**Online Appendix**

**"Representation in an Era of Political and Economic Inequality:**

**How and When Citizen Engagement Matters"**

This appendix includes supplemental details about and analysis of our measures of political participation (section A); details regarding CCES issue inclusion, conflict districts and roll call votes (section B); and estimates of a “win ratio” model of policy congruence (section C).

***A. Participation measures***

Our analysis uses measures of self-reported participation in several political activities as well as a validated indicator of voting in the general election. A well-known drawback of self-reported voting measures is over-reporting bias. We use the CCES validated voting data provided through Catalist, a political data vendor that links survey respondents to their administratively validated voting record (Ansolabahere and Hersh 2012). The weighted mean for the self-reported, non-validated vote measure in the CCES 2012 data is 88.62%, whereas the validated vote measure has a mean of 78.97%. While this voting rate is still meaningfully higher than the actual turnout rate of 2012, the weighting procedure in the CCES—based on using matched cases that are weighted to the sampling frame using propensity scores—creates a nationally representative sample of U.S. adults (Ansolabehere and Schaffner 2013: 17).

For non-voting participation, we use a measure that is coded as “1” if the individual reports engaging in any one of the following three activities in the past year: attending local political meetings, displaying a political sign, or working for a candidate or a campaign (weighted mean 0.326, S.E. 0.002). We analyze making political contributions, or donating, as a separate type of political activity, where respondents are coded “1” if they report making a political contribution over the past year and “0” otherwise (weighted mean 0.315, S.E. 0.002).

***B. Issue inclusion and assignment to theoretical models***

The policy issues for which the CCES provides data on respondent policy preferences as well as their representatives’ legislative roll-call votes include: the Affordable Care Act (2010); the Keystone XL Pipeline; “Don’t Ask, Don’t Tell” (DADT), the U.S.-Korea Free Trade Agreement; the Ryan Budget Bill (2011 House Budget Plan); and the Simpson-Bowles Budget Plan. Each of the CCES issue questions included the following introduction, which was then followed by additional question-wording for each issue:

Congress considered many important bills over the past two years. For each of the following tell us whether you support or oppose the legislation in principle:

* Affordable Care Act of 2010 (1). Requires all Americans to obtain health insurance. Allows people to keep current provider. Sets up health insurance option for those without coverage. Increases taxes on those making more than $280,000 a year. [CC332I]
* Repeal Affordable Care Act (2). Would repeal the Affordable Care Act. [CC332G]
* Keystone Pipeline. A bill to approve the Keystone XL pipeline from Montana to Texas and provide for environmental protection and government oversight. [CC332H]
* End Don’t Ask, Don’t Tell. Would allow gays to serve openly in the armed services. [CC332J]
* U.S. –Korea Free Trade Agreement. Would remove tariffs on imports and exports between South Korea and the U.S. [CC332F]
* 2011 House Budget Plan (also known as the "Ryan Budget Bill"). The Budget plan would cut Medicare and Medicaid by 42%. Would reduce debt by 16% by 2020. [CC332A]
* Simpson-Bowles Budget Plan. Plan would make 15% cuts across the board in Social Security, Medicare, Medicaid and Defense, as well as other programs. Eliminate many tax breaks for individuals and corporations. Would reduce debt by 21% by 2030. [CC332B]

A few details on these questions are of note. First, respondents were asked two different questions about the ACA at different times. We use the “repeal” version of the question in the analysis, but the findings replicate when using the question asking respondents whether they support the ACA. The (second) repeal version of the question referred specifically to the ACA, while the (first) question asked about individuals’ support for the basic features of the ACA legislation.

Second, the DADT vote was on an amendment that would have eliminated funding for military chaplain’s training as part of the previous repeal of DADT; hence, voting against the amendment would convey support for DADT. It is possible that policy congruence was reduced on this issue due to its substantive complexity, as it was introduced as an amendment to a military spending bill. Therefore, it was not a separate, high visibility roll call vote on the repeal of “Don’t Ask, Don’t Tell,” which would provide a more direct correspondence with the CCES survey question. In addition to the DADT amendment, the bill included a highly salient detail related to the closure of Guantanamo. As such, the bill’s substantive content was not solely focused on DADT and this may influence the observed linkage between constituent and representative support as expected for a Responsible Parties issue.

We use the first four issues in the analysis. We exclude the Ryan Budget Bill and the Simpson-Bowles Budget Plan as issues because we use (a) only those issues on which participants and non-participants have opposing policy preferences and (b) only those issues for which the roll call vote exhibits adequate variance. For the Simpson-Bowles Budget bill, the roll call vote was a nearly unanimous bipartisan vote with only 8% voting on the minority side. For the Ryan Budget Bill, respondent opposition was very high, leading to a vanishingly small number of conflict districts.

Hill, Jordan and Hurley argue that the theoretical expectations for the correspondence in preferences between legislator and constituent will vary based on three defining characteristics of the issue at hand: issue easiness, partisan polarization and how long the issue has been on the political agenda. New, simple and cross-cutting issues should reflect an *instructed delegate* model; complicated and cross-cutting issues the *trustee* model; established, simple and party-defining issues the *responsible party* model; complicated and party-defining issues reflect the *party-elite led* model; and established, simple and cross-cutting issues the *belief-sharing* model. For a graphical presentation of the five models, see Hill, Jordan and Hurley 2015: 40.

Hill, Jordan and Hurley note that over time, party-elite led issues on the agenda might reflect some preference congruence between representative and constituents. They speculate (p. 45) that the ACA might have been an elite-led issue prior to its passage in 2009—but also claim that by the time Republicans introduced repeal bills beginning in 2010, it was a classic example of a responsible party issue (pp. 1-2), which is consistent with our evaluation of the issue type.

While Hill, Jordan and Hurley use repeated measures of public opinion and roll call votes over time to assign the issues to models, the timeliness of the issues in the 2012 CCES requires that we rely more heavily on the roll call votes (see below), as well as media coverage of the bills as to their substantive content, strategies and public support.

**Conflict Districts.** The rationale spelled out by Soroka and Wlezien (2008) and Griffin and Newman (2013) clarifies the importance of focusing attention on units of analysis in which salient groups hold opposing policy preferences. To adapt Griffin and Newman’s (2013: 55) example for the purposes of our study: if a piece of legislation is supported by 90% of politically active citizens and 60% of politically inactive citizens, an MC vote that is influenced by the policy preferences of politically active citizens will also satisfy the policy preferences of a majority of those who are politically inactive. Such a district is not useful to test our hypotheses as the policy preferences of participants and non-participants do not differ.

We identify “conflict districts” as ones in which participant preferences for the direction of action on a policy issue at hand conflict with non-participants. The “conflict” is therefore not merely a statistically significant difference between participators and non-participators but where there is disagreement in the *course of policy action* (i.e. one group supports “for” and the other group supports “against” on the same policy issue). Relying on substantive differences in policy preferences provides a more rigorous standard for assessing the consequences of participation for policy congruence than relying on differences in the proportion of each group favoring a policy.

Griffin and Newman (2013) operationalize a “conflict district” as a district in which the relevant groups support opposing policy courses by any margin, meaning one group’s mean policy score is 0.51 and the other is 0.49, or any other unbalanced mean (e.g. 0.90 versus 0.10). We follow this approach in the analyses presented in the manuscript. We also replicated our analyses with the constraint where the proportion of supporters on each side of the midpoint is separated by at least one half standard deviation, The replication analyses using this stricter operationalization were fully consistent with our reported findings.

Table A1 presents the proportion of conflict districts for each CCES policy issue for which we have data on policy preferences for both respondents and for their representatives’ legislative roll-call votes, by political activity.

Table A1. Proportion of districts that are conflict districts for each policy issue

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | ACA | Keystone | DADT | KFTA | Simpson-Bowles | Ryan |
| Vote | 40.14 | 13.99 | 13.99 | 47.48 | 47.94 | 3.67 |
| Activities | 40.37 | 14.22 | 19.27 | 47.48 | 46.79 | 2.52 |
| Donation | 36.93 | 15.37 | 14.45 | 50.23 | 50.69 | 2.52 |

Note: entries represent the proportion of all possible districts that are conflict districts, i.e. in which participators and non-participators support opposite courses of policy action for each policy issue, and for each political act.

As shown in Table A1, with only 3.67% of all districts qualifying as "conflict districts", the Ryan Budget issue does not have a large enough number of conflict districts in order to conduct valid analyses. The reason why the Ryan budget bill has so few conflict districts is because such a large proportion of the public opposed the bill (specifically, 79.4% of the CCES 2012 respondents). In order for a district to qualify as in “conflict,” it must be the case that those who are politically active support one course of action (e.g. support the Ryan bill) at the same time that those who are politically inactive support the opposite course of policy action (e.g., oppose the Ryan bill). When a large majority of the population prefers only one course of policy action, the majority of both participators *and* non-participators overwhelmingly prefer the same policy action, and the issue does not meet our district conflict requirement.

**Variance in Roll Call Votes.** We exclude the Simpson-Bowles Budget Plan from the analysis because the roll call vote was virtually unanimous against the bill. The roll call votes on this bill therefore belong to the "unanimous or nearly so" category of legislation that is not appropriate for this type of roll call voting analysis. As with the conflict district criteria, it is impossible to assess constituency correspondence with roll call votes by members if (almost) all members vote unanimously on a bill (either in support, or in opposition). Details on the roll call votes on the six “matched” (opinion to roll call vote) issues in the CCES are provided below. Note: Voting records for the House of Representative votes are coded as **For** (Aye), **Against** (Nay), **Did Not Vote** (Abstain). **Source:** <https://www.congress.gov/roll-call-votes>.

Repeal of Affordable Care Act/ Obamacare (First Vote)

"Repealing the Job-Killing Health Care Law Act"

* January 19, 2011
* Vote number 14
* H.R. 2
* Passed: 245-189-1
* Democrats: 3-189-1
* Republicans: 242-0-0

Keystone Pipeline

"To direct the President to expedite the consideration and approval of the construction and operation of the Keystone XL oil pipeline, and for other purposes.”

* July 26, 2011
* Vote number 650
* H.R. 1938
* Passed: 279-147-1-5
* Democrats: 47-144-0-2
* Republicans: 232-3-1-3

Don’t Ask, Don’t Tell

Amendment to Defense Appropriations Act, 2012 to prohibit the use of funds in the bill for “Don’t Ask, Don’t Tell” repeal training materials developed for military chaplains.

* July 8, 2011
* Vote number 528
* H.R. 2219
* Passed: 236-184-12
* Democrats: 9-175-8
* Republicans: 227-9-4

US-Korea Free Trade

"To implement the United States-Korea Free Trade Agreement."

* October 12, 2011
* Vote number 783
* H.R. 3080
* Passed: 278-151-4
* Democrats: 59-130-3
* Republicans: 219-21-1

Ryan Budget Bill [excluded from the analysis due to lack of conflict districts]

"Establishing the budget for the United States Government for fiscal year 2012 and setting forth appropriate budgetary levels for fiscal years 2013 through 2021."

* April 15, 2011
* Vote number 277
* H.Con.Res. 34
* Passed: 235-193-4
* Democrats: 0-189-3
* Republicans: 235-4-1

Simpson-Bowles Budget [excluded due to lack of variation in roll call votes]

"Amendment in the nature of a substitute sought to insert the budget proposal endorsed by the Simpson-Bowles Commission."

* March 28. 2012
* Vote number 145
* H.Con.Res. 112, Amendment 1001
* Failed: 38-382-9 (2 present votes)
* Democrats: 22-159-7 (2 present votes)
* Republicans: 16-223-2

***C. Win ratio analyses***

Table A2 provides estimates of models similar to those reported in Table 2 and Table 3, substituting a “win ratio” index as the dependent variable. The index is the number of the four issues on which the respondent is congruent with her representative. As noted in the manuscript, these estimates confirm the general patterns that we report finding for the Responsible Party issues, and especially the ACA: higher policy congruence results not only from the acts of voting, donating or other types of political activity, but is mediated by the partisanship of the participant. In other words, legislators respond to active co-partisans across all types of participation.

Table A2. Simple Models of Policy Congruence (Win Ratio)

*Sample of districts that conflict for all acts; same baseline n for all models*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 |
|  | Vote | Vote \*  Co-partisan | Donate | Donate \* Co-partisan | Activities | Activities \* Co-partisan |
| Vote | 0.961 | -1.395 |  |  |  |  |
|  | (0.728) | (0.846) |  |  |  |  |
|  |  |  |  |  |  |  |
| Co-partisan |  | -1.667 |  | 2.665\*\*\* |  | 2.966\*\*\* |
|  |  | (1.219) |  | (0.686) |  | (0.710) |
|  |  |  |  |  |  |  |
| Vote \* |  | 6.497\*\*\* |  |  |  |  |
| Co-partisan |  | (1.378) |  |  |  |  |
|  |  |  |  |  |  |  |
| Donate |  |  | 0.592 | -1.538\* |  |  |
|  |  |  | (0.606) | (0.760) |  |  |
|  |  |  |  |  |  |  |
| Donate \* |  |  |  | 5.246\*\*\* |  |  |
| Co-partisan |  |  |  | (1.133) |  |  |
|  |  |  |  |  |  |  |
| Activities |  |  |  |  | 1.446\* | 0.026 |
|  |  |  |  |  | (0.612) | (0.788) |
|  |  |  |  |  |  |  |
| Activities \* |  |  |  |  |  | 3.236\*\* |
| Co-partisan |  |  |  |  |  | (1.154) |
|  |  |  |  |  |  |  |
| Constant | 49.637\*\*\* | 50.105\*\*\* | 50.117\*\*\* | 49.185\*\*\* | 49.861\*\*\* | 48.837\*\*\* |
|  | (0.788) | (0.869) | (0.701) | (0.763) | (0.705) | (0.765) |
| Observations | 26223 | 26223 | 25077 | 25077 | 25077 | 25077 |
| Adjusted *R*2 | 0.000 | 0.007 | 0.000 | 0.007 | 0.001 | 0.007 |

Standard errors in parentheses

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