, but we include additional results using all measures in the Appendix. The original Freedom House index measure ranges from 0-100, with zero representing complete press freedom. For our estimation, we rescale the index from 0-1; and to reflect the fact that it captures increasing constraints rather than freedoms, we label it *Press Limits*.⁶

All the equations that follow are estimated using ordinary least squares (OLS), with standard errors clustered by country (see Cameron, Gelbach & Miller 2011), where individual-level spending preferences are the dependent variable.

Freedom of the Press & Responsiveness to Welfare Spending

While the CSES captures respondent preferences for a range of different policy domains, we focus on three that are both highly salient to voters and for which there are available measures of spending. We begin with welfare spending. Table 1 shows four models regressing welfare spending preferences on a basic set of demographics and our measure of country-level spending at t . Our focus here is on the coefficient in the top row of the table, which captures responsiveness to policy. The coefficient in column 1 is expectedly negative; as levels of spending increase, the

⁶ We also test for the possibility that the moderating effect of *Press Limits* is nonlinear, i.e., that marginal increases in *Press Limits* matter little in a largely free media environment, but the impact of limits accumulate exponentially. There are hints of such a relationship in models that include a quadratic version of *Press Limits*; but the full specification, including both the linear and quadratic versions of *Press Limits*, and interactions of each with spending, produces a very high degree of multicollinearity amongst variables for which our sample size is just 23 (countries). If we calculate variance inflation factors (VIF) using country-level values for each of the five variables required in the full interactive specification, the VIF for *Spending*, *Press Limits*, *Spending * Press Limits* and *Spending * Press Limits squared* are all over 200; and the VIF for *Press Limits squared* is over 40. Sticking with the simple linear version, in contrast, leads to VIFs below 10 for all variables.

demand for more spending decrease. That said, the coefficient is not statistically insignificant. There thus is only a hint of thermostatic responsiveness based on these results.

The first model in Table 1 includes only demographic variables, however. The second and third models in the table incorporate a range of other control variables: the second adds mean spending levels from 1990 to 2006 and the third model adds more proximate individual-level measures – support for government reducing income disparities and left-right ideology. All variables have significant effects in the expected direction(s). Moreover, adding these critical controls reveals statistically significant (and substantial) thermostatic responsiveness to current levels of spending. Recall that our expectation is that as spending increases, public preferences for more spending should decrease, which is exactly what we observe in Models 2 and 3, where the coefficient is -0.876 and -0.849, respectively. These estimates imply that a one percent increase (across countries) in the welfare spending share of GDP is associated with nearly a one point drop in support for more spending, which is nearly 25% of the range of the variable. That said, a one percent difference in the spending share is a lot, as the in-sample standard deviation is .39. Given the coefficient in Model 3, a .39 increase in spending predicts a .33-point decrease in preferences, controlling for mean spending. This is a notable effect, approximately 8% of the range of preferences, and 31% of its standard deviation (1.05).

Table 1. Modeling Relative Preferences for Welfare Spending

	Model 1	Model 2	Model 3	Model 4
Spending	-0.225 (0.193)	-0.876*** (0.273)	-0.849*** (0.221)	-0.936* (0.417)
Press Limits				1.006* (0.465)
<i>interaction</i>				2.428 (1.444)
Female	0.071*** (0.019)	0.067*** (0.019)	0.042* (0.016)	0.042*** (0.013)
Age	-0.001 (0.002)	0.000 (0.002)	0.001 (0.002)	0.002 (0.001)
Education	-0.265*** (0.079)	-0.238*** (0.074)	-0.192*** (0.059)	-0.155*** (0.053)
Std Living	-0.136 (0.101)	-0.137 (0.089)	-0.011 (0.078)	-0.001 (0.070)
Mean Spending		0.641*** (0.227)	0.658*** (0.193)	0.459* (0.214)
Gov Reduce			0.816*** (0.124)	0.785*** (0.101)
Ideology			-0.038*** (0.011)	-0.042*** (0.011)
Constant	0.608*** (0.190)	0.587*** (0.188)	0.115 (0.204)	-0.259 (0.226)
Observations	28,893	28,893	28,893	28,893
R2	0.029	0.049	0.117	0.147

^a p < .10; * p < .05; ** p < .01; *** p < .001. Cells contain OLS regression coefficients with clustered standard errors (by country).

Including long-term mean spending makes a big difference in Table 1 – controlling for it alone reveals thermostatic public responsiveness in Model 2. Recall that we view the positive effect of mean spending as an indication of the public’s long-term commitment to welfare, not of thermostatic response to policy change, the latter of which is captured by the negative coefficient on current spending variable, per the foregoing discussion. Incorporating the individual-level

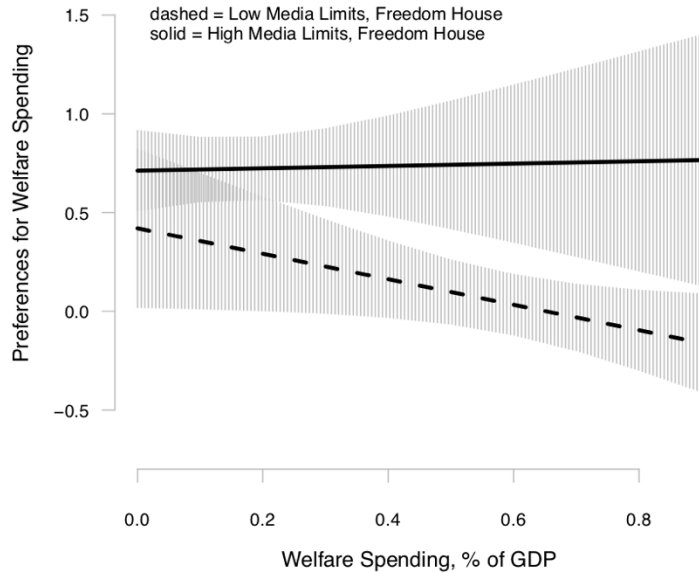
covariates in Model 3 more than doubles the proportion of variance explained, but only trivially impacts estimated thermostatic responsiveness or the effect of long-term mean spending.

We regard findings in Model 3 as rather striking: they demonstrate thermostatic responsiveness in a large dataset across what is, to our knowledge, the broadest and most diverse cross-national sample to date. Even so, we suspect that there is real heterogeneity in our sample, and our primary interest is in the possibility that thermostatic responsiveness is moderated by press freedoms.

This is the focus of Model 4, which adds our measure of press limits as well as the interaction with spending levels. We have no particular expectation about the direct effect of press limits, but we hypothesize that the interaction will be positive, reducing estimated thermostatic responsiveness. This is roughly what we observe. The coefficient for spending (-0.936) now captures the magnitude of responsiveness when there are no press limits, i.e., when that measure is equal to 0, and thus is larger in magnitude than in previous models. The coefficient on the interaction (2.428) also points to the possibility that, as expected, responsiveness is reduced as we introduce press limits. That said, the coefficient for the interaction narrowly misses standard levels of statistical significance ($p=.107$).

Results (below) provide evidence of similar effects in other domains, and/or across other specifications of press limits. Our inclination is thus to take these borderline-significant results seriously. The effect of press limits is difficult to interpret based on the results in Table 1, so Figure 1 depicts how they condition the estimated impact of increases in spending on welfare preferences (R). We expect the line to decrease from left to right; that is, we expect that relative preferences for (more) spending decrease as spending increases. We plot predictions for two levels of press freedoms: low media limits, where press limits are set to the 10th percentile of the measure in our data (0.12), and high media limits, where press limits are set to the 90th percentile (0.41). This is a conservative approach to illustrating our findings, since we are not relying on the entire range of media freedoms. Still, results in this figure are relatively clear: under low media limits, increasing spending appears to be associated with decreased preferences for more spending; under high media limits, this does not appear to be the case. Indeed, in the latter there is no hint of thermostatic responsiveness whatsoever.

Figure 1. Welfare Preferences and Spending, Moderated by Press Freedom



Predicted values using clustered standard errors, and with 95% confidence intervals, based on Model 4 in Table 1.

This is a bold interpretation of insignificant results, to be sure. We thus look for evidence of a similar effect below, first by examining additional spending domains and then by turning to alternative specifications, dropping and adding controls, and changing to the RSF- and V-Dem-based measures of *Press Limits*. Results provide further evidence of the story we suggest here.

Freedom of the Press & Responsiveness in Other Spending Domains

The prior section presents evidence in line with our expectations. We find in our estimation thermostatic responsiveness to welfare spending across a very broad sample, and also that this is conditional on freedom of the press. Our interest in the welfare domain in particular is that it is a relatively salient and important spending domain across a good number of countries. It also is a domain for which we have spending preferences, reliable measures of spending, and reasonable proxies for preferred levels of policy.

Welfare is not the only domain for which this is true, however. The CSES also asks respondents about their preferences on healthcare and old-age pensions, and these are domains for which the OECD SOCX database also provides reliable spending data (comparable spending numbers are not readily available in the various other domains included in the CSES question). There are several mitigating factors in both healthcare and pensions. First and foremost, we have weaker expectations of thermostatic responsiveness in these domains, given results of past research (Soroka and Wlezien 2010). Second, the CSES does not include questions that work as equivalent indicators of people's preferred levels of spending on health and pensions; by contrast with welfare, where they ask about reducing differences in income, there are no questions asking about attitudes toward dealing with health care or pensions. We still are able to use the country-level measure of preferred policy levels, average spending levels from 1990 to 2006, but must rely on

the welfare-focused measure on reducing inequalities (and also left-right ideology), recognizing that this has limited application in the health and pension domains.

Table 2 presents the models of health spending preferences. Model 1 finds a coefficient for spending that is both negative and statistically significant, indicative of a thermostatic response. Adding the proxies for people’s preferred levels of spending in Models 2 and 3 reveals the significant impacts of both mean government spending and ideology and strengthened estimates of thermostatic responsiveness. By contrast with welfare, the control is not decisive, as we saw evidence of negative feedback in Model 1. And Model 3 again doubles the proportion of variance explained from the first model.

As with welfare preferences, we are most interested in the results when we incorporate *Press Limits* with Model 4. In this case, we find a statistically significant positive coefficient for the interaction term, alongside a larger (more negative, and significant) coefficient for spending. Figure 2 plots the estimated effects on health spending preferences at the same low and high media constraints as in Figure 1. Results are similar to what we saw for welfare, with less separation between the plotted effects,⁷ but statistically-significant coefficients. In this case relative preferences decline as spending increases for both sets of countries, and there are only hints that the relationship is stronger where press limits are low. The contrast with welfare may be revealing about the source(s) of information people rely on in the two domains, where health spending is more readily apparent from one’s own direct experience.

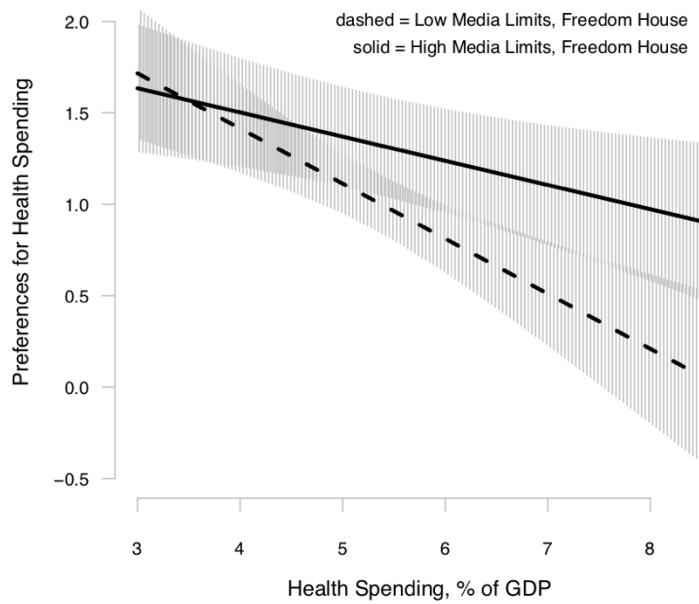
Table 2. Modeling Relative Preferences for Health Spending

	Model 1	Model 2	Model 3	Model 4
Spending	-0.096*** (0.031)	-0.223*** (0.059)	-0.210*** (0.056)	-0.371*** (0.094)
Press Limits				-2.029* (0.877)
<i>interaction</i>				0.583** (0.237)
Female	0.113*** (0.021)	0.114*** (0.020)	0.103*** (0.019)	0.107*** (0.021)
Age	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.002 (0.001)
Education	-0.110 (0.098)	-0.091 (0.090)	-0.081 (0.092)	-0.076 (0.072)
Std Living	-0.004 (0.070)	-0.003 (0.064)	0.062 (0.058)	0.091 (0.057)
Mean Spending		0.157* (0.067)	0.134 ^a (0.069)	0.171* (0.080)
Gov Reduce			0.304*** (0.068)	0.286*** (0.059)
Ideology			-0.030*** (0.006)	-0.029*** (0.006)
Constant	1.420*** (0.189)	1.417*** (0.153)	1.345*** (0.137)	1.819*** (0.348)
Observations	30,254	30,254	30,254	30,254
R2	0.030	0.0401	0.059	0.071

^a p < .10; * p < .05; ** p < .01; *** p < .001. Cells contain OLS regression coefficients with clustered standard errors (by country).

⁷ Though note that effects are clearer when considering a broader range of press freedoms – we rely on just the 10th and 90th percentiles here..

Figure 2. Health Preferences and Spending, Moderated by Press Freedom



Predicted values using clustered standard errors, and with 95% confidence intervals, based on Model 4 in Table 2.

We next turn to old-age pensions, for which Table 3 presents the same basic models. Much as we saw with welfare, Model 1 only hints at thermostatic response, as the coefficient for spending is negative but non-significant. By contrast with welfare and health preferences, adding the proxies of policy preferences in Models 2 and 3 does not reveal the same kind of robust results for spending. Adding press limits in Model 4 makes a difference, however. The estimate for the interaction is in the expected positive direction, and weakly significant.

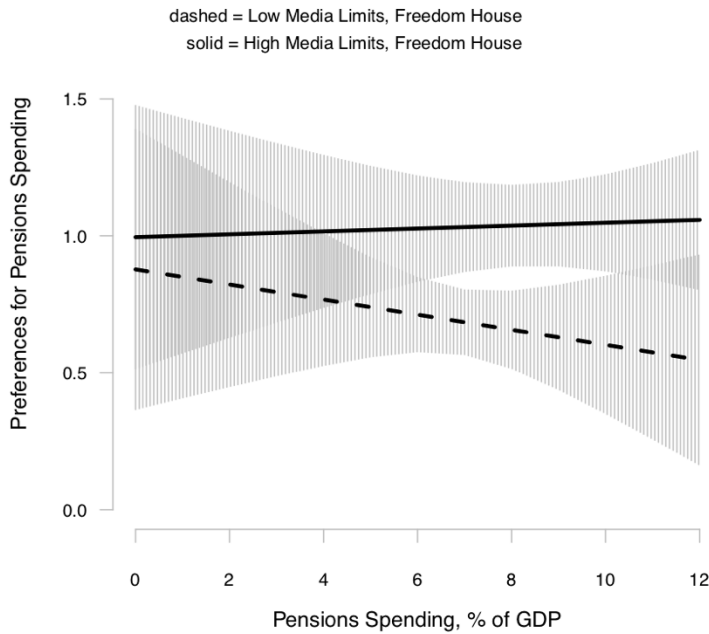
Figure 3 plots the interactive effects from Model 4. The pattern for pensions thus seems to be more similar to welfare than health in that there is evidence of thermostatic responsiveness in when media limits are low, and the same is not true when media limits are high.

Table 3. Modeling Relative Preferences for Pensions Spending

	Model 1	Model 2	Model 3	Model 4
Spending	-0.009 (0.010)	0.011 (0.030)	0.010 (0.030)	-0.041 (0.042)
Press Limits				0.406 (0.408)
<i>interaction</i>				0.113 ^a (0.060)
Female	0.083*** (0.018)	0.084*** (0.017)	0.071*** (0.017)	0.074*** (0.016)
Age	0.003 ^a (0.002)	0.003 ^a (0.001)	0.003** (0.001)	0.004*** (0.001)
Education	-0.300*** (0.065)	-0.291*** (0.061)	-0.261*** (0.060)	-0.246*** (0.048)
Std Living	-0.130 ^a (0.064)	-0.130 ^a (0.064)	-0.076 (0.057)	-0.050 (0.056)
Mean Spending		-0.033 (0.047)	-0.036 (0.044)	0.008 (0.047)
Gov Reduce			0.443*** (0.077)	0.416*** (0.054)
Ideology			-0.002 (0.007)	-0.004 (0.006)
Constant	0.8978*** (0.148)	0.928*** (0.163)	0.621*** (0.132)	0.423 ^a (0.225)
Observations	30,149	30,149	30,149	30,149
R2	0.042	0.044	0.067	0.086

^a p < .10; * p < .05; ** p < .01; *** p < .001. Cells contain OLS regression coefficients with clustered standard errors (by country).

Figure 3. Pensions Preferences and Spending, Moderated by Press Freedom



Predicted values using clustered standard errors, and with 95% confidence intervals, based on Model 4 in Table 3.

Robustness Checks

Results thus far do not resoundingly support the contention that press freedom is critical to public responsiveness. This is not surprising, given that we are working with a limited number of countries and necessarily noisy data on both spending and press freedoms. Our results nevertheless are strongly suggestive, and the fact that they are built on decades – perhaps centuries – of theory on (and observation of) media and democracy leads us to take the findings seriously, at least as a first step. We nevertheless present several different robustness checks.

First, if it is in fact spending within each domain that drives preferences for that domain, then we should expect that spending in other domains does not do so. That is, the public would respond to spending in a specific domain and not to spending in other, even potentially related, areas (also see Wlezien 2004). This depends on there being at least some independent variation in by-domain spending (and preferences), which there clearly is: across the 24 countries included in our estimations, welfare and health spending levels are correlated at 0.30, welfare and pensions at -0.08, and health and pensions at 0.39; only in the last instance is the correlation borderline significant ($p = .06$).

Our test for this is relatively straightforward: we re-estimate Model 3 for each domain (in Tables 1-3) using all “other” spending categories in the OECD database; that is, we use non-welfare social spending in place of welfare spending. We do the equivalent for both health and pensions. Results are included in Appendix Table 1. For welfare and health, there is no sign of thermostatic responsiveness to “other” spending. For pensions, opinion does seem to respond to other spending. This gives us additional confidence in results for the first two domains, but also highlights that public responsiveness varies across domains. It may be responsiveness to health and welfare spending is quite domain-specific, whereas pension spending is not. This would not surprise given previous research (Wlezien 2004), but making the determination requires additional research.

Second, we explore the possibility that it is not press freedoms per se that produce the significant interactions in the preceding tables, but rather other factors highly correlated with press freedoms. The most obvious possibility is that press freedom stands here as a surrogate for broader freedoms, and that, for a wide variety of reasons, countries that are freer exhibit more thermostatic responsiveness. We test this by re-estimating Models 4 (from Tables 1-3) substituting other Freedom House measures for press freedom. Results are included in Appendix Table 2. Here, using the general indices for (a) civil liberties or (b) political rights yields borderline significant interactions for welfare and pensions ($p < .10$). We take these results as evidence that press freedoms are correlated with (and are a component of) freedoms more generally, but when it comes to public responsiveness, press freedoms in particular appear to matter.

Third, we evaluate two other measures of press freedom, from RSF and V-Dem, described above. Rather than present two additional versions of each of Tables 1 through 3, Appendix Figure 3 depicts the illustrated interactions, across all three variants of media freedom, and all three policy domains. For welfare we find stronger interactive effects of Press Limits using the V-Dem measure, but not the RSF measure; for health we find similar but weaker results using the new measures; for pensions, effects are stronger for the RSF measure but weaker for the V-Dem measure. Although there is variation here, we regard the weight of the evidence as being in line with our expectations.

Fourth, we test the robustness of our results to the exclusion of individual countries using jackknife estimates for models Tables 1-3, in which we drop each country (with replacement) from the

overall estimate. Excluding Mexico in the welfare preferences estimation is the only instance in which results change in a substantive way from what we have seen above. In that case, both the direct impact of spending and the interaction are insignificant.⁸

Fifth, we consider the addition of macroeconomic variables as controls, testing for the possibility that preferences for spending are conditioned by macroeconomics in addition to (or even instead of) changes in spending. These results are included in Appendix Table 3. There we can see that adding unemployment and GDP per capita has only a limited impact on the impact of spending. Removing all controls produces weaker estimates of responsiveness, confirming the importance of the demographic and attitudinal controls in our models. Even when spending and press freedom are the only variables in the model, we find some evidence of thermostatic responsiveness, moderated by press freedom, at least for health and to a lesser extent welfare.

Finally, given that our dependent variable is a 5-category variable, we confirm our findings using an ordered logit estimation. Results confirming the robustness of our findings to this change in estimation are included in Appendix Table 4. Indeed, using the logit estimation produces statistically-significant interactions in every case.

Conclusions

Just how important is a free press to the public's ability to hold a government accountable? There are strong claims that freedom of press is critical, but thus far few direct tests of the importance of a free press, particularly in a cross-national setting. The analysis above takes a first step, relying on a new body of data on citizens' relatively preferences for policy combined with measures of spending and press freedoms. The results offer some limited support for the supposition that public responsiveness in important social spending domains – welfare, health, and pensions – is moderated by restrictions on the press.

Where the press is relatively unconstrained there are clear responses to policy change. Where there are controls on the press, it appears as though citizen response to policy change is muted. This finding is important; if citizens do not get accurate information about policy, they will be unable to effectively hold their government(s) accountable for what they do, and media freedom apparently matters. We see this as the basic thrust of the preceding results. That said, cross-national effects are difficult to model, measures of both spending and press freedoms are noisy, and the number of cases on which we are able to draw is limited.

We acknowledge a number of limitations to our analyses. To begin, we are constrained by the datasets that we can use. The CSES Wave 4 offers the most cross-national data to date on relative preferences for spending, but there are still limits to the countries we can, due in part to the need for reliable measures of spending as well. (Other options for surveys with similar question wording contain a narrower range of countries in their sample, e.g., the ISSP.) We are nevertheless able to draw on 24 countries, and we evaluate three separate datasets of press freedom measures and find similar results across seven of the nine possible combinations. Further, our results hold even when we exclude countries that are more constraining on their press (with the one exception noted above). We view this as strong evidence of the robustness of our findings.

The use of observational data limits our ability to make strong causal claims. This is not a constraint exclusive to our work, of course. Note also that we find similar moderating effects

⁸ We do not include these tests in the Appendix, but results are easily replicated using the script and data made available at (*redacted*).

across multiple *Press Limits* measures, but not using measures that tap freedoms more generally; and the pattern of results is robust to the inclusion of controls and a variety of other tests. While not conclusive, we find the combination of theoretical motivation and evidence strongly suggestive, perhaps even compelling.

Another concern is that we have a limited number of control variables in our models, and so it is possible that other, un-measured variables play a role in preferences. Omitted variables are always a concern, of course, and in our case we have a strong theoretical model and attempt to actually measure the constructs, and the measures we use work very much as we expect. Moreover, adding more controls does not appear to change our findings. (See Appendix Table 3.)

We thus regard these findings as making a useful contribution to debates about trends in media freedoms in the US and around the world. Freedom House's most recent report warns that press freedoms are at their lowest point in 13 years, with declines in both democratic and authoritarian states.⁹ In 2016, we saw increasing government control over state media in Poland and responses to an attempted coup in Turkey included the closing of a wide range media outlets, and the incarceration of over 80 journalists. As discussed, we also write this paper in the midst of an increasingly fraught relationship between the White House and much of the mass media. But it is important to make clear that we view this paper as only a first step in quantitatively evaluating the role of a free press on public opinion. There are a number of future directions that work can take, such as looking at media quality or the role of different economic models of the press. What we have done represents a jumping off point for those studies, not a final resting place.

Note also that government-media relations are just one way in which the quality of information about policy may be waning. Consider for instance ongoing debates about whether news consumers exhibit increasingly selective exposure via online, and increasingly partisan, media outlets (the recent literature is vast, but see, e.g., Iyengar and Hahn 2009; Stroud 2008, 2010; Garrett 2009; Messing and Westwood 2014), and whether this dynamic is ameliorated or worsened through the algorithms embedded in search engines and social media (e.g., Bakshy et al. 2015; Flaxman et al. 2016). Although our focus is on the impact of freedom of the press in particular, our results may speak to the possible impacts of a broad range of both provision- and consumption-related dynamics affecting the quality of information reaching citizens. In short, the quality of policy information reaching citizens around the world seemingly is not getting better. Our analysis suggests that this may have consequences for both public responsiveness and political representation itself.

⁹ <https://freedomhouse.org/report/freedom-press/freedom-press-2016>.

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Appendix

Question Wording and Descriptions, Spending Questions

For the next questions, please say whether there should be more or less public expenditure in each of the following areas. Remember if you say "more" it could require a tax increase, and if you say "less" it could require a reduction in those services.

Q: Thinking about public expenditure on HEALTH, should there be much more than now, somewhat more than now, the same as now, somewhat less than now, or much less than now?

HELP: The word "health" is intended to refer to public expenditure related to health care, i.e., public health care programs, public hospitals, clinics, etc.

Q: Thinking about public expenditure on OLD-AGE PENSIONS, should there be much more than now, somewhat more than now, the same as now, somewhat less than now, or much less than now?

HELP: The phrase "old-age pensions" is intended to refer to public expenditure on old age pensions, NOT other spending on programs directed at the elderly.

Q: Thinking about public expenditure on WELFARE BENEFITS, should there be much more than now, somewhat more than now, the same as now, somewhat less than now, or much less than now?

HELP: The phrase "welfare benefits" is intended to refer to public expenditure on welfare programs or social benefit programs

Question Wording and Descriptions, Improving Standard of Living

Q: Over the next ten years or so, how likely or unlikely is it that you will improve your standard of living? Very likely, somewhat likely, somewhat unlikely, or very unlikely?

Question Wording and Descriptions, Government Action Differences in Income

Q: Please say to what extent you agree or disagree with the following statement: "The government should take measures to reduce differences in income levels."

Do you strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, or strongly disagree?

Question Wording and Descriptions, Ideology

Q: Where would you place yourself on this scale? 0 – 10 where 0 means the left and 10 means the right.

This question follows a set of similar questions with the prompt: In politics people sometimes talk of left and right. Where would you place [PARTY A] on a scale from 0 to 10 where 0 means the left and 10 means the right?

Measures of Press Limits

Our measure of *Press Limits* based on the V-Dem data is based on an equally-weighted combination of the following variables: Government censorship effort, Print/broadcast media critical of government, Print/broadcast media perspectives, Female journalists, Media self-censorship, Media bias, and Media corruption. We use the relative scale version of the variables, described in detail at https://www.v-dem.net/media/filer_public/e0/7f/e07f672b-b91e-4e98-b9a3-78f8cd4de696/v-dem_codebook_v8.pdf.

Appendix Figures 1 and 2 show the relationship between the Freedom House measure and the other two measures of *Press Limits*. Countries in black are OECD countries for which we do not have complete data; countries in blue are those for which we have complete data, i.e., data on welfare spending, media systems, and survey data from the CSES. Note that there are two outlying blue data points in Appendix Figure 1 (and Appendix Figure 2), between 60 and 80 in Freedom House and 40 and 60 in the RSF. These are Mexico and Turkey, the two countries in our sample with markedly less “free” media systems. We consider the impact that these (and all other countries) have on our estimations in the Robustness Checks section of the paper.

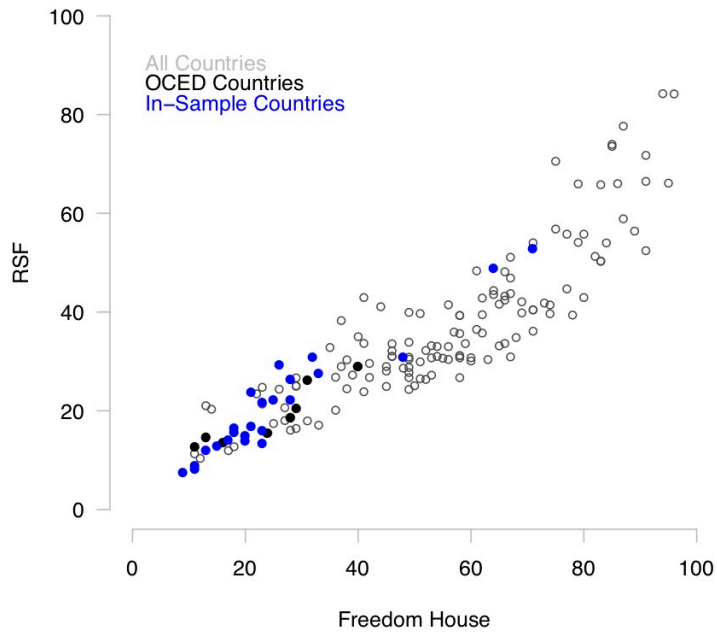
Robustness

The robustness checks section of the paper refers to several different sets of results, included in Appendix Tables 1-3.

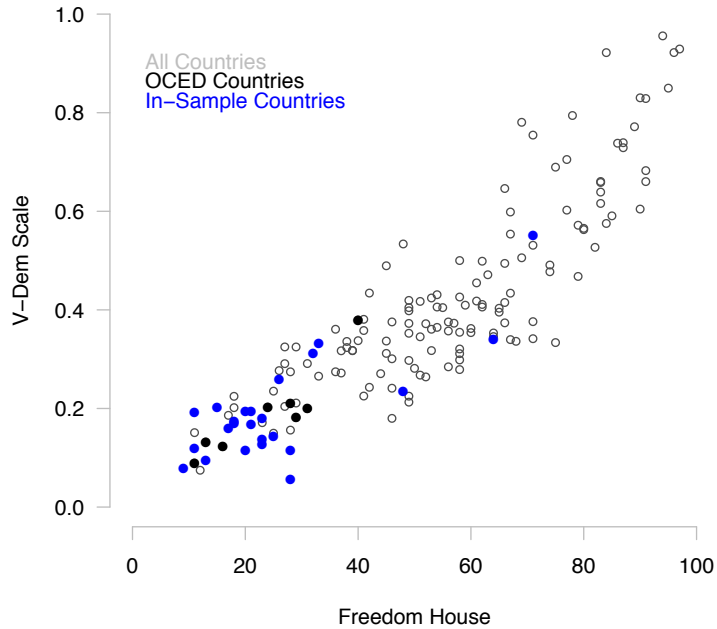
Descriptives

Appendix Table 4 includes descriptive data for each of the 24 countries we include in our analyses.

Appendix Figure 1. Measures of Press Freedom: Freedom House and RSF



Appendix Figure 2. Measures of Press Freedom: Freedom House and V-Dem



Appendix Table 1. Modeling Relative Preferences for Spending,
using non-Domain Spending

	Welfare	Health	Pensions
Spending	0.013 (0.034)	-0.009 (0.021)	-0.085*** (0.023)
Female	0.040* (0.016)	0.100*** (0.020)	0.078*** (0.016)
Age	0.001 (0.002)	-0.000 (0.001)	0.004*** (0.001)
Education	-0.211*** (0.070)	-0.121 (0.093)	-0.245*** (0.067)
Std of Living	-0.073 (0.088)	0.045 (0.080)	-0.044 (0.057)
Mean Spending	-0.035 (0.029)	0.002 (0.019)	0.042* (0.019)
Gov Reduce	0.884*** (0.123)	0.367*** (0.104)	0.385*** (0.058)
Ideology	-0.045*** (0.012)	-0.028*** (0.008)	-0.006 (0.006)
Constant	0.395 (0.311)	0.872*** (0.262)	1.121*** (0.247)
Observations	27300	28651	28539
R2	0.114	0.032	0.090

* $p < .05$; ** $p < .01$; *** $p < .001$. Cells contain OLS regression coefficients with clustered standard errors (by country).

Appendix Table 2. Modeling Relative Preferences for Spending,
Using Political and Civil Liberty Measures

	Welfare		Health		Pensions	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Spending	2.113 (1.480)	4.069 (3.201)	-0.180 (0.211)	-0.322 (0.394)	0.113* (0.050)	0.201* (0.080)
Political Freedom	-1.415*** (0.487)		0.067 (1.004)		-0.355 (0.465)	
<i>interaction</i>	-2.633a (1.503)		-0.034 (0.239)		-0.137a (0.067)	
Civil Liberty		-1.536* (0.724)		-0.516 (1.676)		-0.305 (0.544)
<i>interaction</i>		-4.803 (3.232)		0.123 (0.446)		-0.228* (0.103)
Female	0.047*** (0.012)	0.042*** (0.014)	0.103*** (0.019)	0.102*** (0.019)	0.076*** (0.016)	0.075*** (0.016)
Age	0.003a (0.001)	0.003a (0.001)	0.001 (0.001)	0.001 (0.001)	0.004*** (0.001)	0.004*** (0.001)
Education	-0.148*** (0.047)	-0.132* (0.052)	-0.079 (0.083)	-0.082 (0.079)	-0.248*** (0.056)	-0.245*** (0.054)
Std Living	-0.005 (0.069)	-0.019 (0.077)	0.064 (0.055)	0.060 (0.058)	-0.049 (0.056)	-0.055 (0.053)
Mean Spending	0.412a (0.221)	0.620* (0.242)	0.139 (0.082)	0.132 (0.090)	0.006 (0.048)	0.005 (0.048)
Gov Reduce	0.755*** (0.103)	0.797*** (0.109)	0.300*** (0.072)	0.304*** (0.072)	0.405*** (0.055)	0.425*** (0.061)
Ideology	-0.046*** (0.011)	-0.046*** (0.012)	-0.030*** (0.006)	-0.030*** (0.006)	-0.005 (0.006)	-0.004 (0.007)
Constant	1.256*** (0.403)	1.375* (0.619)	1.268 (0.798)	1.812 (1.463)	0.845* (0.342)	0.817a (0.416)
Observations	28893	28893	30254	30254	30149	30149
R2	0.152	0.144	0.059	0.059	0.083	0.080

a $p < .1$; * $p < .05$; ** $p < .01$; *** $p < .001$. Cells contain OLS regression coefficients with clustered standard errors (by country).

Appendix Table 3. Modeling Relative Preferences for Spending, Alternative Specifications

Excluding all Controls ...

	Welfare	Health	Pensions
Spending	-0.420 (0.329)	-0.233* (0.090)	0.002 (0.028)
Press Limits	1.488*** (0.402)	-2.146a (1.181)	1.040* (0.493)
<i>interaction</i>	2.050 (1.348)	0.558a (0.304)	0.032 (0.077)
Constant	-0.021 (0.212)	2.068*** (0.494)	0.493* (0.225)
Observations	29136	30495	30388
R2	0.061	0.032	0.031

Including Macroeconomic Variables...

	Welfare	Health	Pensions
Spending	-0.823* (0.368)	-0.342*** (0.111)	-0.048 (0.038)
Press Limits	1.024 (0.674)	-1.602 (1.120)	0.078 (0.646)
<i>interaction</i>	1.234 (1.379)	0.468 (0.304)	0.101 (0.075)
Female	0.044*** (0.013)	0.107*** (0.021)	0.073*** (0.017)
Age	0.002a (0.001)	0.002 (0.001)	0.004*** (0.001)
Education	-0.127* (0.047)	-0.065 (0.066)	-0.228*** (0.043)
Std Living	0.004 (0.071)	0.089 (0.055)	-0.042 (0.052)
Mean Spending	0.538* (0.235)	0.169* (0.078)	0.016 (0.043)
Gov Reduce	0.805*** (0.090)	0.294*** (0.057)	0.411*** (0.054)
Ideology	-0.041*** (0.010)	-0.029*** (0.006)	-0.004 (0.006)
GDP per capita (PPP)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
Unemployment Rate	0.024 (0.017)	0.008 (0.010)	0.005 (0.017)
Constant	-0.455 (0.597)	1.646*** (0.480)	0.689 (0.476)
Observations	28893	30254	30149
R2	0.154	0.072	0.090

* p < .05; ** p < .01; *** p < .001. Cells contain OLS regression coefficients with clustered standard errors (by country). GDP per capita (PPP) and unemployment are from the World Bank, as included in the CSES dataset.

Appendix Table 4. Modeling Relative Preferences for Spending
Ordered Logit Estimations

	Welfare	Health	Pensions
Spending	-1.822* (0.786)	-0.812*** (0.202)	-0.098 (0.095)
Press Limits	2.150* (0.972)	-4.575* (1.948)	1.112 (1.004)
<i>interaction</i>	4.579a (2.764)	1.397*** (0.521)	0.295* (0.149)
Female	0.081*** (0.027)	0.231*** (0.046)	0.165*** (0.035)
Age	0.003 (0.002)	0.003 (0.002)	0.008*** (0.003)
Education	-0.297*** (0.101)	-0.183 (0.144)	-0.592*** (0.111)
Std Living	-0.036 (0.140)	0.196 (0.121)	-0.107 (0.133)
Mean Spending	0.939* (0.419)	0.347* (0.173)	0.006 (0.110)
Gov Reduce	1.519*** (0.190)	0.601*** (0.119)	0.981*** (0.132)
Ideology	-0.080*** (0.022)	-0.064*** (0.014)	-0.008 (0.016)
Cut 1	-1.966*** (0.459)	-6.456*** (0.814)	-3.992*** (0.574)
Cut 2	-0.515 (0.435)	-4.941*** (0.805)	-2.396*** (0.540)
Cut 3	1.449*** (0.414)	-2.984*** (0.791)	0.224 (0.546)
Cut 4	3.117*** (0.409)	-1.070 (0.771)	2.138*** (0.523)
Observations	28893	30254	30149

* p < .05; ** p < .01; *** p < .001. Cells contain ordered logit regression coefficients with clustered standard errors (by country).

Appendix Table 5. Descriptives

Country	Sample Size	Year	Means – Demographics and Attitudes					
			Female Education	Income	Std. Living	Gov. Reduce	Ideology	
AUS	3953	2013	0.52	0.87	1.88	0.54	0.59	5.15
AUT	1000	2013	0.49	0.34	2.03	0.42	0.69	4.68
CAN	3458	2010	0.56	0.52	1.99	0.53	0.57	5.02
CHE	4391	2011	0.52	0.90	1.83	0.44	0.68	5.11
CZE	1653	2013	0.51	0.16	1.88	0.35	0.61	4.97
DEU	1889	2013	0.51	0.31	2.06	0.33	0.81	4.37
FIN	1587	2015	0.50	0.30	2.06	0.45	0.75	5.59
FRA	2014	2011	0.55	0.31	1.70	0.44	0.81	4.65
GBR	1567	2015	0.56	0.48	1.97	0.43	0.64	4.96
GRC	1029	2012	0.40	0.55	1.82	0.45	0.46	4.90
IRL	1853	2010	0.50	0.42	1.78	0.55	0.57	6.00
ISL	1479	2012	0.49	0.58	2.01	0.61	0.62	5.48
ISR	1017	2012	0.51	0.44	1.89	0.58	0.78	5.99
JPN	1937	2013	0.53	0.40	2.11	0.35	0.75	5.61
KOR	1000	2011	0.50	0.61		0.50	0.83	5.40
MEX	2400	2012	0.58	0.12	1.92	0.55	0.68	6.63
NOR	1727	2013	0.49	0.50	1.96	0.57	0.62	5.65
NZL	1374	2011	0.54	0.59	1.97	0.52	0.63	5.54
POL	1919	2011	0.55	0.16	1.97	0.38	0.81	6.01
PRT	1499	2015	0.57	0.11	1.49	0.45	0.79	4.94
SVN	1031	2011	0.54	0.33	1.90	0.37	0.81	4.72
SWE	832	2014	0.49	0.43	2.00	0.53	0.70	5.15
TUR	1086	2015	0.49	0.13	2.06	0.46	0.88	5.94
USA	1929	2012	0.57	0.37	1.93	0.69	0.48	6.27

Country	Spending			Mean Spending			Media Freedom		
	Welfare	Health	Pensions	Welfare	Health	Pensions	FH	RSF	V-Dem
AUS	0.25	6.27	4.88	0.20	4.91	4.46	23.0	16.0	15.9
AUT	0.37	6.49	12.19	0.32	5.75	9.90	23.0	13.5	18.0
CAN	2.28	7.29	3.92	2.82	6.15	3.96	18.0	16.5	18.1
CHE	0.58	6.09	5.99	0.50	4.51	5.68	13.0	12.1	8.3
CZE	0.21	5.93	8.21	0.42	5.00	5.86	21.0	16.9	23.3
DEU	0.18	7.94	8.22	0.16	7.25	7.90	20.0	15.0	10.0
FIN	0.85	5.79	11.44	0.57	4.86	7.97	11.0	8.9	11.4
FRA	0.62	8.40	12.07	0.28	7.33	10.12	28.0	22.2	6.5
GBR	0.38	7.15	6.55	0.19	5.24	5.21	25.0	22.3	18.7
GRC	0.45	6.27	15.06	0.21	4.32	9.39	48.0	30.9	19.2
IRL	0.31	5.84	4.99	0.32	4.59	3.17	17.0	14.1	15.6
ISL	0.56	5.29	2.49	0.46	5.76	3.56	15.0	13.0	19.5
ISR	0.57	5.03	4.75	1.14	5.24	4.56	32.0	31.0	33.7
JPN	0.28	7.84	10.70	0.14	5.55	6.05	26.0	29.4	28.5
KOR	0.49	3.74	1.93	0.26	1.86	1.10	33.0	27.6	31.9
MEX	0.00	3.00	0.00	0.46	2.20	0.60	64.0	49.0	37.5
NOR	0.68	5.55	7.60	0.73	4.49	6.84	9.0	7.6	12.5
NZL	0.19	7.69	4.60	0.11	5.76	5.30	20.0	14.0	19.9
POL	0.15	4.42	8.76	0.27	3.92	7.85	28.0	26.5	15.3
PRT	0.20	6.05	12.15	0.15	5.05	6.22	18.0	15.8	18.8
SVN	0.56	6.26	9.64	0.47	5.85	9.91	23.0	21.7	23.3
SWE	0.71	6.55	9.56	0.74	5.98	9.12	11.0	8.3	16.1
TUR	0.20	3.98	6.70	0.16	2.56	3.08	71.0	53.0	50.1
USA	0.89	7.97	6.09	0.52	5.80	5.07	21.0	23.9	11.6

Appendix Figure 3. Preferences and Spending, Moderated by Press Freedom

