Policy or Partisanship: Replicating Results From An Analysis of Quasi-Experimental Evidence From Brexit

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I. Introduction: Overview of Original Paper

This replication examines the paper "Policy or Partisanship in the United Kingdom? Quasi-Experimental Evidence from Brexit" (Schonfeld and Winter-Levy 2019). In the paper, the authors aim to explore one key question: "are voters motivated by policy preferences, or partisan identities?" (Schonfeld and Winter-Levy 2019). The authors answer the question in the context of the UK's political system, exploiting the UK's Brexit referendum – which caused an abrupt change in the British Conservative Party's stance on leaving the European Union, and via a vote "so narrow that it was more or less a coin flip" (Schonfeld and Winter-Levy 2019). The authors' methodology is relatively simple: they employ an uninterrupted time-series design, examining panel survey data from the British Election Study to compare referendum attitudes and party affiliation in the data immediately before and after the referendum ("Wave 8" and "Wave 9" data, respectively). Given the brief gap between the 2 waves, and their ability to identify/eliminate potential confounders (e.g. a change in the Labour Party's stance on Brexit), they assume their identification strategy is sound. They ultimately fit and run several linear regression models that find that voters are most motivated by policy: following Brexit, "Europhilic" (citizens that supported remaining in the EU) Conservatives disaffiliated from the Conservative party; indeed, the less Euroskeptic a Conservative was pre-referendum, the more likely they were to disaffiliate. The "policy story" holds when examining prereferendum non-Conservatives; here, the authors determine that the more Euroskeptic pre-referendum non-Conservatives were, the more likely they were to switch to the Conservative Party.

The authors also explore various related questions, such as whether the intensity of pre-referendum Conservatives' partisanship influenced to what degree they followed their party as it adopted a new position; they ultimately find that the positive relationship between Conservatives' perception of their party's position on Brexit and their position on Brexit is strongest for the most partisan Conservatives. The authors also look at whether newly minted Conservative voters also updated their stances on other policy issues to further align themselves with the Conservative party; looking specifically at the issue of redistribution, they find that this is indeed the case. The authors' other results/conclusions are discussed in detail in the next section.

In the next section, I replicate ¹ the authors' main results (6 tables and 2 figures), providing my analyses/interpretation (which confirm the authors' conclusions). Like the authors, I used linear regression

¹The data and code used in the report can be obtained here: https://github.com/trishprabhu/policyorpartisanship. The original data/code is cited in the "References" section below.

models to produce these results. Then, in the third section, I consider ways to extend the authors' work, in this case, by employing another regression method particularly suited to analyses with binary outcomes (such as switching parties) – logistic regression. As discussed in that section, the implications of such work are a more nuanced picture (e.g. a better understanding of uncertainty, etc.) of the results.

II. Replicated Results and Discussion

In this section, I replicate all of the authors' results (6 tables and 2 figures).

As an overarching note: the discussion below includes some discussion of the significance of coefficients; the presented tables also include significance stars. I only included significance stars to match my results with those of the authors; further, I limited my discussion of significance to observation (as opposed to normative judgment). These choices were made to reflect the values of this class: namely, that significance is an abstract concept that should not be the end-all be-all of our analyses.

Table 1: Euroskepticism and Defection from the Conservatives

| | | $Dependent\ variable:$ | |
|--|---------------------------|------------------------|--------------------------|
| | Defect from Conservatives | | |
| | (1) | (2) | (3) |
| Pre-Referendum Euroskepticism | -0.003* | -0.001 | 0.0001 |
| | (0.001) | (0.001) | (0.001) |
| Perceived Change in Conservative Euroskepticism | | 0.011* | 0.009* |
| | | (0.004) | (0.004) |
| Age | | | -0.001*** |
| | | | (0.0002) |
| Female | | | -0.007 |
| White | | | $(0.007) \\ -0.058**$ |
| white | | | (0.019) |
| Scotland | | | 0.002 |
| occurrence of the control of the con | | | (0.012) |
| Wales | | | 0.021 |
| | | | (0.014) |
| Pre-Referendum Euroskepticism:Perceived Change in Conservative Euroskepticism | | -0.001* | -0.001* |
| | | (0.001) | (0.001) 0.181*** |
| Constant | 0.101*** | 0.084*** | |
| | (0.011) | (0.011) | (0.023) |
| Observations | 7,330 | 6,476 | 6,216 |
| \mathbb{R}^2 | 0.001 | 0.001 | 0.006 |
| Adjusted R ² | 0.0004 | 0.001 | 0.005 |
| Residual Std. Error | 0.272 (df = 7328) | 0.261 (df = 6472) | 0.258 (df = 6207) |
| F Statistic | 3.912* (df = 1; 7328) | 2.709* (df = 3; 6472) | 4.554**** (df = 8; 6207) |

*p<0.05; **p<0.01; ***p<0.001

I began by replicating Table 1 of the paper, which aims to answer the paper's most fundamental question: are voters motivated by policy or partisanship? As discussed, the authors operationalize that question by examining if/how party affiliation evolved in the wake of Brexit. In Table 1, the authors examine defection from the Conservative Party. Like the authors, I began by focusing in on Waves 8 and 9 of the data (immediately pre and post-referendum). I first created a "Conservative Party ID" variable that indicated if, for each wave, a given unit reported being a member of the Conservative party; I then used that information to subset to Wave 8 Conservatives, which I then merged with the Wave 9 data. I also created another variable, "partyswitcher," that indicated switching out of the Conservative Party – a Wave 8 Unit that did not report affiliating with the Conservatives in Wave 9. Like the authors, I then regressed this "partyswitcher" variable on the respondent's self-reported level of Euroskepticism (on a 0 - 10 scale) pre-referendum; in 2 other regressions, I also included the perceived change in Euroskepticism of Conservatives as an interaction, as well as threw in a range of demographic information (e.g. age, gender, etc.). The coefficient associated with the first regression, which is significant at the 0.05 level, suggests that a one-unit increase (1 point on the 10 point scale) in pre-referendum Euroskepticism is associated with a 0.3% decrease in the probability of defection. The interaction coefficient in the second/third column of the table is also significant at the 0.05 level; the negative value indicates that "less Euroskeptic Conservatives who perceive that the party has become increasingly Euroskeptic are especially likely to reject it" (Schonfeld and Winter-Levy 2019). Policy, not partisanship, it seems, is what matters.

Note that in the third regression (which includes the range of demographic info.), the significance of the "Pre-Referendum Euroskepticism" coefficient disappears, and the size of the associated effect becomes smaller.

With that said, we don't simply include/discard results based on their significance, so (like the authors,) I left these results in. I follow this principle throughout this replication.

Table 2: Euroskepticism and Joining the Conservatives

| | | $Dependent\ variable:$ | |
|--|--|---|---|
| | | Joined Conservatives | |
| | (1) | (2) | (3) |
| Pre-Referendum Euroskepticism | 0.007*** (0.0005) | 0.007*** (0.001) | 0.006*** (0.001) |
| Perceived Change in Conservative Euroskepticism | (0.000) | -0.003* (0.001) | -0.004** (0.001) |
| Age | | (, | 0.0004*** (0.0001) |
| Female | | | -0.002 (0.003) |
| White | | | -0.008 (0.007) |
| Scotland | | | -0.017*** (0.005) |
| Wales | | | -0.012 (0.006) |
| ${\bf Pre\text{-}Referendum\ Euroskepticism:} Perceived\ Change\ in\ Conservative\ Euroskepticism$ | | 0.001*** (0.0002) | 0.001*** (0.0002) |
| Constant | -0.001 (0.003) | 0.0002 0.00004 (0.004) | -0.007 (0.009) |
| Observations | 18,517 | 15,139 | 14,554 |
| \mathbb{R}^2 | 0.012 | 0.015 | 0.017 |
| Adjusted R ² | 0.012 | 0.015 | 0.017 |
| Residual Std. Error F Statistic | 0.198 (df = 18515) $216.857^{***} \text{ (df} = 1; 18515)$ | 0.204 (df = 15135) $78.431^{***} \text{ (df} = 3; 15135)$ | 0.202 (df = 14545) $31.854^{***} \text{ (df} = 8; 14545)$ |

Note: *p<0.05; **p<0.01; ***p<0.001

The "policy matters" conclusion was strengthened upon creating/examining Table 2. Here, I followed the same steps as I did to create Table 1, with alterations to examine not defection, but joining the Conservatives. Thus, like the authors, I subsetted to pre-referendum (Wave 8) non-Conservatives, which I merged with the Wave 9 data, and created a switching variable "switchtocons" that indicated joining the Conservative Party – a Wave 8 unit that reported affiliating with the Conservative Party in Wave 9. I repeated the 3 same regressions as in Table 1: 1) regressing my new switching variable, "switchtocons," on pre-referendum self-reported levels of Euroskepticism, 2) including perceived changes in the Euroskepticism of the Conservative Party as an interaction, and finally, 3) throwing a number of relevant predictors in. The "policy matters" finding held: as reported in the paper, the coefficient associated with the first regression, significant at the 0.001 level, suggests a one-unit increase in pre-referendum Euroskepticism is associated with a 0.7% increase in the probability of joining the Conservative Party.

Note that unlike in Table 1, here, in the third regression (which includes the range of demographic info.), the "Pre-Referendum Euroskepticism" coefficient remains significant at the 0.001 level.

Table 3: Individual Shifts in Euroskepticism

| | Dependent variable: Change in Personal Euroskepticism: | | |
|---|---|-------------------------------|--|
| | | | |
| | Moderate Conservatives | Very Strong Conservatives | |
| Perceived Change in Conservative Euroskepticism | 0.139*** | 0.220*** | |
| | (0.011) | (0.020) | |
| Female | -0.055 | -0.109 | |
| | (0.054) | (0.113) | |
| Age | 0.006*** | 0.004 | |
| | (0.002) | (0.004) | |
| White | 0.094 | -0.186 | |
| | (0.154) | (0.300) | |
| Scotland | 0.131 | 0.099 | |
| | (0.096) | (0.192) | |
| Wales | 0.017 | -0.324 | |
| | (0.111) | (0.245) | |
| Constant | -1.161^{***} | -0.573 | |
| | (0.178) | (0.340) | |
| Observations | 5,000 | 1,180 | |
| \mathbb{R}^2 | 0.038 | 0.101 | |
| Adjusted R^2 | 0.036 | 0.097 | |
| Residual Std. Error | 1.882 (df = 4993) | 1.883 (df = 1173) | |
| F Statistic | 32.559***(df = 6; 4993) | 22.025^{***} (df = 6; 1173) | |

Note:

*p<0.05; **p<0.01; ***p<0.001

Table 3 reflects the results of the authors' exploration of an area of inquiry adjacent to the paper's central question: post-referendum, do Conservatives experience evolution in Brexit policy preference, and does that evolution vary across strong and less strong Conservatives? In particular, "do strong partisans (e.g. very committed to Conservatives) change their policy preferences?" (Schonfeld and Winter-Levy 2019). Like the authors, I conducted this analysis by creating a variable - "Euroskepticismchange" - that represents the change in a given unit's level of Euroskepticism from Wave 8 to Wave 9 (from pre-referendum to post-referendum). Using the dataset subsetted to Wave 8 Conservatives/all Wave 9 data, I then further subsetted this dataset to create 2 datasets, 1 representing units that characterized their affiliation to the Conservative Party as "very strong," and another representing units that did not. For each dataset ("very strong" Conservatives, and those that are not), I then regressed "Euroskepticismchange" on perceived increase in Conservative Euroskepticism. As Table 3 indicates, "there is a clear, statistically significant, positive relationship between Conservative partisans' perception of their party's increasing Euroskepticism and their own Euroskepticism" (Schonfeld and Winter-Levy 2019).; the value of the coefficient is higher for self-characterized "Very strong" Conservatives, as we'd infer/expect.

Does this negate the authors' conclusion that policy rules over partisanship/ party affiliation? The authors argue no, not really – as we can see in Table 3, even for "very strong" Conservatives, the coefficient value is relatively small: indeed, a one-point increase in perceived Conservative Euroskepticism is associated with just a 0.22 point increase (on a 10-point scale) in a unit's level of Euroskepticism. Note, though, that this value is significant at the 0.001 level.



Figure 1 is a visual display of the results discussed in Table 3; here, we can clearly see the relationship between a unit's perceived change in the Euroskepticism of the Conservative Party and their personal change in their views on Euroskepticism; for non-Conservatives, there's almost no relationship, whilst the slope is positive and steeper for "Moderate Conservatives" and even more steep for "Very Strong Conservatives," as we observed. These results are best summarized by the authors themselves: "the intensity of Conservative partisanship determined the extent to which voters followed the party's evolving position on the EU – or, more precisely, their perception of the party's evolving position" (Schonfeld and Winter-Levy 2019).

Table 4: Joining the Conservatives and Opposition to Redistribution

| | $Dependent\ variable:$ | | | |
|-------------------------|--|------------------------------|--------------------------------|--|
| | Change in Opposition to Redistribution | | | |
| | Overall | Non-UKIP | UKIP | |
| Joined Conservatives | 0.542*** | 0.605*** | 0.042 | |
| | (0.133) | (0.158) | (0.285) | |
| White | 0.179 | 0.155 | 0.360 | |
| | (0.119) | (0.120) | (0.528) | |
| Age | -0.001 | -0.003 | 0.008 | |
| | (0.002) | (0.002) | (0.007) | |
| Female | -0.009 | 0.0001 | 0.003 | |
| | (0.052) | (0.054) | (0.191) | |
| Scotland | -0.162* | -0.109 | -0.472 | |
| | (0.071) | (0.071) | (0.468) | |
| Wales | -0.051 | -0.112 | 0.536 | |
| | (0.091) | (0.094) | (0.312) | |
| Constant | -0.161 | -0.094 | -0.518 | |
| | (0.144) | (0.146) | (0.631) | |
| Observations | 9,065 | 8,086 | 979 | |
| \mathbb{R}^2 | 0.003 | 0.003 | 0.007 | |
| Adjusted R ² | 0.002 | 0.002 | 0.001 | |
| Residual Std. Error | 2.477 (df = 9058) | 2.415 (df = 8079) | 2.906 (df = 972) | |
| F Statistic | $4.155^{***} (df = 6; 9058)$ | $3.804^{***} (df = 6; 8079)$ | $1.090 \ (\text{df} = 6; 972)$ | |

Note:

*p<0.05; **p<0.01; ***p<0.001

The authors then turned to another interesting, related question: "As previously non-Conservative Euroskeptics flocked to the party, what happened to their views on other issues?" (Schonfeld and Winter-Levy 2019). In particular, the authors were curious to see if these newly minted Conservatives adopted the Conservative stance on other policy issues; this could shed light into whether "partisanship shapes the development of voters' policy preferences" (Schonfeld and Winter-Levy 2019).

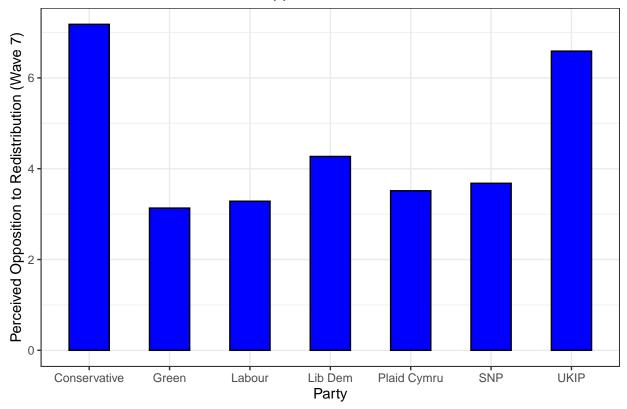
To answer this question, the authors selected redistribution as the policy issue they examined; they noted that it remains a key political issue in the UK (Schonfeld and Winter-Levy 2019). I began by looking at Waves 7 and 11 (the pre and post-referendum surveys that asked participants about redistribution). Like the authors, I created a new variable, "redistchange," which represents the change in a given unit's level of opposition to redistribution between the 2 waves (a positive value suggests an increase in opposition). I then regressed this variable on our "switchtocons" variable (an indicator of whether a given unit switched to the Conservative Party). I did this for the general dataset, as well as for 2 other specific datasets, one representing units that switched to the Conservatives from the United Kingdom Independence Party (UKIP), and another representing units that did not switch from UKIP. UKIP is a right-wing populist party already quite opposed to redistribution; with that said, "the effect of joining the Conservatives on redistributive attitudes should be stronger among respondents who were not previously members of UKIP" (Schonfeld and Winter-Levy 2019).

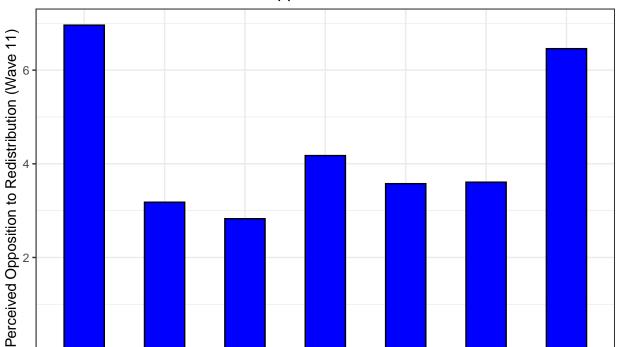
As Table 4 shows us, overall, switching to the Conservative Party is associated with a 0.542 point increase in the level of opposition to redistribution on a ten-point scale; this coefficient is significant at the 0.001 level. As we'd expect, this value is even larger -0.605 – for those switching from a non-UKIP party; further, the coefficient remains significant at the 0.01 level. Finally, though not significant at the 0.05 level, the coefficient associated with those switching from UKIP suggests an almost negligible change (on a 10-point scale) in opposition to redistribution (as we'd expect).

Table 4 is interesting for reasons beyond the results themselves: here, we see the power of partisanship, the

other side of the coin. Policy clearly matters, but partisanship does too.

Wave 7 Values of Perceived Opposition to Redistribution





Wave 11 Values of Perceived Opposition to Redistribution

Figure 2 (both graphs) supports/strengthens the results in Table 4; in particular, the graphs help support our assumption that affiliating with the Conservative Party should (if partisan affiliation influences policy preferences – as we find they do!) lead to an increase in opposition to redistribution. As the graphs show, the Conservatives were the party most opposed to redistribution both before (Wave 7) and after (Wave 11) the referendum (Schonfeld and Winter-Levy 2019).

Labour

Lib Dem

Party

Green

Conservative

Plaid Cymru

SNP

UKIP

Note that, like the authors, I created these graphs by loading in the relevant data, calculating the average perceived opposition to redistribution for each major political party in both waves (7 and 11), and ultimately using ggplot() to generate visualizations of the values.

Table 5: Euroskepticism and Defecting from Conservatives

| | | $Dependent\ variable:$ | |
|---|--|---|---|
| | Defected from Conservatives | | |
| | (1) | (2) | (3) |
| 2015 Euroskepticism | -0.029*** (0.003) | -0.031*** (0.003) | -0.026*** (0.003) |
| Perceived Change in Conservative Euroskepticism | (0.003) | 0.009 (0.008) | 0.010 (0.008) |
| Age | | (0.008) | -0.004*** (0.001) |
| Female | | | 0.023 (0.015) |
| White | | | -0.020 (0.041) |
| Scotland | | | -0.053* (0.026) |
| Wales | | | 0.024 (0.027) |
| Interaction | | -0.001 (0.001) | -0.001 (0.001) |
| Constant | 0.358*** (0.023) | 0.362*** (0.028) | 0.608*** (0.053) |
| Observations | 2,142 | 1,902 | 1,902 |
| \mathbb{R}^2 | 0.047 | 0.059 | 0.096 |
| Adjusted R ² | 0.047 | 0.058 | 0.092 |
| Residual Std. Error F Statistic | 0.332 (df = 2140) $105.620^{***} \text{ (df} = 1; 2140)$ | 0.321 (df = 1898) $39.927^{***} \text{ (df} = 3; 1898)$ | 0.315 (df = 1893) $25.150^{***} \text{ (df} = 8; 1893)$ |

*p<0.05; **p<0.01; ***p<0.001

Finally, the authors ask one last, related (and once again, fascinating) question: yes, we've observed changing partisanship, but "has changing partisanship influenced actual voting?" (Schonfeld and Winter-Levy 2019). While, as the authors point out, it's impossible to isolate causality for voting changes, we can still "assess the relationship between Euroskepticism and voting in the UK's 2015 and 2017 elections" (Schonfeld and Winter-Levy 2019).

Like the authors, I began by looking at individuals who reported voting for the Conservative Party in 2015 (pre-referendum). I then created a "voteswitcher" variable, which indicated if a given unit ultimately defected/voted for another party in 2017. I regressed voteswitcher on the voter's level of Euroskepticism in 2015; in 2 other regressions, I added perceived changes in the Euroskepticism of the Conservative Party as an interaction, as well as threw in a bunch of relevant covariates.

The first regression's coefficient suggests that a one-point increase (on a 10-point scale) in 2015 Euroskepticism is associated with a 2.9% decrease in the probability of leaving the Conservative Party in the 2017 election (note that the value of the coefficient remains similar across the 3 regressions). This coefficient is significant at the 0.001 level (and remains so across the 3 regressions). There is, then, a relatively strong negative relationship between Euroskepticism in 2015 and leaving the Conservatives in 2017.

Table 6: Euroskepticism and Switching Vote to Conservatives

| | | $Dependent\ variable:$ | |
|---|---------------------------|---------------------------------------|---------------------------|
| | | Switched to Conservatives | |
| | (1) | (2) | (3) |
| 2015 Euroskepticism | 0.047*** | 0.049*** | 0.047*** |
| | (0.002) | (0.002) | (0.002) |
| Perceived Change in Conservative Euroskepticism | | 0.005 | 0.004 |
| | | (0.004) | (0.004) |
| Age | | | 0.002*** |
| | | | (0.0004) |
| Female | | | -0.015 |
| | | | (0.012) |
| White | | | 0.061* |
| | | | (0.028) |
| Scotland | | | 0.010 |
| | | | (0.015) |
| Wales | | | -0.034 |
| | | 0.004* | (0.020) |
| Interaction | | 0.001* | 0.001* |
| Constant | -0.068*** | $(0.001) \\ -0.076***$ | (0.001) -0.228*** |
| Constant | (0.011) | (0.012) | (0.035) |
| | | · · · · · · · · · · · · · · · · · · · | ` / |
| Observations | 4,388 | 3,758 | 3,758 |
| \mathbb{R}^2 | 0.164 | 0.203 | 0.210 |
| Adjusted R ² | 0.164 | 0.202 | 0.208 |
| Residual Std. Error | 0.367 (df = 4386) | 0.364 (df = 3754) | 0.363 (df = 3749) |
| F Statistic | 861.685*** (df = 1; 4386) | 318.651^{***} (df = 3; 3754) | 124.664*** (df = 8; 3749) |

Note: *p<0.05; **p<0.01; ***p<0.001

What about non-Conservatives? In Table 6, the authors extend their analysis in Table 5 to answer exactly that question. Here, I began by looking at individuals who reported not voting for the Conservative Party in 2015 (pre-referendum); I then created a "switchtocon" variable that indicated if a given unit ultimately switched to (voted for) the Conservative Party in 2017. Once again, I regressed my "switchtocon" variable on voters' level of Euroskepticism in 2015, and then created 2 other regressions, 1 with perceived changes in the Euroskepticism of the Conservative Party as an interaction, and another with a number of additional covariates.

The results suggest the relationship we'd expect: a one-unit increase (on a 10- point scale) in a non-Conservative voter's level of Euroskepticism in 2015 is associated with a 4.7% increase in the probability of voting for the Conservative Party in 2017 (once again, the value of this coefficient, associated with the first regression, remains similar across the 3 regressions). Once again, this coefficient is also significant at the 0.001 level (and remains so across the 3 regressions).

III. Extension

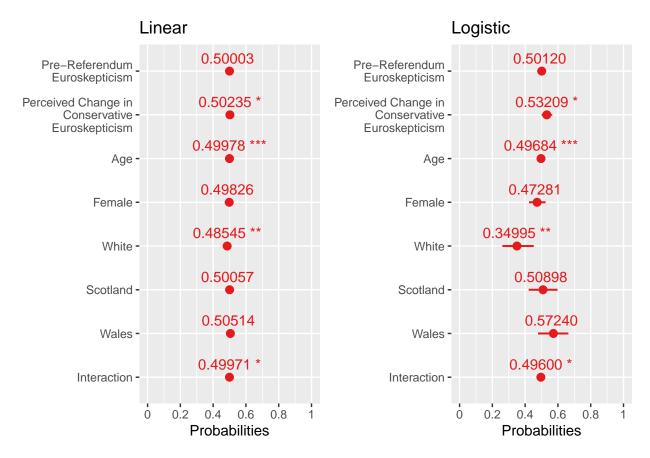
In replicating the results of this paper, I noticed an area for potential extension of the authors' original results: as discussed above, Tables 1 and 2, which examine the probability of defecting from and switching to

the Conservative Party, respectively, as a function of an individual's pre-referendum level of Euroskepticism (recall that this was the authors' main area of investigation), have a binary outcome/dependent variable (partyswitcher and switchtocon are indicator variables, with 1 indicating defection/switching, and 0 indicating otherwise). As described in Gelman and Hill, "logistic regression is the standard way to model binary outcomes" (Gelman and Hill 2007); nevertheless, the authors never employ it in the paper. What if, I wondered, I performed the regressions summarized in Table 1 and 2 (the paper's key findings) via logistic regression? Would the results change; otherwise, would we see any interesting findings?

Table 7: Euroskepticism and Defection from the Conservatives (Logistic)

| | | Dependent variable | : |
|---|---------------------------|--------------------|---------------|
| | Defect from Conservatives | | |
| | (1) | (2) | (3) |
| Pre-Referendum Euroskepticism | -0.033* | -0.015 | 0.005 |
| • | (0.017) | (0.020) | (0.021) |
| Perceived Change in Conservative Euroskepticism | ` ′ | 0.140* | 0.129* |
| | | (0.058) | (0.062) |
| Age | | , , | -0.013*** |
| | | | (0.003) |
| Female | | | -0.109 |
| | | | (0.101) |
| White | | | -0.619** |
| | | | (0.214) |
| Scotland | | | 0.036 |
| | | | (0.178) |
| Wales | | | 0.292 |
| | | | (0.192) |
| Pre-Referendum Euroskepticism:Perceived Change in Conservative Euroskepticism | | -0.017* | -0.016* |
| | | (0.007) | (0.007) |
| Constant | -2.170*** | -2.415*** | -1.260*** |
| | (0.139) | (0.165) | (0.293) |
| Observations | 7,330 | 6,476 | 6,216 |
| Log Likelihood | -2,052.692 | -1,699.461 | -1,588.20 |
| Akaike Inf. Crit. | 4,109.383 | 3,406.922 | 3,194.406 |
| Note: | *. | <0.05; **p<0.01 | 1. ***- <0.00 |

Linear Logistic 1.00482 0.00013 Pre-Referendum Pre-Referendum Euroskepticism Euroskepticism Perceived Change in 0.00940 Perceived Change in 1.13715 Conservative -Conservative -Euroskepticism Euroskepticism -0.00088 0.98746 Age -Age --0.006970.89686 Female -Female -0.05821White -White -0.00230 1.03658 Scotland -Scotland -0.02057 1.33865 Wales -Wales --0.00115 * 0.98412 * Interaction -Interaction -0.1 0.2 2 -0.5 0.5 0.5 1 Ó 10 **Estimates Odds Ratios**

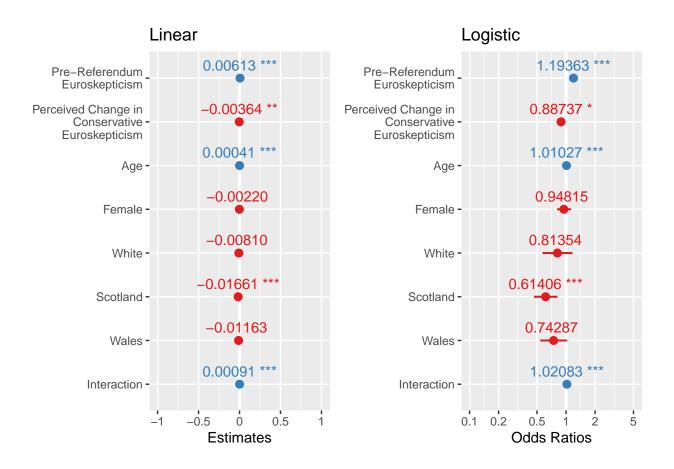


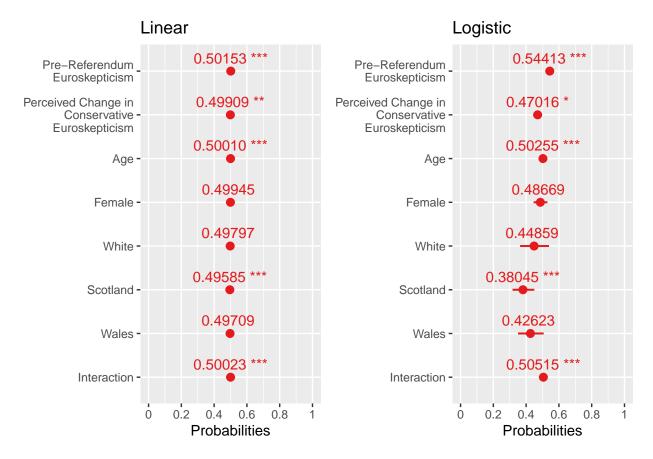
The results above suggest that in the case of Table 1, the authors ultimately didn't have a lot to gain in utilizing logistic regression instead of linear regression; neither the significance nor the direction of any of the coefficient estimates change. With that said, we do get a clearer, more nuanced picture of the results with an odds ratio interpretation; specifically, it more concretely allows us to compare the relative magnitudes of the various coefficients. The same is true in the case of the probability values: while, across both linear and logistic, the significance of the probability values stay the same, we do see that the logistic probability estimates vary a bit more in magnitude, suggesting additional nuance. Indeed, both the logistic odds ratios and probability estimates have larger standard errors; this implies that the logistic regression ultimately captures and reflects more uncertainty, a key area of "value-add" in interpreting the results.

Table 8: Euroskepticism and Joining the Conservatives (Logistic)

| | | Dependent variable: | |
|---|----------------------|-------------------------|--------------|
| | Joined Conservatives | | |
| | (1) | (2) | (3) |
| Pre-Referendum Euroskepticism | 0.198*** | 0.190*** | 0.177*** |
| | (0.014) | (0.015) | (0.016) |
| Perceived Change in Conservative Euroskepticism | , , | -0.108* | -0.119* |
| | | (0.047) | (0.048) |
| $_{ m Age}$ | | | 0.010*** |
| | | | (0.003) |
| Female | | | -0.053 |
| | | | (0.083) |
| White | | | -0.206 |
| | | | (0.180) |
| Scotland | | | -0.488** |
| | | | (0.141) |
| Wales | | | -0.297 |
| | | | (0.161) |
| Pre-Referendum Euroskepticism:Perceived Change in Conservative Euroskepticism | | 0.020*** | 0.021*** |
| | | (0.005) | (0.006) |
| Constant | -4.580*** | -4.492* [*] ** | -4.678*** |
| | (0.119) | (0.128) | (0.247) |
| Observations | 18,517 | 15,139 | 14,554 |
| Log Likelihood | -3,075.151 | -2,620.402 | -2,473.16 |
| Akaike Inf. Crit. | 6,154.302 | 5,248.803 | 4,964.324 |
| Note: | *_ | <0.05; **p<0.01 | . ***- <0.00 |

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Once again, the results here indicate little to no difference between the linear and logistic regression models, suggesting that the authors didn't necessarily have much to gain in utilizing logistic regression. In particular, across all of the coefficient estimates/odd ratios, the direction of the values are consistent. For the most part, the significance of the values are consistent as well, with the singular exception of the "Perceived Change in Conservative Euroskepticism" coefficient, which loses one significance star in the logistic regression model (note, though, that its coefficient and probability values are still significant at the 0.05 level across both models). This is likely due to the fact that (as is visually apparent) for both the odds ratios and probabilities, once again, the logistic regression values have larger standard errors; the model clearly captures and reflects additional uncertainty. Ultimately, then, like Table 1, the "value-add" of the logistic regression is in the additional nuance around/ understanding of the results.

IV. Conclusion

This replication set out to answer one key question: what drives voters – policy, or partisanship? In replicating the results of "Policy or Partisanship in the United Kingdom? Quasi-Experimental Evidence from Brexit," I, like the authors, was able to exploit the United Kingdom's 2016 Brexit referendum to demonstrate that, in fact, policy seems to be critical: "voters are sufficiently policy-motivated to change parties if they disagree with their party on important issues" (Schonfeld and Winter-Levy 2019). With that said, like the authors, I did also find evidence of partisan power: for example, voters that joined the Conservative Party following the Brexit referendum then adopted the Conservative Party's stance on other issues, such as economic redistribution.

In particular, the key findings/takeaways of this replication are:

• In the wake of Brexit, pre-referendum Euroskeptic Conservatives were less likely to defect from the Conservative Party (this supports the "policy" narrative).

- In addition, pre-referendum Euroskeptic non-Conservatives were more likely to join the Conservative Party (this also supports the "policy" story).
- There was a direct relationship between Conservatives' perception of the party's changing position on the issue of EU membership and their own Euroskepticism; this was particularly true for "Strong" conservatives.
- Newly minted Conservatives adopted the Conservative stance on other key policy issues, like redistribution (this counters the strength of the "policy" narrative partisanship matters too).
- Increasing pre-referendum Euroskepticism decreased the probability that a pre-referendum Conservative would defect from the party in the 2017 elections.
- On the other hand, increasing pre-referendum Euroskepticism increased the probability that a prereferendum non-Conservative would switch to the party in the 2017 elections.

My extension found:

 While logistic regression didn't necessarily produce a change in the substantive results of the paper, it did add additional nuance/understanding to interpretation of the results; in particular, the odds ratios/probability values associated with the logistic regression model captured/reflected additional uncertainty, a key "value-add."

This paper is not without its limitations, and looking ahead, I would suggest that future work aim to address these limitations. On the more technical side of things, it's important to note that generally speaking, the size of the effect(s) associated with the dependent variables analyzed in this paper's regressions was relatively small. Further attention/investigation in this area is needed.

At a higher level, while the authors' assumptions – some explored in this report (e.g. Figure 2) – are relatively well-supported, suggesting high internal validity, it's not at all clear that their findings have strong external validity, and are generalizable to voters at-large/beyond the United Kingdom. Qualitative evidence from other countries, particularly those with rising levels of political polarization (such as the United States) suggest that we should be surprised, and indeed, somewhat skeptical of the broader applicability of these findings. The authors' ultimate conclusion would be strengthened by performing a similar analysis in other countries, as well as across different systems of government (e.g. parliamentary vs. presidential).

The potential ramifications of such work are immense, for in learning more about voters, we learn more about democracy, that "government of the people, by the people, for the people" (Lincoln 1863).

V. Bibliography

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