

Randomization Checks

To assess the influence of exposure to arguments about the economic and environmental costs and benefits of fracking on support for the process, we embedded an experiment on a nationally representative online survey of 2,000 adult Americans. Demographic comparisons of our sample to the 2010 General Social Survey and to the most recent data from the U.S. Census are presented in SI Table 2. The full wording of the experimental module is provided in SI Appendix 1. Subjects were randomly assigned to one of four experimental groups: a control group; the benefits treatment; the costs treatment; or the costs and benefits treatment.

To insure that the randomization was successful, SI Table 1 presents the demographic composition of the subjects in each experimental group. Along each dimension, we conducted a one-way ANOVA to test the null hypothesis of equal means across the four experimental groups. In no case could we reject the null of equal means, $p < .05$. Consistent with successful randomization, the demographic composition of each group is extremely similar. As a result, in the manuscript we focus on the simple differences in the percentage of subjects supporting fracking across the experimental groups.

ANOVA Results

In the manuscript we graphically compare the percentage of subjects supporting fracking in each of the experimental groups. In the text, we note which treatment effects are statistically significant, $p < .05$. SI Table 4 presents the full results of one-way ANOVA tests that employ a bonferroni correction to assess which differences in means across experimental groups are statistically significant.

Alternate Graphical Presentation of Results

In the text, we present simple bar graphs summarizing the percentage of Americans supporting fracking in each of our four experimental groups. SI Figures 1-3 present the same information in a different format. In these figures the percentage supporting fracking in the baseline control group is illustrated by a solid horizontal line. The percentage supporting fracking in each of the three treatment groups is then indicated by a dot, with i-bars presenting 95% confidence intervals around each sample mean.

Testing Relative Frame Strength

As discussed in the text (and as can be seen in the first set of analyses for all subjects in SI Table 4), support for fracking was significantly higher in the benefits treatment than in the control group ($p < .01$). This strongly supported H1. Support for fracking was only 1% lower in the costs treatment than in the control group, and this difference in means is not statistically significant. This null result shows that there is little evidence in support of H2. In the text, we argued that the most likely explanation for the null effects for the costs treatment is a floor effect. Support for fracking in the control group was very low at just under 31%. Given the intense support for all forms of increased energy production among a subset of the American public, aggregate levels of support for fracking may simply have little room to decrease further.

However, framing theory suggests another possibility: the benefits frame may be stronger than the costs frame. If so, then the former would affect opinion, while the latter would not (Chong and Druckman 2007, 2010). To test this alternate explanation for the null results on the costs treatment, we conducted a follow-up survey in November 2015. We recruited a convenience sample of 507 subjects through Mechanical Turk (on the strengths and limits of

Mturk samples, see Berinsky, Huber, and Lenz 2012). All subjects received the following prompt: "Regardless of whether you support or oppose fracturing, we'd like to get an idea of how effective you think the argument is on the mass public. That is, do you think the argument is convincing to others?" After reading this initial prompt, subjects were randomly assigned to one of two groups. The first group then received the arguments from our benefits treatment (for wording, see SI Appendix 1). The second group then received the arguments from our costs treatment. Subjects in both groups were then asked the same question: "Regardless of your personal views on fracking, to what extent do you think this argument is effective in making the case against the continued use of fracking to the public?" They answered this question on a five-point item response scale: (1) Definitely effective; (2) Somewhat effective; (3) Neither effective nor ineffective; (4) Somewhat ineffective; (5) Definitely ineffective.

While the costs treatment emphasizes the environmental risks of fracking it does contain at least some positive information: "burning natural gas, while cleaner than burning coal, is dirtier than producing energy from renewable sources." If subjects found the benefits treatment to be more effective than the costs treatment, then this would explain the differential impact of the two treatments.

However, our follow-up survey found no evidence that subjects viewed the benefits treatment as more effective. The mean effectiveness evaluations of the two frames were very similar: 2.25 for the costs frame vs. 2.5 for the benefits frame, with lower values indicating greater effectiveness. As a result, we conclude that the two frames were of almost equal strength.

Robustness Check: Logit Models with Demographic Controls

Because the randomization of subjects across our four experimental groups was successful (SI Table 1), a simple difference in means analysis allows us to assess the influence of our treatments on support for fracking. However, as a robustness check and to allow us to assess the relative influence of our treatments versus other factors identified in the literature as influencing attitudes toward fracking, we also estimated a series of logit models. The independent variables of interest in these models are three dummy variables indicating assignment to each of the three experimental treatments: benefits; costs; costs and benefits. The models also include a number of control variables. First, past research has shown that attitudes toward fracking, like other salient questions of energy policy, have varied significantly along partisan and ideological lines (Cacciatore et al., 2015; Boudet et al., 2016; Goldfarb, Kriner, and Buessing 2016; though see Clarke et al., 2015). As a result, we include two dummy variables identifying whether or not a subject affiliates with either the Democratic or Republican parties.¹ Second, to account for relationships between support for fracking and broader environmental attitudes (Davis and Fisk 2014) and to explore whether these attitudes moderate the influence of new information on support for fracking, we control for subjects' beliefs about global climate change (Villar and Krosnick 2011). Finally, we control for a range of demographic variables shown to influence support for fracking by prior research, including educational attainment, age, race, and gender (Boudet et al., 2014). SI Table 5 presents the results.

Consistent with the differences in means presented in Figure 1 in the text, the coefficient for the benefits treatment is positive and statistically significant. This is strongly consistent with H1. The coefficient for the costs treatment is negative, but it is small and statistically insignificant. This is inconsistent with H2. Finally, the coefficient for the combined costs and

¹ We also estimated logit models that controlled for both partisanship and ideology or just ideology and not partisanship. All specifications yield substantively similar results.

benefits treatment is almost zero and not statistically significant. This is consistent with H3. The estimated effect, derived from simulations, of each treatment on the median independent's probability of supporting fracking is presented in SI Figure 4.

SI Figure 7 uses simulations to illustrate the relative effect size of each treatment versus the control variables on the predicted probability of the median subject who does not believe global climate change presents a serious threat supporting the use of fracking. I-bars present 95% confidence intervals around each point estimate. Receiving new information about the potential economic and environmental benefits of fracking increased the predicted probability of the median subject supporting hydraulic fracturing by approximately .12. By contrast, the costs and combined costs and benefits treatment did not significantly alter the predicted probability of supporting fracking from that observed in the control group.

Republicans were significantly more likely to support fracking than Democrats or independents, all else being equal. Older subjects were also more likely to support fracking, all else being equal, as were men and non-whites. Finally, believing that climate change is a serious problem significantly decreased the probability of supporting fracking.

Turning to the models for Democrats and Republicans (columns 2 and 3 of SI Table 5), the benefits treatment significant increased support for both partisan groups. However, the coefficient is much larger in magnitude for Republicans than for Democrats. As shown in SI Figure 5, consistent with H4 the effect of the benefits treatment was much greater among Republicans than among Democrats.

Finally, the last two models in SI Table 5 examine the effect of the treatments on subjects whose partisanship and global warming beliefs were in conflict (i.e. Democrats who do not believe climate change is a serious threat, and Republicans who do believe it is a serious threat),

and those partisans for whom their party affiliation and global warming beliefs are aligned. Strongly consistent with H7, the coefficient for the benefits treatment among conflicted partisans is much stronger than among non-conflicted partisans. As shown in SI Figure 6, the estimated effect of the benefits treatment on support for fracking is three times larger among conflicted partisans than among non-conflicted partisans.

Alternate Operationalization of the Dependent Variable

As described in the text and shown in SI Table 3, our survey measured support for fracking on a five-point item response scale. For the analysis presented in the text, we collapsed this variable to a binary measure coded 1 for those who strongly or somewhat supported fracking, and 0 for those who either opposed it or neither supported nor opposed it. This allows us to focus on the percentage of Americans supporting fracking in each of our experimental treatments. Substantively, we argue that this operationalization of the dependent variable allows us to focus on the quantity of greatest relevance to policymakers: the level of support for fracking among the public. However, this coding decision lumps together those who opposed fracking and those who neither supported nor opposed it. This could potentially skew our understanding of how arguments about costs and benefits influence attitudes toward fracking.

Therefore, as a robustness check we also examined the influence of our experimental treatments on an alternate operationalization of support for fracking coded 1 for those who strongly or somewhat support it; 2 for those who neither support nor oppose it; and 3 for those who strongly or somewhat oppose it. Toward this end, we estimated a series of multinomial logit models with the midpoint – those who neither support nor oppose fracking – as the omitted baseline category. These models allow us to examine the influence of the experimental

treatments on the probability of moving from the baseline to supporting fracking and on the probability of moving from the baseline to opposing fracking. The independent variables of interest in these models are three dummy variables indicating assignment to each of the three experimental treatments: benefits; costs; costs and benefits. The models also control for a number of demographic characteristics including partisanship; educational attainment; age; race; gender; and beliefs about climate change. SI Table 7 presents the results.

In none of the models did any of the experimental treatments have a statistically significant effect in the model estimating the probability of moving from the baseline to opposing fracking. By contrast, the models show that the benefits treatment increased the probability of supporting fracking among all subjects and (to varying degrees, consistent with the results presented in the text) across the various partisan subgroups. Thus, the results of the multinomial logit models strongly support our decision to focus on the influence of the treatments on support for fracking vs. not supporting it. The experimental treatments had no effect on the probability of a subject opposing fracking vs. neither supporting nor opposing it.

As a final robustness check, we also estimated ordered logit models using the full five-point item-response scale (SI Table 3) as the dependent variable. SI Table 6 presents the results. The results are substantively similar to those obtained from logit regressions and from the simple difference in means analysis presented in the text. However, likelihood ratio tests suggest that the proportional odds assumption is violated. As a result, the multinomial logit approach is the correct one; and as discussed above, the multinomial logit results support our decision to create a binary dependent variable to compare supporters of fracking with those who did not support fracking.

Conflicted Democrats and Republicans

Our final research question, informed by top-of-the-head models of opinion formation, explored whether conflicted partisans – that is, those whose partisanship and attitudes toward climate change are in conflict – should be most influenced by arguments about the costs and benefits of fracking. Because these partisans draw on conflicting salient considerations, exposure to information about fracking should be more likely to tip the balance of considerations either for or against fracking (e.g. Zaller 1992). In the analyses reported in both the text and Supporting Information, we found strong evidence that conflicted partisans were much more responsive to the benefits treatment than were non-conflicted partisans. However, a final question is whether this is true of both conflicted Democrats and conflicted Republicans. Or whether the effect was driven by one partisan group.

SI Figure 8 replicates the analysis from Figure 3 in the text, but disaggregates the data by partisanship. This final cut of the data confirms that conflicted Democrats and Republicans were both more responsive to the treatments than were their co-partisan peers whose views on climate change aligned with their partisanship. Among both conflicted Democrats and Republicans, the effect of the benefits treatment was large and statistically (21% and 48%, respectively). By contrast, among non-conflicted Democrats and Republicans, the relevant differences in means were much smaller and not statistically significant.

Looking for Evidence of Motivated Reasoning Among Knowledgeable Partisans

The base models presented in the text found only limited evidence of partisan motivated reasoning. Consistent with H4, Democrats were less responsive to the benefits treatment (which conflicts with their partisan predisposition) than were Republicans. However, we found little

support for H5 and H6. A possible explanation for the limited evidence of motivated reasoning in this case is that motivated reasoning should occur primarily among highly knowledgeable political sophisticates. Unfortunately, due to financial constraints, we were unable to include a battery of scientific knowledge questions on the survey. However, following literature demonstrating a strong linkage between educational attainment and political knowledge, we are able to use educational attainment as a proxy for policy knowledge and political sophistication.²

To examine whether there is stronger evidence of motivated reasoning among more knowledgeable partisans, we conducted two additional rounds of analysis. First, we compared the effect of each experimental treatment on partisans who possessed a college degree (i.e. a 2-year degree; 4-year degree; or post-BA degree; this comprised 36% of our sample) versus the almost two-thirds of our sample who did not. To do this, we estimated a pair of logistic regressions, one for Democrats and one for Republicans. As in the preceding logistic regressions, the dependent variable is coded 1 for those who supported fracking and 0 for those who did not. The model includes the following variables: three indicator variables that identify assignment to each of the three experimental treatments; a new dummy variable coded 1 for subjects with some college degree and 0 for those who did not; and the interaction of this college education variable with each of the three treatments.

SI Table 8 presents the results. H4 predicted that the effects of the benefits treatment should be more influential among Republicans than among Democrats. Democrats should be

² See: Lambert, R. D., Curtis, J. E., Kay, B. J., & Brown, S. D. (1988). The social sources of political knowledge. *Canadian Journal of Political Science*, 21(02), 359-374; Jennings, M. K. (1996). Political knowledge over time and across generations. *Public Opinion Quarterly*, 60(2), 228-252; Popkin, S. L., & Dimock, M. A. (1999). Political knowledge and citizen competence. In S.L. Elkin and K.E. Soltan (Eds.), *Citizen competence and democratic institutions* (pp. 117-146). University Park: Pennsylvania State University Press.

more likely to resist incorporating this frame into their opinion of fracking as it is inconsistent with their partisan predisposition. SI Figure 9 illustrates the estimated effect of the treatment for college educated and non-college educated Republicans (top panel) and Democrats (bottom panel). Among Republicans, the benefits treatment had a large positive effect on support for fracking among non-college educated respondents, increasing their probability of supporting fracking by about .24. Among college educated respondents, the estimated effect was still positive, but considerably smaller, increasing the predicted probability of supporting fracking by about .11. Among Democrats, we observe a similar pattern. The benefits treatment increased support for fracking among non-college educated Democrats; however, consistent with H4 the effect is considerably smaller than among non-college educated Republicans (.12 vs. .24). Among college-educated Democrats, the benefits treatment had no effect at all. This is superficially consistent with the hypothesis that motivated reasoning will be strongest amongst the most sophisticated partisans. However, the fracking assessments of both highly educated Republicans and Democrats were less moved by the benefits cue. Thus, these results seem more consistent with more educated subjects of all partisan stripes having more prior information on which to base their opinions of fracking and therefore being less susceptible to influence by a new frame emphasizing the benefits of fracking.

H5 predicted that Democrats should become less supportive of fracking when exposed to the costs treatment, while Republicans should be less responsive to it as this frame is counter to their partisan predispositions. In the text, we found little evidence that either partisan group was responsive to the costs treatment. For Republicans, this was expected. Among Democrats, we argued that this is evidence of a floor effect as the low level of support for fracking among Democrats in the control group – only 20% – meant that there was simply little room for

Democratic support for fracking to fall much further. As shown in SI Figure 10, the costs treatment had little effect among Democrats or Republicans, regardless of their level of educational attainment.

Finally, H6 argued that if partisan motivated reasoning was occurring, Democrats and Republicans should respond differently to the combined costs and benefits treatment. Republicans should embrace the benefits frame, and counter-argue against the costs frame; thus, this treatment should increase support for fracking among Republicans. By contrast, Democrats should be receptive to the costs frame, and resist incorporating the benefits frame into the range of salient considerations used to form their opinion of fracking. In the text, we found little evidence for this when looking at all partisans. However, when disaggregating the analysis by educational attainment we do find some evidence consistent with H6 among college educated partisans. As shown in SI Figure 11, the costs and benefits treatment had no effect at all among non-college educated Republicans. However, among college educated Republicans, the estimated effect is positive, as predicted by H6, and substantively meaningful (a .10 increase in the predicted probability of supporting fracking). However, the 95% confidence interval around this estimate does include 0. Among Democrats, the combined treatment again had no effect among non-college educated subjects. However, consistent with H6, among college educated Democrats, the combined costs and benefits treatment had the expected negative effect and the 95% confidence interval just excludes 0.³ Thus, particularly with respect to H6, we do find some evidence consistent with partisan motivated reasoning among highly educated partisans.

³ Confidence intervals are obtained from simulations and so may vary slightly across simulations.

As a robustness check, we also estimated a second pair of logistic regressions using an alternate operationalization of educational attainment: the full six-point ordinal variable described in SI Table 3. Results are presented in SI Table 9. SI Figures 12 and 13 provide substantive interpretation of the results for the benefits and combined costs and benefits treatments (the costs treatment again has no effect at any level of educational attainment). As shown in the top panel of SI Figure 12, the benefits treatment had a significant effect on support for fracking among Republicans, particularly at lower levels of educational attainment. As educational attainment increases, the estimated effect (i.e. the gap between the dashed and solid lines) attenuates and it is no longer significant at the highest levels of educational attainment. Among Democrats, we observe a similar pattern; however, the effect of the benefits treatment becomes insignificant at a lower level of educational attainment (i.e. for those who have a 2-year college degree). The smaller effect of the benefits treatment among Democrats is consistent with H4. Moreover, the steeper attenuation of this effect as educational attainment increases is consistent with partisan motivated reasoning being most prominent among the most knowledgeable and politically sophisticated partisans.

SI Figure 13 shows the estimated effect of the combined costs and benefits treatment across levels of educational attainment by partisan group. Among Republicans, exposure to the costs and benefits treatment group increases support for fracking as educational attainment increases. However, even at the highest levels of educational attainment, the estimated effect is not statistically significant. Among Democrats, the effect of the costs and benefits treatment becomes increasingly negative as educational attainment increases, and among the most highly educated Democrats, this negative effect is statistically significant. The pattern of results across

both additional analyses is generally consistent with H6 and is suggestive of partisan motivated reasoning among the most highly knowledgeable and politically sophisticated partisans.

SI Table 1: Demographic Balance Across Experimental Groups

	Control	Benefits	Costs	Both	F-statistic (p-value)
Democrat	46%	48%	47%	50%	0.47 (0.70)
Republican	32%	29%	33%	32%	0.73 (0.53)
Conservatism	2.97	2.95	2.99	2.98	0.09 (0.97)
Education	3.19	3.26	3.27	3.24	0.30 (0.83)
Age	48	46	47	47	0.82 (0.48)
White	69%	73%	72%	71%	0.56 (0.64)
Male	47%	46%	44%	48%	0.50 (0.68)
Climate change serious	57%	54%	55%	57%	0.58 (0.63)
Observations	498	499	500	503	

Note: Far right column presents the p-value obtained from an F test from a one-way ANOVA of the null hypothesis of equal means across the four experimental groups. In no case can we reject the null of equal means, $p < .05$.

SI Table 2: Sample Demographics Comparison

	YouGov survey	2010 GSS	U.S. Census
<i>Demographics</i>			
White	71%	77%	78%
Female	54%	57%	51%
% College degree	27%	31%	28%
Median age	46 years	49 years	37 years
Christian	57%	78%	71%
Catholic	19%	23%	21%
<i>Political Characteristics</i>			
Republican	31%	34%	
Democrat	48%	48%	
Ideology (% moderates)	30%	37%	

Note: Partisan variables include those who “lean” toward a political party.

SI Table 3: Variable Measures and Descriptive Statistics

Variable	Question	Descriptive Statistics
Fracking support	Based on anything you may have heard or read about fracking, do you...? 5=strongly support it 4=somewhat support it 3=neither support nor oppose it 2=somewhat oppose it 1=strongly oppose it	Mean: 2.93 SD: 1.36 17% -- strongly support it 16% -- somewhat support it 30% -- neither support nor oppose it 15% -- somewhat oppose it 21% -- strongly oppose it
Climate change serious	If nothing is done to reduce global climate change in the future, how serious of a problem do you think it will be?" 1=extremely serious 2=very serious 3=somewhat serious 4=slightly serious 5=not at all serious	Mean: 2.52 SD: 1.47 35% -- extremely serious 21% -- very serious 18% -- moderately serious 10% -- slightly serious 17% -- not serious at all
Partisanship	Generally speaking, do you think of yourself as a...? 1=strong Democrat 2= not very strong Democrat 3= lean Democrat 4 = independent 5 = lean Republican 6 = not very strong Republican 7 = strong Republican 8 = Not sure	27% -- strong Democrat 13% -- not very strong Democrat 8% -- lean Democrat 16% -- independent 9% -- lean Republican 10% -- not very strong Republican 13% -- strong Republican 5% -- not sure
Education	What is the highest level of education you have completed? 1=no high school 2=high school graduate 3=some college, but no degree yet 4=2-year college degree 5=4-year college degree 6=post-graduate degree	Mean: 3.24 SD: 1.48 5% -- no high school 38% -- high school graduate 21% -- some college 10% -- 2-year degree 17% -- 4-year degree 10% -- post-graduate degree
Age	In what year were you born? (Age calculated by subtracting from 2016)	Mean: 46.84 SD: 17.18
Race	What racial or ethnic group best describes you? 1=white 2=black 3=Hispanic 4=Asian 5=Native American 6=mixed 7=other 8=Middle Eastern	71% -- white 12% -- black 11% -- Hispanic 2% -- Asian 1% -- Native American 2% -- mixed 1% -- other <1% -- Middle Eastern
Gender	Are you male or female?	

	1= male 2=female	46% -- male 54% -- female
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Note: From the fracking support question, we created a dependent variable coded 1 for those who strongly or somewhat support fracking, and 0 otherwise. From the climate change serious question, we created a binary variable coded 1 for those who believe climate change is extremely or very serious and, 0 otherwise. From the partisanship question, we created two indicator variables. The first is coded 1 for those who identified as strong or not very strong Democrats or who leaned toward the Democratic Party, and 0 otherwise. The second is coded 1 for those who identified as strong or not very strong Republicans or who leaned toward the Republican Party, and 0 otherwise.

SI Table 4: Differences in Means Across Experimental Groups*All Subjects*

Row mean – Col mean	Control	Benefits	Costs
Benefits	.112 (.001)		
Costs	-.013 (1.000)	-.125 (.000)	
Both	.003 (1.000)	-.109 (.002)	.016 (1.000)

Democrats

Row mean – Col mean	Control	Benefits	Costs
Benefits	.078 (.225)		
Costs	-.004 (1.000)	-.082 (.165)	
Both	-.032 (1.000)	-.110 (.017)	.028 (1.000)

Republicans

Row mean – Col mean	Control	Benefits	Costs
Benefits	.196 (.004)		
Costs	-.031 (1.000)	-.223 (.000)	
Both	.022 (1.000)	-.171 (.015)	.053 (1.000)

Conflicted Partisans

Row mean – Col mean	Control	Benefits	Costs
Benefits	.321 (.000)		
Costs	.071 (1.000)	-.251 (.004)	
Both	.030 (1.000)	-.292 (.000)	.041 (1.000)

Not Conflicted Partisans

Row mean – Col mean	Control	Benefits	Costs
Benefits	.050		

	(1.000)		
Costs	-.040 (1.000)	-.090 (.110)	
Both	-.028 (1.000)	-.078 (.258)	.012 (1.000)

Note: Each cell presents the mean of the experimental group in the row minus the mean of the experimental group in the column. The p-value obtained from an ANOVA with bonferroni correction is presented in parentheses.

SI Table 5: Logistic Regression Models

	All	Dem	GOP	Conflicted	Not Conflicted
Benefits treatment	0.63*** (0.15)	0.47** (0.23)	0.90*** (0.27)	1.56*** (0.36)	0.41** (0.19)
Costs treatment	-0.08 (0.15)	0.00 (0.24)	-0.22 (0.25)	0.48 (0.41)	-0.22 (0.19)
Costs and Benefits treatment	0.02 (0.15)	-0.22 (0.24)	0.09 (0.25)	0.16 (0.39)	-0.08 (0.19)
Democrat	-0.21 (0.15)				
Republican	1.02*** (0.15)			0.45* (0.27)	2.17*** (0.15)
Education	0.05 (0.04)	-0.14** (0.06)	0.23*** (0.07)	0.12 (0.10)	0.01 (0.05)
Age	0.01*** (0.00)	-0.01* (0.00)	0.03*** (0.01)	0.00 (0.01)	0.01** (0.00)
White	-0.47*** (0.12)	-0.71*** (0.17)	-0.38 (0.26)	-0.01 (0.28)	-0.92*** (0.17)
Male	0.71*** (0.10)	0.36** (0.16)	1.05*** (0.18)	0.72*** (0.26)	0.72*** (0.14)
Climate change serious	-0.76*** (0.12)	-0.31 (0.20)	-1.12*** (0.22)		
Constant	-1.50*** (0.25)	-0.04 (0.37)	-1.93*** (0.47)	-2.57*** (0.63)	-1.64*** (0.30)
Observations	2,000	960	628	326	1,262

Note: Dependent variable is coded 1 for those who strongly or somewhat supported fracking; 0 otherwise. Columns 4 and 5 examine the influence of the experimental treatments on conflicted partisans (i.e. those for whom partisanship and climate change beliefs conflict) or non-conflicted partisans; independents are excluded. As a result, the Democratic and climate change dummy variables are excluded because they are perfectly predicted. Models are logistic regressions. Standard errors in parentheses. All significance tests are two-tailed.

*** $p < 0.01$

** $p < 0.05$

* $p < 0.10$

SI Table 6: Ordered Logit Models

	All	Dem	GOP	Conflicted	Not Conflicted
Benefits treatment	0.32*** (0.11)	0.20 (0.17)	0.64*** (0.21)	1.18*** (0.29)	0.21 (0.15)
Costs treatment	-0.18 (0.11)	-0.10 (0.17)	-0.35* (0.20)	-0.02 (0.31)	-0.23 (0.14)
Costs and Benefits treatment	-0.04 (0.11)	-0.15 (0.16)	-0.01 (0.21)	0.09 (0.28)	-0.08 (0.15)
Democrat	-0.40*** (0.11)				
Republican	0.89*** (0.12)			0.04 (0.21)	2.42*** (0.13)
Education	-0.05* (0.03)	-0.15*** (0.04)	0.09 (0.05)	0.04 (0.08)	-0.07** (0.03)
Age	0.01*** (0.00)	-0.01*** (0.00)	0.02*** (0.00)	0.00 (0.01)	0.00 (0.00)
White	-0.63*** (0.09)	-1.02*** (0.12)	-0.29 (0.21)	-0.38* (0.22)	-1.04*** (0.13)
Male	0.35*** (0.08)	-0.02 (0.12)	0.89*** (0.15)	0.59*** (0.21)	0.32*** (0.10)
Climate change serious	-1.07*** (0.10)	-0.88*** (0.15)	-1.23*** (0.18)		
Observations	2,000	960	628	326	1,262

Note: Dependent variable is support for fracking on a 5-point ordinal response scale ranging from 1 (strongly oppose) to 5 (strongly support). Models are ordered logistic regressions. Standard errors in parentheses. All significance tests are two-tailed.

*** p < 0.01
 ** p < 0.05
 * p < 0.10

SI Table 7: Multinomial Logit Models

	All		Democrats		Republicans		Conflicted		Not Conflicted	
	<i>Oppose</i>	<i>Support</i>	<i>Oppose</i>	<i>Support</i>	<i>Oppose</i>	<i>Support</i>	<i>Oppose</i>	<i>Support</i>	<i>Oppose</i>	<i>Support</i>
Benefits treatment	0.06 (0.17)	0.66*** (0.17)	0.06 (0.24)	0.53** (0.27)	-0.50 (0.42)	0.74** (0.30)	-0.39 (0.43)	1.43*** (0.40)	0.02 (0.23)	0.41* (0.23)
Costs treatment	0.21 (0.16)	0.02 (0.17)	0.12 (0.23)	0.08 (0.28)	0.21 (0.33)	-0.14 (0.27)	0.50 (0.41)	0.69 (0.45)	0.03 (0.21)	-0.21 (0.22)
Costs + Benefits treatment	0.12 (0.16)	0.08 (0.17)	0.03 (0.23)	-0.19 (0.27)	0.25 (0.34)	0.19 (0.28)	-0.18 (0.37)	0.10 (0.41)	0.23 (0.22)	0.04 (0.22)
Democrat	0.44*** (0.16)	0.04 (0.17)								
Republican	-0.12 (0.18)	0.94*** (0.16)					0.88*** (0.29)	0.79*** (0.29)	-2.01*** (0.20)	1.08*** (0.18)
Education	0.19*** (0.04)	0.16*** (0.04)	0.14** (0.06)	-0.05 (0.07)	0.09 (0.10)	0.26*** (0.08)	-0.01 (0.11)	0.12 (0.11)	0.19*** (0.05)	0.11** (0.05)
Age	0.01 (0.00)	0.02*** (0.00)	0.01 (0.00)	-0.01 (0.01)	-0.00 (0.01)	0.03*** (0.01)	0.00 (0.01)	0.01 (0.01)	0.01 (0.00)	0.01** (0.00)
White	0.75*** (0.13)	-0.09 (0.13)	1.11*** (0.17)	-0.06 (0.19)	0.26 (0.36)	-0.29 (0.29)	0.95*** (0.32)	0.31 (0.30)	0.90*** (0.18)	-0.38** (0.19)
Male	0.37*** (0.12)	0.88*** (0.12)	0.35** (0.17)	0.58*** (0.19)	0.19 (0.26)	1.12*** (0.20)	-0.04 (0.30)	0.69** (0.28)	0.47*** (0.16)	0.96*** (0.16)
Climate change serious	1.34*** (0.14)	-0.11 (0.14)	1.80*** (0.22)	0.53** (0.21)	0.97*** (0.27)	-0.73*** (0.25)				
Constant	-2.55*** (0.28)	-1.99*** (0.28)	-2.53*** (0.40)	-0.59 (0.43)	-1.43** (0.64)	-1.77*** (0.52)	-1.62** (0.67)	-2.45*** (0.69)	-0.89*** (0.34)	-1.34*** (0.34)
Observations	2,000	2,000	960	960	628	628	326	326	1,262	1,262

Note: Dependent variable is support for fracking on a 3-point response scale (support; neither support nor oppose; oppose). Models are multinomial logistic regressions. The mid-point category (neither support nor oppose) is the omitted baseline category. Standard errors in parentheses. All significance tests are two-tailed.

*** p < 0.01
 ** p < 0.05
 * p < 0.10

SI Table 8: Treatment Effects for College vs. Non-College Educated Subjects

	Democrats	Republicans
Benefits treatment	0.67** (0.27)	1.01*** (0.31)
Costs treatment	0.07 (0.30)	-0.06 (0.28)
Costs and Benefits treatment	-0.02 (0.29)	-0.05 (0.28)
Benefits treatment * College	-0.70 (0.46)	-0.48 (0.50)
Costs treatment * College	-0.24 (0.48)	-0.12 (0.47)
Costs and benefits treatment * College	-0.60 (0.51)	0.46 (0.48)
College degree	-0.04 (0.34)	0.49 (0.33)
Constant	-1.38*** (0.21)	-0.12 (0.20)
Observations	960	628

Note: Dependent variable is coded 1 for those who strongly or somewhat supported fracking; 0 otherwise. Models are logistic regressions. Standard errors in parentheses. All significance tests are two-tailed.

*** $p < 0.01$

** $p < 0.05$

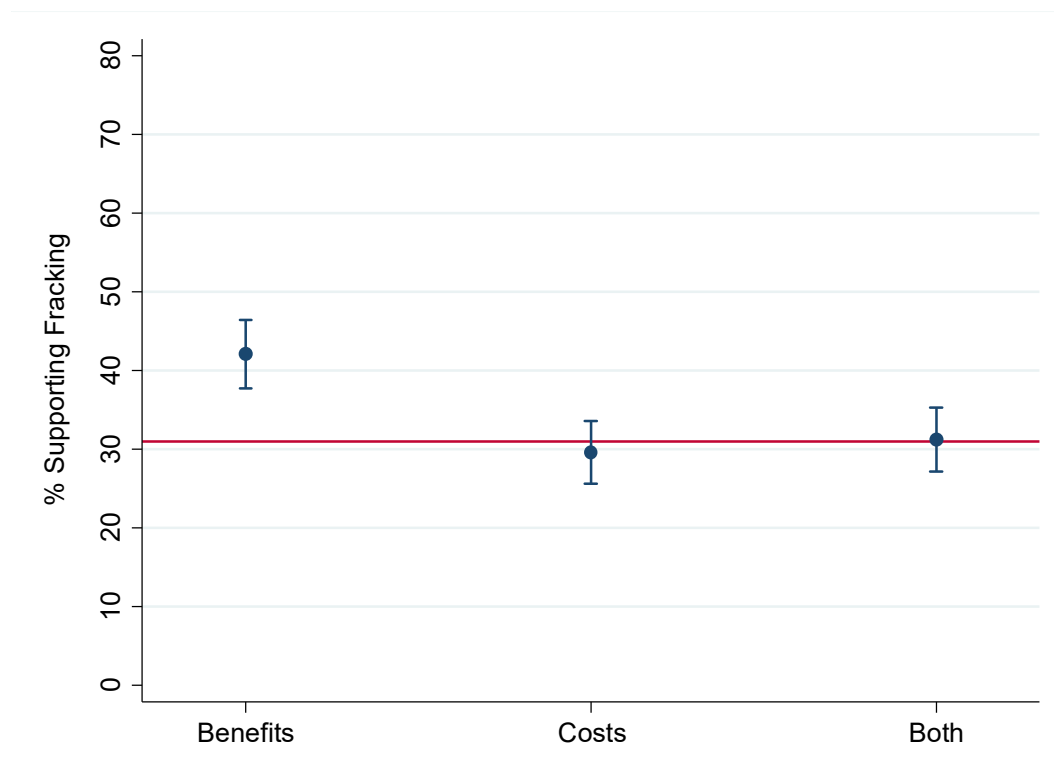
* $p < 0.10$

SI Table 9: Treatment Effects by Educational Attainment

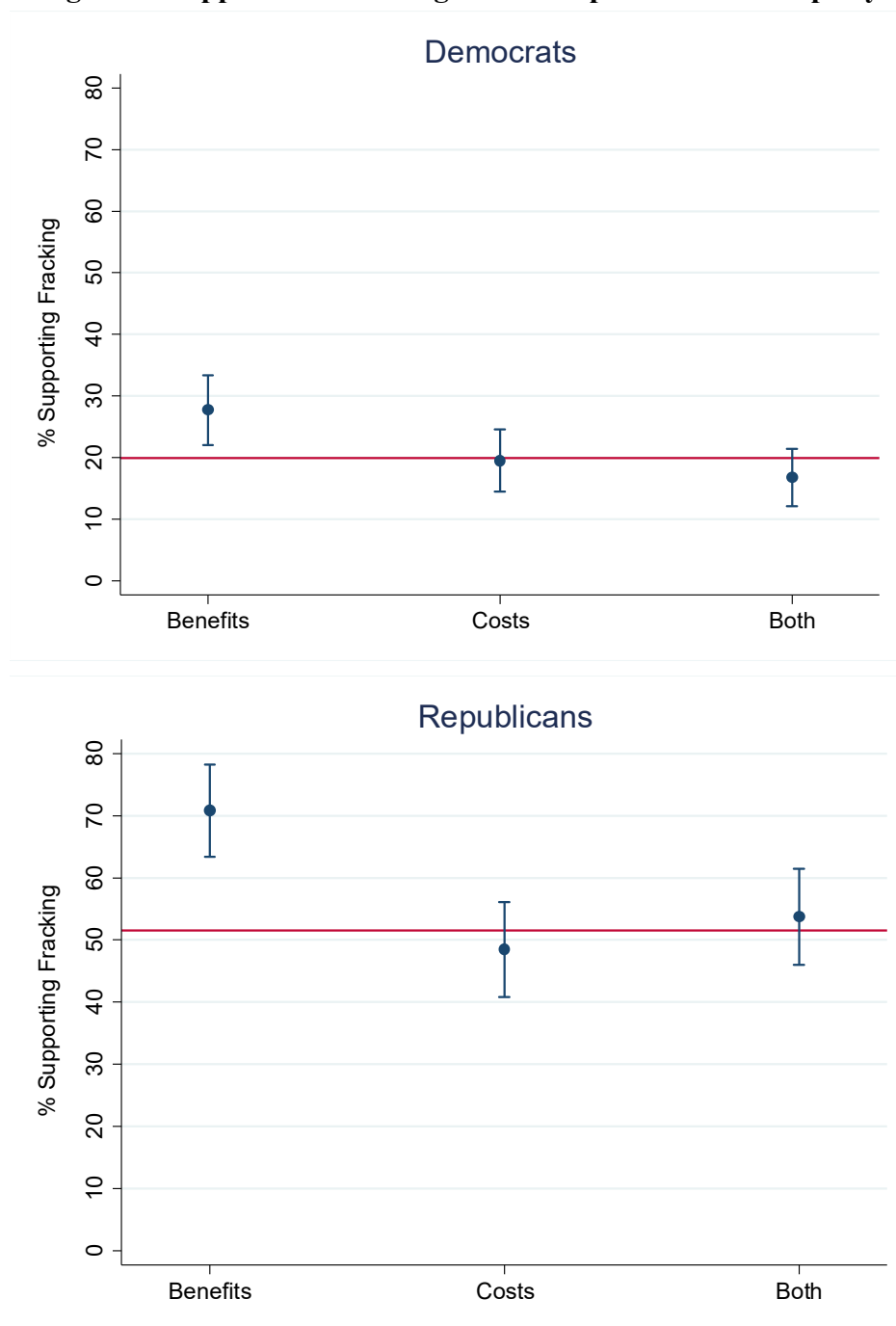
	Democrats	Republicans
Benefits treatment	0.95* (0.52)	1.26** (0.61)
Costs treatment	0.04 (0.56)	-0.11 (0.57)
Costs and Benefits treatment	0.25 (0.56)	-0.41 (0.58)
Benefits treatment * Education	-0.16 (0.15)	-0.13 (0.17)
Costs treatment * Education	-0.01 (0.16)	0.00 (0.16)
Costs and benefits treatment * Education	-0.15 (0.17)	0.16 (0.17)
Education	-0.09 (0.11)	0.22** (0.11)
Constant	-1.10*** (0.40)	-0.65* (0.39)
Observations	960	628

Note: Dependent variable is coded 1 for those who strongly or somewhat supported fracking; 0 otherwise. Models are logistic regressions. Standard errors in parentheses. All significance tests are two-tailed.

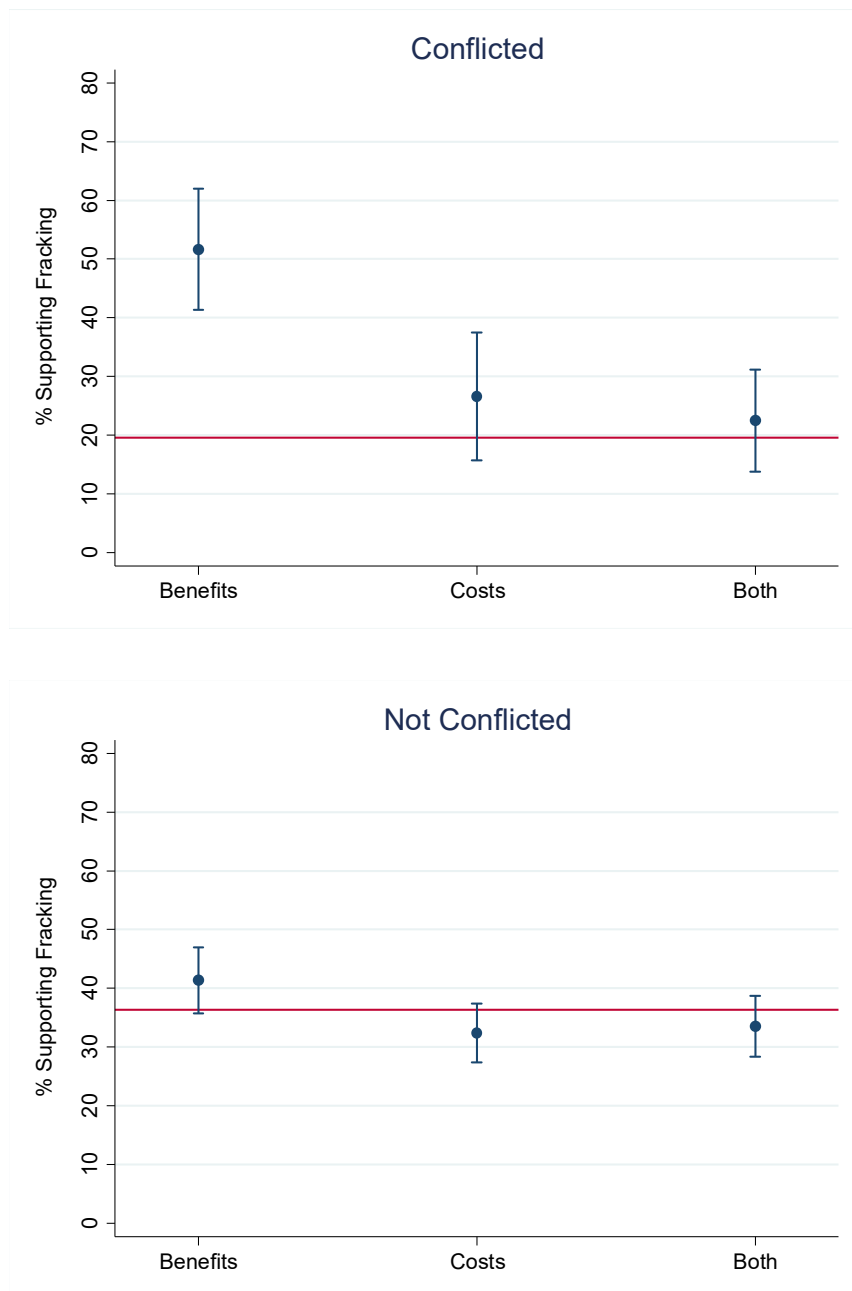
*** $p < 0.01$
 ** $p < 0.05$
 * $p < 0.10$

SI Figure 1: Support for Fracking Across Experimental Groups

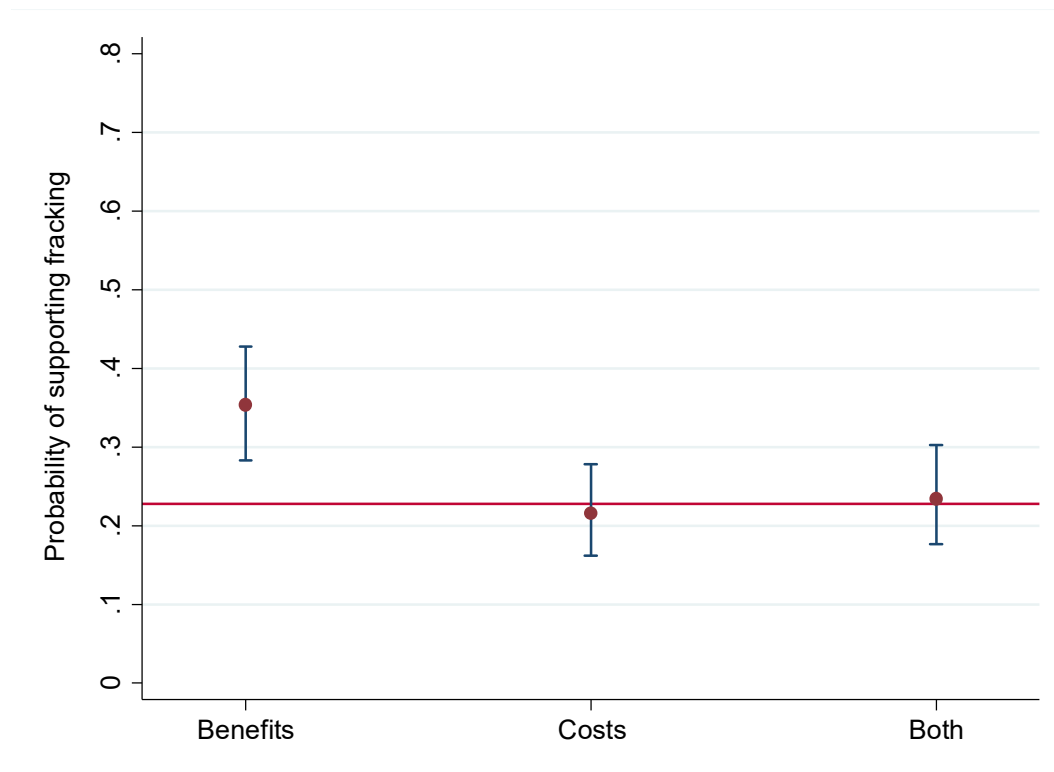
Note: The solid line at 31% represents the percentage support for fracking in the control group. Each dot presents the percentage support for fracking in the relevant treatment group; i-bars present 95% confidence intervals about the sample means.

SI Figure 2: Support for Fracking Across Experimental Groups by Partisanship

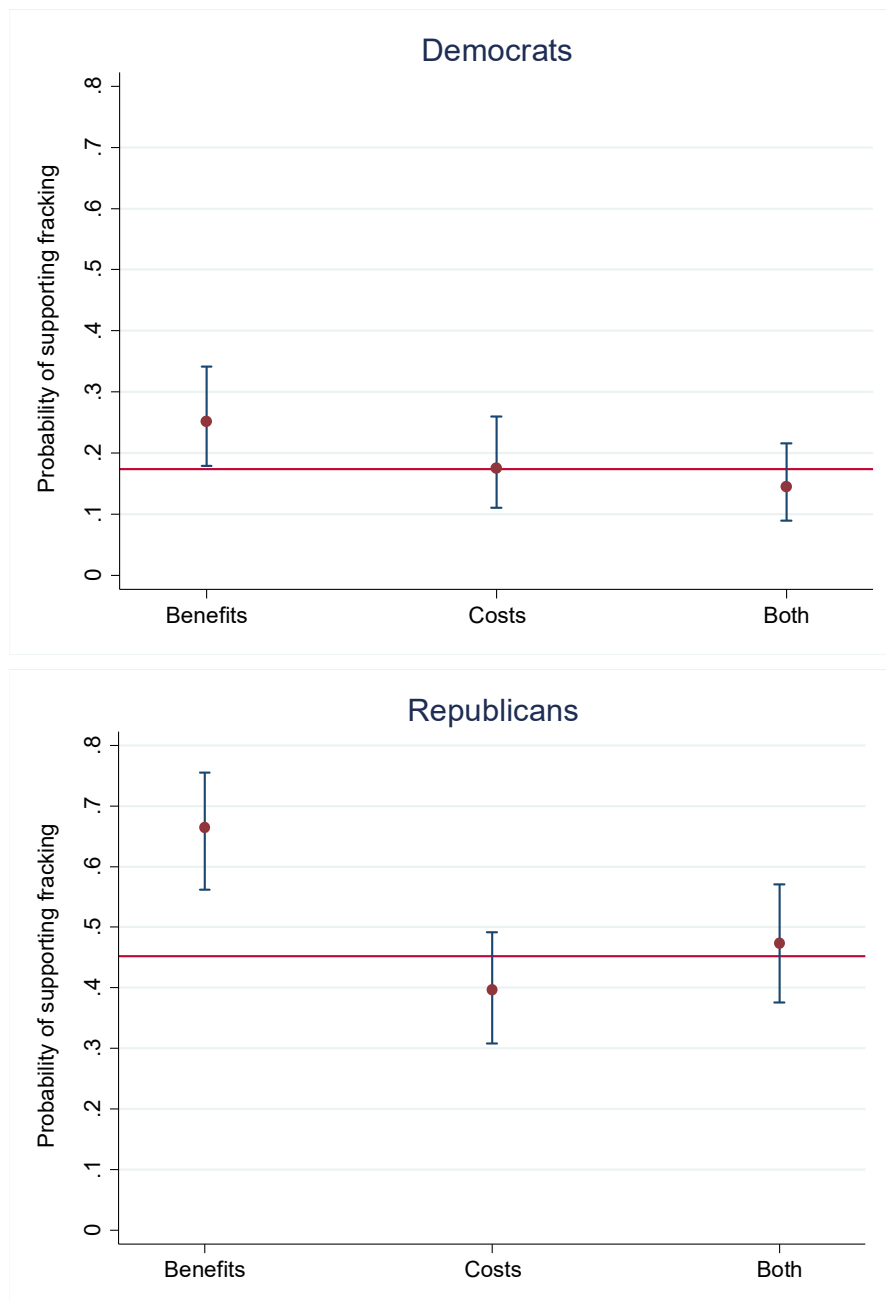
Note: The solid lines at 20% and 52% represent the percentage support for fracking in the control group for Democrats and Republicans, respectively. Each dot presents the percentage support for fracking in the relevant treatment group; i-bars present 95% confidence intervals about the sample means.

SI Figure 3: Support for Fracking Across Experimental Groups, Conflicted vs. Not Conflicted

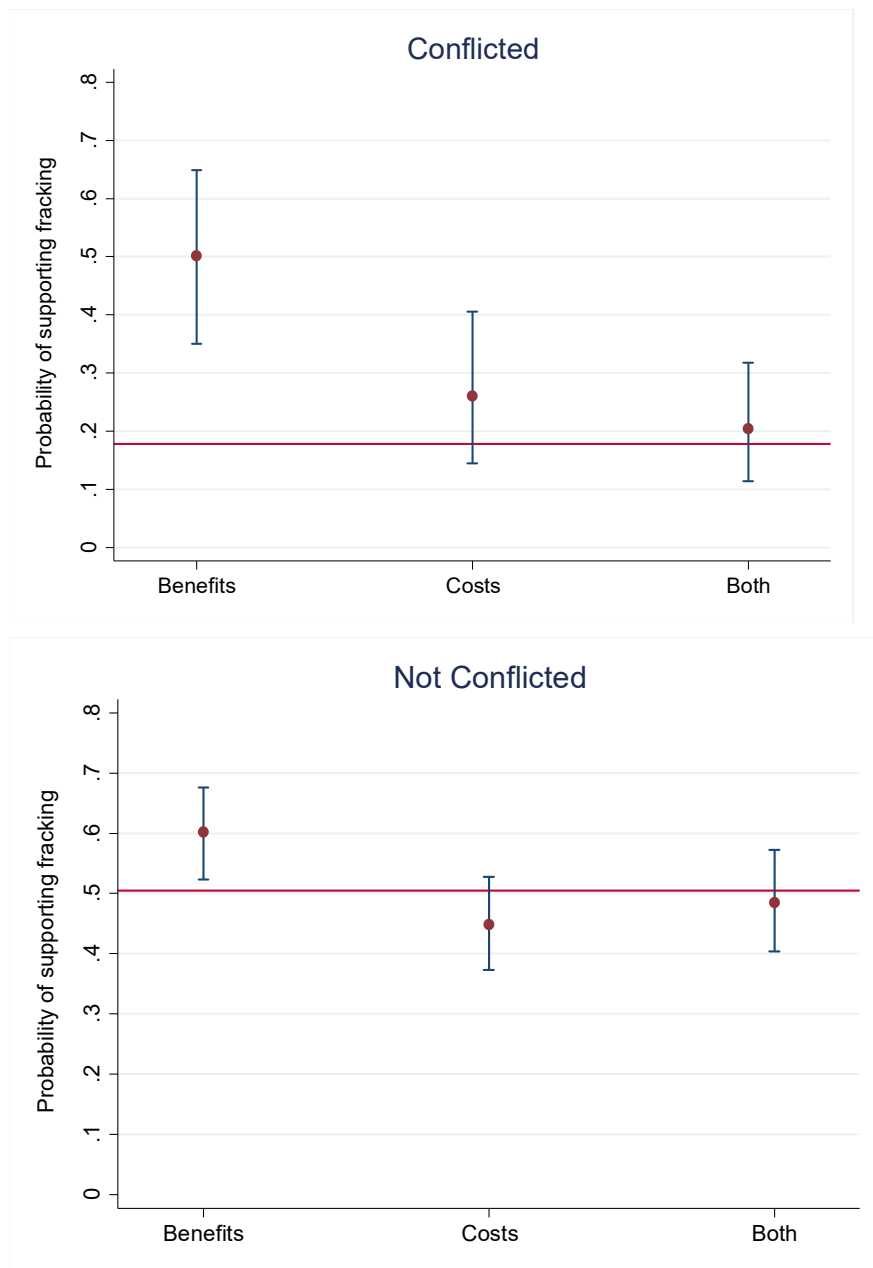
Note: The solid lines at 20% and 36% represent the percentage support for fracking in the control group for conflicted and not conflicted subjects, respectively. Each dot presents the percentage support for fracking in the relevant treatment group; i-bars present 95% confidence intervals about the sample means.

SI Figure 4: Treatment Effects, All Subjects

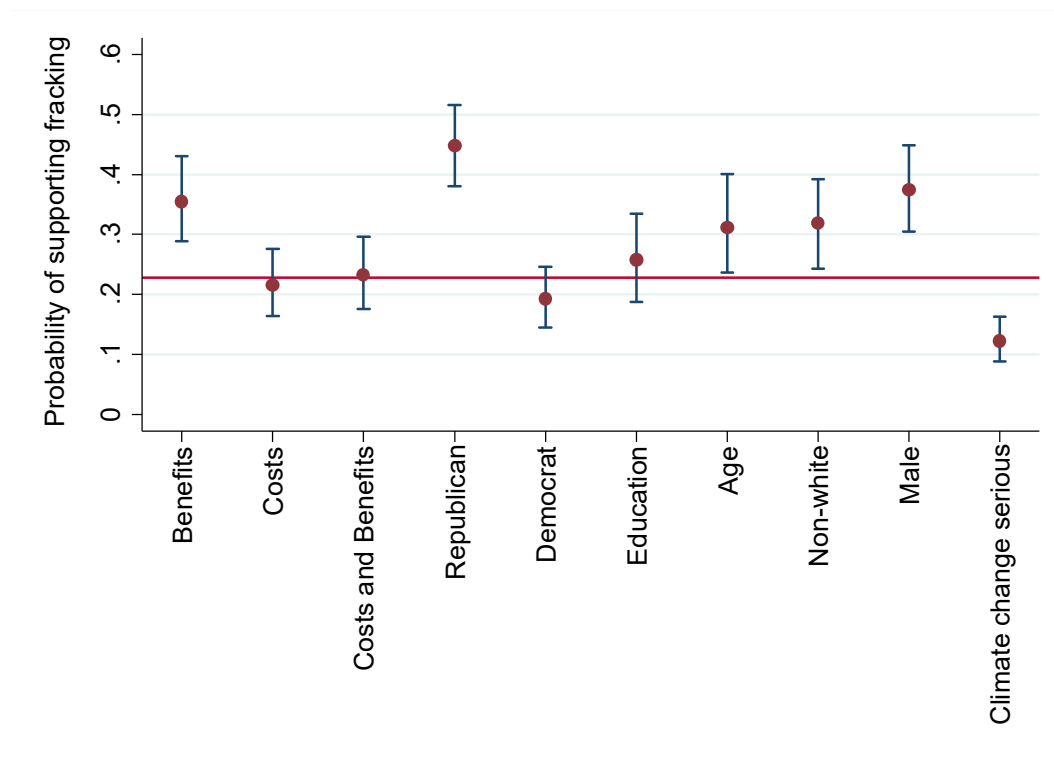
Note: Estimated treatment effects from logit models. The solid line at .22 represents the predicted probability for the median independent in the control group. Each dot presents the predicted probability of supporting fracking in the relevant treatment group; i-bars present 95% confidence intervals about the point estimates.

SI Figure 5: Treatment Effects by Partisanship

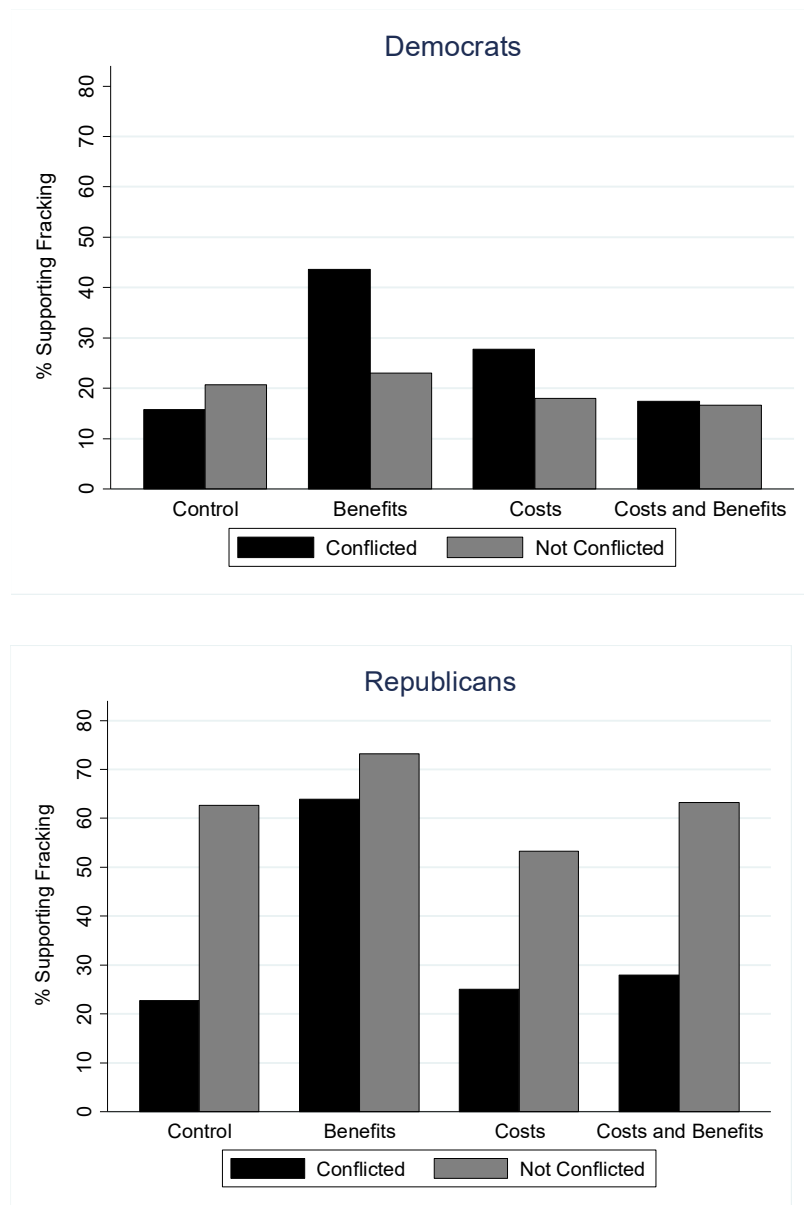
Note: Estimated treatment effects from logit models. The solid lines at .17 and .45 represent the predicted probability for the median Democrat or Republican, respectively, in the control group. Each dot presents the predicted probability of supporting fracking in the relevant treatment group; i-bars present 95% confidence intervals about the point estimates.

SI Figure 6: Treatment Effects, Conflicted vs. Not Conflicted Partisans

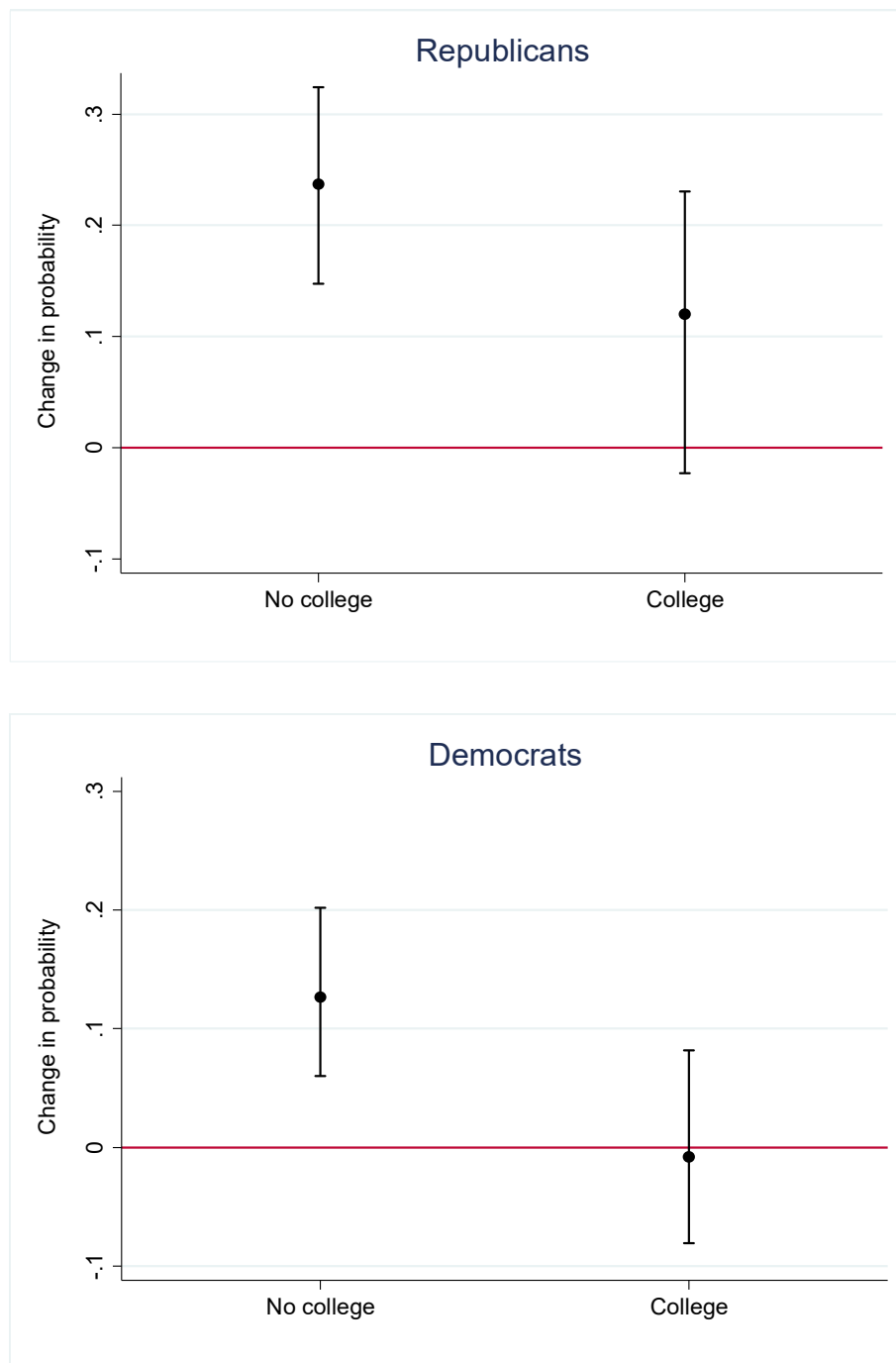
Note: Estimated treatment effects from logit models. The solid lines at .18 and .51 represent the predicted probability for the median conflicted and not conflicted Republican, respectively, in the control group. Each dot presents the predicted probability of supporting fracking in the relevant treatment group; i-bars present 95% confidence intervals about the point estimates.

SI Figure 7: Estimated Effects of Treatments and Control Variables on Probability of Supporting Fracking

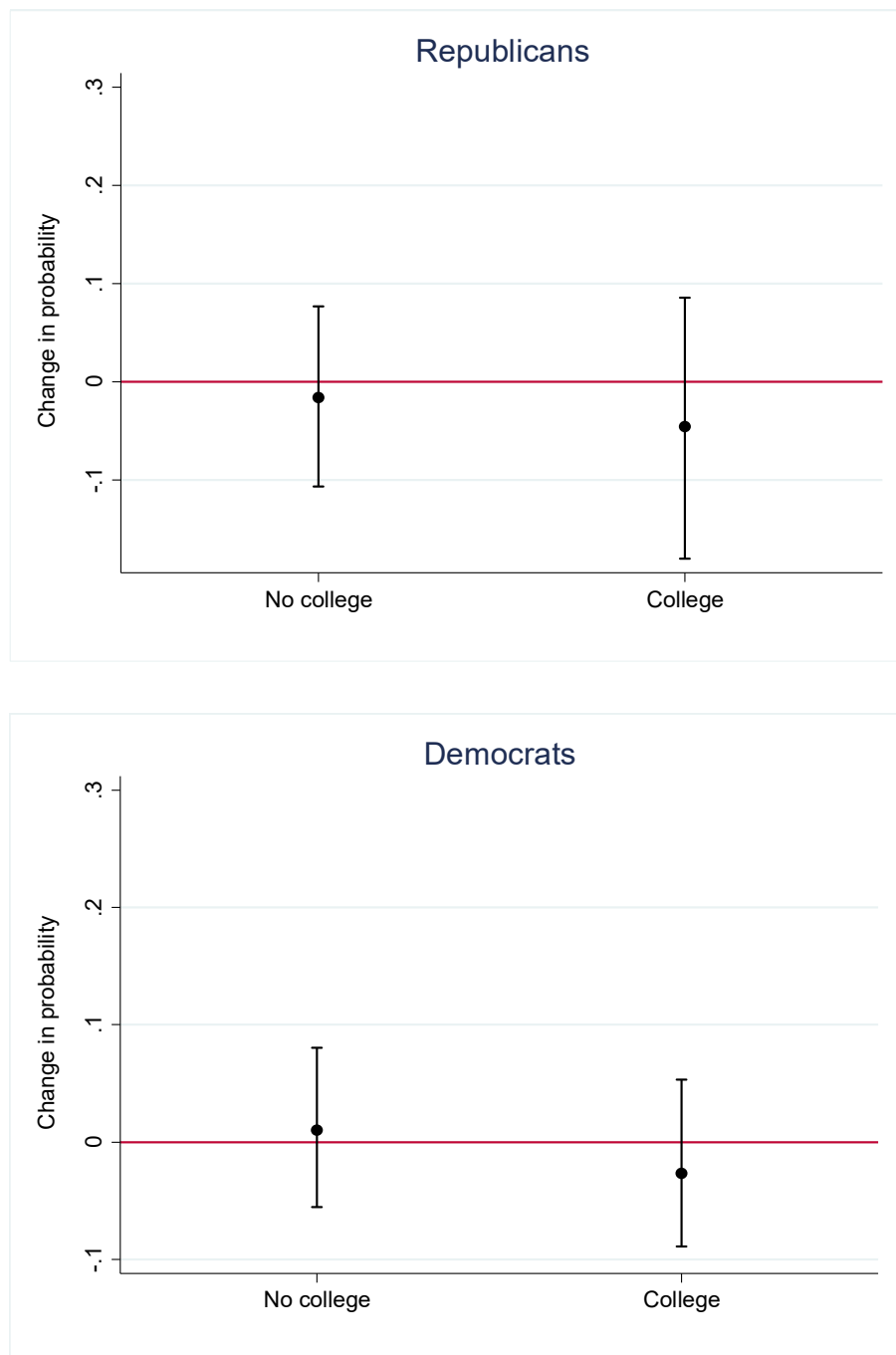
Note: Estimated effects from logit model. Each dot illustrates the effect of an increase in the chosen variable (from 0 to 1 for indicator variables; or a two standard deviation increase for ordinal variables) on the predicted probability of supporting fracking while holding all other variables at their median value (for ordinal variables) or zero (for dummy variables). I-bars represent 95% confidence intervals around each point estimate. The solid line at .22 represents the predicted probability for the median independent in the control group.

SI Figure 8: Conflicted vs. Not Conflicted, by Partisanship

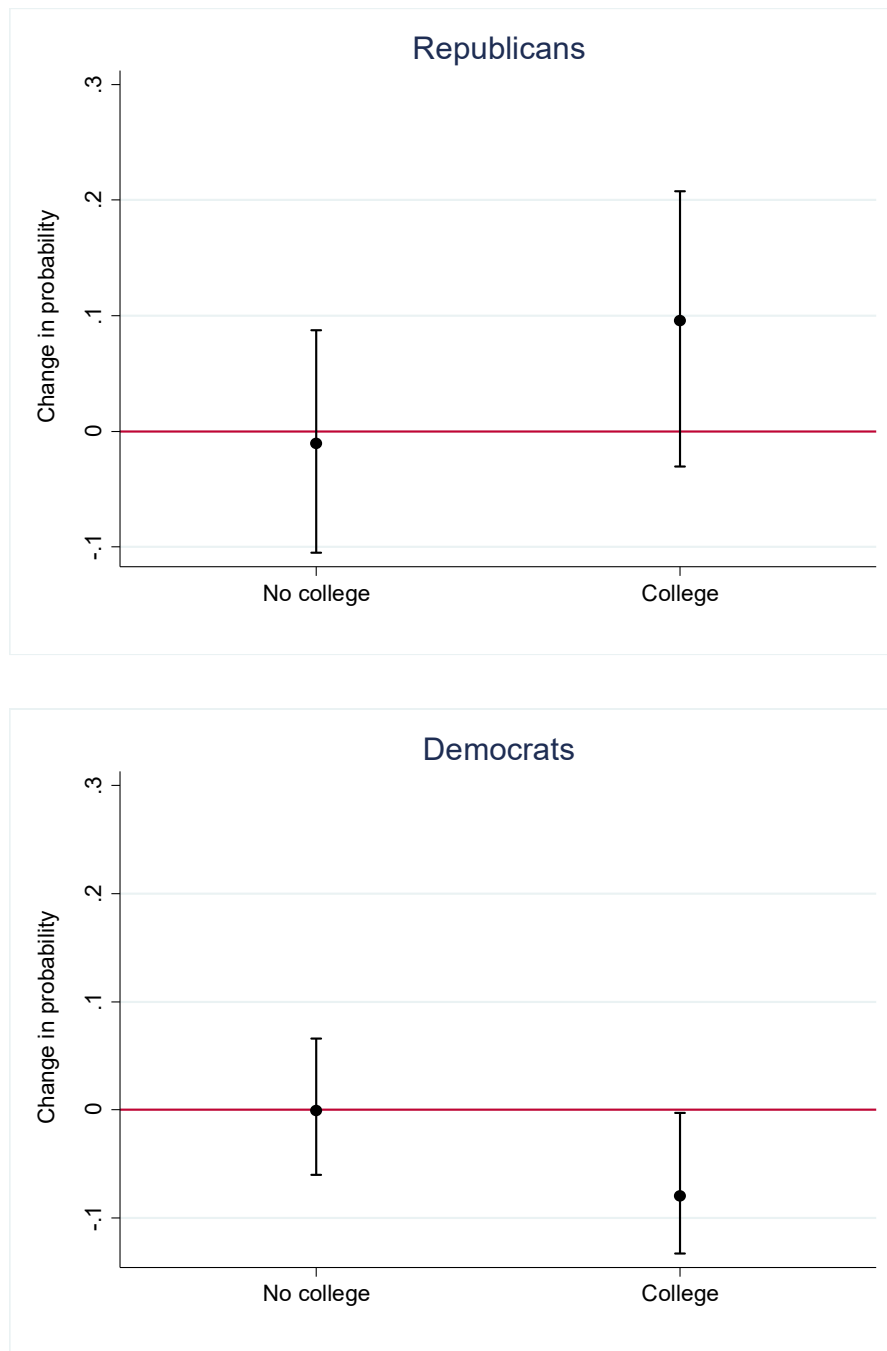
Note: For both Democrats and Republicans whose climate change beliefs conflict with their party id, support for fracking is significantly greater in the benefits treatment than in the control, $p < .05$. By contrast, among un-conflicted partisans, the difference in support for fracking between the benefits treatment and the control is not statistically significant. No other treatments are significantly different from the control.

SI Figure 9: Effect of Benefits Treatment by Party and College Education

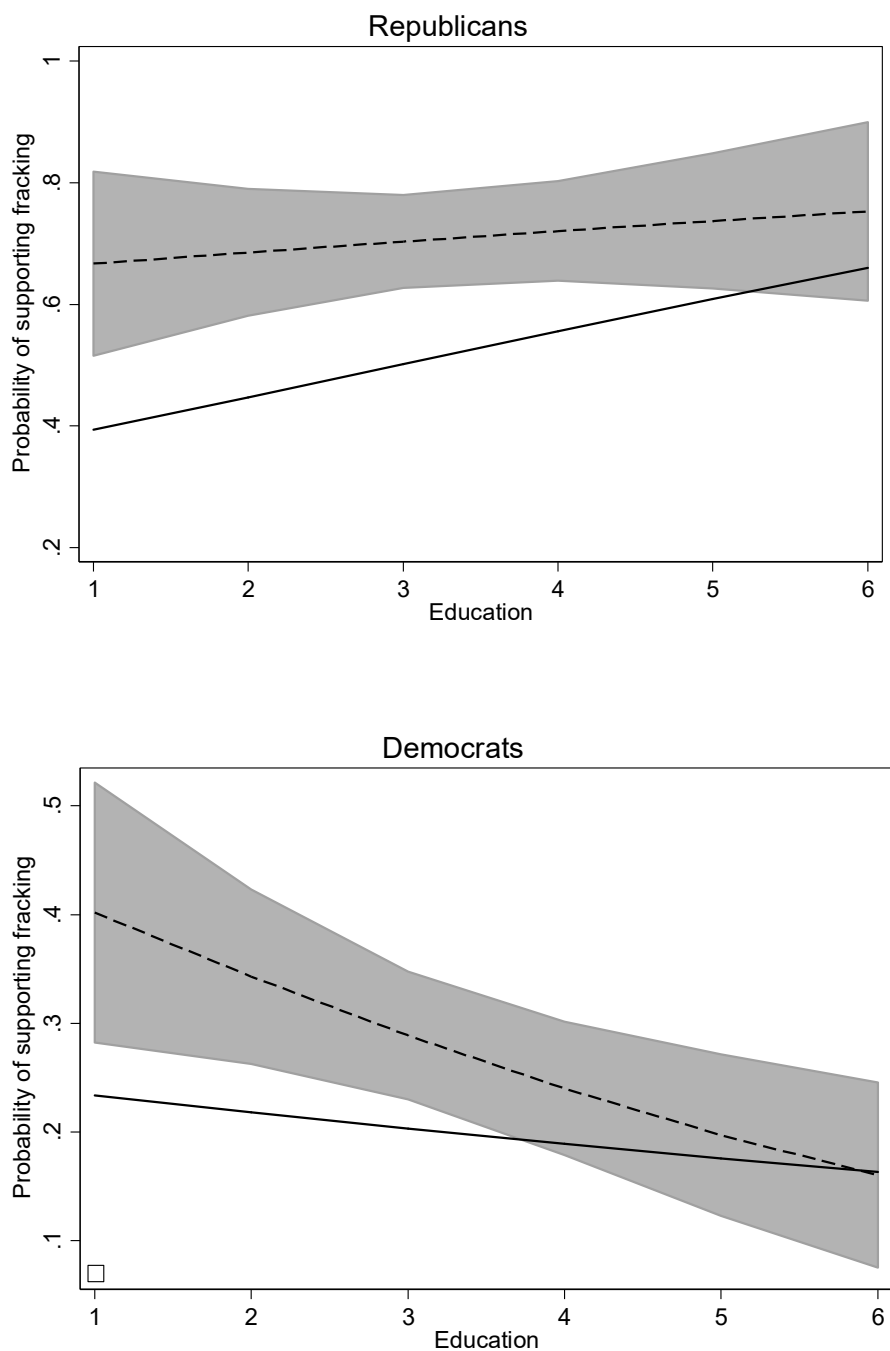
Note: Estimated treatment effects from logit models. Each dot presents the change in the predicted probability of supporting fracking produced by the treatment; i-bars present 95% confidence intervals about the point estimates.

SI Figure 10: Effect of Costs Treatment by Party and College Education

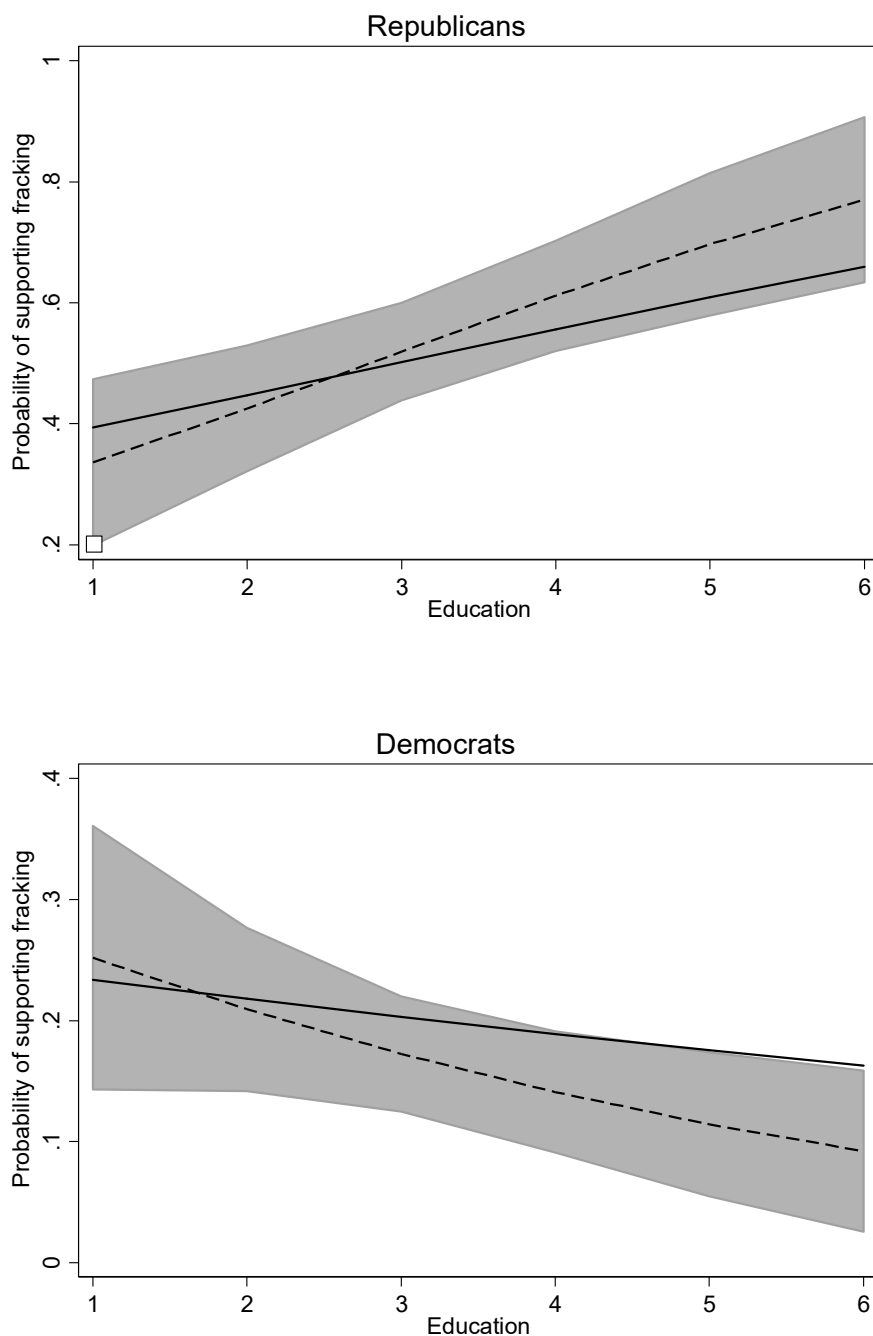
Note: Estimated treatment effects from logit models. Each dot presents the change in the predicted probability of supporting fracking produced by the treatment; i-bars present 95% confidence intervals about the point estimates.

SI Figure 11: Effect of Costs and Benefits Treatment by Party and College Education

Note: Estimated treatment effects from logit models. Each dot presents the change in the predicted probability of supporting fracking produced by the treatment; i-bars present 95% confidence intervals about the point estimates.

SI Figure 12: Effects of Benefits Treatment by Party and Educational Attainment

Note: Solid lines present the predicted probability of supporting fracking in the control. Dotted lines present the predicted probability of supporting fracking in the treatment, with shading indicating 95% confidence interval.

SI Figure 13: Effect of Costs and Benefits Treatment by Party and Educational Attainment

Note: Solid lines present the predicted probability of supporting fracking in the control. Dotted lines present the predicted probability of supporting fracking in the treatment, with shading indicating 95% confidence interval.

SI Appendix 1: Complete Wording of Experimental Module

Subjects were randomly assigned to one of the three conditions, A, B or C, shown below. All respondents were then presented with the same question and response options.

Condition A:

“Fracking” is a way to extract natural gas from shale rock deep underground.

Condition B:

“Fracking” is a way to extract natural gas from shale rock deep underground.

Supporters of fracking argue that it creates jobs and lowers energy prices for consumers and that burning natural gas is cleaner than burning coal.

Condition C:

“Fracking” is a way to extract natural gas from shale rock deep underground.

Opponents of fracking argue that it contaminates ground water supplies and that burning natural gas, while cleaner than burning coal, is dirtier than producing energy from renewable sources.

Condition D:

“Fracking” is a way to extract natural gas from shale rock deep underground.

Supporters of fracking argue that it creates jobs and lowers energy prices for consumers and that burning natural gas is cleaner than burning coal. Opponents of fracking argue that it contaminates ground water supplies and that burning natural gas, while cleaner than burning coal, is dirtier than producing energy from renewable sources.

QUESTION:

Based on anything you may have heard or read about fracking, do you...

- 5 Strongly support it
- 4 Somewhat support it
- 3 Neither support nor oppose it
- 2 Somewhat oppose it
- 1 Strongly oppose it