

The News Media and Voter Responses to the Financial Crisis in Britain

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Last updated: 18 January 2019

Abstract

How does news media coverage influence voters' interpretation of political developments – and could this be of electoral significance? I use data from the 2005–10 British Election Panel Study to investigate the effect of newspaper readership on British voters' attribution of responsibility for the 2008 financial crisis. Using an instrumental variables approach, I show that reading particular newspapers had a substantial effect on whether British voters allocated blame to, for instance, the incumbent Prime Minister Gordon Brown, for the crisis. I show, further, that 2005 Labour voters were substantially less likely to vote Labour again in 2010 if they believed Brown responsible for the ongoing financial crisis. Structural topic modeling of reporting from this period reveals substantial variation in newspapers' coverage of the crisis and in a manner consistent with these patterns. This study corroborates earlier work documenting the persuasive power of the news media, especially in Britain.

*I am grateful to Matthew Knowles, Sophie Hill, Rob Johns, Michael Oswald, Holli Semetko and Joost van Spanje for their helpful feedback on earlier versions of this paper. This work has also benefited from suggestions made by seminar audiences at EPSA 2017, MPSA 2018 and EPSA 2018.

1 Introduction

In October 2008—about a year after the first run on a British bank in more than a century—opposition party leader David Cameron asserted that the ongoing financial crisis was a direct consequence of decisions made by then Labour prime minister, and former Chancellor of the Exchequer, Gordon Brown. “The economic assumptions that Gordon Brown made in the last decade now lie in ruins,” declared Cameron – singling out Brown’s policy of spending and borrowing “without restraint” for particular criticism. Separately, in an interview with BBC Radio 4, shadow chancellor George Osborne described the British economy as a “house...on fire” – casting Brown in the part of chief arsonist.¹ The economic and political origins of the of the 2007–2008 global financial crisis are undoubtedly complex, and the subject of ongoing study and debate among commentators and academic economists.² Yet, the charge that the Labour government’s policies leading up to the 2007–2008 crash, and its subsequent response, was responsible for the financial crisis appears to have been insidiously effective. Between September 2007 and June 2008, the Labour party’s advantage over the Conservatives on managing the economy had shrunk from a lead of +25% to a deficit of –9%, and has remained in deficit ever since.³ This paper combines an instrumental variables approach with structural topic modeling of newspaper content in order to identify the role played by certain British newspapers in increasing the potency of this charge.

In doing so, this paper contributes towards a live debate among researchers on the persuasive power of the mass media. Early studies concluded that their influence on vote choice was minimal, and that media exposure during a campaign only served to reinforce individuals’ prior political views (Lazarsfeld, Berelson and Gaudet 1944; Berelson, Lazarsfeld and McPhee 1954) – a consensus that then remained dominant within social science research for decades (Della Vigna and Gentzkow 2009). However, more recently, a number of studies have reached more mixed conclusions regarding the impact of political coverage on vote choice (Della Vigna and Kaplan 2007; Gerber, Karlan and Bergan 2009) – even when we restrict our attention to research focused on the British case (Curtice 1997; Ladd and Lenz 2009; Brandenburg and Egmond 2012). For instance, Curtice (1997) leverages within-paper variation in slant between 1992 and 1997 among the predominantly right-leaning British press to argue that newspapers had little influence on either voter opinions or election outcomes. On the other hand, (Ladd and Lenz

¹Both quoted in ‘Financial crisis: David Cameron blames Gordon Brown for Britain’s ‘broken economy’, *Telegraph*, 17 October 2008.

²Post-crisis economists have advanced two classes of explanations for the financial crisis that endangered much of the global economy from 2008 onwards: market and regulatory failures, and a macroeconomic environment of cheap credit in the years leading up to the crisis (Helleiner 2011; Tooze 2018).

³Calculations based on data collected by UK polling firm IPSOS-MORI, accessible here.

2009) exploit a ‘rare shift’ in the the editorial stance of the *Sun* in favour of the Labour party—traditionally a paper which backed the Conservative party—and, by doing so, identify a substantial effect of newspaper endorsements on vote choice. More recently, Barnes and Hicks (2018) document a range of evidence suggesting that media framing shaped popular attitudes towards austerity in Britain in the last decade.

In this paper, I return to this question using panel data from the British Election Panel Study between 2005 and 2010. The availability of a survey which re-interviewed the same panelists over this crucial period allows me to tackle some of the most significant challenges facing studies of media persuasion: the problem of self-selection by individuals into media outlets that share their political views, and the possibility that media outlets may follow, rather than lead, their readers in their framing of an issue. I attempt to address these concerns by instrumenting for an individual’s news exposure following the 2007–2008 crisis using their preferred newspaper circa 2005, and by also controlling for individuals’ past political preferences and other observable characteristics. My results suggest that voter attribution of blame for the events of 2007–2008 in Britain may have been substantially influenced by their news consumption. For instance, I find that, all else equal, individuals who were regular readers of the right-wing broadsheet, the *Telegraph*, were twice as likely to consider Brown responsible for the financial crisis as similar individuals who did not regularly read a newspaper, but readers of the Labour-supporting tabloid, the *Daily Mirror*, were about a quarter as likely as those who did not regularly read a newspaper to blame Brown for the financial crisis.⁴

A structural topic model of how different British newspapers covered the financial crisis suggests that variation in their framing of this issue may explain their diverse effects on the views of their readers. In particular, I show that among the broadsheets, the *Telegraph* was especially likely to target Brown’s handling of the crisis, and to stress the possible negative economic implications of his policies. A final piece of analysis suggests that these editorial choices may have had downstream electoral consequences, with 2005 Labour voters being substantially less likely to vote Labour again in 2010 if they believed Brown responsible for the ongoing financial crisis. Cumulatively, these results are in line with existing work suggesting that the mass media may have a significant persuasive influence under the right circumstances – for instance, following an “unexpected” endorsement (Ladd and Lenz 2009; Chiang and Knight 2011), or in a less competitive or less partisan media environment (Enikolopov, Petrova and Zhuravskaya 2011). In line with Barnes and Hicks (2018), I conjecture that the news media might also have more impact on voter opinion when it comes to issues where there is ‘expert dissensus’ and which

⁴In the 2010 British general election, the *Daily Mirror* was the only daily newspaper which endorsed the Labour party. For a list of party endorsements by newspaper, see Table 1.

are more demanding of voters' knowledge and expertise – issues such as fiscal policy, or the causes of financial crises and the appropriate policy responses.

2 The Financial Crisis in Britain

Following on almost a decade of sustained global economic growth, the first half of 2007 was marked by an ominous spate of bank failures. The first casualties of the burgeoning crisis were largely “subprime mortgage lenders”—or financial institutions which specialized in providing mortgage loans to borrowers with a weak or limited credit history. However, aftershocks from these events swiftly reverberated through the globalized financial system, as even megabanks like HSBC and UBS realized they were holding large portfolios of mortgage-backed securities with uncertain value. On 9 August 2007, the prominent French bank BNP Paribas announced that it was freezing withdrawals from three of its investment funds, citing concerns about these funds' exposure to the US subprime mortgage sector⁵ and bringing the interbank lending markets in Europe to a near-standstill. Within weeks, the aftereffects were felt in Britain: on 14 September 2007, with queues of depositors snaking outside its branches, Northern Rock—one of Britain's largest mortgage lenders—confirmed that it would need emergency funding from the Bank of England.⁶ Within days, faced with an imminent banking collapse, chancellor Alistair Darling pledged that the British government would itself guarantee all savings that had been deposited with Northern Rock. In February 2008, after two failed private takeover bids, Northern Rock was admitted to a ‘temporary’ period of public ownership⁷, and its outstanding liabilities added to the British national debt.

The collapse of Northern Rock was the first of several British banking crises in the next two years. On 20 March 2008, share prices for HBOS—Britain's biggest mortgage lender—plunged 17% in a single day following rumours that the bank was on the brink of a funding crisis⁸. Six months later, its share prices plunged further, prompting the Labour government to broker talks between HBOS and Lloyds TSB regarding a possible takeover. By end-September 2008, it had become clear that not only HBOS but also Bradford & Bingley, Lloyds and RBS were losing access to wholesale funding markets, and would require financial assistance from the government to preempt a wholesale collapse of the British banking system. In the small hours of 8 October 2008, a bailout agreement was hammered out between Downing Street, the UK Treasury, and representatives from

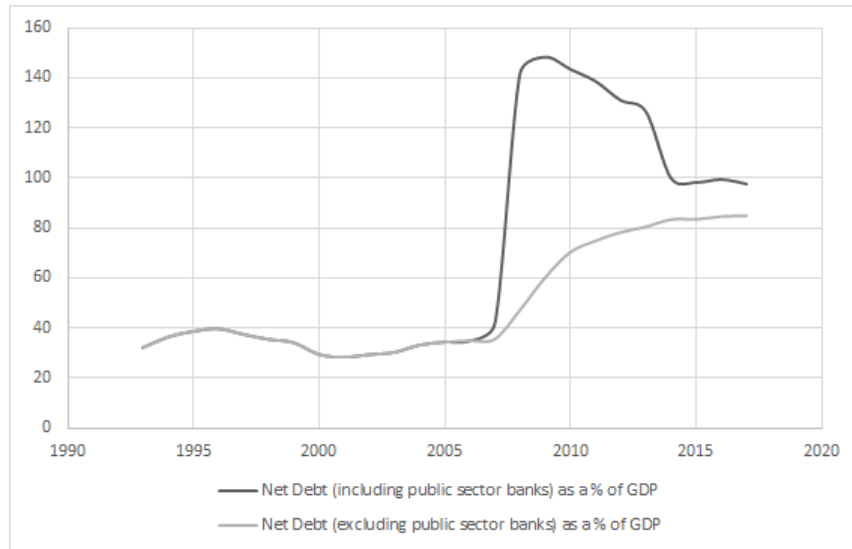
⁵‘BNP Paribas suspends funds because of subprime problems’, *New York Times*, 9 August 2007.

⁶‘Lessons of the fall: How a financial darling fell from grace, and why regulators didn't catch it’, *Economist*, 18 October 2007.

⁷‘Darling under fire as Northern Rock is nationalised’, *Guardian*, 18 February 2008.

⁸‘Authorities avert run on HBOS caused by false rumours’, *Guardian*, 20 March 2008.

Figure 1: Public Sector Debt in the United Kingdom, 1993–2017



Note: This figure plots the trend in net public sector debt (including and excluding public sector banks) as a percentage of UK GDP between 1993 and 2017 (source: UK Office for National Statistics, public sector finances time series, December 2018 release).

leading British banks, committing the British government to providing up to £500 billion to recapitalise the banks and calm the financial markets.⁹ This had momentous implications for Britain’s public finances. By the time Northern Rock was partially nationalised in February 2008, British national debt had inched up to 41.2% of GDP, already exceeding Brown’s own ‘sustainable investment rule’.¹⁰ After the bailout package was agreed in October 2008, British net national debt skyrocketed to a staggering 130.7% of GDP. Although the debt-to-GDP ratio peaked at 148.4% of GDP in December 2009, net national debt remained above 130% of GDP until the next general election and beyond (see Figure 1). After the UK entered a technical recession in the third quarter of 2008, the growing deficit was deepened by Brown’s decision to push through a multibillion-pound fiscal stimulus, comprising tax cuts and a limited public spending program. A second bailout package was unveiled in January 2009. By March 2009, the IMF estimated that among G20 countries, the UK had spent the largest amount—almost 20% of GDP—on bailouts.¹¹

At the time—illustrating the scale of ‘expert dissensus’ on this issue—the steps Brown took to stabilise the British banking system won him plaudits from many center-left economists, but criticism from some on the right. For example, the economist Paul

⁹‘Bank bailout: Alistair Darling unveils £500 billion rescue package’, *Telegraph*, 8 October 2008.

¹⁰The government committed to maintaining net debt below 40 % of GDP in the 2008 Budget (Channel 4 News FactCheck, 15 May 2008).

¹¹‘IMF: Fifth of Britain’s GDP spent so far on bailouts’, *Guardian*, 6 March 2009.

Krugman lauded Brown for setting what he thought was an important precedent, asking: “[h]as Gordon Brown... saved the world financial system?”¹² Soon after, the former US Treasury secretary and Democrat Robert Rubin praised the British PM as an “acclaimed leader”.¹³ Yet, around the same time, several economists wrote to the *Telegraph*, criticising Brown and arguing for immediate tax cuts instead of the stimulus.¹⁴ Indeed, Brown quickly found himself targeted by three distinct lines of attack.

The first concerned the size of the bailout and any implications for the pace and progression of the recovery. Although the bailout legislation sailed through parliament with cross-party backing, the scale of the government’s burgeoning financial commitments raised eyebrows among commentators and experts – including those of Mervyn King, the Governor of the Bank of England¹⁵, the Institute for Fiscal Studies¹⁶, the International Monetary Fund¹⁷, and the prominent credit ratings agency Standard & Poor¹⁸. Further afield, the German finance minister Peer Steinbrück denounced Brown’s planned fiscal stimulus as “crass Keynesianism”¹⁹; in February 2009, French President Sarkozy chimed in, stating that Brown’s policies had “absolutely not worked”²⁰. Many of these individuals and institutions expressed fears that this ‘borrowing binge’²¹ would prompt either a run on the pound or a rise in interest rates (or both), threatening the nascent recovery. In their view, the only solution was to introduce tax rises or public spending cuts as soon as feasible.

That said, an ultimately more damaging line of attack against Brown was not that his preferred policy response risked deepening the recession, but that his actions over the last decade had *caused* the financial crisis in the first place. Of course, few disagreed that the proximate cause of the crisis was the subprime mortgage bubble bursting in the United States. However, on both left and right, many pointed fingers at the regulatory framework established by then-PM Blair and, as his Chancellor, Brown, for leaving Britain uniquely exposed to the international fallout from this event. Indeed, the ‘tripartite’ regulatory system established by the newly elected Labour government in 1997 was intended to provide “not only light but limited regulation”²². Consequently, on some counts, regulatory

¹²Paul Krugman, ‘Gordon Does Good’, *New York Times*, 12 October 2008.

¹³‘Gordon Brown hints at tax cuts for poor and support for green technology’, *Guardian*, 14 November 2008.

¹⁴‘Economists condemn Chancellor Alistair Darling’s spending plan’, *Telegraph*, 25 October 2008.

¹⁵‘Britain cannot afford any further fiscal stimulus, King warns’, *Guardian*, 24 March 2009.

¹⁶‘The truth about tax’, *Daily Mirror*, 26 April 2009.

¹⁷‘IMF warns pound at risk without plan to cut debt’, *Telegraph*, 17 July 2009; also ‘UK interest costs equal to entire Transport bill’, *Telegraph*, 4 November 2009.

¹⁸In May 2009, S&P downgraded the outlook on Britain’s debt from ‘stable’ to ‘negative’.

¹⁹‘German minister ridicules Brown’s recovery plan’, *Independent*, 11 December 2008.

²⁰‘No 10 furious after Sarkozy criticises PM for mistakes’, *Daily Express*, 7 February 2009.

²¹Courtesy of Cameron, speech delivered on 18 November 2008.

²²Brown, quoted in Wade (2008).

standards were *lower* for banks operating in London than in New York.²³

Lastly, the third and final line of attack wielded by Brown’s opponents was that the Labour government’s “irresponsible borrowing” in the boom years meant that Britain was “the worst prepared economy in the world for recession.”²⁴ In a speech to the center-left Demos thinktank in January 2009, Cameron thundered: “We know that we’re in this mess is because of too much debt. Too much banking debt, too much personal debt and too much government debt.”²⁵ This attack had several components. The first, favored by Conservative leadership, was that Labour had borrowed too much while in government in order to finance its spending programmes, and so public sector debt had reached an unsustainable level even before 2008. A quick glance at Figure 1, which plots the trend in UK public sector debt between 1993 and 2017, reveals the hollowness of this charge: after ten years of office, if anything, the Labour government had *reduced* net debt from what it was under Conservative PM John Major. However, the Conservatives also argued that the economic growth of the last decade had been illusory, driven by a fragile and unsustainable property and household debt bubble – and that this had contributed to the scale of the financial crisis in Britain. As before, both charges gathered momentum as they were echoed by others, such as Mervyn King²⁶, Donald Tusk—then the Polish prime minister²⁷—the Chilean president Michelle Bachelet, the OECD²⁸, and by June 2009, even the left-wing broadsheet, the *Guardian*²⁹

Naturally, Brown denied all the charges laid before him. Time and again, he insisted that the crisis was the “result of problems which started in banking operations of these banks in other countries”³⁰, and that no (national) regulatory system could have picked up the problems in the global financial system that prompted the recession.³¹ However it seems that, increasingly, these denials of any responsibility were met with derision – including among voters. In the remainder of this paper, I explore the extent to which the coverage of the financial crisis by particular newspapers encouraged some voters to take these charges more (or less) seriously.

²³An example is given by the phenomenon of “collateral rehypothecation”. Whereas in the US, reusing collateral provided to an institution as collateral for other loans was strictly limited to a maximum of 140% of the collateral actually held, the FSA imposed no such limit. As a consequence, banks operating out of London were able to use rehypothecation to procure about \$4.5 trillion in additional funding “effectively out of thin air” (Singh and Aitken 2010; Tooze 2018).

²⁴Shadow Chancellor George Osborne, quoted in ‘Osborne fights back’, *Daily Mail*, 17 November 2008.

²⁵‘David Cameron blames Gordon Brown and big government for recession’, *Guardian*, 22 January 2009.

²⁶‘King warns of the ‘long hard slog’ to clear Britain’s debt’, *Independent*, 25 June 2009.

²⁷‘Brown gets lecture in economics from Poles’, *Independent*, 30 April 2009.

²⁸‘OECD calls on UK government to make ‘deep’ public spending cuts’, *Guardian*, 29 June 2009.

²⁹‘So what happened?’, *Guardian*, 3 June 2009.

³⁰‘Brown agrees EU banking rules but keeps Britain’s decisions British’, *Times*, 19 June 2009.

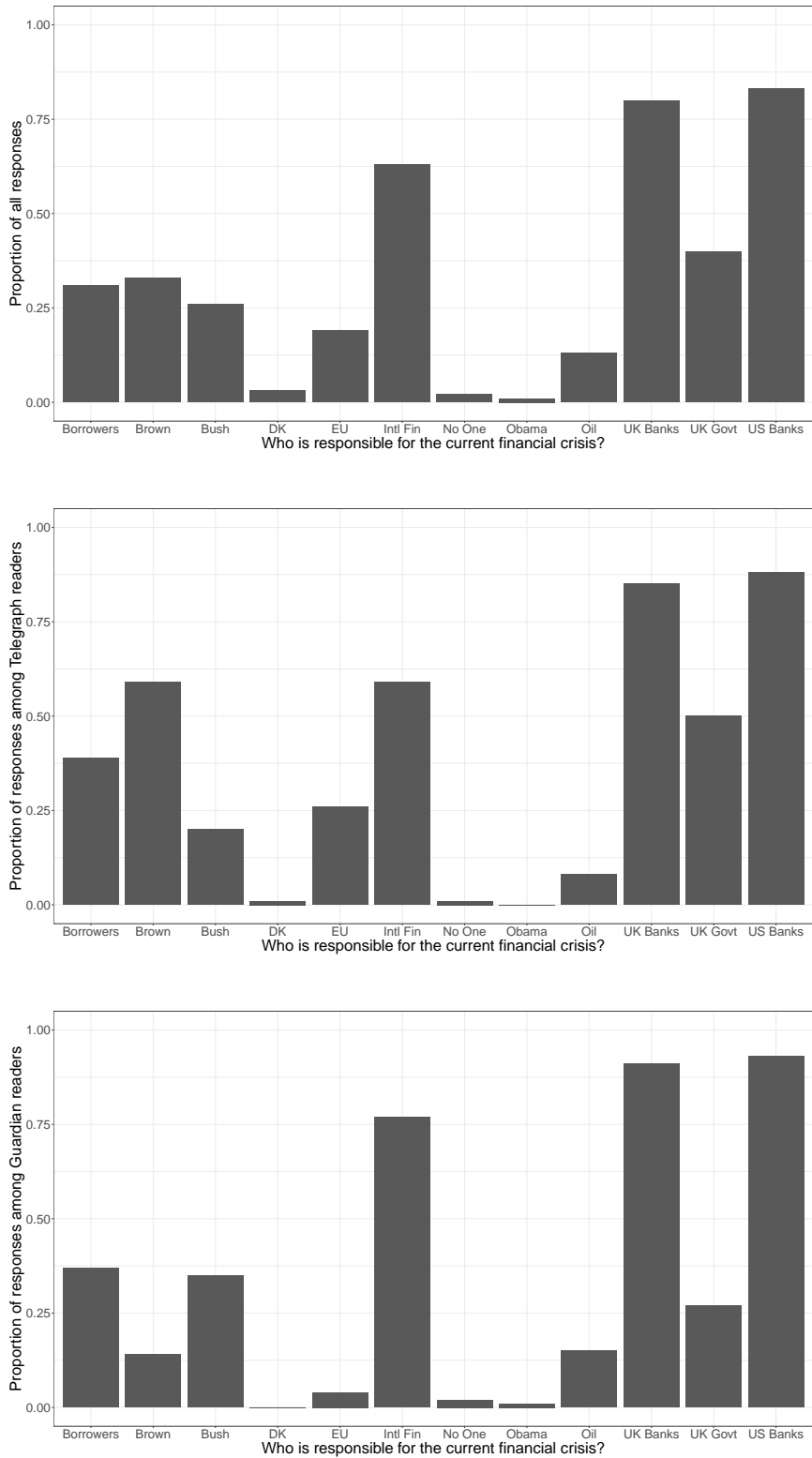
³¹‘Brown to urge US to seize moment to help world solve financial crisis’, *Guardian*, 4 March 2009.

3 Data & Methodology

To analyse the effect of newspaper readership on voter attribution of blame following the financial crisis of 2007–2008, I use data from the British Election Panel Study 2005–2010, which repeatedly interviewed the same national sample before and after the crisis. I restrict my analysis to those respondents in the sample for the entire duration of the panel, which produces a sample of 1,447 individuals. Figure 2 graphically presents the variation in answers to the question asked of BEPS respondents in 2009: “Who do you think is responsible for the ongoing financial crisis?” Respondents were presented with twelve possible options, and able to select as many of the options as they wished. We see that, within the full sample, 33% of respondents believed Brown was responsible for the financial crisis of 2007–2008. Among respondents who regularly read the right-wing broadsheet, the *Telegraph*, this figure rises to 59%, but among those who regularly read the left-wing broadsheet, the *Guardian*, only 14% held Brown responsible for the crisis. These figures provide suggestive evidence that an individual’s preferred newspaper may influence how she responds to new political events. To better account for any confounding variables and to identify the magnitude of any influence, I turn to regression analysis.

The identification of media effects on mass political behaviour poses particular challenges for researchers. Crucially, individuals may choose particular media outlets because they prefer their political slant (Gentzkow and Shapiro 2006) – which creates the appearance of persuasion. Further, media outlets may adopt a particular slant in response to the preferences of their readers, which may also resemble persuasion at a glance. However, in this case, the use of panel data helps us to rule out self-selection to a considerable degree, as we can instrument for news exposure *following* the crisis by using a respondent’s preferred newspaper from before the financial crisis. Ladd and Lenz (2009) point out that the use of panel data does not necessarily alleviate this concern, as if a news outlet maintains a consistent slant throughout a panel survey, those who choose an outlet may do so because they prefer its politics even after controlling for observable characteristics of individuals. Thus, Newton and Brynin (2001)’s finding that Conservative party identifiers were more likely to vote Conservative if they preferred to read Conservative supporting papers, relative to those who preferred Labour supporting papers, is vulnerable to the critique that the latter prefer such papers precisely because their party allegiances are weaker. However, as in Ladd and Lenz (2009)’s analysis, I will go on to argue that bias of this kind is not a particular concern in my case, due to the nature of my findings and the unexpected character of the financial crisis. In order for the exclusion restriction to be violated, one would have to argue that even after controlling for previous vote choice and ideology, those preferring the right-leaning *Telegraph* were more predisposed to blame

Figure 2: Who did British Voters think Responsible for the 2008 Financial Crisis?



a Labour prime minister in bad times than individuals preferring *other* right-leaning newspapers, like the *Times*, the *Daily Mail*, the *Daily Express* or the *Sun*.

In order to identify the relationship of interest between newspaper readership and individuals' attribution of blame following the financial crisis, I estimate the following regression equation:

$$Y_i = \mathbf{X}_i\boldsymbol{\beta} + \mathbf{A}_i\boldsymbol{\gamma} + \epsilon_i \quad (1)$$

where, for each possible option j , Y_i is a binary variable that takes the value 1 if individual i considers j to have been responsible for the financial crisis, and 0 otherwise. In the 2009 wave of the British Election Panel Study, respondents were asked if any of ten possible individuals or institutions were responsible for the ongoing financial crisis: Gordon Brown, the British government, American banks, George W. Bush, the European Union, Barack Obama, British banks, people who took out big mortgages, oil companies, or international financiers. Respondents could select as many options as they wished. I do not estimate a regression equation for the response 'Obama', as only nine respondents selected this option. This leaves me with nine possible dependent variables.

\mathbf{X}_i is a vector of variables measuring each individual i 's news exposure following the crisis, and \mathbf{A}_i is a vector of control variables. For each newspaper, I assume X_i is also given by the following equation:

$$X_i = Z_i + \mathbf{A}_i\boldsymbol{\gamma} + u_i \quad (2)$$

where Z_i takes the value 1 if the individual i preferred the same newspaper in 2005, two years before the onset of the financial crisis, and 0 otherwise. In other words, in order to address concerns regarding the self-selection of respondents into the media outlets that mirror their views on the 2007–2008 financial crisis, I instrument for individuals' 2009 news exposure, X_i , using their news exposure in 2005, Z_i .

I construct \mathbf{X}_i based on each individual i 's response to the following two questions in the 2009 wave of the BEPS survey:

1. How often do you read a daily morning newspaper?
2. If everyday or sometimes, which daily morning newspaper do you read most often?

As reported in Table 1, 75.7% of respondents read a daily morning newspaper sometimes or everyday. I distinguish between individuals who are regular readers of the following eight newspapers: the *Daily Mirror*, the *Sun*, the *Daily Express*, the *Daily Mail*, the *Telegraph*, the *Guardian*, the *Independent*, the *Times*, and a residual category identifying individuals who are regular readers of the *Financial Times*, the *Aberdeen Press and*

Journal, the *Daily Star*, the *Glasgow Herald* and the *Scotsman*. Descriptive statistics regarding the characteristics of each newspaper’s readership are presented in Table 1.

Table 1: Newspaper Readership in Britain

Newspaper	2005 Labour Vote (%)	2009 Labour Vote Int. (%)	What Paper Did You Read Most Often? (%)	Endorsement in 2010	Circulation (c. Jan 2009)
Daily Mirror	66.7	49.3	10.3	Labour	1,366,891
Sun	33.5	18.5	11.9	Conservatives	3,146,006
Daily Express	33.8	17.6	4.7	Conservatives	736,340
Daily Mail	19.5	13.7	15.5	Conservatives	2,200,398
Telegraph	10.9	8.4	8.2	Conservatives	783,210
Guardian	54.7	48.4	6.6	Liberal Democrats	358,844
Independent	32.5	17.5	2.8	Liberal Democrats	215,504
Times	33.0	23.4	6.5	Conservatives	617,483
Other	42.4	30.3	9.1	—	—
None	39.9	29.5	24.3	—	—
Total	36.6	26.1	100.0	—	—

Note: Readership and voting percentages are from the 2005 pre-campaign wave of the British Election Panel Study. Titles classified as ‘other’ include the Financial Times, the Aberdeen Press and Journal, the Daily Star, the Glasgow Herald and the Scotsman, and the category also included those who indicated no particular newspaper preference. Circulation figures reflect each paper’s average daily sales in January 2009 as reported by the Audit Bureau of Circulations.

Observe that, in Table 1, the readers of different newspapers vary considerably in their party preferences, with 49.3% of *Daily Mirror* readers having voted for the Labour party in 2005, as compared with 8.4% of *Telegraph* readers. This suggests that the readers of different newspapers may well vary systematically on attributes that are also correlated with their vote choice. For this reason, I control for a whole host of potentially confounding variables (denoted \mathbf{A}_i in equation (1)). In particular, in all specifications, I control for each individual’s vote choice in 2005, preferences on taxation vs. spending, ideological moderation³², rating of Brown in 2005, education, income, age, gender, region, union membership, ethnicity, and self-reported level of political attention. With the

³²Measured by folding over the taxation vs. spending scale, as in Ladd and Lenz (2009).

exception of political attention—only available from 2009—I measure these variables before the financial crisis in order to avoid potential post-treatment bias.³³

Due to the binary nature of Y_i , I estimate equation (1) using a logit estimator, and instrument for individuals’ news exposure following the crisis using a two-stage residual inclusion (2SRI) approach. Alongside the two-stage predictor substitution (2SPS) approach, the 2SRI approach is one of the main approaches that have been used to extend the linear two-stage least squares (2SLS) approach to non-linear models (Blundell and Smith 1989; Terza, Basu and Rathouz 2008). Like the 2SLS approach, the 2SPS approach requires that we substitute fitted values from the first-stage regression for the endogenous regressor in the second-stage equation. However, unlike 2SLS, this does not necessarily produce consistent estimates in the non-linear case. In the 2SRI approach, we instead include the first-stage residuals as additional regressors in the second-stage equation, while retaining the endogenous regressors. While 2SPS is more frequently used in a non-linear context, only 2SRI delivers consistent estimates in general. For comparison, I re-estimate my main specifications using 2SLS and 2SPS in Tables 5 and 6, and obtain results of similar substantive and statistical significance (see Appendix B).

4 Results

4.1 Evidence for News Media Effects on Voter Beliefs

Table 2 reports 2SRI estimates for logit models of the effect of newspaper readership on individuals’ attribution of responsibility to different institutions and individuals following the global financial crisis of 2007–2008. Respondents were able to choose among ten possible institutions or individuals, and I model the effect of newspaper readership on voter attribution of blame to each separately. Although the magnitude of the effect of newspaper readership on voters is not directly interpretable from the coefficient estimates in Table 2, we are still able to infer the direction and statistical significance of the effect for each newspaper and each option from the table of results.

The results reported in Table 2 suggest that, in many instances, newspaper readership had a substantial and statistically significant effect on voters’ attribution of blame to a particular institution or individual for the financial crisis of 2007–2008. For instance, the coefficient estimates in columns (3) and (4) of Table 2 imply that a regular reader of the

³³Unlike in Ladd and Lenz (2009), I do not control for individuals’ parents’ party preference or values as these were not asked of respondents in this survey. I also do not control for respondents’ prior party identification at this stage, due to the large number of missing values for respondents in my sample. However, I do not believe this is particularly worrying, as we would expect respondents’ long-term party attachments to be highly correlated with their voting history.

Table 2: 2SRI Analysis of News Media Effects on Voters' Blame Attribution

	Who Do You Think is Responsible for the Current Financial Crisis?								
	(1) Brown	(2) UK Govt	(3) US Banks	(4) Bush	(5) EU	(6) UK Banks	(7) Borrowers	(8) Oil	(9) Int'l Finance
Sun	0.723 (0.459)	0.343 (0.416)	-1.621* (0.666)	-0.277 (0.452)	0.862 (0.485)	-0.827 (0.470)	-0.896* (0.413)	0.381 (0.548)	-0.854* (0.376)
Daily Mail	0.269 (0.441)	0.283 (0.397)	0.037 (0.653)	-0.305 (0.415)	-0.407 (0.488)	-0.052 (0.468)	0.038 (0.374)	0.065 (0.520)	-0.124 (0.366)
Telegraph	0.955* (0.441)	-0.159 (0.393)	0.443 (0.812)	-0.413 (0.425)	0.224 (0.502)	-0.064 (0.511)	0.043 (0.382)	-0.441 (0.686)	-0.327 (0.370)
Guardian	-0.435 (0.611)	-0.103 (0.458)	1.148 (1.924)	0.546 (0.446)	-2.080 (2.858)	1.052 (0.665)	0.034 (0.429)	0.213 (0.613)	0.639 (0.447)
Daily Express	1.094 (0.775)	-0.386 (0.708)	-0.726 (0.850)	-0.194 (0.692)	0.906 (0.702)	-0.705 (0.749)	-1.056 (0.747)	-0.212 (1.373)	-0.748 (0.623)
Daily Mirror	-1.381** (0.514)	-0.333 (0.503)	-0.361 (0.576)	-0.283 (0.499)	-0.271 (0.609)	0.072 (0.515)	-0.896 (0.477)	0.209 (0.601)	-0.243 (0.430)
Times	1.148 (0.589)	0.332 (0.563)	0.989 (0.936)	1.331* (0.533)	0.245 (0.664)	0.839 (1.008)	-0.206 (0.527)	-0.558 (1.148)	0.511 (0.557)
Independent	2.426 (1.516)	1.056 (1.373)	3.755 (17.771)	-0.679 (1.497)	-1.438 (8.457)	0.782 (6.011)	-2.569 (1.656)	0.187 (3.782)	2.217 (2.011)
Other	0.493 (0.726)	0.466 (0.592)	-0.583 (1.127)	0.027 (0.595)	0.126 (0.780)	-0.717 (0.670)	-0.360 (0.555)	0.196 (0.777)	-0.264 (0.556)
Intercept	0.776 (0.471)	-0.057 (0.371)	1.763** (0.566)	-1.233** (0.430)	-0.783 (0.537)	1.739*** (0.487)	-1.273*** (0.377)	-2.830*** (0.605)	0.458 (0.399)
# Individuals	1,447	1,447	1,447	1,447	1,447	1,447	1,447	1,447	1,447
Log Likelihood	-661.137	-839.875	-601.925	-801.124	-651.749	-670.845	-871.769	-545.037	-906.968
AIC	1,394.274	1,751.75	1,275.849	1,674.247	1,375.498	1,413.690	1,815.539	1,162.075	1,885.937

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

Note: Cell entries present 2SRI coefficient estimates from logit models of individuals' attribution of responsibility following the 2007–2008 financial crisis in Britain. In all models, the baseline category is individuals who do not regularly read a daily morning newspaper. All models include first-stage residuals as additional controls, and also control for each individual's vote choice in 2005, preferences on taxation vs. spending, ideological moderation, rating of Brown in 2005, education, income, age, gender, region, union membership, ethnicity, and self-reported level of political attention. Bootstrapped standard errors are reported in parentheses.

right-wing tabloid, the *Sun*, was considerably less likely to blame American banks for the financial crisis as a similar individual who did not regularly read a daily newspaper, but a regular reader of the right-wing broadsheet, the *Times*, was considerably more likely to blame George W. Bush, former president of the US, for the financial crisis than a similar individual who did not regularly read a daily newspaper.

Table 3: Who Blamed Brown for the 2007–8 Financial Crisis?

	Predicted Probability of Blaming Brown	2.5 % CI	97.5 % CI
Read the <i>Sun</i>	0.278	0.126	0.431
Read the <i>Daily Mail</i>	0.197	0.078	0.315
Read the <i>Telegraph</i>	0.327	0.155	0.500
Read the <i>Guardian</i>	0.108	0.008	0.208
Read the <i>Daily Express</i>	0.359	0.068	0.649
Read the <i>Daily Mirror</i>	0.045	−0.003	0.093
Read the <i>Times</i>	0.371	0.108	0.634
Read the <i>Independent</i>	0.679	0.085	1.274
Read other paper	0.235	0.043	0.427
Read no paper	0.158	0.067	0.249

Note: Predicted probabilities were generated based on coefficient estimates from Model (1) in Table 2. Values for other variables were chosen to generate a voter with the following profile: white, middle-income, male residing in England, aged above 60, not a union member, does not regularly read any other paper, and voted Labour in 2005. All other variables were held at their median. Confidence intervals are based on standard errors generated by the `predict` package in R.

For the remainder of this section, I focus my discussion on coefficient estimates for Model 1, which examines the effect on newspaper readership on voters' attribution of blame for the ongoing financial crisis to the incumbent Labour prime minister Brown. To aid interpretation, Table 3 reports the predicted probability that a regular reader of each (or none) of the major newspapers would blame Brown for the financial crisis,

based on these estimates. These estimates suggest that regular readers of the right-wing broadsheet, the *Telegraph*, were twice as likely to blame Brown for the financial crisis relative to similar individuals who did not regularly read the news, but regular readers of the Labour-supporting tabloid, the *Daily Mirror*, were about a quarter as likely to do so (see Table 4). There is also some evidence that regular readers of the *Independent* may have been more likely to blame Brown for the financial crisis as a consequence. Although not statistically significant, the coefficient on the *Independent* in Model 1 is both positive and large, and implies that a regular *Independent* reader was more than four times as likely to blame Brown for the financial crisis as a similar individual who did not regularly read a newspaper. However, due to the small number of regular *Independent* readers in my sample, this figure is very imprecisely estimated; consequently, we cannot actually rule out that regular readers of the *Independent* were *less* likely to blame Brown for the financial crisis than similar individuals who did not regularly read a newspaper.

4.2 Media Coverage of the Crisis

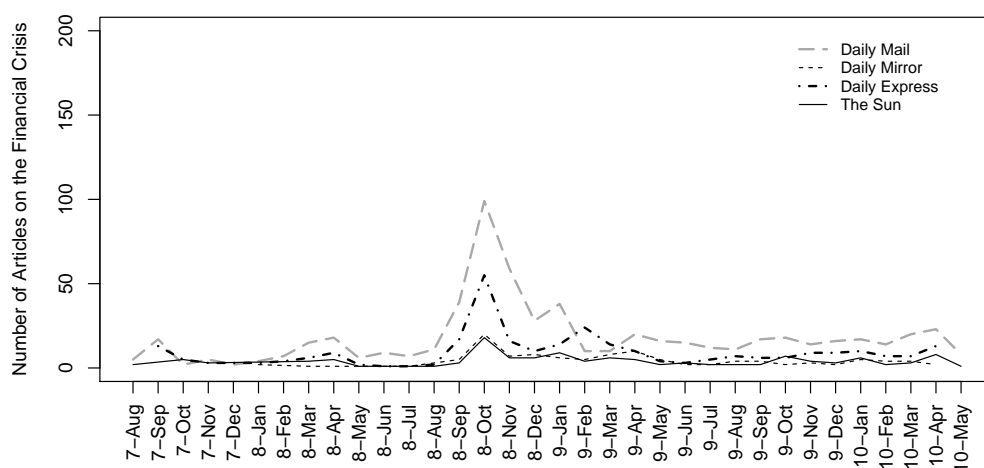
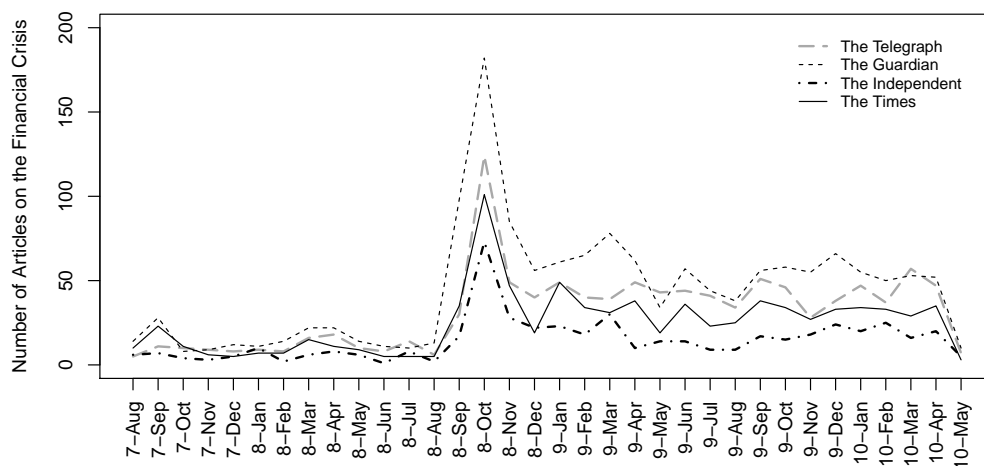
In this section, I investigate whether the variation in attitudes among respondents that I identify in Section 4.1 was plausibly related to differences in how their preferred newspaper covered the financial crisis of 2007–8 and its aftermath. Specifically, I ask (1) how much each newspaper mentioned the financial crisis, (2) whether newspapers varied in the topics they focused on when discussing the financial crisis, and (3) whether newspapers framed these topics differently. To do so, I employ a structural topic model (Roberts et al. 2014) to analyze newspaper coverage of the financial crisis in the UK between 9 August 2007 (shortly before the collapse of Northern Rock) and 6 May 2010 (the day before the 2010 election). To create a text corpus for the analysis, I use LexisNexis to collect all articles that were published in eight major British newspapers³⁴ between these two dates that contained the words “financial” and “crisis” within five words of each other.³⁵ I exclude articles appearing in the sports and culture sections of each paper, producing a corpus comprising 5060 articles in total. As is standard, I apply several text pre-processing techniques to exclude stop words and to lemmatize the text.

To indicate how media attention to the financial crisis varied between newspapers and over time, Figure 3 plots the monthly trend in the number of articles relating to the financial crisis published by each paper. Two facts are apparent. First, there was hardly any discussion of the financial crisis until October 2008—after the collapse of Lehman

³⁴These are: the *Telegraph*, the *Guardian*, the *Independent*, the *Times*, the *Daily Mail*, the *Daily Mirror*, the *Daily Express* and the *Sun*.

³⁵This approach ensures that a newspaper article referring to, for instance, the “financial market crisis” is not overlooked.

Figure 3: Trends in Media Attention to the Financial Crisis



Brothers—when coverage spikes across the board. After this point, media attention to the crisis levels off, but remains higher than previously. Second, broadsheets devoted considerably more space to the financial crisis than did tabloids. On average, broadsheets printed 115 articles mentioning the financial crisis each month, whereas the tabloids printed, on average, 33.8 articles on the financial crisis in the same period.³⁶ Given the substantial difference in the volume and depth of coverage between these two types of newspapers, I analyse broadsheet and tabloid coverage of the financial crisis separately. In the main paper, I restrict my analysis to the four broadsheets—the *Telegraph*, the *Guardian*, the *Independent* and the *Times*—while pooling Sunday and weekday editions of each paper. Results from a structural topic model of tabloid coverage of the financial crisis are presented in Appendix A.1.³⁷

Following Barnes and Hicks (2018), I employ a structural topic model to analyse how British newspapers differed in their coverage of the financial crisis. This is preferred to other approaches to topic modeling, as unlike, for instance, a latent Dirichlet allocation approach (Blei, Ng and Jordan 2003), a structural topic model (STM) allows us to directly model the effect of article characteristics (like publication title or time) on topic prevalence (how often a topic appears) as well as content (the words used to discuss a given topic) (Roberts et al. 2014). I specify the presence of four topics³⁸, and again following Barnes and Hicks (2018), I allow topic prevalence to vary with a spline function of the publication month and across the four newspapers, and allow the content of each topic to vary across newspapers. Figure 4 illustrates the content of each topic estimated by the STM using wordclouds, with larger font sizes indicating that a word was used more frequently when discussing that topic.

Topic 1 deals with the economic impact of the recession, most prominently featuring the word “market”, but also “housing”, “price” and “growth”. When we look at the articles considered most representative of Topic 1,³⁹ we see that these focus on developments like the impact of falling consumer spending on British businesses⁴⁰, or the impact of the recession on stock and house prices⁴¹. Topic 2 focuses on Westminster (or parliamentary) politics, with Brown, Cameron, Labour and the Conservatives (‘Tories’)

³⁶Notably, the *Sun* only published 124 articles mentioning the financial crisis throughout this period, an average of 3.65 per month, of which many were comically tangential to the crisis.

³⁷In Appendix A.2, I also report results from a structural topic model analysis including both broadsheets and tabloids, one including the *Daily Mail* in the same analysis as the broadsheets, and one excluding Sunday papers from consideration. The latter may be important, as the Sunday edition of each paper typically has a different editorial team, and so may frame the same topic differently from the weekday edition of that paper.

³⁸I experimented with topic counts K between 3 and 15. Among the values considered, $K = 4$ produced topics that were the most substantively meaningful while also being distinct.

³⁹These only include articles which devoted at least half their content to this topic.

⁴⁰‘Retailers in the line of fire’, *Independent*, 25 July 2008.

⁴¹‘Britain’s biggest mid-market private companies’, *Times*, 19 October 2008.

all featuring prominently. The articles most representative of this topic concern the finer points of electoral politics in Britain in the shadow of the crisis, such as which party leader won the televised debates preceding the 2010 election⁴², or infighting within the Labour party⁴³. Topic 3, on the other hand, deals with the various domestic and international policy responses to the financial crisis, their merits and their consequences, with representative articles evaluating the use of fiscal rather than monetary policy in a recession⁴⁴, or whether the depreciating pound should be a cause for concern.⁴⁵ Finally, Topic 4 focuses on the various banking crises and bailouts that took place from 2007 onwards (note the references to Lloyds and Northern Rock). Here, representative articles narrated the events leading up to the bankruptcy of Lehman Brothers in September 2008⁴⁶, or the bailout of Northern Rock⁴⁷.

Figure 5 plots the marginal topic proportion for each newspaper and topic (alongside the 95% confidence interval for each estimate), revealing no statistically significant difference in the attention given by the various broadsheets to each topic as a proportion of their total coverage of the financial crisis. However, we do find substantial differences in how the broadsheets *framed* the relevant topics—that is, the vocabulary each paper chose to address a topic—and in a manner consistent with the attitudes of their readers towards Brown following the crisis (as identified in Section 4.1). Figures 6 and 7 present pairwise comparisons of the vocabulary used by various broadsheets when discussing parliamentary politics and the policy response to the crisis (Topics 2 and 3 in Figure 4 above) – with larger font sizes indicating a stronger association between that word and that topic. Observe that, for instance, although the *Guardian* may have been marginally more predisposed to focus on electoral politics in its coverage of the financial crisis than the *Telegraph* overall (see point estimates in Figure 4), the *Telegraph* was more likely than both the right-wing *Times* and the left-wing *Guardian* to focus narrowly on Brown in its coverage of electoral politics after the crisis (see Figure 6). Further, we find that the *Telegraph* was also more likely to focus on “debt”, the “pound”, and “cuts” than all of the other broadsheets in its discussion of the British policy response to the crisis (see Figure 7).⁴⁸

⁴²‘The people’s election: the campaign’, *Independent*, 5 May 2010.

⁴³‘Supergroup, or a sad tribute act?’, *Times*, 5 October 2008.

⁴⁴‘Only a drastic cut in interest rates can avert disaster’, *Times*, 20 October 2008, and ‘Darling’s step into the unknown’, *Times*, 25 November 2008.

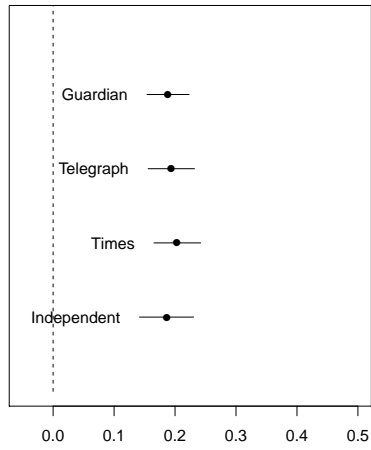
⁴⁵‘Pound’s fall may be herald of recovery, not of doom’, *Times*, 17 November 2008.

⁴⁶‘The making of a crash’, *Guardian*, 4 September 2009.

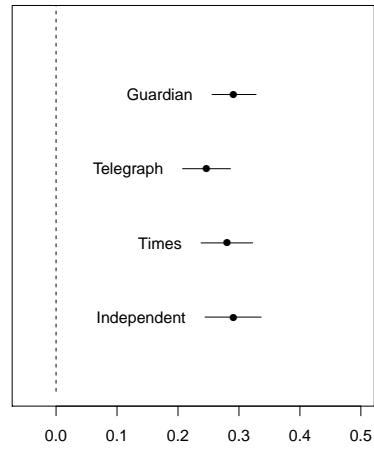
⁴⁷‘Why King gave up trying to hold back the waves’, *Telegraph*, 23 September 2007.

⁴⁸Consistent with the point estimate for *Independent* readers in Model 1 in Table 2, we find that the *Independent* was even more likely to focus on Brown in its coverage of the crisis than the *Telegraph*. Moreover, I document several instances where *Independent* columnists delivered damning indictments of Brown’s handling of the crisis (for instance, in ‘Mr Cameron’s struggle to regain the initiative’, printed

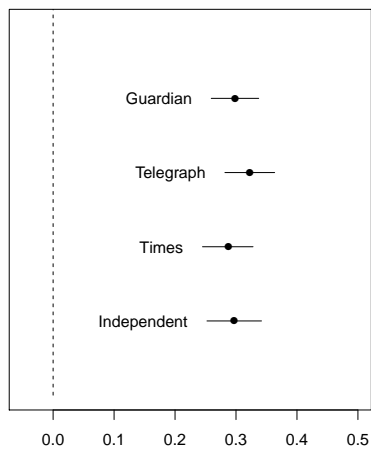
Figure 5: Topical Prevalence by Broadsheet



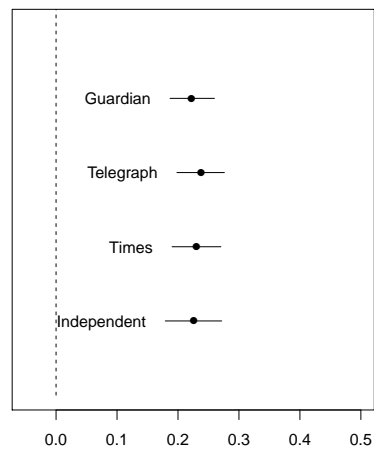
(a) Economic Impact of Recession



(b) Westminster Politics



(c) Policy Response to Recession



(d) Bank Failures & Bailouts

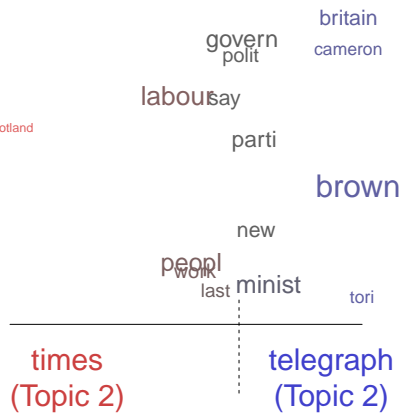
Note: This figure plots the between-newspaper differences in average topic proportions for each topic, based on a structural topic model of newspaper coverage of the financial crisis.

Figure 6: Broadsheet Coverage of Westminster Politics after the Crisis



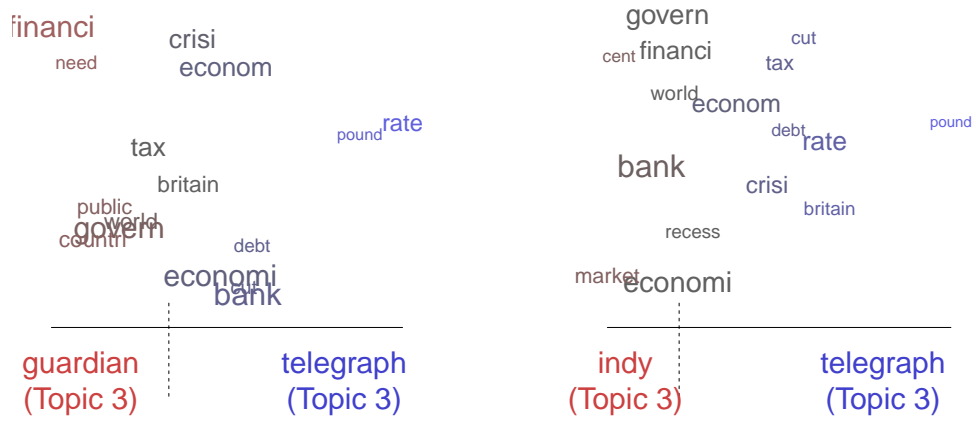
(a) Guardian vs. Telegraph

(b) Independent vs. Telegraph



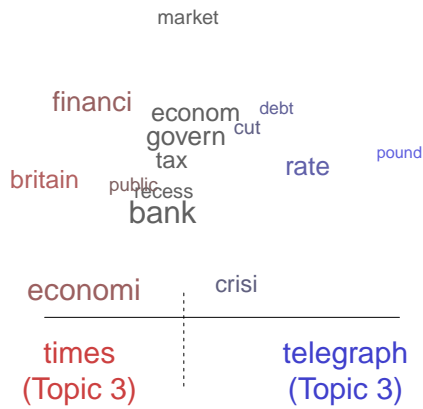
(c) Times vs. Telegraph

Figure 7: Broadsheet Coverage of the Policy Response to the Crisis



(a) Guardian vs. Telegraph

(b) Independent vs. Telegraph



(c) Times vs. Telegraph

This impression is corroborated by a survey of relevant articles from the *Telegraph*, revealing numerous instances where the paper directed particular vitriol at Brown and Labour’s handling of the crisis and the economy more generally. An example is given by the *Telegraph*’s leader on 25 November 2008, immediately following Darling’s pre-Budget report, when it reprimanded the Labour government for its continued efforts to emphasize the international dimension of the crisis⁴⁹:

...it is not America’s fault that we have the biggest budget deficit in the developed world; or that we have the highest level of personal debt in the world; or that we have one of the most unbalanced economies with an over-reliance on housing, financial services and the public sector. This crisis should be stamped “Made in the UK”.

This contrasts with even the *Times*’ more measured response that same day⁵⁰:

Doesn’t this mean that Mr Darling has taken an enormous gamble with the British economy and public finances? The answer, as usual in economics, is “yes” and “no”: “yes” in the sense that future levels of debt, public borrowing and taxes depend entirely on whether the policies announced yesterday succeed in pulling the economy off the rocks; “no” in the sense that a more “cautious” fiscal policy would entail even greater risks.

Another example is given by the *Telegraph*’s response to the bailout package announced in October 2008⁵¹:

Let there be no doubt about the extent of Gordon Brown’s culpability for the crisis. As Chancellor, he raised huge sums and borrowed yet more in order to build a client state of tame Labour voters on the public payroll – whether as employees or claimants. He pushed Britain to live way beyond its means not merely in this way, but by putting excessive amounts of money into circulation that banks could lend on with cavalier irresponsibility. He then failed properly to regulate those banks. The debt mountain he created has yet to wreak its full horror on society. He spent so wildly that when things went wrong... we were desperately short of funds to make repairs. As a result, taxes will have

on 18 October 2008, when the *Independent* highlighted both ‘the manner in which Mr Brown piled debt on to the national credit card’ [prior to the crisis], and his ‘failure to regulate the financial sector adequately’.). However, given the small number of *Independent* readers in the BEPS sample, we cannot draw conclusive inferences regarding the effect of the *Independent* on its readers.

⁴⁹‘Labour lands Britain in a £1 trillion hole’, *Telegraph*, 25 November 2008.

⁵⁰‘Darling’s step into the unknown’, *Times*, 25 November 2008.

⁵¹‘Could we have an Opposition please?’, *Telegraph*, 11 October 2008.

to go up, and public services may have to endure damaging cuts. Finally, when the time came to clear up the mess, he dithered and brooded while the stock market went into free fall and banks went to the wall.

It is plausible, then, that regular readers of the *Telegraph* may have been more likely to associate Brown personally with the financial crisis than similar individuals who read other papers, to be persuaded that “overspending” under Brown contributed to the severity of the crisis in Britain, and to dwell on the possible implications of the bank bailout package spearheaded by Brown for public sector debt and the exchange rate, and also the tax rises and public spending cuts these might entail in future.

4.3 Implications For Vote Choice in 2010

Finally, I investigate whether the view that Brown was responsible for the financial crisis of 2007–2008 was damaging to the electoral fortunes of the Labour party in 2010. Whether this was the case is crucial for our assessment of the electoral significance of the news media effects identified in Section 4.1. I evaluate this by regressing individuals’ vote intention (as measured in 2009) and self-reported vote choice for the 2010 general election (as measured in 2010) on their assessment of the extent to which various individuals and institutions were responsible for the financial crisis (as measured in the 2009 wave of the BEPS survey). The results of my analyses are reported in Table 4. Models (1) and (2) analyse the full sample, whereas Models (3) and (4) only consider those individuals who voted Labour in 2005. As before, I use a logit estimator, and also control for past vote choice and other observable characteristics.

We find that, even after controlling for past vote choice, individuals who considered Brown responsible for the economic crisis in 2009 were substantially less likely to indicate an intention to vote for the Labour party in the same year. Meanwhile, individuals who considered the Labour government—but not necessarily Brown personally—responsible for the financial crisis were *also* less likely to indicate support for Labour later that year. Moreover, the magnitudes of the effects remain similar in size even when we restrict our sample to include only those who had voted Labour in 2005, suggesting that these effects are not being simply driven by differential trends among voters who did not vote Labour in 2005. A further illustrative example is provided by Figure 8, which shows the predicted probability of voting Labour in 2010 for a white middle-income non-union-member male aged over 60 residing in England who voted Labour in 2005 (all other variables held at their medians). The figure is based on the estimates reported in Table 4 and shows that such an individual is estimated as having a 42.6% probability of voting Labour in 2010 if they did not think that Brown was responsible for the crisis, and

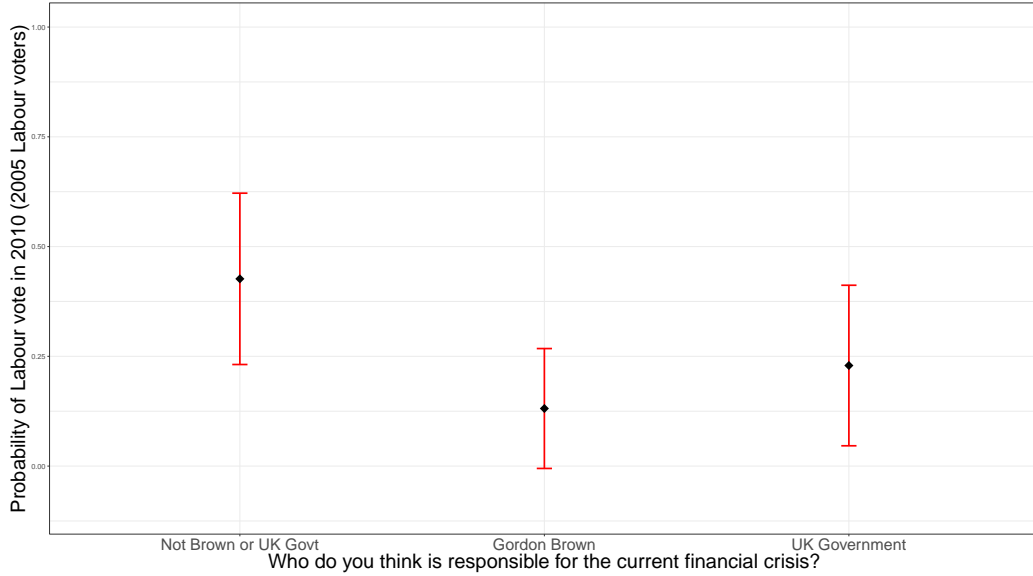
Table 4: Implications of Voter Blame Attribution for Party Choice

	Party preference			
	(1) Labour in 2009 (All voters)	(2) Labour in 2010 (All voters)	(3) Labour in 2009 (Lab' 05 only)	(4) Labour in 2010 (Lab' 05 only)
Brown responsible for FC	-2.378*** (0.463)	-1.953*** (0.369)	-2.138*** (0.505)	-1.595*** (0.475)
UK govt responsible for FC	-1.035*** (0.289)	-0.809** (0.264)	-1.131*** (0.329)	-0.917** (0.331)
US banks responsible for FC	0.048 (0.305)	0.286 (0.279)	0.443 (0.356)	0.523 (0.350)
Bush responsible for FC	0.357 (0.238)	0.732*** (0.216)	0.431 (0.279)	0.558* (0.269)
EU responsible for FC	0.573 (0.350)	0.885** (0.306)	0.487 (0.403)	0.530 (0.392)
UK banks responsible for FC	-0.184 (0.267)	-0.092 (0.242)	-0.397 (0.319)	-0.196 (0.302)
Borrowers responsible for FC	0.225 (0.204)	0.171 (0.187)	0.490* (0.237)	0.320 (0.228)
Oil responsible for FC	-0.204 (0.268)	-0.119 (0.250)	-0.393 (0.296)	-0.076 (0.300)
Intl finance responsible for FC	0.525* (0.216)	-0.021 (0.197)	0.337 (0.249)	-0.339 (0.246)
2005 Lab voter	3.077*** (0.458)	1.935*** (0.365)		
2005 Cons voter	-1.498* (0.662)	-0.927* (0.448)		
2005 LD voter	0.046 (0.488)	-0.218 (0.394)		
Intercept	-3.663*** (0.680)	-3.698*** (0.615)	-0.060 (0.695)	-2.339 (0.704)
# Individuals	1,447	1,365	529	499
Log Likelihood	-396.932	-457.965	-291.405	-298.408
AIC	847.864	969.930	630.811	644.816

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

Note: Cell entries present coefficient estimates from logit models of individuals' vote choice. In all models, the reference category is individuals who do not consider any of these institutions or individuals to have been responsible for the ongoing financial crisis. All models include controls for each individual's vote choice in 2005, preferences on taxation vs. spending, ideological moderation, rating of Brown in 2005, education, income, age, gender, region, union membership, ethnicity, and self-reported level of political attention. Standard errors are reported in parentheses.

Figure 8: Economic Voting in Britain after the 2008 Financial Crisis



Note: This figure allows us to compare the predicted probabilities of a Labour vote in 2010 for an individual who believed Brown responsible for the ongoing financial crisis, an individual who believed the UK government responsible, and an individual who believed neither were responsible for the financial crisis. Predicted probabilities were generated based on coefficient estimates from Model (2) in Table 4. Values for other variables were chosen to generate a voter with the following profile: white, middle-income, male residing in England, aged above 60, not a union member, does not believe any other individual or institution responsible for the financial crisis, and voted Labour in 2005. All other variable were held at their median.

an approximately 13.1% chance of voting Labour in 2010 if they did think that Brown was responsible. Meanwhile, all else equal, those who believed Labour, generally, was responsible for the crisis had a 22.9% probability of voting Labour again in 2010 (though here we cannot reject the hypothesis of no difference between the likelihood of those who believed Labour responsible for the crisis and those who did not voting Labour again). It appears, then, that even Labour supporters' decisions in 2010 were enormously influenced by their opinions about whether Brown was responsible for the financial crisis, and it is plausible that these opinions were partly acquired from the newspapers they regularly read.

5 Conclusion

How does news media coverage influence voters' interpretation, and response, to political events – and might it have any electoral consequences? In this paper, I investigate how newspaper coverage may have influenced how British voters interpreted the financial crisis

of 2007–2008 – and in particular, how it may have influenced their attribution of blame to different institutions and individuals following the crisis. At the time, senior figures within the opposition Conservative party, including party leader David Cameron, were keen to pin much of the blame for the economic turmoil of 2007 onwards on Gordon Brown and the incumbent Labour government. The charges laid at his feet were the following: that Brown’s policy of ‘light-touch regulation’ of the financial sector during his term as Chancellor of the Exchequer had made the UK especially vulnerable to a global financial crisis, and also that Labour’s spending plans had endangered the British economy, and also its prospects for recovery. As late as 2015, the Labour party leader Ed Miliband continued to be dogged by accusations that the Labour party in government under Brown had destroyed the British economy.

In this paper, I investigate the extent to which differences in news media coverage of the events of 2007–2008 onwards increased the potency of these arguments among the British public. I identify a substantial and statistically significant effect of news media coverage on how British voters assigned blame to individuals and institutions for the global financial crisis. Importantly, I find that news media coverage seems to have significantly influenced whether and how much British voters blamed the prime minister Gordon Brown for ongoing economic turmoil, with regular readers of the right-wing broadsheet, the *Telegraph* being twice as likely to attribute blame to Brown than similar individuals who did not read a daily newspaper, and readers of the left-wing tabloid, the *Daily Mirror*, being a quarter as likely to do so. These patterns are corroborated by a structural topic model analysis of how different newspapers covered the financial crisis, which reveals that the *Telegraph* was particularly likely to focus on Brown when discussing the financial crisis, and also to highlight that his policies might imply slower growth, higher taxes and public spending cuts in the near future. Finally, I show that those who believed Brown to be responsible for the financial crisis were substantially less likely to vote Labour, even when we only consider those who voted Labour in 2005. Cumulatively, these analyses suggest that the editorial choices made by newspaper staff may have a significant influence on voter opinion, and thus, the outcomes of elections.

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with a spline function of the publication month and across the four papers, and allow topic content to vary across papers. Again, $K = 4$ seems to be the number of topics which produces the most substantively meaningful and interpretable results. Figure 9 presents wordclouds that graphically depict the content of each topic estimated by the STM. Unsurprisingly, the topics that are identified by the analysis as characterizing the tabloid coverage of the crisis are not identical to those that preoccupied the broadsheets. In particular, we do not see any substantial discussion of the policy responses to the crisis by the tabloids (Topic 3 in Figure 4), but do see more extensive discussion of the economic impact of the crisis as felt by households and firms in Britain (Topics 1 and 2 in Figure 9).

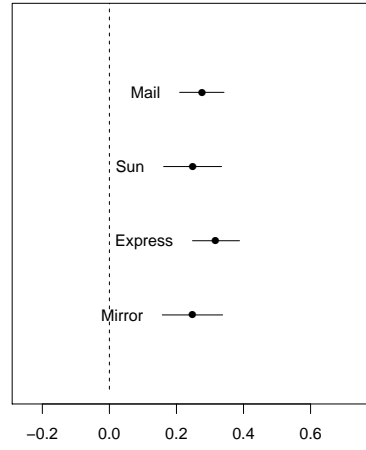
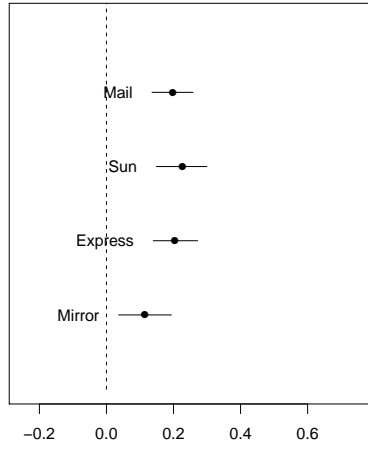
Next, Figure 10 presents the marginal topic proportion estimated by the STM for each tabloid and topic, alongside the 95% confidence interval for each estimate. This time, we find that the Labour-supporting *Daily Mirror* was substantially more likely than its peers to devote attention to one of the topics—parliamentary politics—and less to all the others. Moreover, although its coverage of electoral politics focused on Brown more than did the coverage of the crisis by the other tabloids (see Figure 11), its presentation of the events and of Brown’s handling of the crisis was far more favorable—bordering on sycophantic—when compared with that presented, for instance, by the *Telegraph*. For instance, on 19 October 2008, shortly after the bank bailout package was finalised, the *Mirror* described Brown as “a serious leader for serious times.”⁵² It proceeds:

He is a round peg in a round hole. He does not downplay the significance of what has happened. His analysis has been sharper than that of other leaders. The decisions taken to stabilise the economy have shown bold leadership, followed overseas. Cameron meanwhile is looking confused and out of his depth, one day supporting Labour, the next day not, one day loving the markets, the next not so sure, all the time frightened of upsetting the multimillionaire short-sellers and hedge fund owners who bankroll his campaign.

The nature of this coverage is consistent with the estimated effect of *Mirror* readership we identify in Model 1 in Table 2 – which shows that regular readers of the *Mirror* were substantially less likely to hold Brown responsible for the crisis than similar individuals who did not read a daily newspaper. Therefore, it also corroborates the argument that, under particular circumstances, newspapers may have a substantial effect on voter opinion and, thus, electoral politics.

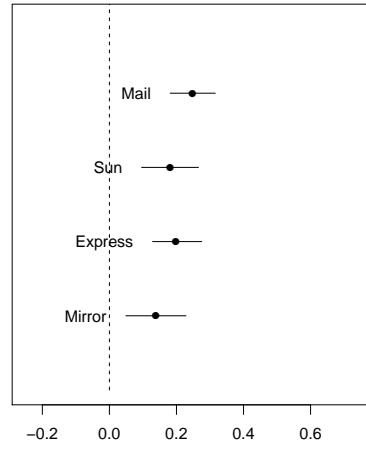
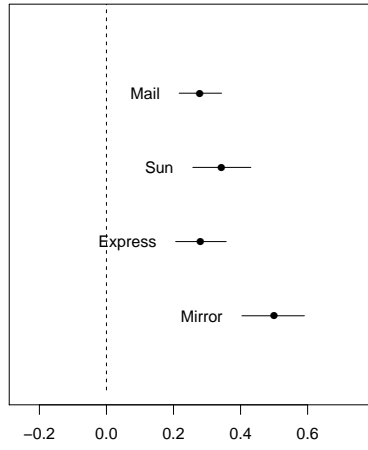
⁵²‘Why Brown is Britain’s only serious choice’, *Daily Mirror*, 19 October 2008.

Figure 10: Topical Prevalence by Tabloid



(a) Impact of Recession on Firms

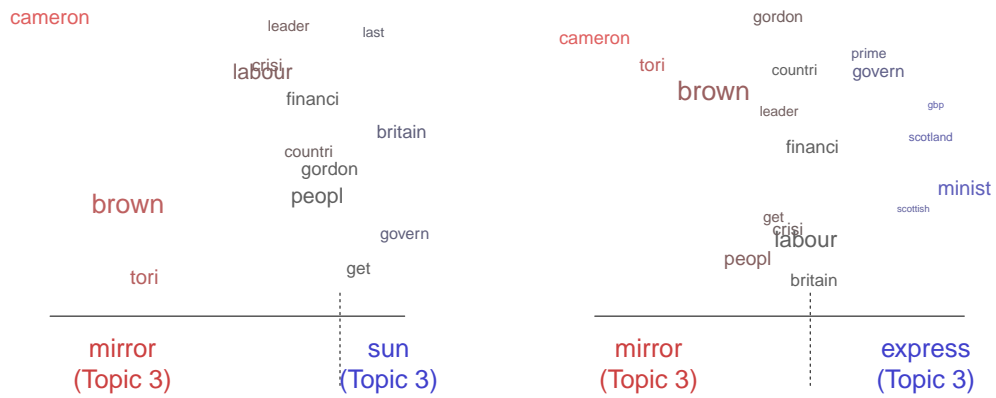
(b) Impact of Recession on Economy



(c) Westminster Politics

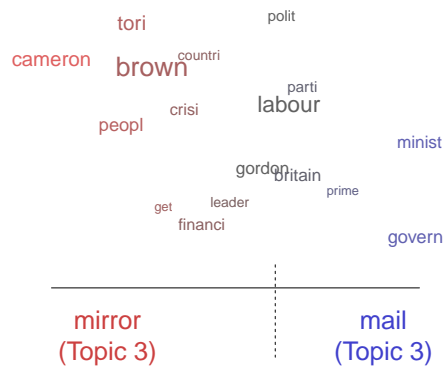
(d) Bank Failures & Bailouts

Figure 11: Tabloid Coverage of Westminster Politics after the Crisis



(a) Mirror vs. Sun

(b) Mirror vs. Express



(c) Mirror vs. Mail

A.2 Alternative Specifications

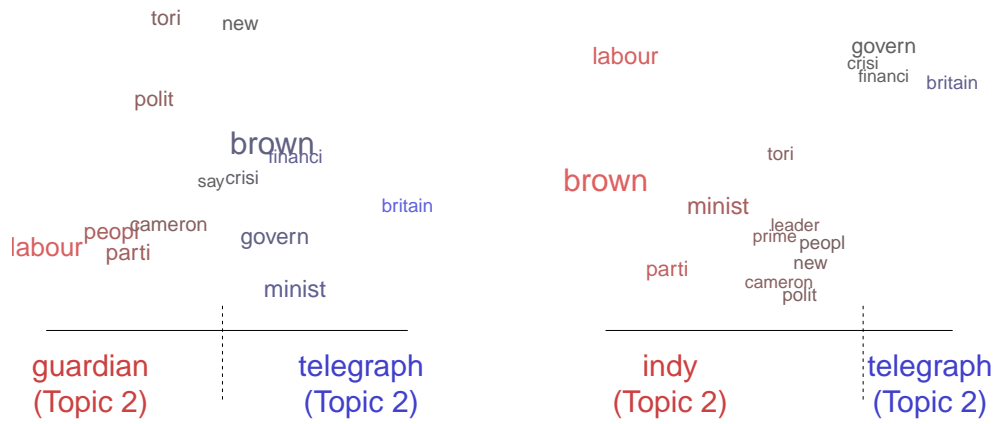
Figures 12—17 demonstrate the results from the STM analyses reported in the main paper to the choice of sample. Figures 12 and 13 replicate Figures 6 and 7 while pooling articles from broadsheets and tabloids in the same text corpus; figures 14 and 15 report results from an analysis including articles by the *Mail* in the same corpus as the four main broadsheets, and figures 16 and 17 report results from an analysis restricted to the weekday editions of each broadsheet.

B Robustness Checks

In this section, I demonstrate the robustness of the main results from the paper to alternative estimators. First, Table 5 replicates Table 2 from the paper using two-stage least squares (2SLS) instead of estimating a logit model using the two-stage residual inclusion (2SRI) instrumental variables estimator. The 2SLS approach requires that we estimate a linear probability model using 2SLS, instead of a logit model. However, this is problematic in cases with a binary dependent variable, such as mine – where we would expect there to be a non-linear relationship between the regressor of interest (respondents’ news exposure) and the dependent variable (respondents’ attribution of blame following the financial crisis). Use of a linear probability model in such cases will certainly produce biased parameter estimates, and also generate fitted values that are outside the range of feasible values. Regardless, we obtain substantively similar results to those in the main paper when using this alternative approach. For instance, we continue to find that both readers of the *Telegraph* were more likely to blame Gordon Brown for the financial crisis than otherwise similar non-readers, and readers of the *Mirror* less likely to do so.

Next, Table 6 replicates Table 2 from the paper using two-stage predictor substitution (2SPS) in place of two-stage residual inclusion (2SRI). The 2SPS approach presents an alternative means for extending the linear 2SLS approach to non-linear models (Blundell and Smith 1989; Terza, Basu and Rathouz 2008), and, like 2SLS, is implemented by substituting fitted values from the first-stage regression for the endogenous regressors in the second-stage equation. However, the 2SRI approach is preferred for the main specifications, as unlike both 2SLS (in the linear case) and 2SRI (in the non-linear case), the 2SPS estimator does not necessarily produce consistent parameter estimates. Regardless, the estimates we obtain using 2SPS are virtually identical to those obtained using 2SRI in the main body of the paper.

Figure 12: Framing Westminster Politics after the Crisis (All Papers)



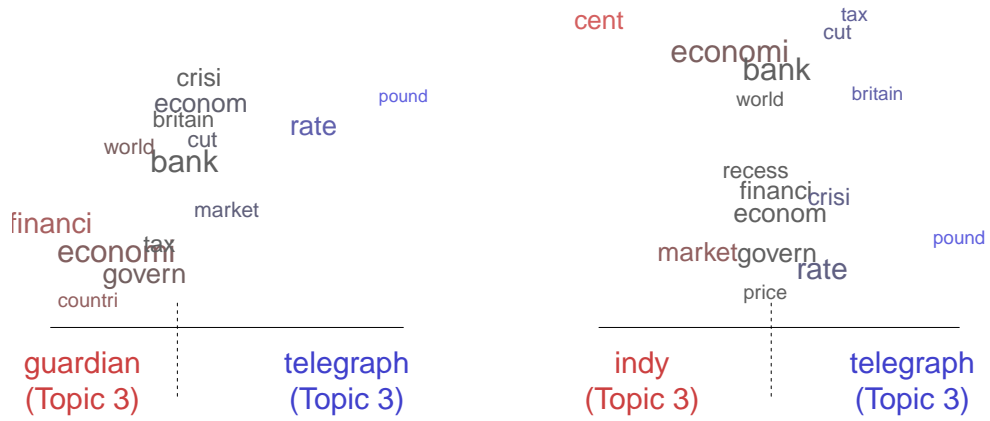
(a) Guardian vs. Telegraph

(b) Independent vs. Telegraph



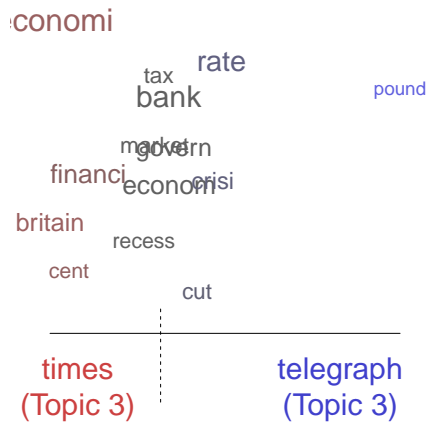
(c) Times vs. Telegraph

Figure 13: Framing the Policy Response to the Crisis (All Papers)



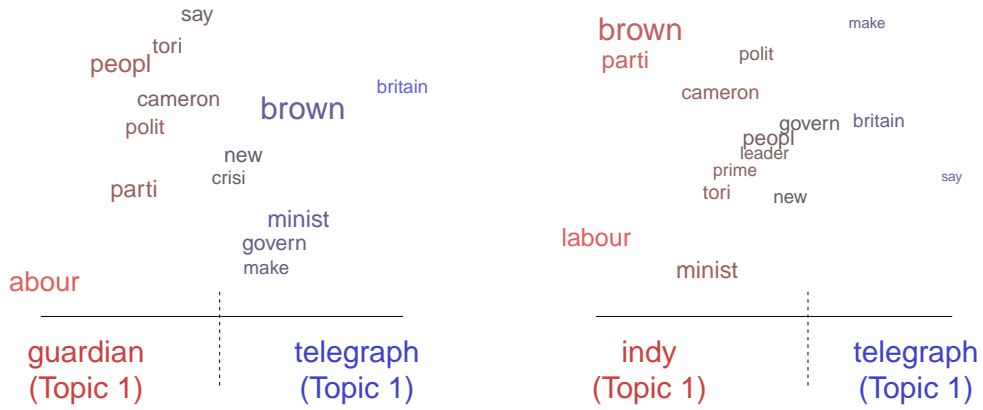
(a) Guardian vs. Telegraph

(b) Independent vs. Telegraph



(c) Times vs. Telegraph

Figure 14: Framing Westminster Politics after the Crisis (inc. Mail)



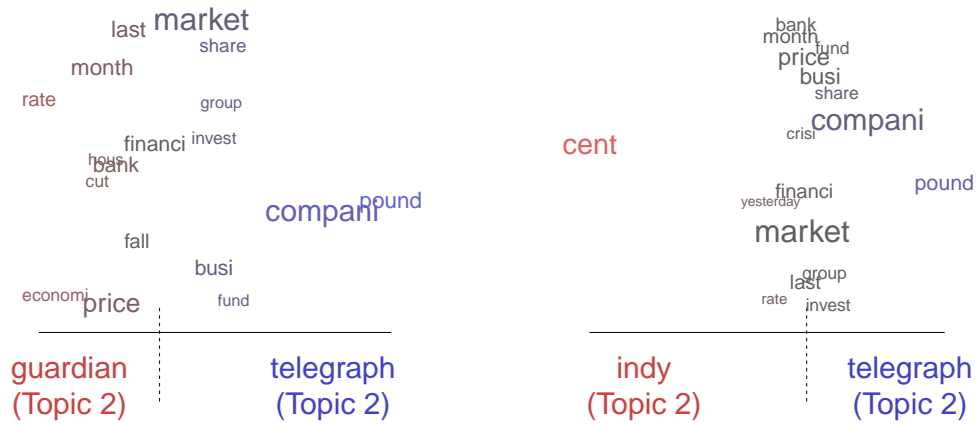
(a) Guardian vs. Telegraph

(b) Independent vs. Telegraph



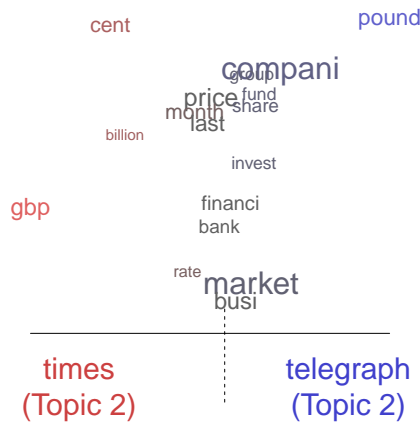
(c) Times vs. Telegraph

Figure 15: Framing the Policy Response to the Crisis (inc. Mail)



(a) Guardian vs. Telegraph

(b) Independent vs. Telegraph



(c) Times vs. Telegraph

Figure 16: Framing Westminster Politics after the Crisis (exc. Sunday papers)



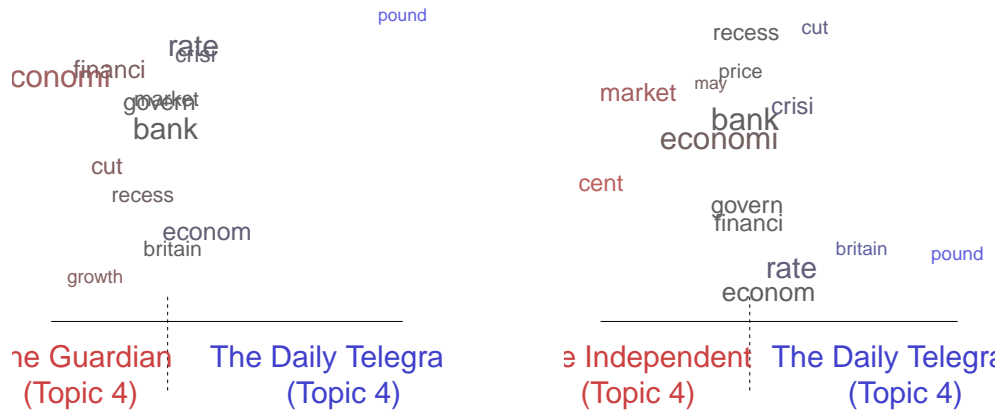
(a) Guardian vs. Telegraph

(b) Independent vs. Telegraph



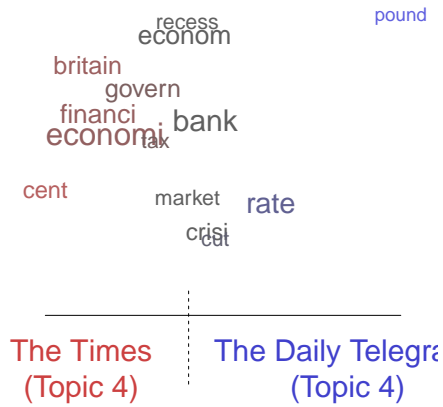
(c) Times vs. Telegraph

Figure 17: Framing the Policy Response to the Crisis (exc. Sunday papers)



(a) Guardian vs. Telegraph

(b) Independent vs. Telegraph



(c) Times vs. Telegraph

Table 5: 2SLS Analysis of News Media Effects on Voters' Blame Attribution

	Who Do You Think is Responsible for the Current Financial Crisis?								
	(1) Brown	(2) UK Govt	(3) US Banks	(4) Bush	(5) EU	(6) UK Banks	(7) Borrowers	(8) Oil	(9) Int'l Finance
Sun	0.093 (0.070)	0.062 (0.082)	-0.278*** (0.077)	-0.049 (0.079)	0.153* (0.075)	-0.136 (0.076)	-0.172* (0.079)	0.046 (0.064)	-0.204* (0.084)
Daily Mail	0.031 (0.069)	0.058 (0.079)	-0.009 (0.066)	-0.056 (0.074)	-0.067 (0.067)	-0.012 (0.066)	0.008 (0.079)	0.003 (0.057)	-0.030 (0.080)
Telegraph	0.163* (0.071)	-0.036 (0.079)	0.037 (0.059)	-0.069 (0.072)	0.037 (0.072)	-0.015 (0.064)	0.015 (0.083)	-0.025 (0.053)	-0.079 (0.080)
Guardian	-0.047 (0.064)	-0.027 (0.082)	0.070 (0.057)	0.109 (0.089)	-0.158** (0.054)	0.121 (0.064)	0.020 (0.092)	0.034 (0.068)	0.115 (0.080)
Daily Express	0.163 (0.129)	-0.087 (0.138)	-0.097 (0.103)	-0.032 (0.121)	0.154 (0.115)	-0.107 (0.114)	-0.209 (0.127)	-0.018 (0.098)	-0.164 (0.136)
Daily Mirror	-0.135* (0.067)	-0.059 (0.084)	-0.045 (0.075)	-0.045 (0.085)	-0.036 (0.070)	0.018 (0.079)	-0.177 (0.088)	0.023 (0.071)	-0.052 (0.092)
Times	0.173 (0.090)	0.065 (0.109)	0.071 (0.070)	0.272* (0.111)	0.035 (0.089)	0.072 (0.083)	-0.041 (0.110)	-0.040 (0.073)	0.105 (0.108)
Independent	0.436 (0.261)	0.253 (0.280)	0.255 (0.166)	-0.124 (0.271)	-0.134 (0.206)	0.103 (0.220)	-0.501 (0.256)	0.034 (0.222)	0.391 (0.256)
Other	0.064 (0.098)	0.091 (0.114)	-0.107 (0.097)	0.009 (0.111)	0.006 (0.097)	-0.117 (0.105)	-0.076 (0.112)	0.024 (0.082)	-0.065 (0.122)
Intercept	0.600*** (0.075)	0.564*** (0.086)	0.830*** (0.068)	0.272*** (0.080)	0.310*** (0.077)	0.831*** (0.073)	0.212** (0.082)	0.041 (0.061)	0.608*** (0.086)
# Individuals	1,447	1,447	1,447	1,447	1,447	1,447	1,447	1,447	1,447
R ²	0.304	0.166	0.073	0.041	0.063	0.046	0.030	0.022	0.051

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

Note: Cell entries present 2SLS coefficient estimates from linear models of individuals' attribution of responsibility following the 2007–2008 financial crisis in Britain. In all models, the baseline category is individuals who do not regularly read a daily morning newspaper. All models include controls for each individual's vote choice in 2005, preferences on taxation vs. spending, ideological moderation, rating of Brown in 2005, education, income, age, gender, region, union membership, ethnicity, and self-reported level of political attention. Bootstrapped standard errors are reported in parentheses.

Table 6: 2SPS Analysis of News Media Effects on Voters' Blame Attribution

	Who Do You Think is Responsible for the Current Financial Crisis?								
	(1) Brown	(2) UK Govt	(3) US Banks	(4) Bush	(5) EU	(6) UK Banks	(7) Borrowers	(8) Oil	(9) Int'l Finance
Sun	0.700 (0.453)	0.333 (0.412)	-1.595*** (0.470)	-0.261 (0.451)	0.869 (0.454)	-0.785 (0.444)	-0.865* (0.410)	0.380 (0.531)	-0.853* (0.366)
Daily Mail	0.260 (0.425)	0.279 (0.388)	0.024 (0.503)	-0.302 (0.396)	-0.420 (0.455)	-0.064 (0.447)	0.029 (0.363)	0.036 (0.501)	-0.126 (0.360)
Telegraph	0.949* (0.433)	-0.155 (0.385)	0.440 (0.561)	-0.413 (0.424)	0.243 (0.454)	-0.050 (0.481)	0.041 (0.375)	-0.347 (0.641)	-0.334 (0.368)
Guardian	-0.385 (0.577)	-0.115 (0.446)	0.922 (0.753)	0.540 (0.436)	-2.071 (1.208)	1.061 (0.658)	0.039 (0.417)	0.204 (0.580)	0.613 (0.433)
Daily Express	1.064 (0.779)	-0.391 (0.702)	-0.734 (0.743)	-0.187 (0.677)	0.914 (0.674)	-0.664 (0.725)	-1.041 (0.719)	-0.164 (0.926)	-0.736 (0.600)
Daily Mirror	-1.420* (0.712)	-0.347 (0.492)	-0.334 (0.564)	-0.260 (0.493)	-0.267 (0.575)	0.110 (0.504)	-0.888 (0.465)	0.200 (0.596)	-0.236 (0.418)
Times	1.146 (0.574)	0.333 (0.552)	0.850 (0.781)	1.324* (0.514)	0.268 (0.639)	0.579 (0.681)	-0.190 (0.513)	-0.406 (0.869)	0.497 (0.543)
Independent	2.410 (1.461)	1.088 (1.324)	3.381 (2.246)	-0.636 (1.306)	-0.731 (1.852)	0.700 (2.037)	-2.490 (1.414)	0.354 (2.050)	2.098 (1.417)
Other	0.481 (0.71)	0.462 (0.586)	-0.680 (0.726)	0.038 (0.580)	0.100 (0.716)	-0.693 (0.623)	-0.352 (0.545)	0.223 (0.733)	-0.271 (0.546)
Intercept	0.759 (0.467)	0.319 (0.419)	-1.006* (0.507)	-1.229** (0.400)	-0.776* (0.510)	1.676*** (0.472)	-1.307** (0.404)	-2.769*** (0.596)	0.460 (0.390)
# Individuals	1,447	1,447	1,447	1,447	1,447	1,447	1,447	1,447	1,447
Log Likelihood	-668.049	-845.141	-612.747	-806.332	-661.023	-684.552	-877.682	-551.747	-916.830
AIC	1,390.098	1,744.283	1,279.495	1,666.664	1,376.045	1,423.105	1,809.363	1,157.494	1,887.661

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

Note: Cell entries present 2SPS coefficient estimates from logit models of individuals' attribution of responsibility following the 2007–2008 financial crisis in Britain. In all models, the baseline category is individuals who do not regularly read a daily morning newspaper. All models include controls for each individual's vote choice in 2005, preferences on taxation vs. spending, ideological moderation, rating of Brown in 2005, education, income, age, gender, region, union membership, ethnicity, and self-reported level of political attention. Bootstrapped standard errors are reported in parentheses.