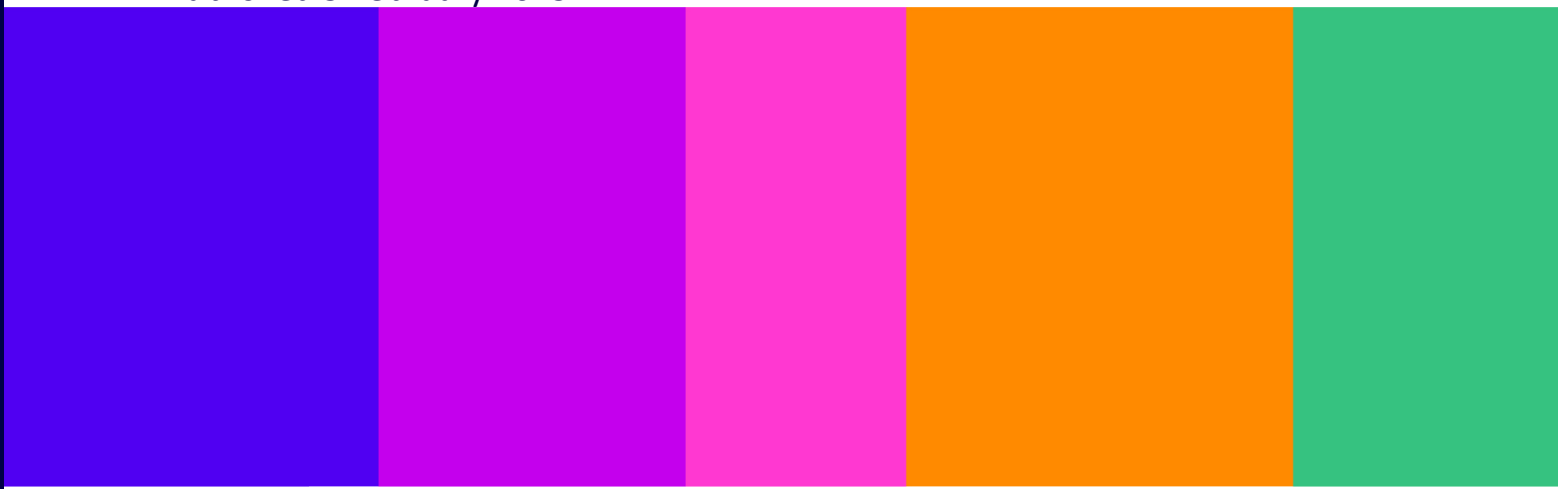# The relationship between the use of PSBs for news and societal outcomes: An empirical analysis

Economics Discussion Paper Series Issue 14

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Ofcom is committed to encouraging debate on all aspects of media and communications regulation and to creating rigorous evidence to support its decision-making. One of the ways we do this is through publishing a series of discussion papers, extending across economics and other disciplines. The research aims to make substantial contributions to our knowledge and to generate a wider debate on the themes covered.

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Contents

1. Overview

1.1   Public Service Broadcasters (PSBs) play a crucial role in providing trustworthy, impartial and accurate news. As part of the Public Service Media Review (PSMR) that Ofcom is carrying out,[1] and as a contribution to understanding how PSBs have delivered for UK audiences during the period from 2019 to 2023, this paper explores the relationship between the use of PSBs for news and a range of societal outcomes which are related to effective participation in a well-functioning democracy, such as citizens' trust in democratic institutions, their likelihood of voting in an election, the extent of their polarisation and their understanding of important news facts.

1.2   The analysis in this paper builds on work we carried out in 2022 as part of our programme of work on online news and media plurality, which focussed on the role of news consumption through online intermediaries (including social media).[2] In particular, in 2022, we found that people who use social media (as opposed to traditional media) most often for news are less likely to correctly identify important factual information, feel more antipathy towards people who hold different political views and are less trusting of democratic institutions (such as the central government, local councils, the National Health Service, the Police and judges) and the news media.[3]

1.3   This paper uses the same data as our previous work in 2022 (i.e. data from over 2,500 survey respondents in the UK) and a range of similar analytical techniques (i.e. regression analysis) and considers the same societal outcomes. However, the focus of this paper is specifically on the use of PSBs for news by survey participants.[4] In simple terms, our research aims at answering the question of whether people who use PSBs for news tend to be better informed, have more trust in democratic institutions, be less polarised and more likely to vote in an election, compared to people who do *not* use PSBs for news.

1.4   Our findings show that, compared to survey participants who do not use PSBs for news, survey participants who use PSBs for news are more knowledgeable about news facts, have higher levels of trust in institutions and are more likely to have voted in the 2019 general election. They also tend to be less polarised than survey participants who do not use PSBs. Importantly, our analysis controls for the possible use by survey participants of a comprehensive set of alternative news sources, including: commercial TV and radio stations; offline news sources (i.e. newspapers and magazines); social media (such as X, formerly Twitter, and Facebook); and any other online source (such as search engines and news aggregators).[5] It also includes a rich set of variables to control for respondents' socio-demographic characteristics. Our results show that there is a statistically significant

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[1] See Terms of Reference and Ofcom's review of Public Service Media 2019-23, published in September and December 2024, respectively.
[2] See Ofcom's page on "Media plurality and online news".
[3] See, in particular, Annex 3 of the "Media plurality and online news" report of 2022.
[4] As discussed later in the paper, use of PSBs for news includes all modes of access (i.e. TV, radio or online via mobile apps or websites).
[5] It is worth noting that, within this comprehensive set of alternative news sources, commercial TV and radio stations (like PSBs) must comply with Ofcom's broadcasting code. This requires broadcasters to ensure that news, in whatever form, is reported with due accuracy and presented with due impartiality.

relationship between the societal outcomes we consider in this paper and the use of PSBs for news. However, they do not prove that this relationship is causal.

1.5   In order to further probe the validity of our findings, we consider a range of alternative specifications and robustness checks and obtain results which are similar to those in our main regressions, thus confirming the validity of our main findings.

1.6   Given the fact that we did not carry out a randomised controlled trial, our results do not prove that the use of PSBs for news causes these differences in societal outcomes, but they are consistent with the hypothesis that using PSBs for news leads to better societal outcomes. Our results are in line with some recent literature. For example, Broockman and Kalla (2023) find that a more balanced news diet (less Fox News, more CNN) leads to viewers being more informed and less polarised for the period of the experiment.[6]

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[6] Broockman, D.E. and Kalla, J.L. (2023). Consuming cross-cutting media causes learning and moderates attitudes: A field experiment with Fox News viewers. OSF Preprints, 1, 1-42. See also Broockman, D.E. and Kalla, J.L. (2024). Selective exposure and echo chambers in partisan television consumption: Evidence from linked viewership, administrative, and survey data. American Journal of Political Science.

2. Introduction

2.1   This Economics Discussion Paper aims at exploring through regression analysis whether there is a statistically significant relationship between the use of PSBs for news and specific societal outcomes. In simple terms, it aims at answering the question of whether people who use PSBs for news tend to be better informed, to have more trust in institutions, to be less polarised and to be more likely to vote in an election, compared to people who do *not* use PSBs for news.

2.2   The structure of the paper is as follows. The next section on "Data" describes our data sources and the specific societal outcomes we consider in our analysis. It also summarises how we measure the use of PSBs and other news sources by survey participants; and the range of socio-demographic factors we include in our regressions. The "Methodology" section presents our main empirical model and discusses the estimation methods we use in the regressions as well as the rationale for presenting the results through so-called average marginal effects. In the "Main results" section, we present our results, notably the statistically significant correlation that we find between the use of PSBs for news and the societal outcomes we consider in this paper. Our results are consistent across a range of alternative specifications and robustness checks, as described in the corresponding section. Lastly, the final section of the paper summarises our results and discusses some limitations of our analysis.

3. Data

3.1   For our analysis, we use the same data that was used for the "Media plurality and online news" project.[7] The data were drawn from: i) a representative survey of UK adults aged 16-75+ conducted online using the Ipsos proprietary iSay panel; and ii) a survey of UK adult members of Ipsos Iris, which is Ipsos passive measurement panel. A total of 2,557 panel interviews were conducted: 1,483 interviews for iSay and 1,074 for Iris, with fieldwork completed between 29 July and 16 August 2022. Quotas were set by age, gender, region, education and social grade.

Societal outcomes

3.2   As we did in the "Media plurality and online news" project, we consider four societal outcomes which broadly capture how effectively individuals may be participating in the democratic process.[8] Notably, we look at: whether respondents had voted in the 2019 general election (as a proxy for democratic participation); respondents' level of knowledge about news and important issues (knowledge of news); their level of trust in institutions; and their level of polarisation.

3.3   *Democratic participation* is measured through a binary variable which takes the value of 1 if a respondent voted in the 2019 general election and 0 otherwise. Respondents who said that they did not remember if they had voted or were not eligible to vote are excluded from the analysis.[9]

3.4   In order to measure their level of *knowledge of news*, survey participants were given two quizzes, with each quiz containing a total of six statements concerning topical issues, such as the state of the economy, healthcare and climate change. In each quiz, three statements were true and the remaining three were false. A respondent's level of knowledge of news is then calculated as the total number of statements that a respondent correctly identified as true and ranged from 0 (no true statement in the two quizzes was correctly identified) to 6 (all six true statements in the two quizzes were correctly identified).[10]

3.5   *Trust in institutions* is measured on a scale ranging from 1 ('Not at all trustworthy') to 10 ('Completely trustworthy') and respondents were asked to state their trust in each of the following institutions: the UK Government, the local council, the National Health Service, the

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[7] See here for the main findings on media plurality and online news published in November 2022. The dataset and survey analysis are discussed in Annex 3 of the report.

[8] As discussed in the final section of this paper, the societal outcomes we consider in this paper may be imperfect and not capture the full extent to which an individual participates in the democratic process and in society, more broadly.

[9] As already noted in Annex 3 of the "Media plurality and online news" report of 2022, we recognise that this is a narrow measure and that a broader set of questions including, for example, future voting intention and other aspects of democratic participation would yield a more comprehensive picture of democratic participation.

[10] To be clear, for this paper, we did not design new quizzes, but used the responses to the quizzes which were used for Ofcom's "Media plurality and online news" report of 2022. As noted in Annex 3 of the report, the quizzes were based on Angelucci, C., & Prat, A. (2024). Is Journalistic Truth Dead? Measuring How Informed Voters Are about Political News. *American Economic Review*, 114(4), 887-925. The questions covered key issues that UK citizens had identified as important in the monthly Ipsos Issues Index.

Police and judges. The overall trust level in institutions is calculated as the mean of the trust level across all the individual institutions.

3.6 Lastly, our measures of *political polarisation* were designed to capture the concept of "affective polarisation" – i.e. they were based on the extent to which respondents disliked people who hold different political views. In particular, our first measure is calculated on the basis of whether survey participants agreed or disagreed with the statement that it is hard to be friends with people who had opposing views about Brexit. This measure ranges from 1 ("Strongly disagree", indicating absence of polarisation) to 5 ("Strongly agree", indicating maximum degree of polarisation). Our second measure is based on whether survey participants agreed or disagreed with the statement that it is hard to be friends with people who vote for a political party opposite from their own. As for the measure based on Brexit, this measure ranged from 1 ("Strongly disagree") to 5 ("Strongly agree").

3.7 We also consider two additional measures of affective political polarisation. These measures are based on the extent to which survey respondents reported that they "disliked" people with opposing political views (regarding Brexit and party affiliation), relatively to people who had similar political views.[11] These two additional measures range between 0 (no relative dislike, indicating absence of polarisation) and 100 (maximum relative dislike, indicating maximum degree of polarisation).

Use of PSBs and other news sources

3.8 In our main regressions, we measure the use of PSBs (i.e. the BBC, ITV, Channel 4 and Channel 5)[12] for news through a binary variable which takes the value of 1 if a respondent had used any PSB for news in the last month in any way (i.e. through TV, radio or online via mobile apps or websites) and 0 otherwise.

3.9 We also control for use of other news sources by including separate binary variables for each of: commercial TV and radio stations; offline news sources (i.e. newspapers and magazines); social media (such as X, formerly Twitter, and Facebook); and any other online source (such as search engines and news aggregators).[13]

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[11] In other words, these two measures are based on the relative dislike between a survey participant's out-group and his/her in-group. For example, in the case of a respondent who had voted Leave in the Brexit referendum, the out-group was represented by "Remain" voters – and the in-group by "Leave" voters. The polarisation measure is then calculated (on a scale from 0 to 100) on the basis of "dislike" of the participant's out-group, compared to his/her in-group. A similar methodology is used to calculate the relative dislike between out-group and in-group based on stated (loose) party affiliation. For additional details, see Annex 3 of Ofcom's report on media plurality and online news.

[12] In the surveys used to collect the data for our analysis, if participants lived in Scotland, Northern Ireland or Wales, their ITV option listed STV, UTV or ITV Wales as well, depending on location. Therefore, in our analysis, ITV captures the use of STV, UTV and ITV Wales by survey participants living in Scotland, Northern Ireland and Wales, respectively. As far as S4C (the Welsh-language PSB) is concerned, in the surveys, S4C was not listed as a separate option to select for respondents (and no respondent mentioned it in the residual category "*Any other channel used for news – please specify*"). It is possible that the use of S4C by survey participants is attributed to the BBC, since: i) the surveys specifically asked participants about the use of PSBs for news; and ii) the news programmes broadcast by S4C (including its main one, Newyddion) are produced by BBC Cymru Wales (whose logo appears alongside S4C's one at the end of news programmes).

[13] Our dataset is relatively granular, as survey participants were asked about their use of about 70 individual news sources. To construct the binary variables included in our regressions, we aggregate individual news sources as appropriate (by way of example, the Guardian, Daily Mail, Telegraph and Financial Times are all

3.10   In alternative specifications and robustness checks (see the corresponding section later in the paper), we consider other ways to model the use of PSBs for news. To start with, we use separate binary variables for the BBC, on the one hand, and for the remaining PSBs (ITV, Channel 4 and Channel 5), on the other hand. In other specifications, we use individual binary variables to control for each mode of access (TV, radio and online) separately; and a variable measuring the frequency of use of PSBs for news, instead of a binary variable measuring use of PSBs for news (or lack thereof). In addition, we use a variable measuring the prevalence of PSBs in respondents' news consumption; and a binary variable capturing whether respondents listed any PSB as their most important news source; or amongst their top three sources. Lastly, we include a binary variable capturing whether television in general is where respondents tended to go most often for news (as opposed to other traditional media – such as radio, newspapers and magazines; social media; search engines and news aggregators).

Socio-demographic characteristics

3.11   In all of our regressions, we include a rich set of variables to control for respondents' socio-demographic characteristics and thus better assess the relationship between societal outcomes and use of news sources. By way of example, we include variables measuring respondents' age, gender, marital status, ethnicity, employment status, household size, education level and income levels as well as region of residence.

included in offline news sources; Sky News, CNN, Al Jazeera and GB News are all included in commercial TV and radio stations).

4. Methodology

4.1   In order to assess the relationship existing between the use of PSBs (alongside other news sources) for news and the four societal outcomes we consider in this paper, we estimate, for each societal outcome, the following model:

$$Outcome_i = \alpha + \beta * Used\_PSB_i + \sum_j \gamma_j * Used\_other\_sources_i + \sum_h \delta_h * Control_i + \epsilon_i$$

4.2   In the model above, $Outcome_i$ denotes the societal outcome for respondent i in our sample (e.g. whether he/she had voted in the general election of 2019 or not); $Used\_PSB_i$ is the binary variable (0/1) capturing whether the respondent had used any of the PSBs (i.e. the BBC, ITV, Channel 4 and Channel 5) for news in the last month or not; $Used\_other\_sources_i$ is a vector of separate binary variables (0/1) capturing the use of other news sources (including, as described in the previous section, commercial TV and radio; offline sources, such as magazines and newspapers; and social media); $Control_i$ is a vector of variables for respondents' socio-demographic characteristics (e.g. age, income, education, etc., as described earlier); and, lastly, ε_i is the error term.

4.3   The α, β and the set of γ_j and δ_h are the coefficients to be estimated. The specific estimation method we use – i.e. logit, ordered logit or ordinary least squares (OLS) – depends on how each societal outcome is measured.[14]

4.4   In particular, for democratic participation, the dependent variable is binary and captures whether a respondent voted in the general election of 2019 or not. Accordingly, we estimate our model using logit. For knowledge of news, we use a categorical variable which is simply equal to the number of true statements which respondents correctly identified in two quizzes, ranging between 0 and 6, as described earlier. In this case, therefore, it is appropriate to estimate our model using ordered logit. Individuals' political polarisation is measured by the extent to which they agreed with the statement that it is hard to be friends with people who had opposing views about Brexit or had voted for an opposing political party.[15] Thus, we also use ordered logit in this case. Lastly, individuals' level of trust in institutions and polarisation levels measured by relative "dislike" between in-group and out-group are continuous variables. In this case, we use a linear estimation method such as ordinary least squares (OLS).[16]

4.5   Given the model above, our focus is mainly on β, which measures the difference in societal outcomes if respondents used PSBs for news and if they did not, holding everything else constant (i.e. the use of other news sources and socio-demographic characteristics).[17] We

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[14] For a review of the different estimation methods, see: Wooldridge, J. M. (2020). *Introductory Econometrics: A Modern Approach*, South-Western College Publishing; or Greene, W.H. (2020). *Econometric Analysis*, Pearson.

[15] As noted in the previous section, individuals' responses range from "Strongly disagree" to "Strongly agree" and can thus be naturally ordered, with values ranging from 1 to 5.

[16] In particular, trust level is measured on a scale from 1 to 10; and polarisation based on relative "dislike" on a scale from 0 to 100. See, again, the previous section.

[17] For example, if our results indicate that there is a positive correlation between having voted in the general election of 2019 and use of PSBs for news, we are able to rule out that such a correlation is attributable to the fact that people who use PSBs for news are older. This is because we explicitly control for respondents' age in our regressions.

emphasise that β simply indicates whether there is a statistical correlation between our selected societal outcomes and the use of PSBs for news (after including all other explanatory variables mentioned earlier) and does not establish a causal relationship (e.g. in the sense that using PSBs for news might have led to or caused an increased participation in the general election of 2019 or made individuals more knowledgeable about news).[18]

4.6   When looking at the estimates we obtain for the β coefficient in the model above, we consider the following three things: i) whether the estimated coefficient is statistically different from zero at standard significance levels (i.e. 1%, 5% and 10%); ii) whether it has the expected sign (i.e. positive for trust in institutions, knowledge of news and democratic participation; and negative for polarisation); and iii) its magnitude, indicating the strength of the statistical correlation between societal outcomes and the use of PSBs for news (after controlling for use of other news sources and socio-demographic characteristics).

4.7   In respect of point iii) above, whether our estimate for β is directly interpretable as the difference in a given societal outcome associated with whether respondents used PSBs for news or not depends on whether we use linear or non-linear estimation methods. For example, in the case of trust in institutions, as explained earlier, we use a linear model. Therefore, our estimate for β is directly interpretable as the difference in trust levels (on a scale from 1 to 10) for the case when respondents used PSBs for news versus the case when they did not (holding everything else constant).[19]

4.8   In contrast, when we use non-linear estimation methods,[20] the raw estimated coefficients are not directly interpretable and, therefore, we calculate so-called *average marginal effects*. To be specific, in the case of democratic participation, the average marginal effect that we calculate measures the difference in the predicted probability of voting in the general election of 2019 if respondents used PSBs for news and the probability if they did not. For knowledge of news, our marginal effect measures the difference in the probability of obtaining a "pass" grade (i.e. of correctly identifying more than half of the six true statements included in the two quizzes) if respondents used PSBs for news and if they did not. Lastly, for polarisation, our marginal effect measures the difference in the probability of "agreeing" or "strongly agreeing" with the statement that it is hard to be friends with someone with opposing political views (notably, about Brexit and political affiliation), again comparing the case when respondents used PSBs for news with the case when they did not.

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[18] In practice, it could be that, for example, using PSBs for news makes respondents more likely to vote – or the other way round, i.e. that propensity to vote makes respondents also more likely to use PSBs. Given the cross-sectional nature of our dataset and lack of suitable instruments, we are unable to address this problem of reverse causality completely. The fact that we control for many socio-demographic characteristics in our model partly addresses the issue that we are unable to control for unobserved individual characteristics.

[19] The same applies to polarisation when measured by relative "dislike" between in-group and out-group, i.e. the estimate we obtain for β directly measures the difference in polarisation levels between respondents who used PSBs for news and those who did not (holding everything else constant).

[20] As noted earlier, this is the case for democratic participation, knowledge of news and polarisation as measured by whether respondents agree or disagree with the statement that it is hard to be friends with people who had opposing political views.

5. Main results

5.1 In this section, we present the main results from estimating the model in paragraph 4.1. By way of preview, we find that there is a statistically significant difference in the selected societal outcomes when respondents used PSBs for news (compared to when respondents do *not* use PSBs for news), after controlling for use of other news sources and socio-demographic characteristics. Given the fact that these are observational data and that we did not carry out a randomised controlled trial, these results do not prove that the use of PSBs for news causes the differences in the societal outcomes that we consider in this paper. However, they do reflect a statistically significant correlation between societal outcomes and the use of PSBs for news, even after controlling for a range of socio-economic and demographic characteristics, which is consistent with the hypothesis that using PSBs for news leads to better societal outcomes.

5.2 To be specific, we find that respondents who used PSBs for news are more likely to have voted in the 2019 general election, to be more knowledgeable about news and to have higher levels of trust in institutions. In addition, they tend to be less polarised than respondents who did not use PSBs, when polarisation is measured on the basis of whether respondents say that it is hard to be friends with someone with opposing political views (notably, about Brexit and political affiliation).[21]

5.3 The estimates we obtain from our regression are presented in Table 3 in the Appendix. However, as noted earlier, because we use non-linear estimation methods for some societal outcomes, it is more convenient and intuitive to present our results through average marginal effects, which are shown in Table 1 below. Specifically, columns 1 and 2 in Table 1 below show, respectively, the societal outcome under consideration and the indicator we use as a proxy to measure that outcome. We then present our estimated baseline level if respondents did *not* use PSBs for news (column 3), the corresponding level if respondents did use PSBs for news (column 4) and then the resulting difference, in absolute terms or percentage points as appropriate (column 5).

5.4 Specifically, for *trust in institutions*, we find that respondents who used PSBs for news trust institutions more than respondents who did not use PSBs for news – and that this difference is equal to 0.64 (on a scale from 1 to 10). In the case of *political participation*, we found that, if respondents used PSBs for news, they had an estimated probability of 86.4% of voting in the 2019 general election, compared to 81.1% when respondents did not use PSBs for news, i.e. a difference of 5.4 percentage points (which is statistically significant at 5%).

5.5 For *knowledge of news*, we also find a positive difference in the probability of answering 4 or more questions correctly (out of 6 questions) when respondents used PSBs for news and when they did not, notably 77.3% vs 72.3% (i.e. 5 percentage points). This difference is statistically significant at a 5% level of significance. By way of illustration, in order to get a better sense of the relative magnitude of the correlation between knowledge of news and use of PSBs for news, we calculate average marginal effects for education levels as well, specifically for the difference between survey participants holding a GCSE qualification and those holding a Bachelor's degree. We find that the difference in knowledge of news

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[21] When polarisation is measured through relative dislike, the difference between respondents who used PSBs for news and those who did not is not statistically significant.

associated with the use of PSBs for news (5 percentage points, as noted earlier) is roughly the same as the one we find between respondents holding an undergraduate degree and those holding a GCSE qualification (4.9 percentage points). This comparison provides an illustration of the relative magnitude of the difference in knowledge of news associated with using PSBs for news.

5.6 Lastly, for *polarisation*, our results suggest that, on average, if respondents used PSBs for news, they would have an estimated probability of 23% of agreeing or strongly agreeing that it is hard to be friends with someone who has opposing beliefs about Brexit, while the same probability is equal to 28.6% if they did not use PSBs for news – a difference of minus 5.6 percentage points, which is statistically significant at a 5% level. Similarly, using PSBs for news is associated with a reduction in the probability of agreeing or strongly agreeing that it is hard to be friends with someone who has opposing beliefs when it comes to political affiliation – from 39.2% to 33.2%, i.e. a difference of minus 3.1 percentage points (which is statistically significant at a 5% level).

5.7 Overall, our results indicate a statistically significant relationship between the use of PSBs for news and better societal outcomes. In the next section, we probe these results using a range of alternative specifications and robustness checks.

Table 1: Differences in societal outcomes associated with using PSBs for news

Societal outcome (1)	Indicator (2)	Baseline level: Not used PSBs for news (3)	Level when using PSBs for news (4)	Delta from using PSBs for news (5)
Trust	Trust in institutions (1 to 10)	5.72	6.36	0.64 ***
Political participation	Probability of having voted in 2019 general election	81.1%	86.4%	5.4 p.p. **
Knowledge of news	Probability of answering 4 or more questions correctly (out of 6)	72.3%	77.3%	5.0 p.p.**
Polarisation	Probability of "agreeing" or "strongly agreeing" that it is hard to be friends with someone who has opposing beliefs about Brexit	28.6%	23.0%	- 5.6 p.p.**
Polarisation	Probability of "agreeing" or "strongly agreeing" that it is hard to be friends with someone who has opposing beliefs re political affiliation	39.2%	33.2%	-6.0 p.p.**

*Notes: *, ** and *** denote a coefficient is significant at 10%, 5% and 1% levels of significance, respectively. Results are based on regressions which include a constant and socio-demographic variables. Estimation method: OLS for trust; logit for participation; ordered logit for knowledge and difficulty being friends.*
Source: Ofcom

6. Alternative specifications and robustness checks

6.1   Our main results suggest that there is a statistically significant relationship between the use of PSBs for news and better societal outcomes. In order to test the robustness of these results, we modified our model in paragraph 4.1 in several different ways, to consider alternative specifications and robustness checks.

6.2   To start with, we use separate binary variables for the BBC, on the one hand, and for the remaining PSBs (ITV, Channel 4 and Channel 5), on the other hand. In other specifications, we use individual binary variables to control for each mode of access (TV, radio and online) separately; and a variable measuring the frequency of use of PSBs for news. In addition, we use a variable measuring the prevalence of PSBs in respondents' news consumption; and a binary variable capturing whether respondents listed any PSB as their most important news source; or amongst their top three sources. Lastly, we include a binary variable capturing whether television in general was where respondents tended to go most often for news (as opposed to other traditional media – such as radio, newspapers and magazines, social media, search engines and news aggregators).

6.3   Overall, as discussed below, the results we obtain from these alternative specifications and robustness checks strongly support our main results presented in the previous section, further confirming the existence of a statistically significant relationship between the use of PSBs for news and better societal outcomes.

Use of the BBC

6.4   In order to make the role of the BBC more visible in our analysis, we slightly change the model described in paragraph 4.1, by including a binary variable (0/1) for whether respondents had used the BBC in any way (i.e. TV, radio or online) for news in the last month or not. Accordingly, we include separate binary variables for whether respondents had used any of the other PSBs for news (i.e. ITV, Channel 4 or Channel 5); any commercial TV and radio; any offline source (i.e. newspapers and magazines); any social media; and any other online source.

6.5   Our full regression results are in Table 4 in the Appendix, whereas our more intuitive average marginal effects are shown in Table 2 below. Our results for the use of the BBC (in column 4) are slightly smaller than those presented earlier when we considered the use of any PSB by survey participants (see column 3, which is identical to column 5 in Table 1 above), but, overall, suggest a statistically significant and positive relationship between use of the BBC for news and trust in institutions, political participation and knowledge of news. In the case of polarisation, we find that using the BBC for news is associated with a lower probability of being polarised regarding Brexit. However, in the case of polarisation regarding political affiliation, the estimated coefficient is still negative, but is not significant (unlike for use of PSBs).[22]

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[22] It is worth noting that, when looking at the results for using the BBC, we also included a separate binary variable for the use of any other PBS (i.e. ITV, Channel 4 or Channel 5).

Table 2: Differences in societal outcomes associated with using PSBs and the BBC for news

Societal outcome (1)	Indicator (2)	Delta from using PSBs for news (3)	Delta from using the BBC for news (4)
Trust	Trust in institutions (1 to 10)	0.64 ***	0.52 ***
Political participation	Probability of having voted in 2019 general election	5.4 p.p. **	4.4 p.p. **
Knowledge of news	Probability of answering 4 or more questions correctly (out of 6)	5.0 p.p.**	3.8 p.p. **
Polarisation	Probability of "agreeing" or "strongly agreeing" that it is hard to be friends with someone who has opposing beliefs about Brexit	- 5.6 p.p.**	-4.0 p.p. *
Polarisation	Probability of "agreeing" or "strongly agreeing" that it is hard to be friends with someone who has opposing beliefs re political affiliation	-6.0 p.p.**	-2.7 p.p.

*Notes: *, ** and *** denote a coefficient is significant at 10%, 5% and 1% levels of significance, respectively. Results are based on regressions which include a constant and socio-demographic variables. Estimation method: OLS for trust; logit for participation; ordered logit for knowledge and difficulty being friends.*
Source: Ofcom

Measuring use of PSBs for news through separate binary variables for TV, radio and online channels

6.6   We also sought to estimate the relative contribution of each mode of use of PSBs (TV, radio and online). To this aim, we replace the single binary variable for use of PSBs in our model in paragraph 4.1 with separate binary variables for use of PSBs through TV, radio and online.[23]

6.7   Our full results are presented in Table 5 in the Appendix and broadly confirm our main findings.[24] In particular, the coefficients for the relevant binary variables (TV, radio and online) are, to a large extent, statistically significant and have the expected sign. A test of joint significance is also consistent with our main results presented above, i.e. it confirms the statistical relationship between use of PSBs for news and better societal outcomes. The only exception is polarisation based on the difficulty of being friends with someone who has opposing beliefs about Brexit, where the three binary variables are jointly not statistically different from zero.[25]

6.8   Perhaps contrary to expectations, TV is not always the mode of use which correlates the most with better societal outcomes (in terms of the magnitude of the estimated coefficient). For example, in the case of democratic participation and knowledge of news, the estimated coefficient for online use of PSBs is greater than the one for TV. [26]

Frequency of use of PSBs for news

6.9   As an additional robustness check, we measure use of PSBs for news with a frequency variable ranging from 1 ("Rarely used in the last month") to 10 ("Used multiple times in a day"), rather than through binary variables, as discussed so far. Our results are presented in Table 6 and Table 7 in the Appendix, for the case of single frequency variables and separate frequency variables for each mode of use (TV, radio and online), respectively.

6.10   Overall, our results indicate a positive and statistically significant relationship between greater frequency of use of PSBs for news and better societal outcomes (i.e. more trust in institutions, higher political participation, better knowledge of news and less polarisation),[27] in line with the results we obtained employing binary variables for the use of PSBs.[28]

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[23] The BBC is the only PSB with a radio presence.

[24] We also adapted the model used in the previous sub-section for the BBC by including separate binary variables for each mode of use (TV, radio and online), obtaining similar results (not reported for brevity) to those summarised in the text above.

[25] The coefficients for polarisation based on relative dislike are not significant either. This is in line with the main results presented above.

[26] See, again, Table 6 in the Appendix for full results.

[27] In the case of polarisation, the estimated coefficients for frequency of use are not statistically significant when polarisation is measured through difficulty of being friends based on political affiliation and relative dislike based on Brexit. This is in line with results with binary variables presented earlier in the text.

[28] In addition to estimating a model with frequency of use of PSBs, we also adapted the model to include variables measuring frequency of use of the BBC. Our results (not reported for brevity) are similar to those for PSBs and confirm a positive and statistically significant relationship between frequency of use of the BBC and better societal outcomes.

Prevalence of PSBs in respondents' news consumption

6.11   In this alternative specification, we use a variable capturing the prevalence of PSBs in respondents' news consumption, as measured by the number of times a respondent had used any of the PSBs in a month, relatively to the total number of times he/she had used any news source.[29] This variable, therefore, captures the number of times a respondent had used a specific source (e.g. the BBC once a day) as well as the number of sources used by the respondent (e.g. the BBC alongside Sky News, CNN, Facebook and the Guardian – not all necessarily with the same frequency). In other words, the variable is one possible way of calculating the PSBs' share in respondents' news consumption, taking into account both how many news sources respondents used in a month and how frequently they used each specific source.

6.12   Our results are reported in Table 8 in the Appendix. Overall, they indicate that there is a statistically significant relationship between a greater prevalence of PSBs in respondents' news consumption and better societal outcomes (including all variants of polarisation).[30]

Relative importance of PSBs – and of TV in general

6.13   As an additional robustness check, we modify our model in paragraph 4.1 to include binary variables (0/1) to capture whether respondents listed any of the PSBs either i) as their most important source for news; or ii) as one of their top three sources in terms of importance, while also controlling for use of other news sources.

6.14   Our full results are presented in Table 9 and Table 10 in the Appendix, respectively. For trust in institutions, democratic participation and knowledge of news, the relevant coefficients are statistically significant and have the expected (i.e. positive) sign. Our results also indicate that respondents who list any of the PSBs as their top source (or amongst their top 3 sources) for news tend to be less polarised, when polarisation is measured on the basis of political affiliation. However, the coefficients are not statistically significant when polarisation is measured by reference to respondents' attitude regarding Brexit.[31]

6.15   Lastly, rather than focusing on use of PSBs, we estimate a model with a binary variable (0/1) capturing whether respondents tended to use most often the TV for news (as a proxy for watching PSBs on TV for news), as opposed to alternatives, such as: other traditional media (radio, newspapers and magazines), social media, search engines, news aggregators, and friends or other sources. Our results – presented in Table 11 in the Appendix – indicate a positive and statistically significant relationship between the use of TV as the most frequent source of news and better societal outcomes, with the only exception of knowledge of news. In this case, it is the coefficient for the use of other traditional media (radio, newspapers and magazines) as the most often used news source which is positive and statistically significant from zero.

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[29] The "number of times" variable was itself derived from the frequency variable discussed in the previous subsection. For example, "once a day" amounts to roughly 30 times a month.
[30] We also estimated a model taking into account the prevalence of the BBC in respondents' news consumption. We obtained similar results (not reported for brevity) to those for PSBs.
[31] We also estimated our model to capture whether the BBC was listed as the most important source or amongst the top 3 sources by respondents. We obtained similar results (not reported for brevity) to those for PSBs discussed in the text above.

7. Discussion and concluding remarks

7.1   Our analysis shows that, even after controlling for a range of socio-economic and demographic characteristics, respondents who used PSBs for news tend to be less polarised, compared to respondents who did *not* use PSBs for news. They also tend to be more knowledgeable about news and have higher levels of trust in institutions. Lastly, they are more likely to have voted in the 2019 general election.

7.2   While the results do not prove a causal link between the use of PSBs for news and better societal outcomes (in the sense of societal outcomes which are related to effective participation in a well-functioning democracy), they are, nevertheless, consistent with the hypothesis that using PSBs for news leads to better societal outcomes. This conclusion is strengthened by the fact that our results remain valid after considering a wide range of alternative specifications and robustness checks.

7.3   Other limitations of our analysis include those inherent to using survey data, i.e. that: people might not understand or misinterpret a question; they might display recall or reporting biases; and there might be differences across individuals in interpreting statements like "strongly agree" or "strongly disagree". In our case, however, these risks are somewhat reduced, since we measure the use of PSBs based on questions which are less prone to these errors, e.g. whether a respondent had used PSBs in the last month (a "Yes" or "No" question), which source had used most often for news, or whether he or she had used TV in general for news.

7.4   We are also aware that our measures of societal outcomes may be imperfect. For example, our measure of democratic participation (whether a respondent had voted in the general election of 2019) does not capture other important considerations, e.g. that the respondent – even if he or she did not vote – may be a very active member in the community. Similarly, when it comes to knowledge of news, an individual who performed poorly in the two news quizzes used in our survey may be very well informed on issues which were not covered by the quizzes – or found the quizzes too difficult (although, about the latter issue, we are reassured by the fact that respondents who did not use PSBs reported a 72.3% probability of answering 4 or more questions correctly). Lastly, our measure of trust in institutions and polarisation are necessarily relative – we can only infer that someone is more or less polarised compared to a benchmark such as the sample average or the average among traditional media users.[32]

7.5   While acknowledging these limitations, our results provide useful evidence of a statistical correlation between the use of PSBs for news and differences in societal outcomes and can be a starting point for further analysis which makes use of more comprehensive data and/or robust estimation techniques.

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[32] In addition, other factors (e.g. direct experience by survey participants with certain institutions) which we do not include in our empirical analysis may affect survey participants' level of trust in those institutions.

A1. Regressions results

Table 3: Results for regressions including single binary variable for use of PSBs (BBC, ITV, Channel 4 and Channel 5) for news

Societal outcome	Trust in institutions	Democratic participation	Knowledge of news	Political polarisation: Difficulty being friends re Brexit	Political polarisation: Difficulty being friends re political affiliation	Political polarisation: Relative dislike re Brexit	Political polarisation: Relative dislike re political affiliation
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Used any of the PSBs	0.643***	0.459***	0.303**	-0.311**	-0.289**	-3.713	-4.035
	(6.10)	(2.66)	(2.55)	(-2.27)	(-2.05)	(-1.36)	(-1.47)
Used any other TV or radio	0.158**	0.426***	-0.0188	-0.0918	0.0249	0.560	-0.548
	(2.24)	(2.68)	(-0.22)	(-0.99)	(0.27)	(0.31)	(-0.32)
Used any other offline source	0.384***	0.532***	-0.157	0.114	0.114	2.232	2.113
	(4.76)	(2.77)	(-1.59)	(1.11)	(1.10)	(1.12)	(1.15)
Used any social media	0.0597	0.107	-0.246***	0.155	0.194*	4.519**	7.400***
	(0.80)	(0.69)	(-2.75)	(1.60)	(1.95)	(2.35)	(4.07)
Used any other online source	0.124*	0.112	0.303***	0.00273	-0.111	2.748	-3.842**
	(1.72)	(0.75)	(3.44)	(0.03)	(-1.14)	(1.51)	(-2.22)
Number of observations	2,257	2,030	2,221	1,857	1,755	1,577	1,456

Notes: robust t-statistics in parentheses (* p < 0.10, ** p < 0.05, *** p < 0.01). All regressions include a constant and socio-demographic variables. Estimation method: OLS for trust and relative dislike; logit for participation; ordered logit for knowledge and difficulty being friends.
Source: Ofcom

Table 4: Results for regressions including single binary variable for use of the BBC

Societal outcome	Trust in institutions	Democratic participation	Knowledge of news	Political polarisation: Difficulty being friends re Brexit	Political polarisation: Difficulty being friends re political affiliation	Political polarisation: Relative dislike re Brexit	Political polarisation: Relative dislike re political affiliation
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Used BBC	0.525***	0.388**	0.234**	-0.228**	-0.133	-5.064**	-8.199***
	(5.63)	(2.38)	(2.23)	(-2.00)	(-1.13)	(-2.19)	(-3.67)
Used any of ITV, Ch. 4 or Ch.5	0.0877	0.0240	-0.0870	0.0188	-0.0744	0.825	1.752
	(1.26)	(0.16)	(-1.01)	(0.20)	(-0.77)	(0.45)	(1.02)
Used any other TV or radio	0.156**	0.434***	-0.00141	-0.103	0.0213	0.587	-0.466
	(2.20)	(2.73)	(-0.02)	(-1.09)	(0.23)	(0.32)	(-0.27)
Used any other offline source	0.383***	0.532***	-0.141	0.105	0.112	2.189	2.016
	(4.77)	(2.76)	(-1.42)	(1.02)	(1.08)	(1.09)	(1.09)
Used any social media	0.0682	0.124	-0.231***	0.148	0.197**	4.285**	6.926***
	(0.91)	(0.80)	(-2.58)	(1.53)	(1.97)	(2.22)	(3.80)
Used any other online source	0.118	0.109	0.313***	0.000896	-0.117	2.820	-3.723**
	(1.63)	(0.73)	(3.52)	(0.01)	(-1.20)	(1.55)	(-2.15)
Number of observations	2,257	2,030	2,221	1,857	1,755	1,577	1,456

Notes: robust t-statistics in parentheses (* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$). All regressions include a constant and socio-demographic variables. Estimation method: OLS for trust and relative dislike; logit for participation; ordered logit for knowledge and difficulty being friends.
Source: Ofcom

Table 5: Results for regressions including separate binary variables (TV, radio and online) for use of PSBs

Societal outcome	Trust in institutions	Democratic participation	Knowledge of news	Political polarisation: Difficulty being friends re Brexit	Political polarisation: Difficulty being friends re political affiliation	Political polarisation: Relative dislike re Brexit	Political polarisation: Relative dislike re political affiliation
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Used any of the PSBs – TV	0.465***	0.391**	0.151	-0.205*	-0.227**	-1.459	-2.720
	(5.34)	(2.51)	(1.50)	(-1.79)	(-1.97)	(-0.66)	(-1.25)
Used any of the PSBs – radio	0.166**	0.316*	0.185**	0.0833	0.0110	-0.665	-0.698
	(2.26)	(1.68)	(1.98)	(0.84)	(0.11)	(-0.34)	(-0.39)
Used any of the PSBs – online	0.236***	0.435**	0.371***	-0.157	-0.217**	-1.725	-0.292
	(3.02)	(2.40)	(3.64)	(-1.54)	(-2.01)	(-0.87)	(-0.15)
Used any other TV or radio	0.129*	0.355**	-0.0363	-0.0905	0.0412	0.549	-0.342
	(1.81)	(2.19)	(-0.41)	(-0.96)	(0.43)	(0.30)	(-0.20)
Used any other offline source	0.370***	0.504***	-0.170*	0.103	0.115	2.212	2.123
	(4.60)	(2.58)	(-1.72)	(1.01)	(1.11)	(1.10)	(1.15)
Used any social media	0.0561	0.119	-0.242***	0.154	0.190*	4.501**	7.422***
	(0.75)	(0.76)	(-2.70)	(1.60)	(1.90)	(2.33)	(4.07)
Used any other online source	0.0576	-0.0400	0.147	0.0468	-0.0301	3.369	-3.966**
	(0.71)	(-0.24)	(1.48)	(0.47)	(-0.28)	(1.64)	(-2.02)
Number of observations	2,257	2,030	2,221	1,857	1,755	1,577	1,456
F-statistic / chi2 statistic for joint significance of binary variables for use of PSBs	17.24***	19.57***	23.04***	6.08	8.87**	0.66	0.51

Notes: robust t-statistics in parentheses (* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$). All regressions include a constant and socio-demographic variables.
Estimation method: OLS for trust and relative dislike; logit for participation; ordered logit for knowledge and difficulty being friends.
Source: Ofcom

Table 6: Results for regressions including single variable for frequency of use of PSBs (BBC, ITV, Channel 4 and Channel 5) for news

Societal outcome	Trust in institutions	Democratic participation	Knowledge of news	Political polarisation: Difficulty being friends re Brexit	Political polarisation: Difficulty being friends re political affiliation	Political polarisation: Relative dislike re Brexit	Political polarisation: Relative dislike re political affiliation
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Frequency use any PSB	0.0981***	0.100***	0.0437***	-0.0283*	-0.0253	-0.474	-0.644**
	-7.37	-4.4	-2.82	(-1.66)	(-1.45)	(-1.44)	(-2.01)
Frequency use any other TV or radio	0.0162	0.0523**	-0.0055	-0.0215	-0.00293	0.0623	0.0281
	-1.49	-2.11	(-0.42)	(-1.47)	(-0.20)	-0.23	-0.11
Frequency use any other offline source	0.0708***	0.0738**	-0.0267*	0.0261	0.0249	0.302	0.119
	-5.56	-2.32	(-1.66)	-1.53	-1.51	-0.92	-0.41
Frequency use any social media	0.0108	0.0162	-0.0353***	0.0269**	0.0300**	0.529**	0.968***
	-1.11	-0.83	(-3.10)	-2.15	-2.28	-2.17	-4.14
Frequency use any other online source	0.0138	0.0183	0.0358***	-0.00258	-0.0128	0.314	-0.500**
	-1.42	-0.91	-2.97	(-0.20)	(-0.97)	-1.29	(-2.17)
Number of observations	2,257	2,030	2,221	1,857	1,755	1,577	1,456

Notes: robust t-statistics in parentheses (* p < 0.10, ** p < 0.05, *** p < 0.01). All regressions include a constant and socio-demographic variables.
Estimation method: OLS for trust and relative dislike; logit for participation; ordered logit for knowledge and difficulty being friends.
Source: Ofcom

Table 7: Results for regressions including separate variables (TV, radio and online) for frequency of use of PSBs

Societal outcome	Trust in institutions	Democratic participation	Knowledge of news	Political polarisation: Difficulty being friends re Brexit	Political polarisation: Difficulty being friends re political affiliation	Political polarisation: Relative dislike re Brexit	Political polarisation: Relative dislike re political affiliation
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Frequency use PSBs - TV	0.0761***	0.0675***	0.00597	-0.0254	-0.0308**	-0.352	-0.571**
	-6.37	-3.01	-0.42	(-1.62)	(-1.97)	(-1.17)	(-1.97)
Frequency use PSBs - radio	0.0336***	0.0523*	0.0454***	0.00918	-0.000313	0.0312	-0.252
	-3.19	-1.82	-3.18	-0.61	(-0.02)	-0.11	(-0.96)
Frequency use PSBs - online	0.0224**	0.0598**	0.0660***	-0.0187	-0.0326**	-0.177	-0.225
	-2.15	-2.29	-4.64	(-1.33)	(-2.28)	(-0.65)	(-0.89)
Frequency use any other TV or radio	0.0135	0.0502**	-0.00193	-0.0204	-0.000902	0.0786	0.0675
	-1.24	-2.03	(-0.15)	(-1.39)	(-0.06)	-0.29	-0.26
Frequency use any other offline source	0.0717***	0.0768**	-0.0227	0.0244	0.0236	0.28	0.108
	-5.66	-2.4	(-1.43)	-1.43	-1.42	-0.86	-0.37
Frequency use any social media	0.0109	0.0185	-0.0318***	0.0268**	0.0294**	0.529**	0.969***
	-1.12	-0.93	(-2.79)	-2.14	-2.23	-2.16	-4.13
Frequency use any other online source	0.0162	0.00861	0.0145	0.00118	-0.00312	0.331	-0.477*
	-1.55	-0.4	-1.09	-0.09	(-0.23)	-1.25	(-1.93)
Number of observations	2,257	2,030	2,221	1,857	1,755	1,577	1,456
F-statistic / chi2 statistic for joint significance of variables for frequency of use of PSBs	21.41***	20.96***	34.93***	5.05	10.28**	2.30*	0.67

Notes: robust t-statistics in parentheses (* p < 0.10, ** p < 0.05, *** p < 0.01). All regressions include a constant and socio-demographic variables.
Estimation method: OLS for trust and relative dislike; logit for participation; ordered logit for knowledge and difficulty being friends.
Source: Ofcom

Table 8: Results for regressions including variable measuring prevalence of PSBs in respondents' news consumption

Societal outcome	Trust in institutions	Democratic participation	Knowledge of news	Political polarisation: Difficulty being friends re Brexit	Political polarisation: Difficulty being friends re political affiliation	Political polarisation: Relative dislike re Brexit	Political polarisation: Relative dislike re political affiliation
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Number of times PSBs used in a month, relatively to total including all news sources	0.819***	0.696**	0.535***	-0.376**	-0.354**	-6.445*	-8.059**
	(6.04)	(2.45)	(3.16)	(-2.17)	(-1.98)	(-1.85)	(-2.54)
Number of observations	2,257	2,030	2,221	1,857	1,755	1,577	1,456

Notes: robust t-statistics in parentheses (* p < 0.10, ** p < 0.05, *** p < 0.01). All regressions include a constant and socio-demographic variables.
Estimation method: OLS for trust and relative dislike; logit for participation; ordered logit for knowledge and difficulty being friends.
Source: Ofcom

Table 9: Results for regressions including binary variable for whether any of the PSBs is listed as most important source for news

Societal outcome	Trust in institutions	Democratic participation	Knowledge of news	Political polarisation: Difficulty being friends re Brexit	Political polarisation: Difficulty being friends re political affiliation	Political polarisation: Relative dislike re Brexit	Political polarisation: Relative dislike re political affiliation
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Any PSB listed as most important source for news	0.441***	0.500***	0.196**	-0.0865	-0.187**	-2.724	-6.134***
	(6.33)	(3.57)	(2.33)	(-0.96)	(-2.07)	(-1.57)	(-3.73)
Number of observations	2,257	2,030	2,221	1,857	1,755	1,577	1,456

Notes: robust t-statistics in parentheses (* p < 0.10, ** p < 0.05, *** p < 0.01). All regressions include a constant and socio-demographic variables.
Estimation method: OLS for trust and relative dislike; logit for participation; ordered logit for knowledge and difficulty being friends.
Source: Ofcom

Table 10: Results for regressions including binary variable for whether any of the PSBs is listed as amongst top 3 sources for news

Societal outcome	Trust in institutions	Democratic participation	Knowledge of news	Political polarisation: Difficulty being friends re Brexit	Political polarisation: Difficulty being friends re political affiliation	Political polarisation: Relative dislike re Brexit	Political polarisation: Relative dislike re political affiliation
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Any PSB listed as amongst top 3 sources in terms of importance for news	0.634***	0.607***	0.204**	-0.141	-0.287**	-1.466	-6.599***
	(7.04)	(3.86)	(2.02)	(-1.26)	(-2.52)	(-0.67)	(-3.10)
Number of observations	2,257	2,030	2,221	1,857	1,755	1,577	1,456

Notes: robust t-statistics in parentheses (p < 0.10, ** p < 0.05, *** p < 0.01). All regressions include a constant and socio-demographic variables.*
Estimation method: OLS for trust and relative dislike; logit for participation; ordered logit for knowledge and difficulty being friends.
Source: Ofcom

Table 11: Results for regressions including binary variable for TV as most often used source for news

Societal outcome	Trust in institutions	Democratic participation	Knowledge of news	Political polarisation: Difficulty being friends re Brexit	Political polarisation: Difficulty being friends re political affiliation	Political polarisation: Relative dislike re Brexit	Political polarisation: Relative dislike re political affiliation
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Most often respondent used TV	0.368***	0.517**	0.197	-0.401**	-0.422**	-6.317**	-7.802***
	-2.91	-2.27	-1.34	(-2.37)	(-2.48)	(-2.04)	(-2.72)
Most often used other traditional media	0.222*	0.612***	0.495***	-0.226	-0.319**	-2.052	-6.961***
	-1.85	-2.9	-3.56	(-1.40)	(-2.05)	(-0.72)	(-2.61)
Most often used search engines	-0.026	-0.376	-0.191	-0.307	-0.367	6.899	-7.814
	(-0.12)	(-1.17)	(-0.79)	(-1.03)	(-1.35)	-1.31	(-1.64)
Most often used news aggregators	0.159	0.236	0.282	-0.101	-0.0173	-1.464	-8.646**
	-0.89	-0.74	-1.34	(-0.39)	(-0.07)	(-0.31)	(-2.08)
Most often used friends or other sources	-0.614***	0.32	-0.197	-0.317	-0.14	-7.745*	-0.418
	(-3.16)	-1.08	(-0.96)	(-1.32)	(-0.58)	(-1.67)	(-0.09)
Number of observations	2,257	2,030	2,221	1,857	1,755	1,577	1,456

Notes: robust t-statistics in parentheses (* p < 0.10, ** p < 0.05, *** p < 0.01). All regressions include a constant and socio-demographic variables.
Estimation method: OLS for trust and relative dislike; logit for participation; ordered logit for knowledge and difficulty being friends.
Source: Ofcom

A2. Responding to this Economic Discussion Paper

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