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Lost in Transmission: Evaluating Internet Effects on
Citizens' Attitudes Towards the European Union in
Times of Crisis

Leonardo Baccini, Maria Laura Sudulich and Matthew T. Wall

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Abstract

Previous studies suggest that citizens' attitudes towards the European Union (EU) are influenced by media coverage of EU institutions and policies. To date, empirical studies have investigated the effects of TV and newspaper consumption on euro-skepticism. However, the role of the Internet remains under-explored. In this study we combine data on broadband availability with respondent geo-location data from the 2011 Irish National Election Study, which allows us to measure whether respondents live in an area with broadband coverage. We use this dataset to perform a quasi-experimental analysis that identifies the effect of online news-gathering on citizens' evaluations of the extent to which the European Union and the Euro are culpable for the current economic crisis. To allow for heterogeneous treatment effects, we implement local average response functions (LARF) in our analysis. We find that those citizens who source political information online are more prone to blame the EU for (mis)managing the current economic crisis than those who do not.

Keywords

European Union, Public Opinion, Economic Crisis, Internet, Ireland

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Introduction

Omne ignotum pro magnifico.

Cornelio Tacito, Julii Agricolaе Vita

In this article we examine the extent to which use of the Internet as a source of political news affects citizens' attribution of blame to the European Union and to the Euro for the post-September 2008 economic collapse. With the global financial system in the midst of arguably the most severe and prolonged crisis of the post-war era, there is currently a considerable amount of political blame going around. Recent contributions on citizens' attribution of blame have mostly focused on the role of party cues (Hellwig and Cioffey 2011; Malhotra and Kuo 2008; Malhotra and Margalit 2008), whereas we approach the issue by focusing on media effects. Specifically, we seek to assess the effects on public opinion of online news-gathering in a country that was particularly impacted by the crisis - the Republic of Ireland. Ireland is an ideal laboratory for our exercise given that the current economic downturn has assumed a strong supra-national dimension as a consequence of the EU/ECB/IMF bailout granted in November 2010.

Although the mass adoption of Internet technologies across the EU has dramatically changed the European media landscape, the impact of the web on citizens' attitudes towards the EU is currently empirically under-explored. The question that we pose here is whether exposure to the Internet, a medium that radically alters the costs of diffusion of information and opinions, influences citizens' opinions towards the EU; in particular with regard to how citizens attribute responsibility for economic mismanagement.

We argue here that the Internet represents a source of information and opinions that do not tend to find oxygen in traditional media. In the Irish case this means that the web is a considerably more euro-skeptic environment than off-line media. We further argue that in a context of economic crisis and information overload, negative messages will have a strong effect on citizens opinions and we therefore theorize that voters who consume news online will attribute higher levels of blame to the EU for the on-going economic crisis.

We use data collected by the Irish National Election Study (INES) shortly after the 2011 general election to examine the manner in which Irish citizens attribute blame for the financial crisis to the EU and the Euro. Our econometric strategy closely follows a number of recent studies that have made use of variation in media accessibility to analyse media effects (DellaVigna and Kaplan 2007; Enikolopov et al. 2011; Kern and Hainmueller 2009). Specifically, we make use of geographical variation in the availability of broadband

in Ireland to instrument online news-gathering. This methodological approach allows us to examine the causal impact of politicized Internet use on citizens evaluations of the EU.

We find robust evidence that citizens who access political information on the Internet are more likely to blame the EU for (mis)managing the current economic crisis and to blame the Euro for worsening its effects. Our paper has two important implications. Firstly, our findings cast doubt on the argument that more informed citizens tend to be in favour of the EU and that Euro-skepticism is nurtured by lack of knowledge of EU policies (Sattler and Urpelainen 2012). In our study, web users prove to be simultaneously politically well-informed and critical of anti-crisis policies implemented by the EU. Secondly, our results indicate that the Internet can lead to exacerbation of extreme views. We stress that such a process is somewhat lop-sided during economic crises, when negative messages have a stronger impact than positive ones. Thus, while the Internet is a source of political knowledge, it can also increase the risk of citizens acquiring noisy information. Both of these insights lead us to conclude that the effects of online news-gathering on an array of political opinions should be further investigated.

In the next section, we review the literature on media effects in relation to citizens' evaluations of the European Union. In section two, we elaborate on the political context within which this study takes place by briefly outlining Ireland's current economic situation and its relationship with the EU/ECB/IMF. In section three, we present our theory. We then introduce our data and outline our methodological approach in section four. In section five, we present our main results. We then show additional evidence that further validates our findings. We conclude with a discussion of the implications of our study for future research.

1 Mediated Information and Political Attitudes

Empirical research on the effects of media consumption on political behaviour dates back to the 1940s (Lazarsfeld et al. 1948; Berelson et al. 1954). However, the broad consensus on the 'minimal effects' thesis among these early studies tended to discourage further research. In the early 1990s, Bartels went so far as to describe the research on media effects as "one of the most notable embarrassments of modern social science" (1993, 267). Since this withering assessment, however, a large number of scholars have engaged in research seeking to identify and quantify the influence of media consumption on the opinions held and behaviors exhibited by voters, leading to an erosion of the confidence in the contention that media effects are 'minimal'. Several recent studies point to the existence of identifiable and significant effects of mass media exposure on political opinions and behaviors,

once appropriate estimation techniques are implemented (Stromberg 2004; Gerber, Karlan and Bergan 2007; DellaVigna and Kaplan 2007; Enikolopov et al. 2011; Kern and Haimuller 2009; Ladd and Lenz 2009; Enikolopov, Petrova, and Zhuravskaya 2010).

The effects of mediated information are especially crucial in determining citizens' attitudes towards the EU because of a widespread lack of knowledge of EU politics and policies, and a general lack of understanding of EU institutions and mechanisms, among members of the European public (Dalton and Duval 1986; Hobolt 2006; Sattler and Urpelainen 2012). The challenge of political communication in nation states is amplified in the EU – a political project that spans an entire continent, but where, as Dalton and Duval observe, “very few citizens have first- or even second-hand contact with Community affairs in Brussels” (1986, 186). Citizens are thus particularly dependent on mediated coverage when forming opinions about the functioning of the EU (Norris 2000). Indeed, citizens have repeatedly reported that they rely heavily on television and newspapers as their principal sources of information on the EU (Eurobarometer 2007). As such, TV and newspapers are natural targets for scholars interested in understanding the role of mediated information in the formation of citizens' attitudes towards the EU. However, content analyses have revealed that national broadcasters and newspapers consistently pay low levels of attention to EU affairs (Anderson and McLeod 2004; De Vreese 2002; Meyer 2005) and scholars have repeatedly pointed to the non-emergence of a European-level media system or ‘public sphere’ (Grimm 2004; Scharpf 1999; Schlesinger 1999).

In spite of the low level of visibility of European affairs in national media, a number of empirical studies have explored media effects on citizens attitudes towards project Europe. Work in this tradition has been mostly experimental or quasi-experimental in nature. The exposure of treatment groups to specific media content has been used to explain opinions on the EU generally (De Vreese and Boomgaarden 2003; Semetko, Van der Brug and Valkenburg 2003); support for EU enlargement (Schuck and De Vreese 2006); or support for the accession of specific countries (for example, Maier and Rittberger 2008). Mediated information has been consistently shown to exercise an identifiable effect on citizens' evaluations of EU affairs, with intense media coverage being linked to increases in citizens' levels of knowledge of the EU (De Vreese and Boomgaarden 2006). In terms of electoral politics, Banducci and Semetko (2004) conclude that individuals are more likely to turn out to vote in EP elections in media environments where the election campaign is featured prominently. To date, however, no scholarly attention has been paid to the questions of whether and how the Internet weighs into this process.

Overall, the literature that informs our research provides us with two solid assumptions. First, the mass media influence citizens' political and electoral behavior, *ceteris*

paribus. Second, national media play a primary role in the formation of opinions towards the EU, mainly because EU citizens have limited direct experience of the functioning of the EU on which to base their opinions. However, these assumptions do not, in themselves, provide us with specific theoretical expectations about how the Internet may influence public opinion towards the EU. One reason for this is that the Internet is substantially different from newspapers, radio and television, which are the objects of interest of every previous published study concerned with the identification of the causal mechanisms relating media to attitudes towards and behavior within the EU. Moreover, we are concerned with attribution of blame in the context of the current economic crisis, in a country that was affected particularly severely by the economic downturn. Therefore, before formulating our theory and working hypothesis, we provide a short overview of the Irish case in relation to the EU.

2 The Irish Economic Meltdown

The story of Ireland's political and economic development in the 21st century reads somewhat like a Victorian morality tale. A period of extraordinary economic growth from the mid-1990s onwards led the Irish economy to be described as 'the Celtic Tiger' - a phrase that rapidly became part of Ireland's popular and political parlance. However, much of this growth was driven by what eventually turned out to be a property bubble - fueled by a global supply of cheap and easy credit. In late 2008, this supply of credit was abruptly cut off - revealing spectacular holes in the balance sheets of most of Ireland's major banks (Murphy 2011).

When the heads of the distressed banks met with the Taoiseach (Irish Prime Minister), Finance Minister, and a small number of senior civil servants in the small hours of the morning on September 30th, 2008 - ostensibly to discuss an impending 'run' on Anglo-Irish bank, the true scale of the Irish banking system's losses were unknown to the government. Nonetheless, the government issued a guarantee on behalf of the state, covering the liabilities of all of Ireland's troubled banks. This decision was a truly momentous one - state exposure under the guarantee was reported to run to 330 billion euros, although the public was reassured by Finance Minister Brian Lenihan, who announced that Ireland's bank bailout would be 'the cheapest in the world'. Unfortunately, as Mair's (2011, 3) account makes clear, the government's decision was ill-informed: "the banks had not been upfront about their liabilities, and the guarantee was eventually to encompass a much larger sum than was envisaged". Carswell (2011) estimates the gross cost of the bailout at 40 percent of Ireland's GDP.

This costly bailout of Ireland's banks necessarily coincided with the collapse of Ireland's property bubble - leading to disastrous unemployment and GDP growth figures. The fiscal gap created by these circumstances, and Ireland's inability to finance its outgoings on the international bond markets led to the EU/ECB/IMF conditional bailout of the Irish exchequer in November, 2010. Subsequently, and in shambolic circumstances (Murphy 2011), the Fianna Fáil/Green coalition government collapsed and a general election was held on February 25th, 2011. The results saw both government parties electorally obliterated, and a Fine Gael/Labour coalition taking office.

The new government not only struggled to enact campaign promises to renegotiate the terms of the bailout granted by EU/ECB/IMF but also introduced a raft of new taxes while cutting public expenditure. Therefore, the May 31st 2012 Fiscal Compact referendum unsurprisingly saw the 'No' side tying the terms of the Compact with on-going austerity policies. 'Vote No to Austerity' was a dominant narrative on the 'No' side - with Sinn Fein and the United Left Alliance being the parliamentary parties adopting this stance (we therefore control for support for these two parties in our analysis below). The 'Yes' side, comprised of the government parties and Fianna Fáil, argued that voting Yes was essential to securing on-going funding for the Irish state, and adopted a 'Yes to Stability, Growth and Employment' frame. The referendum was ultimately approved by 60.3% on a turnout of 50%.

3 Theory and Hypotheses

Our study seeks to fill a gap in the literature by investigating whether online news-gathering produces any effect on the public's evaluation of the EU and Eurozone membership. We postulate the existence of a negative effect of online news-gathering in citizens' evaluation of the EU and the Euro, building our theoretical argument on three blocks. First, we argue that traditional media in Ireland hold a moderate, often positive, position towards the EU. Second, the low cost of information production and provision on the Internet mean that it is a space where information and arguments supporting extreme stands in political debates are more easily encountered than is the case with traditional media. Third, we argue that the context of the crisis accentuates the viability of negative views on the EU.

The Irish media market can be classified as belonging to the North Atlantic model, with a strong tradition of public broadcasting (Hallin and Mancini, 2004), and it is mostly committed to a reporting style that, while not immune from certain forms of bias (Bran-

denburg, 2005), is not characterised by ideological polarization². Neither print media nor radio and television broadcasters show signs of fragmentation or political radicalism. As such, Irish traditional media are quite homogeneous and tend to be perceived as moderately supportive of the European Union³. Furthermore, the three largest Irish parties - Fianna Fáil, Fine Gael and the Labour party - have all displayed long term support for Europe and have engaged in pro-EU referenda campaigns on multiple occasions (Franklin, Marsh and McLaren 1994; Garry, Marsh and Sinnott 2005; Marsh 2007). It is thus highly unlikely that mainstream media would neglect to cover pro-EU positions, which have also typically been advocated by Ireland's major Trade Unions and business organizations (Garry, Marsh and Sinnott 2005). Importantly for our theory-building exercise, the traditional media tend to present only one side of the 'story'. The 2009 PIREDEU media study,(REF) shows that only 41% of the EU-related media stories mention more than one side of an issue/problem, with this figure dropping as low as 26% in Ireland. For those citizens whose media menu is limited to traditional media, we can thus expect opinions to be strongly channelled in the relatively pro-EU direction fostered by those media.

Our second theoretical contention is built upon the peculiar position of the Internet in news production. The costs of online news production are much lower than those associated with any other type of media; the world wide web offers both a higher volume of information and a more diverse set of information producers to its consumers. Furthermore, while online news meets demands from the mainstream, it is also particularly suited to providing content for niches. The notion that the Internet creates a marketplace that can cater to a long-tail of diffuse preferences (see: Anderson, 2007) which was originally elaborated in relation to Amazon's books sales - applies to political information as well as goods. While the Internet offers repackaged information already available offline, it also gives voice to opinions that would not be otherwise represented in the traditional media.

Nie et al. (2010: 341) offer the first theoretical account - accompanied by an empirical evaluation - of how the Internet has changed the supply of political news. According to their framework, the Internet saturates the political space, overlapping with mainstream media at the centre of the distribution of political opinions, but providing a unique media space for the extremes. We adapt Nie et al.'s a framework to seek to understand the

²No openly politically-biased TV channels exist and the licensed pay-per-view cable TV channels that operate in Ireland mostly target precise portions of the market, offering mainly sports packages tailored to 18-35 year-old males [http : //www.bci.ie/licensed_operators/tv_services/index.html](http://www.bci.ie/licensed_operators/tv_services/index.html) [25/10/2012]

³Influential journalist Vincent Browne, on the website he co-founded in 2009, openly accused RTE of being 'timorous and unprofessional' in reporting on the supposed impossibility of Ireland applying to a second IMF bailout programme if the Fiscal Compact referendum was rejected at the polls [RT 'timorous and unprofessional' on IMF story online at: <http://www.politico.ie/media-watch/8524-sunday-times-imf-fiscal-treaty-rte.html>]

broadcasting of attitudes towards the EU in Ireland, assuming that the mainstream media cover the centre of the spectrum of attitudes - while the extremes of opinion that do not find space on TV, radio or the printed press are expressed online.

As Ireland's mainstream media are moderately favorable towards the EU, the Internet should thus provide a space for extremely negative positions on the EU. Examples abound. The Irish Times issued a report on "The changing media landscape in Ireland between 2002-2008 and its implications for public opinion about the European Union" at the end of 2008.⁴ The main focus of the report is on the position of the Irish media on the 'yes' and 'no' campaigns during EU referenda. The report argues that bulletin boards like Politics.ie and Boards.ie,⁵ and blogs are skewed against the EU and that they contain largely anti-establishment messages. Moreover, the report claims that no positive online forum on the EU was present in Ireland in 2008. The report draws the following conclusion on the relationship between the Internet and the position of Irish citizens towards the EU (page 6):

"The fragmented No campaign has had a very high presence on the Internet, achieving high rankings on Google and other search engines. The Internet has allowed direct citizen-publisher interaction and works widely outside the standard news-cycle so has been the seeding source for many opinion formers."

Moreover, there are no indications that the prevailing negative attitude of the Irish blogosphere towards the Euro and the EU's management of the crisis have changed since 2008. The Cedar Lounge Revolution Blog, winner or the Best Irish political blog award in 2009 and 2011, is openly biased against the EU/IMF/ECB 'Troika'.⁶ Posts with negative and sensational titles like 'Is the EU becoming the 'Fourth Reich'?' continue to attract high numbers of hits and replies on fora such as politics.ie.⁷

The final key element in our theoretical account of the influence of the Internet on the attitudes of Irish citizens towards the EU is the information context created by the economic crisis. The origins of the crisis and the proposed solutions to it remain obscure to most citizens, whose most vivid concern is living with its consequences. In researching the

⁴The document is available at [http : //www.irishtimes.com/focus/2008/](http://www.irishtimes.com/focus/2008/) [accessed on October 4, 2012.]

⁵Politics.ie is run and owned by David Cochrane, campaign manager of Libertas, which was of one of the principal 'no' campaign groups in the two referenda to ratify the EU Constitution. 'Politics.ie is Ireland's leading politics and current affairs website with more than 900,000 visitors a month' [http : //www.politics.ie](http://www.politics.ie).

⁶Available at [http : //cedarlounge.wordpress.com/2012/02/01/privatisation - the - troika - the - government - and - us/](http://cedarlounge.wordpress.com/2012/02/01/privatisation-the-troika-the-government-and-us/) [10/10/2012].

⁷For instance, this particular post received about 10,000 views. [http : //www.politics.ie/forum/europe/156084 - eu - becoming - fourth - reich.html](http://www.politics.ie/forum/europe/156084-eu-becoming-fourth-reich.html) [16/03/2011]

decline of trust in the ECB, Jones notes that: “people who [...] are exposed to conflicting views in the media are likely to become more ambivalent and they may become openly distrustful as the disagreement wears on.”(2009: 1098). In such a scenario, where ordinary citizens are too overwhelmed by complex information to be able to effectively process all the information, we argue that negative messages can be particularly effective.

The literature on negative campaign advertising indicates that negative messages are increasingly pervasive in contemporary politics and it is widely acknowledged that negative messages appear to be more memorable than positive ones (Lau et al. 2007). A disproportionate impact of negative news on opinion formation has also been found in relation to citizens’ evaluation of candidates and parties during US presidential election campaigns (Lau, 1982; 1985; Holbrook et al. 2001). Soroka (2006) shows that public opinion reacts asymmetrically to economic information, finding that negative news appears to exert a stronger effect than positive news. Importantly, there is also a large body of literature in psychology showing that “bad impressions and bad stereotypes are quicker to form and more resistant to disconfirmation than good ones” (Baumeister et al., 2001: 323). Put simply, bold negative statements play well during periods of economic turmoil.

We combine these three elements and formulate the following working hypothesis:

HP: *Individuals who browse the Internet for political news are more likely to hold the EU responsible for the current economic crisis than individuals who do not.*

We have described the traditional Irish media as moderately favorable towards the EU and presented the Internet as the ideal space for extreme views to gather visibility. Given that the web provides a space for extreme positions on both sides of a debate, we should also take account of the possibility that the Internet could also provide a space for particularly positive evaluations of the EU and the Euro. However, while such a possibility cannot be ruled out on paper, there is no substantive evidence available of the existence of a pro-EU blogosphere or other significant online space in Ireland, nor elsewhere in the EU for that matter. Therefore, we expect the distribution of online political information on this issue to be one-tailed tending to attribute blame to the EU and Euro for the current crisis.

4 Research Design

In what follows we describe our methodological approach, test our hypotheses and provide additional evidence using a reduced-form approach.

4.1 Survey Data

The Irish National Election Study (INES) is a five-wave panel study that initially covered the period 2002-2007, encompassing the Irish general elections of 2002 and 2007. The 2011 general election held on February 25th 2011 was called, somewhat unexpectedly, on February 1st following the Green party’s withdrawal from government on January 23rd. The 2011 wave of the INES aggregates data from 1,863 electors, interviewed by the polling company Red C during the election campaign. To date, follow-up waves have not been planned⁸. The study asked respondents about their experience of the campaign, their voting behavior, their media usage, and also about their political attitudes and socio-economic background.

4.1.1 Dependent Variable

Our dependent variable captures the extent to which respondents blame the EU and the Euro for the economic crisis. More specifically, our outcome variable is built on the following question from the INES survey:

“In the past few years the economy has been in recession. How responsible, if at all, are each of the following for the poor economic conditions of the past two years? Extremely responsible (4), Very responsible (3), moderately responsible (2), A little responsible (1), Not at all responsible (0), Don’t know (5)”.

The question lists several political and economic actors including the EU and the Euro. We drop the ‘don’t know’ answers, so we exclude 118 observations for the question on the EU and 184 observations for the question on the Euro.⁹ The resulting variables are ordinal and range between 0 and 4. Figure 1 (Appendix) shows the distribution of the two outcome variables.

4.1.2 Treatment

We code a binary variable D that takes a value of 1 for respondents who browse online news at least once per week and 0 for respondents who never do so. The set of respondents who browse online news is defined as our *treatment group*, whereas the set of respondents who do not go online is defined as our *control group* (Rubin 1974; Rosenbaum 2002). Furthermore, we define Y_1 and Y_0 as the potential outcomes under treatment and control; that is, the levels of blaming the EU and the Euro that a respondent would have with

⁸Nor has a dataset integrated with the previous waves been released.

⁹Our results are not sensitive to this decision.

and without going online for news. For each respondent, the effect of Internet exposure is defined as the difference between these two potential outcomes ($Y_1 - Y_0$).

Specifically, our treatment is built on the following question from the 2011 INES survey:

“On a scale of 0-7 where 0 means ‘never’, 1 means one day a week, 2 means two days a week, and so on until 7 means ‘every day’ of the week, how often do you browse online for news”.

We recoded this ordinal variable as a dummy to facilitate the interpretation of our results. We could also think of browsing online for news as an ordinal treatment, but that would further complicate the identification strategy (Imbens and Wooldridge 2008; Kern and Hainmueller 2009, 383). Our results are similar if we code as zero those respondents who browse online for political news only once a week. In our dataset, 311 respondents go online to browse for political news, i.e., 20 percent of our sample. Figure 2 (Appendix) shows the distribution of this variable.

4.1.3 Covariates

As Kern and Hainmueller (2009: 387) note, “Even though the use of a natural experiment reduces the danger of confounding, some imbalances between the treatment and control groups might exist”. Rosenbaum (1984) warns of the dangers of post-treatment bias, i.e., including variables that are themselves affected by the instrument or the treatment. Thus, we include covariates parsimoniously.

In the *baseline model* we include important economic characteristics, such as living in rural areas, income, level of education, and age. This is standard practice in individual-level data analysis. Moreover, in the *extensive model* we also include a variable capturing how many times a week respondents read newspapers.¹⁰ As discussed in the theory section, Irish newspapers are mildly positive towards the EU, and by including a control variable for the potential impact of this coverage we account for it in the model. Furthermore, we add a variable labelled ‘Euroskeptics’ that scores one if respondents are ideologically close to Sinn Féin and/or the United Left Alliance, the two consistently euro-skeptic parties that occupy the extreme left of the Irish ‘left-right’ continuum.¹¹

¹⁰As a robustness check, we also include variables capturing respondents’ consumption of TV, national radio, and local radio. We obtain similar results, available upon request.

¹¹The question from the survey was the following: *We have a number of political parties in Ireland each of which would like to get your vote. How probable is it that you will ever give your first preference vote*

Figure 3 (Appendix) shows the distributions of the covariates, and the correlation among covariates is also shown in the Appendix. Missing data are treated as additional categories, i.e., we do not drop missing values of covariates.

4.2 Identification Strategy

Our identification strategy is similar to that of Kern and Hainmueller (2009, 380-388). Thus, we follow them closely in order to estimate the causal effect of the Internet on citizens' propensity to blame the EU and the Euro for the economic crisis.

As is common in social studies, we confront the fundamental problem of causal inference: the impossibility of observing the counterfactual, i.e., the outcome for the same unit in the absence of the treatment. The ideal way to overcome this problem when trying to estimate the causal effect of the Internet on public opinion towards the EU would be to conduct an experiment. Specifically, if we could randomly assign the possibility of browsing political news online to individuals. Given random assignment, then we could then simply compare individuals who go online with individuals who do not. The difference in average attitudes towards the EU and the Euro for the treated group and the control group would constitute the causal effect of the Internet, since both groups would be comparable with respect to observed and unobserved confounding factors.

However, with observational data things are more difficult, since browsing for political news online is not randomly assigned to individuals. One way of comparing individuals who use the Internet for political news with individuals who do not would be to control for those characteristics that are likely to affect both the probability of going online and attitudes towards the EU and Euro. For instance, we could use multivariate regressions or matching with a set of control variables. However, this approach would not help us with the issue of selection on the unobservables that are correlated with the treatment and the outcome variables. This would induce correlation between the dependent variable and the error term, undermining causal inference.

Instrumental variables are a more effective identification strategy. In particular, we exploit the fact that not every area in Ireland had broadband coverage during the period under investigation. We code a binary instrument Z based on information about where

*to the following parties? Please use the numbers on this scale to indicate your views, where 1 means 'not at all probable' and 10 means 'very probable'. We code the variable *Euroskeptics* one if respondents score eight or more than eight for either Sinn Féin or United Left Alliance, and 0 otherwise.*

respondents live. This dummy variable scores 1 if respondents live in an area with broadband coverage and 0 if respondents live in an area without broadband coverage. Figure 4 (Appendix) shows the distribution of this instrument. Since broadband coverage is an original variable, we detail below how we built this instrument.

We first encoded the geographical location (latitude and longitude) of respondents, and then performed a search for broadband availability for each respondent’s geographical location. The 1,754 respondents to the INES 2011 were based in 309 different geographical locations (six respondents per location in the survey). We searched for broadband coverage in each location by consulting information supplied by major broadband providers and, additionally, by using an online service which provides detailed information on broadband coverage by location (getbroadband.ie).¹² For those locations without broadband coverage we also performed a final check by searching for the keywords “location+broadband” on google.ie.¹³ Figure 1 maps locations with and without broadband coverage.

Figure 1 about here

An example demonstrates the precision of our instrument. Carkerbeg is a small village in County Cork with less than 1,000 residents. Carkerbeg does not have broadband coverage. Buttevant is a medieval market town in County Cork with 1,667 residents, according to the 2006 census. Buttevant is less than five miles away from Carkerbeg.¹⁴ However, Digiweb, Eircom, and Vodafone provide broadband coverage in Buttevant. The monthly price of a subscription ranges from 19 euros to 48 euros depending on the speed.¹⁵

We have previously noted that the number of Irish citizens who go online for political news has increased sharply over the past decade. In the Appendix, we show that only 20 percent of Irish households had a broadband connection in 2006 (CSO 2006). Even in Dublin, all of which now has full broadband coverage, only 32 percent of households had broadband connections in 2006. Thus, if the Internet has an effect on Irish citizens’

¹²This website was accessed between October 2011 and December 2011. Note that the INES survey was carried out immediately after the election. Updated maps of Broadband coverage released by the Irish Department of Communications, Energy and Natural Resources confirm that those areas that we classified as not covered by broadband services still did not avail of coverage in December 2011, as the phase of broadband expansion plan sponsored by the Irish government only started in January 2012. [[http : //www.dcenr.gov.ie/Communications/Communications + Development/Rural + Broadband + Scheme/Rural + Broadband + Scheme.htm](http://www.dcenr.gov.ie/Communications/Communications+Development/Rural+Broadband+Scheme/Rural+Broadband+Scheme.htm)] Last accessed on October 30th 2012.

¹³For all those locations where the location name was present in more than one county, we used the search: “location+broadband+constituency”.

¹⁴We calculated the distance using the STATA 12 command GEODIST.

¹⁵Information available on getbroadband.ie [accessed in December 2011].

attitudes towards the EU, such an effect is the product of a recent shock produced by technological change and not of a long-term trend.

Combining our treatment D with our instrument Z and relying on terminology used by Angrist, Imbens, and Rubin (1996), we distinguish four categories:

1. $D_0 = 0$ and $D_1 = 1$. Compliers are respondents who browse for political news online if they live in areas with broadband coverage, but who do not browse for political news online if they live in areas without broadband coverage.
2. Always-takers: $D_1 = D_0 = 1$. These are respondents who always browse for political news online, no matter where they live.
3. Never-takers: $D_1 = D_0 = 0$. Similarly, these are respondents who never browse for political news online, no matter where they live.
4. Defiers: $D_0 = 1$ and $D_1 = 0$. These are respondents who browse for political news online if they live in an area without broadband coverage, but who do not browse for political news online if they live in areas with broadband coverage.

Compliers amount to 43 percent in our sample.¹⁶ In the Appendix we show some socio-economic characteristics of compliers versus the characteristics of the other three categories. The two groups appear to be well-balanced in relation to these variables.¹⁷ Although we cannot individually identify compliers in our sample, IV estimations in general, and LARF estimators in particular, allow us to estimate average treatment effects for the subgroup of compliers under certain assumptions that we will discuss in the next subsection.

4.2.1 Identification Assumptions

According to Abadie (2003, 234-235), the following four non-parametric assumptions allow one to identify causal effects in an instrumental variable (IV) model, where: Y represents the potential outcome, Z is the instrument, i.e., living in an area with broadband coverage, D is the treatment, i.e., if an individual looks at political news online, and X represents a vector of covariates.

1. Independence of the instrument: conditional on X , the random vector $(Y_{00}, Y_{01}, Y_{10}, Y_{11}, D_0$ and $D_1)$ is independent of Z for each $z \in (0, 1)$.

¹⁶See the Appendix for a breakdown of the 4 categories, i.e., Online, \sim Online, Broadband, and \sim Broadband.

¹⁷All these variables come from the 2011 INES survey and are described in the Appendix.

2. Exclusion of the instrument: $P(Y_{1d} = Y_{0d}|X) = 1$ for $D \in (0, 1)$.
3. First stage: $0 < P(Z = 1|X) < 1$ and $P(D_1 = 1|X) > P(D_0 = 1|X)$.
4. Monotonicity: $P(D_1 \geq D_0|X) = 1$.

Let us explore whether these assumptions are met for the data analyzed in this article. We begin with the most innocuous assumptions. Assumption four requires that it is not the case that there are people who would have browsed for political news online if they had lived in an area without broadband coverage, but would not have browsed for political news online if they had lived in an area with broadband coverage. It is safe to rule out this possibility as it seems highly unlikely.¹⁸

Assumption three requires that Z (broadband coverage) is a strong instrument for D (browsing the Internet for news). In other words, Z must be highly correlated with D conditional on X . Figure 4 (Appendix) shows that living in an area without broadband coverage is strongly correlated with the probability of not browsing for political news online. Only a few respondents who live in areas without broadband coverage browse for political news once or twice in a week. Conversely, living in an area with broadband coverage is strongly associated with browsing for political news online.¹⁹ The correlation between Z (broadband coverage) and D (browsing the Internet for news) is 0.41. Moreover, when we regress broadband coverage on online news-gathering controlling for a large number of covariates, broadband coverage is statistically significant and the t-statistic is greater than 10.

Assumption one and assumption two are trickier to justify. Assumption one states that the area in which a respondent lives is ‘as good as randomly assigned’ once we condition on control variables. Assumption two states that Z (broadband coverage) explains variation of the dependent variable only through its effect on D (browsing for news online). These two assumptions together imply that once we control for a set of covariates, living in an area without broadband per se should not impact directly on respondents’ propensity to blame the EU and the Euro for the crisis (but, instead, should do so only through D).

¹⁸We acknowledge that people may access the Internet via 3G devices and/or access internet at the workplace. However, as long as 3G use or accessing the Internet from work is not systematically related to broadband access, our effects should still be identified. What is more, such a possibility may run against our effect. Indeed, if people in places with no broadband availability have other means of accessing the Internet, our effects should be underestimated.

¹⁹See the Appendix for further details.

A way to make sure that these two assumptions are met is to show that areas with broadband coverage are similar to areas without broadband coverage in relation to characteristics that might affect attitudes towards the EU during the crisis. We can rely on an extensive number of individual-level characteristics from our survey and we use them to explore how balanced the two groups are. In particular, we focus on socio-economic characteristics; use of media other than the Internet; political attitudes; levels of trust in institutions; and concerns about respondents' economic situation.²⁰

Before showing that assumptions one and two hold, we provide some insights into how the process of broadband diffusion across Ireland has unfolded. Ireland lags significantly behind the EU and the OECD in terms of broadband penetration. In May 2011 the Department of Communications, Energy and natural Resources launched two parallel schemes, one national and one focusing on rural areas, to counter the remarkably low diffusion of broadband connections across the island of Ireland. However the scheme's target of 50% of the population being covered is expected to be met only in 2015.²¹ While rural areas particularly suffer from a lack of broadband availability, an engineer at the Commission for Communications Regulation (ComReg), interviewed by the authors in December 2011, pointed out that "broadband penetration has been often developed randomly by the Irish government. This happened due to a lack of institutional capacity. It was not infrequent that certain areas originally included in a plan to extend broadband coverage remained left out because of a sudden shortage of financial resources".²²

We begin by discussing balance in terms of socio-economic characteristics. As Figure 2 shows, respondents in areas with broadband coverage are very similar to respondents in areas without broadband coverage in terms of age, income, occupational status, and social class. Only the average level of education and knowledge about politics appear to be higher in areas with broadband coverage compared to areas without broadband coverage, though the median is the same.

Figure 2 about here

With regard to traditional media use, Figure 3 shows that respondents in areas with broadband coverage watch TV as much as respondents in areas without broadband cov-

²⁰All of these variables are described in the Appendix.

²¹[[http : //www.dcenr.gov.ie/Communications/Communications + Development/Rural + Broadband + Scheme/Rural + Broadband + Scheme.htm](http://www.dcenr.gov.ie/Communications/Communications%20+%20Development/Rural%20+%20Broadband%20+%20Scheme/Rural%20+%20Broadband%20+%20Scheme.htm)] Last accessed on November 9th 2012.

²²In releasing this statement the ComReg engineer required anonymity at the time of the interview. We note here that we are not the first to argue that broadband access is randomly assigned. For a similar research design, see a study on the role of the Internet in sex crime in Norway (Bhuller et al. 2011).

erage. Similarly, the variables that capture how frequently respondents listen to national and local radio in a week appear to be balanced between the two groups. The variable that captures how frequently respondents read newspapers is the only one to show a different median between the two groups, although both groups display a similar distribution. In the section *Additional Evidence*, we explore the combined effect of the Internet and traditional media on attitudes towards the EU in greater detail.

Next, we explore the distribution of political attitudes that might influence attitudes towards the EU across the two groups (Figure 3). Since the left-right dimension is not particularly meaningful in Irish politics (Coakley and Gallagher, 2009), we focus on questions that describe the position of respondents on the economic and social dimensions.²³ Respondents who live in areas with broadband coverage do not appear to be more socially conservative, nor do they appear to be more left-wing economically. Importantly, responses to the proposition *EU unification has gone too far* shows a similar distribution for both groups.

Regarding levels of trust, the distribution of all the questions is well-balanced between respondents who live in areas with broadband and respondents who live in areas without broadband (Figure 3). Trust in the police (Gardai) is the only exception, but this variable is unlikely to affect attitudes toward the EU. Again, we highlight that there is no evidence that respondents in broadband areas are more euro-skeptic than respondents in non-broadband areas.

Finally, we consider a set of questions that concerns how worried respondents are about their economic situation. Even for these questions, the two types of constituencies appear to be well-balanced. This is important because a possible concern with our strategy could be that the crisis may have hit harder in areas without broadband than in areas with broadband. Such a disparity could drive a negative attitude towards EU policies during the crisis for respondents who live in areas without broadband. Figure 3 seems to rule out such a concern.

Figure 3 about here

²³In the Appendix we show that there are similar levels of interest in politics across the two groups. Moreover, the two groups show similar voting behavior in the previous general election (held in June 2007). Furthermore, the proportion of voters supporting parties that oppose the EU (Sinn Féin and United Left Alliance) is evenly distributed across groups. Finally, voter turnout in the 2007 election was similar in areas with and without broadband (the percentage of respondents claiming that voting does not matter is also roughly the same).

In sum, there is little evidence that differences among areas with and without broadband coverage could pose a threat to the exclusion restriction, especially after including a large set of covariates.

4.2.2 Estimation Techniques

We implement different models to estimate the causal link between use of the Internet for political information and the probability of blaming the EU and the Euro for the economic crisis. In addition to the traditional 2SLS estimation and following Kern and Hainmuller (2009, 388), we also implement the local average response functions (LARF) estimator developed by Abadie (2003). LARF does not assume constant treatment effects, but it allows for heterogeneous treatment effects. Put simply, LARF allows the analyst to estimate the effect of the treatment on an outcome for the sub-population of compliers.

Moreover, LARF seems more appropriate than the Wald estimator (LATE), which does not incorporate covariates. There may be other channels through which browsing for news can affect our outcome. LARF allows us to estimate the impact of Internet exposure on the probability of our outcome variable by averaging across all of the control variables included into our models.

We adjust standard errors for clustering within the 43 constituencies.²⁴ Following common practice, we use the Eicker-Huber-White sandwich estimator for the 2SLS models, whereas we bootstrap (100 replications) standard errors for the LARF estimations (Davison and Hinkley 1997, 101-103; Kern and Hainmuller 2009, 388).

5 Results

For each dependent variable, we begin by running a naïve ordered probit model in which we do not instrument for browsing online news. In both models (1) and (6) the coefficient for online news-gathering (labelled Online in the tables) is negative, although it is statistically significant at the conventional level only in Model (1). This result implies that browsing for news online decreases the probability of blaming the EU and the Euro for the current crisis. As explained above, it is likely that these estimates are confounded by selection into treatment and so these coefficients are biased.

To correct for this bias we estimate baseline models as well as extensive models using LARF and 2SLS (Table 2 and Table 3). In both baseline models and extensive models,

²⁴Results are similar if we adjust standard errors for clustering within the 309 locations.

the Online coefficient is positive and statistically significant at the 95 percent confidence level. Thus, our analysis implies that people who browse for news online hold place greater blame on the EU and the Euro for the crisis than people who do not go online. The magnitude of the effect is substantial, ranging between 1.74 and 1.85 for the question on blaming the EU and between 1.76 and 1.92 for the question on blaming the Euro.²⁵

Tables 1 and 2 about here

Another way of showing the effect of the variable Online on our ordinal outcome variables is to look at the probability of each cut-off point (see Table [XXX] in the Appendix). For instance, respondents who browse the web for news are 21 percent more likely to hold the EU and the Euro ‘extremely responsible’ for the crisis. In sum, these findings indicate that online news-gathering is such an important driver of attitudes towards the EU that neglecting to include this variable would cause a serious omitted variable problem.

Our findings indicate that browsing for news online has a significant positive and measurable effect on Irish citizens’ propensity to blame the EU and Eurozone membership for the current economic crisis. Wired citizens attribute greater blame to the EU and the Euro, *ceteris paribus*.

5.1 Asking for Help from Geography

Balancing area characteristics is crucial for correctly identifying our models. We implement two further analyses in which we exploit geographical location to sharpen our identification strategy.²⁶

First, we match broadband coverage (our instrument) on distance from the closest area in the other group.²⁷ For instance, if an area has broadband coverage, e.g., Buttevant, we calculated the distance (in miles) from the closest area without broadband coverage, e.g., Carkerbeg. Closely located areas are likely to have more balanced characteristics than areas that are far away from one another. For instance, we know that

²⁵Regarding 2SLS, (1) the Kleibergen-Paap test shows that our models are not under-identified; (2) the Cragg-Donald Wald F statistic is always greater than 10; (3) the Hansen J statistic shows that our equations are exactly identified.

²⁶Ideally, we would like to implement spatial regression discontinuity looking at neighboring areas. However, such an analysis would be problematic in our case since we can only rely on an average of six respondents per area. Moreover, we are unable to consider area boundaries as discontinuity, since we do not know respondents’ place of residence at such a disaggregated level.

²⁷For a similar approach, see: Imai and Van Dyk, 2004.

socio-economic characteristics are usually geographically clustered. The Kernel distribution of the variable Distance is provided in the Appendix. Moreover, we also match on two other variables: rural areas and newspapers. We do this because these two variables are slightly unbalanced in areas with and without broadband.

By matching, we ‘exclude’ 176 observations in areas with broadband and 14 in areas without broadband. Although the number of unmatched observations is fairly small, the overall L_1 balance measure, which captures imbalance with respect to the full joint distribution, drops significantly from 0.51 to 0.29, i.e., matching reduces the imbalance of the full joint distribution by more than 40 percent. We run our main models again without these unmatched observations, obtaining similar results (Table 13 and Table 14 in the Appendix).

Second, we run the baseline models only for the sub-sample of areas for which the variable Distance takes values of lower than 12 miles (cases where areas with and without broadband are not further than 12 miles away). 12 is the value of the 75th percentile of Distance distribution.²⁸ Once again, the rationale for doing this is to improve the balance of area’ characteristics. In the Appendix we show that the Education and Newspaper variables, which are partially unbalanced in the full sample, are perfectly balanced for geographical units that are 12-miles away from each other. Even with this rather conservative sub-sample, Table 15 (in the Appendix) shows that our results remain unchanged.

6 Additional Evidence

In the following subsections, we further explore the implications and robustness of our main findings. Tables and figures that show the results of these additional analyses are available in the Appendix.

6.1 A Placebo Test

Previous results show that respondents who browse for news online are significantly more likely to blame the EU and the Euro for the current economic crisis than respondents who do not. However, so far our analysis has not provided a direct test of the mechanism linking Internet use as a news source to attitudes towards the EU. To rule out the possibility of a spurious relationship between these variables, we run a placebo test on models that have a dependent variable that is theoretically unrelated to the variable Online. Specifically,

²⁸Our results are similar if we take Distance < 10. Data available upon request.

we use a variable capturing whether a respondent has any dependent children under 16. Browsing for news online should be orthogonal to this outcome and so no effect should be found. Details of the results of the placebo test are provided in the Appendix. Here it is enough to say that the variable Online is not statistically significant in these models. Thus, we can confidently claim that there is a specific link between using the Internet as a news source and attitudes towards the EU.

6.2 The Internet and Socio-economic Issues

It might be the case that respondents who use the Internet as a source of news hold different views on several issues - other than EU-related matters - compared to respondents who do not. That would not undermine our previous results, but it would cast doubt on the notion that such results are EU-specific. To explore this possibility, we run a series of tests using dependent variables that are absolutely unrelated to the EU. Luckily, the INES 2011 is a rich source of alternative dependent variables.

Overall, we find little evidence that respondents who browse for news online hold different views on socio-economic issues compared to respondents who do not (details of alternative dependent variables used in such tests are provided in the Appendix, Table 6 and Table 7). Coefficients of the LARF estimator are always *not* statistically significant at the conventional level for these alternative dependent variables. Regarding 2SLS, Online is statistically significant at the 95 percent confidence level in Model 22 and Model 26. Specifically, respondents who browse the Internet for news appear to hold a more positive view on immigration and a more negative view on Multi-National Companies than respondents who do not. However, such results do not appear very robust across model specifications and do not square with the Euro-skeptic tendency towards social conservatism.

6.3 Informed Citizens and the Internet

One of the key findings of our analysis is that informed citizens are more like to blame the EU and the Euro for the current crisis. As we highlighted above, this result runs partially against the previous literature, as well as against the conventional wisdom claiming that negative attitudes towards the EU can be explained by a lack of knowledge of EU institutions and policies (Sattler and Urpelainen 2012). We use questions from the INES survey designed to unveil knowledge about politics, finding that individuals who browse for news online are more knowledgeable about politics than people who never go online (details in the Appendix).

6.4 Robustness Checks

We implement a large number of robustness checks to further validate our findings. We begin by accounting for heterogeneity among geographical areas in Ireland, given that geography plays a key role in this study. We drop the Dublin area, in which every sub-area has broadband coverage, to make sure that Dublin-specific characteristics are not driving our results. Moreover, we include constituency fixed effects in the 2SLS regressions to control for confounding factors at the level of the 43 Irish electoral constituencies.²⁹ Second, we re-run our main analysis replacing our treatment with an ordinal variable, i.e. number of days (per week) in which people browse for news online. Third, we explore the effect of the Internet in combination with traditional media on attitudes towards the EU. Fourth, to control for violations of the stable unit treatment value assumption (SUTVA), we use the median score of the outcome variables by area. Finally, we replicate our analysis on a survey held during the 2012 Irish referendum on the Fiscal Compact. Over all of these checks, our main results do not change and details are provided in the Appendix.

7 Conclusion

This paper has explored the role of the Internet in the Irish public’s evaluation of the responsibility of the European Union and the Euro common currency for the on-going economic crisis. The provision of respondent geo-location in the 2011 INES survey data, together with detailed geographical information on broadband availability in the Republic of Ireland, has allowed us to assess the differences that exist between individuals who use the Internet to gather news and individuals who do not. Our findings show that individuals who use the Internet to gather political news attribute greater blame to the EU and the Euro for the economic crisis. Controlling for levels of political information and knowledge, we find consistent evidence that the Internet has an impact in forming political evaluations towards the EU and Euro.

Additionally, we have performed several checks of the robustness of this finding, including: a placebo test; an analysis controlling particularly for the effects of alternative media; an analysis controlling for the personal impact of the economic downturn on respondents; and a number of tests for geographical location, which, by controlling for individuals’ distance from the capital, allowed us to rule out the effect of an urban/rural cleavage. Our special concern with the crucial role played by geography in our research design was further tested by implementing matching techniques. In each and every of the

²⁹We are unable to use area fixed effects, since we have an average of six respondents per area and our instrument does change within each area.

above-mentioned checks the main results remained unchanged.

In line with previous studies, we find media use to be causally linked to citizens' political opinions. In the *Theory* section, we hypothesized that the Internet would act as an environment where negative attitudes towards the EU and the Eurozone would be more widely expressed than in mainstream media, emphasizing the particular effectiveness of such negative messages in times of economic crisis. Our working hypothesis is not falsified by the large set of empirical tests that we have performed. However, our findings, while empirically sound, are conceptually complex to interpret. Difficulties arise mostly from two unknown elements in our research design, both of which stem from the difficulty of characterizing the Internet as a news medium. Firstly, we have no information on what specific websites were browsed by those citizens who used the Internet for political information, and secondly, we do not know the content of those websites that were browsed. The long tail theory describes a mechanism through which niche demand and supply meet; the implications of such a process remain mostly overlooked. By shedding some light on the effects of Internet news supply on public opinion, we seek to contribute to filling this *lacuna*. Future research on the effects of online news-gathering should aim to open this black box in order to better understand type of extra information the Internet provides citizens with. Ideally, a laboratory experiment, where the content administered can be controlled and manipulated, may clarify how and what type of online content exercises pervasive effects.

Our study clearly speaks to the literature on the role of information on attitudes towards the EU and the integration process, but more broadly it contributes to the literature on 'media effects' from a new angle, by specifically assessing the role of online news-gathering. Using a quasi-experimental set-up, we have uncovered findings that indicate that the Internet produces different, and in fact opposite, outcomes on public opinions compared to traditional media. Moreover, our study engages with the recent literature that explores public attitudes on the crisis (Bechtel, Hainmueller, and Margalit 2012; Marsh and Mikhaylov 2012). By bringing the Internet into the picture, we have unveiled how online news-gathering can emphasize extreme opinions by providing a space for actors and voices that are not visible on mainstream media, and crucially we have demonstrated how effective such messages can be.

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Table 1: Is the EU responsible for the crisis? LARF: bootstrapped standard errors. 2SLS: robust standard errors clustered by constituency. Online instrumented with broadband coverage. The baseline model includes Living in rural areas, Income, Education, and Age. The extensive model also adds Reading newspapers and Being ideologically close to Sinn Féin and United Left Alliance. Response categories for the outcome variables are coded as ‘not at all responsible’ 0, ‘a little responsible’ 1, ‘moderately responsible’ 2, ‘very responsible’ 3, ‘extremely responsible’ 4.

	(1)	(2)	(3)	(4)	(5)
	Ordered Probit	LARF	LARF	2SLS	2SLS
Online	-0.15	1.85	1.75	1.83	1.74
	[-0.28, -0.02]	[0.44, 3.27]	[0.35, 3.16]	[0.86, 2.80]	[0.80, 2.68]
First Stage					
Broadband		0.17	0.18	0.17	0.18
		[0.14, 0.21]	[0.15, 0.21]	[0.14, 0.21]	[0.15, 0.21]
F Statistics		50.6	36.2	50.6	36.2
Online instrumented	no	yes	yes	yes	yes
Baseline model	yes	yes	no	yes	no
Extensive model	no	no	yes	no	yes
Observations	1636	1636	1636	1636	1636

95 percent confidence interval in parentheses

Table 2: Is the Euro responsible for the crisis? LARF: bootstrapped standard errors. 2SLS: robust standard errors clustered by constituency. Online instrumented with broadband coverage. The baseline model includes Living in rural areas, Income, Education, and Age. The extensive model also adds Reading newspapers and Being ideologically close to Sinn Féin and United Left Alliance. Response categories for the outcome variables are coded as ‘not at all responsible’ 0, ‘a little responsible’ 1, ‘moderately responsible’ 2, ‘very responsible’ 3, ‘extremely responsible’ 4.

	(6)	(7)	(8)	(9)	(10)
	Ordered Probit	LARF	LARF	2SLS	2SLS
Online	-0.10	1.92	1.80	1.91	1.76
	[-0.23, 0.03]	[0.37, 3.48]	[0.72, 2.88]	[0.95, 2.87]	[0.84, 2.67]
First Stage					
Broadband		0.17	0.18	0.17	0.18
		[0.14, 0.21]	[0.15, 0.21]	[0.14, 0.21]	[0.15, 0.21]
F Statistics		49.6	37.6	49.6	37.6
Online instrumented	no	yes	yes	yes	yes
Baseline model	yes	yes	no	yes	no
Extensive model	no	no	yes	no	yes
Observations	1570	1570	1570	1570	1570

95 percent confidence interval in parentheses

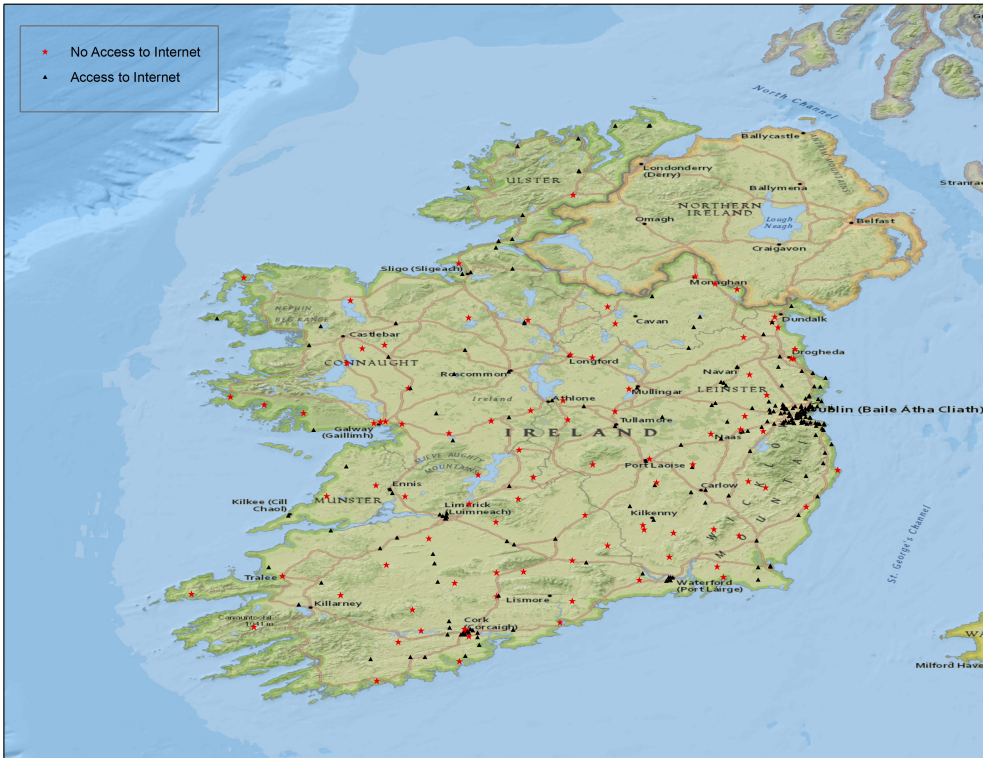


Figure 1: Geographical distribution of the instrument.

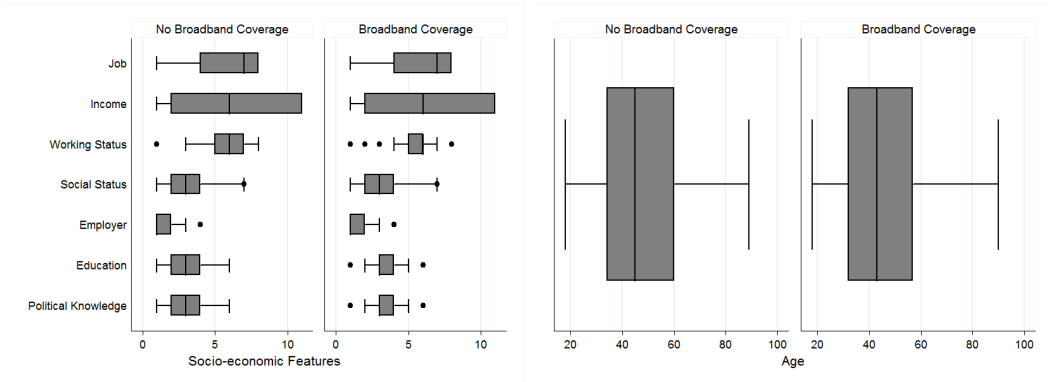


Figure 2: Areas with broadband coverage versus areas without broadband coverage. The graphs show the balance in socio-economic characteristics between the two groups.

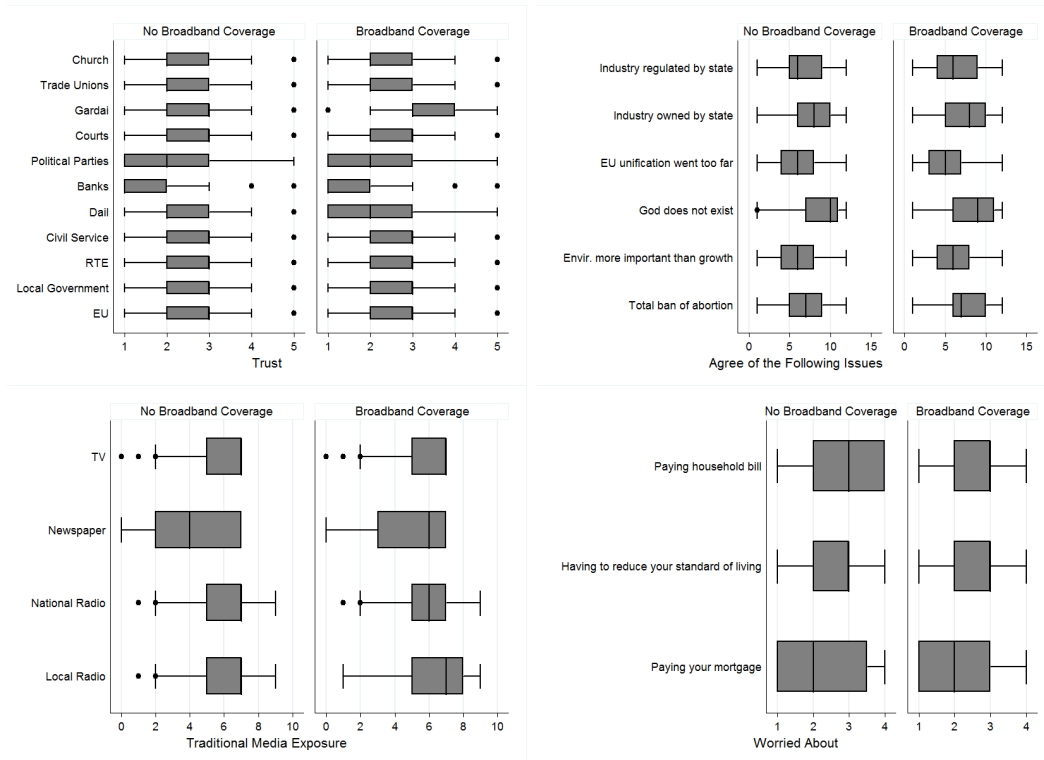


Figure 3: Areas with broadband coverage versus areas without broadband coverage. The graphs show the balance in area's characteristics in relation to media, political attitudes, trust, and concerns about the crisis.

APPENDIX – Lost in Transmission: Evaluating Internet Effects on Citizens’ Attitudes Towards the European Union in Times of Crisis

Distributions of Dependent Variable and Covariates

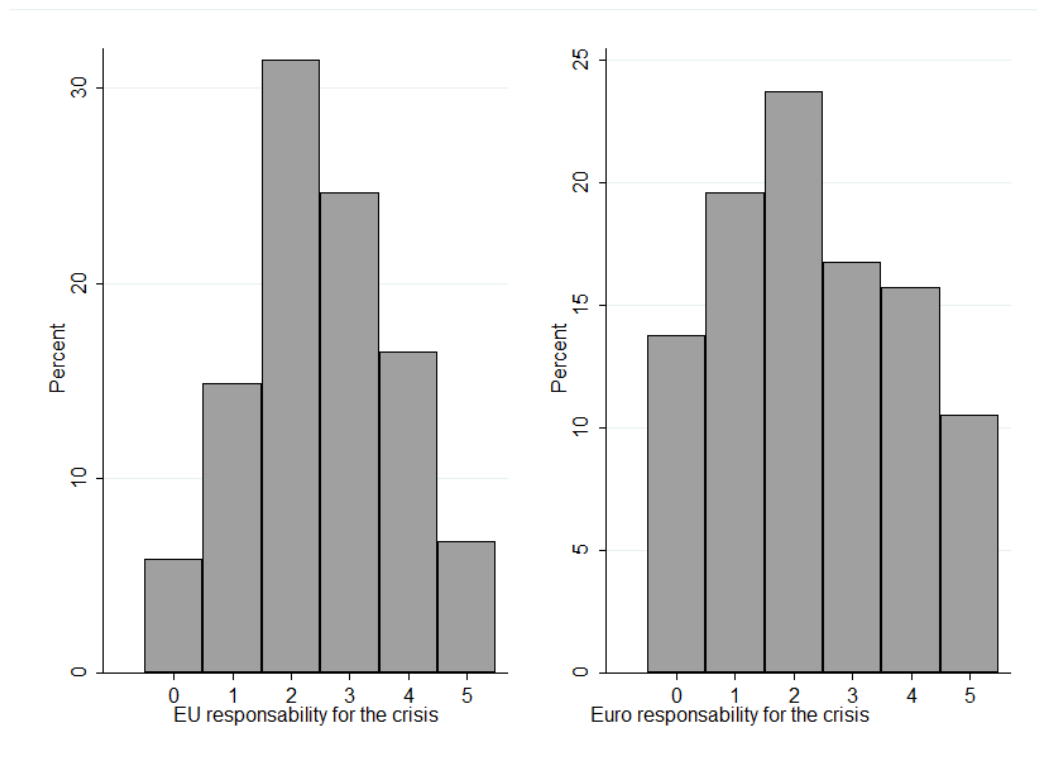


Figure 4: Distribution of the dependent variables. Note: ‘don’t know’ are coded five.

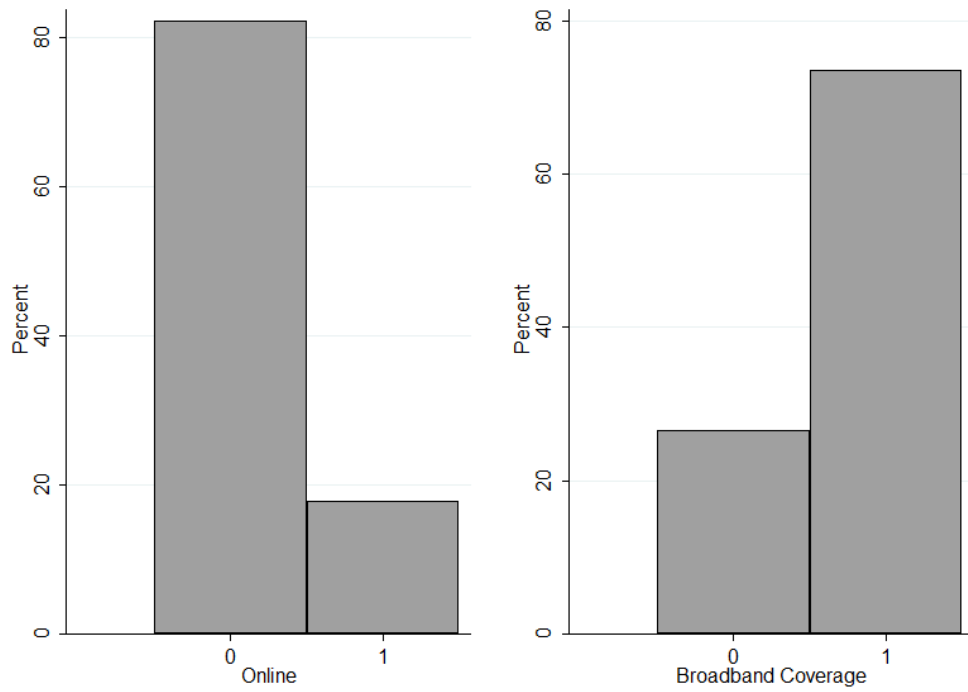


Figure 5: Distribution of treatment and instrument.

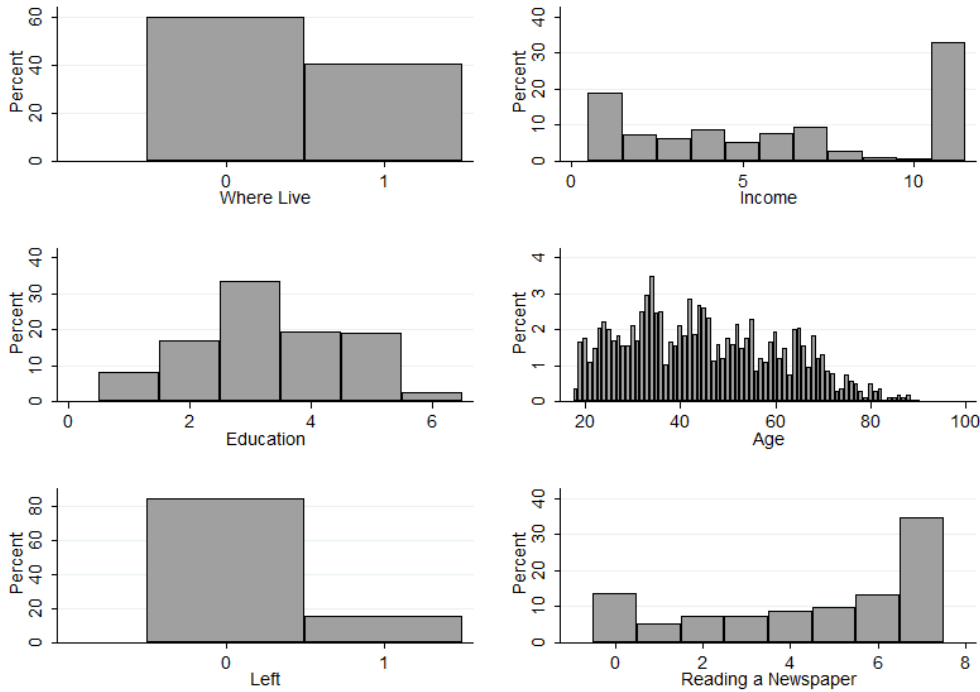


Figure 6: Distribution of the covariates.

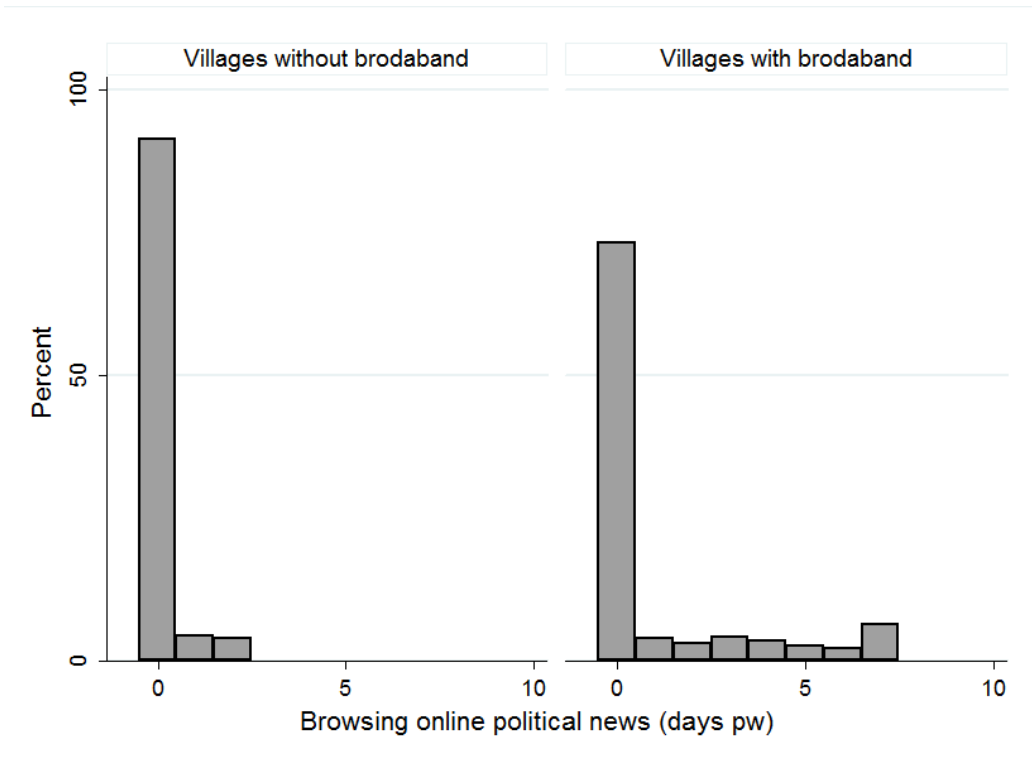


Figure 7: Browsing online news in villages with and without broadband.

Correlation Among Covariates

Table 3: Correlation among covariates.

	Rural	Income	Education	Age	Left	Newspaper
Rural	1					
Income	0.01	1				
Education	-0.11	0.22	1			
Age	0.03	-0.03	-0.35	1		
Left	-0.01	-0.09	-0.04	-0.07	1	
Newspaper	-0.10	0.06	0.09	0.16	0.02	1

Compliers versus Defiers

Table 4: Respondents are broken down into Online and Broadband.

	Online	Broadband
		yes no
yes	446	997
no	19	292

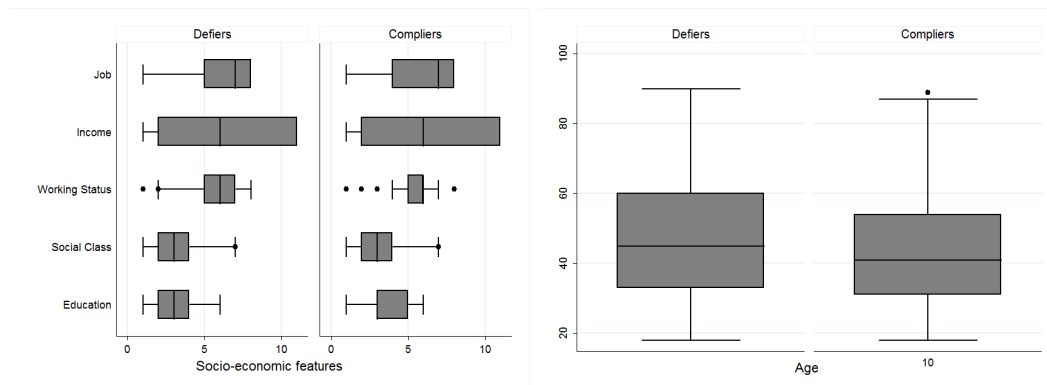


Figure 8: The graphs show balance in compliers' versus defiers' characteristics.

Broadband Coverage in 2006

Table 5: Percentage of households with and without broadband for a selected sample of Irish towns in 2006 – Central Statistics Office data. Note: ‘Total’ is not calculated on this sample.

City	Broadband Connection	No Broadband Connection
Dublin	31%	69%
Cork	18%	82%
Galway	17%	83%
Limerick	16%	84%
Carlow	13%	87%
Monaghan	10%	90%
Total	20%	80%

Assumption 1 and Assumption 2

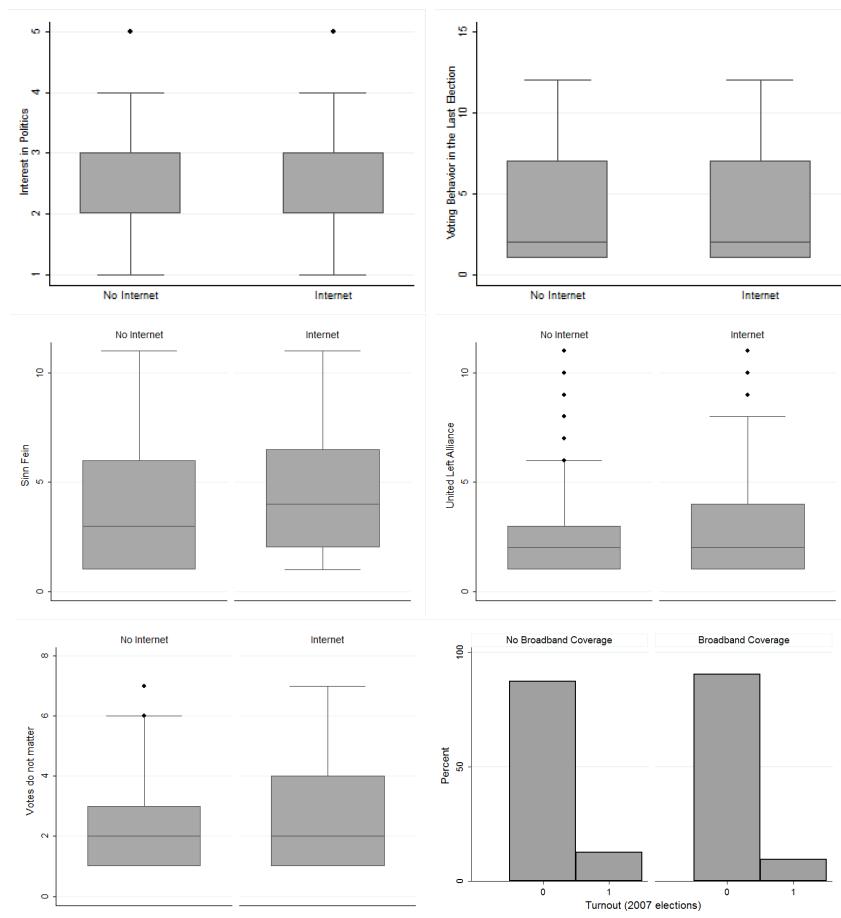


Figure 9: Villages with broadband coverage versus villages without broadband coverage. The graphs show the balance in village characteristics in relation to political attitude.

Assumption 4

Table 6: Browsing online news in villages with and without broadband.

Browsing political news online (days pw)	Living in	
	villages without broadband	villages with broadband
0	425	945
1	21	52
2	19	41
3	0	56
4	0	47
5	0	35
6	0	30
7	0	83

Effect

Table 7: Effect of the internet on blaming the EU. Note: values of covariates set at their median.

Cutoff	Prob. (Online 0 \rightarrow 1)	CI
0	-0.07	[-0.09, -0.04]
1	-0.11	[-0.16, -0.06]
2	-0.10	[-0.15, -0.04]
3	0.07	[0.04, 0.09]
4	0.21	[0.10, 0.33]

Table 8: Effect of the internet on blaming the Euro. Note: values of covariates set at their median.

Cutoff	Prob. (Online 0 \rightarrow 1)	CI
0	-0.14	[-0.20, -0.07]
1	-0.11	[-0.16, -0.05]
2	-0.03	[-0.07, -0.004]
3	0.06	[0.03, 0.08]
4	0.22	[0.09, 0.35]

Asking for help from geography

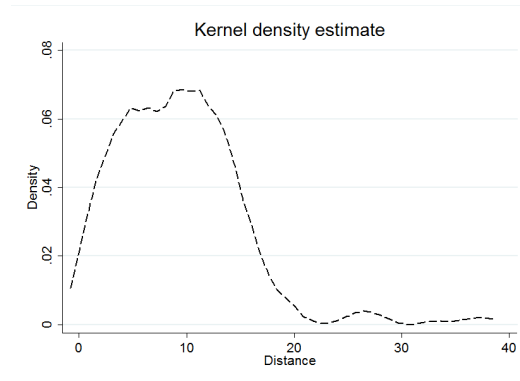


Figure 10: Distribution of Distance.

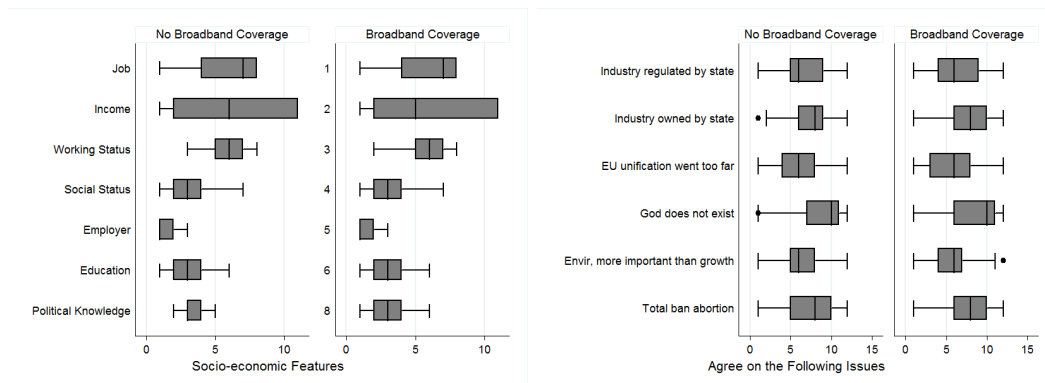


Figure 11: The graphs show balance in close villages socio-economic and political attitude characteristics.

Table 9: Geography, matching, and the Internet. LARF: bootstrapped standard errors. 2SLS: robust standard errors clustered by constituency. Online instrumented with broadband coverage. Matching on Distance from the closest village in the other (i.e. treatment vs. control) group, Rural areas, and Newspaper. The baseline model includes Living in rural areas, Income, Education, and Age. The extensive model also adds Reading newspapers and Being ideologically close to Sinn Féin and United Left Alliance. Response categories for the outcome variables are coded as ‘not at all responsible’ 0, ‘a little responsible’ 1, ‘moderately responsible’ 2, ‘very responsible’ 3, ‘extremely responsible’ 4.

	(49)	(50)	(51)	(52)
	LARF	2SLS	LARF	2SLS
	EU responsible		Euro responsible	
Online	1.89	1.86	1.90	1.89
	[0.76, 3.01]	[0.91, 2.80]	[0.72, 3.08]	[0.83, 2.94]
Online instrumented	no	yes	yes	yes
Baseline model	yes	yes	yes	yes
Matching	yes	yes	yes	yes
Observations	1446	1446	1397	1397

95 percent confidence interval in parentheses

Table 10: Only villages with Distance ≤ 12 . LARF: bootstrapped standard errors. 2SLS: robust standard errors clustered by constituency. Online instrumented with broadband coverage. The baseline model includes Living in rural areas, Income, Education, and Age. Response categories for the outcome variables are coded as ‘not at all responsible’ 0, ‘a little responsible’ 1, ‘moderately responsible’ 2, ‘very responsible’ 3, ‘extremely responsible’ 4.

	(57)	(58)	(59)	(60)
	LARF	2SLS	LARF	2SLS
	EU responsible		Euro responsible	
Online	1.39	1.39	1.30	1.28
	[0.38, 2.40]	[0.44, 2.34]	[0.08, 2.52]	[0.29, 2.28]
Online instrumented	yes	yes	yes	yes
Baseline model	yes	yes	yes	yes
Observations	1735	1143	1731	1731

95 percent confidence interval in parentheses

Placebo Tests

The results below show that we can safely rule out the possibility that those individuals who browse online news differ from individuals who do not go online in relation to dependent children. Since the outcome variable is a dummy, we run a biprobit model in addition to LARF and 2SLS.

Table 11: Placebo Tests. LARF: bootstrapped standard errors. 2SLS and Biprobit: robust standard errors clustered by constituency. Online instrumented with broadband coverage. The extensive model includes Living in rural areas, Income, Education, Age, Euro-skepticism, and Newspaper. Response categories for the outcome variables are coded as ‘any dependent children under 16’ 0 and ‘no dependent children under 16’ 1.

	(17) LARF	(18) 2SLS	(19) Biprobit
	Children Dependent		
Online	0.10 [-0.64, 0.84]	0.10 [-0.20, 0.41]	-0.11 [-0.64, 0.43]
Online instrumented	yes	yes	yes
Extensive model	yes	yes	yes
Observations	1754	1754	1754

95 percent confidence interval in parentheses

The Internet and Socio-economic Issues

First, we begin by recalling the question on which our two dependent variables were originally built:

“In the past few years the economy has been in recession. How responsible, if at all, are each of the following for the poor economic conditions of the past two years? Extremely responsible (4), Very responsible (3), moderately responsible (2), A little responsible (1), Not at all responsible (0), Don’t know (5)”.

Among the other institutions listed in this question there are *Irish government* and *bankers*. In line with our previous analysis, we drop the ‘don’t know’ answers. Table 5 (in the Appendix) shows that respondents who go online are *not* more likely to blame these institutions as responsible for the crisis. Regarding the Irish government, the negative coefficient of Online is particularly interesting, given the extremely low popularity of the Fiance Fáil government at the time in which the survey was conducted. We find that respondents who browse online news are less likely to blame their government for the crisis, although the coefficients are not statistically significant at the conventional level.

Second, we rely on the following question, which allows us to test the effect of the internet on some crucial socio-economic issues:

“I will now read out some statements. Please tell me to what extent you Disagree or Agree with each statement. ‘strongly disagree’ 0, ‘disagree’ 1, ‘disagree slightly’ 2, ‘neither agree or disagree’ 3, ‘slightly agree’ 4, ‘agree’ 5, ‘strongly agree’ 6.”.

Specifically, we use four statements from this question. The first two statements captures the effect of the internet on issues related to the social dimension, whereas the last two questions captures the effect of the internet on issues related to the economic dimension.

1. “There should be very strict limits on the number of immigrants coming to live in Ireland”;
2. “A working mother can establish just as warm and secure a relationship with her children as a mother who stays at home”;
3. “The presence of large international companies is good for the Irish economy”;
4. “Ireland should limit the import of foreign products in order to protect its national economy”;

The results below show that we can safely rule out the possibility that those individuals who browse online news hold different views on socio-economic issues compared to individuals who do not go online.

Table 12: Other institutions responsible for the crisis. LARF: bootstrapped standard errors. 2SLS: robust standard errors clustered by constituency. Online instrumented with broadband coverage. The extensive model includes Living in rural areas, Income, Education, Age, Being ideologically closed to Euroskeptics parties, and Newspaper. Response categories for the outcome variables are coded as ‘not at all responsible’ 0, ‘a little responsible’ 1, ‘moderately responsible’ 2, ‘very responsible’ 3, ‘extremely responsible’ 4.

	(17)	(18)	(19)	(20)
	LARF	2SLS	LARF	2SLS
	Government responsible		Bankers responsible	
Online	-0.54	-0.52	-0.005	-0.001
	[-2.16, 1.08]	[-1.09, 0.05]	[-0.66, 0.66]	[-0.49, 0.49]
Online instrumented	yes	yes	yes	yes
Extensive model	yes	yes	yes	yes
Observations	1735	1735	1731	1731

95 percent confidence interval in parentheses

Table 13: Social dimension. LARF: bootstrapped standard errors. 2SLS: robust standard errors clustered by constituency. Online instrumented with broadband coverage. The extensive model includes Living in rural areas, Income, Education, Age, Being ideologically closed to Euroskeptic parties, and Newspaper. Response categories for the outcome variables are coded as ‘strongly disagree’ 0, ‘disagree’ 1, ‘disagree slightly’ 2, ‘neither agree or disagree’ 3, ‘slightly agree’ 4, ‘agree’ 5, ‘strongly agree’ 6.

	(21) LARF	(22) 2SLS	(23) LARF	(24) 2SLS
	Limits to immigration		Working mother	
Online	-1.23 [-2.74, 0.29]	-1.17 [-2.64, -0.07]	0.88 [-1.29, 3.04]	0.84 [-0.31, 1.98]
Online instrumented	yes	yes	yes	yes
Extensive model	yes	yes	yes	yes
Observations	1754	1754	1754	1754

95 percent confidence interval in parentheses

Table 14: Economic dimension. LARF: bootstrapped standard errors. 2SLS: robust standard errors clustered by constituency. Online instrumented with broadband coverage. The extensive model includes Living in rural areas, Income, Education, Age, Being ideologically closed to Euroskeptical parties, and Newspaper. Response categories for the outcome variables are coded as ‘strongly disagree’ 0, ‘disagree’ 1, ‘disagree slightly’ 2, ‘neither agree or disagree’ 3, ‘slightly agree’ 4, ‘agree’ 5, ‘strongly agree’ 6.

	(25) LARF	(26) 2SLS	(27) LARF	(28) 2SLS
	Positive view on MNCs		Limits to imports	
Online	-1.43 [-4.22, 1.37]	-1.41 [-2.23, -0.60]	-1.25 [-5.10, 2.60]	-1.19 [-2.41, 0.02]
Online instrumented	yes	yes	yes	yes
Extensive model	yes	yes	yes	yes
Observations	1754	1754	1754	1754

95 percent confidence interval in parentheses

Informed Citizens and the Internet

Since we are unable to capture which website(s) respondents visit, it might be argued that browsing online news does not always imply being more knowledgeable about politics. In this section, we explore the impact of the internet on respondents’ political knowledge relying on several variables from the INES survey. Specifically, we use as dependent variables answers to the following questions:³⁰

- Who is the current Irish Commissioner to the EU?
- Who is the current First Minister of Northern Ireland?

The dependent variables are ordinal and score zero if respondents know the correct answers. Table 12 shows the results. The variable Online is always negative and statistically significant at the conventional level. Thus, respondents who browse online news are more knowledgeable about politics than respondents who do not go online.³¹

³⁰The question has the following preamble: *Now I would like to ask you some factual questions about politics. It doesn't matter if you know the answers or not, we are just interested to see how close people are to politics in Ireland..*

³¹We obtain similar results if we use a variable capturing the interviewer’s recorded judgment on how knowledgeable the respondent is about politics. We do not rely on this variable as main test since it is a rather discretionary assessment. Results are available upon request.

Table 15: Information and the Internet – Economic dimension. LARF: bootstrapped standard errors. 2SLS: robust standard errors clustered by constituency. Online instrumented with broadband coverage. The baseline model includes Living in rural areas, Income, Education, and Age. Response categories for the outcome variables are coded as ‘right answer’ 0, ‘wrong answer’ 1, ‘don’t know’ 2.

	(45) LARF	(46) 2SLS	(47) LARF	(48) 2SLS
	Irish Commissioner		First Minister of Northern Ireland	
Online	-0.70 [-1.40, -0.02]	-0.71 [-1.31, -0.11]	-0.91 [-1.63, -0.20]	-0.88 [-1.50, -0.27]
Online instrumented	yes	yes	yes	yes
Baseline model	yes	yes	yes	yes
Observations	1754	1754	1754	1754

95 percent confidence interval in parentheses

Robustness Checks

Heterogeneity Among Geographical Areas

Table 16: Robustness Checks. LARF: bootstrapped standard errors. 2SLS: robust standard errors clustered by constituency. Online instrumented with broadband coverage. The baseline model includes Living in rural areas, Income, Education, and Age. Response categories for the outcome variables are coded as ‘not at all responsible’ 0, ‘a little responsible’ 1, ‘moderately responsible’ 2, ‘very responsible’ 3, ‘extremely responsible’ 4.

	(11) LARF	(12) 2SLS	(13) 2SLS	(14) LARF	(15) 2SLS	(16) 2SLS
	EU responsible			Euro responsible		
Online	1.30 [0.42, 2.18]	1.36 [0.49, 2.22]	1.69 [0.63, 2.75]	1.04 [0.05, 2.04]	1.14 [0.13, 2.14]	1.98 [0.71, 3.25]
Dublin	no	no	yes	no	no	yes
Constituency FE	no	no	yes	no	no	yes
Online instrumented	yes	yes	yes	yes	yes	yes
Baseline model	yes	yes	yes	yes	yes	yes
Observations	1211	1211	1636	1153	1153	1570

95 percent confidence interval in parentheses

Online as Ordinal Variable

With 2SLS our results do not change if we replace our treatment with an ordinal variable capturing the number of days per week in which people browse online political news. Conversely, our Online ordinal is not statistically significant at the conventional level with LARF.

Table 17: Is the EU responsible for the crisis? LARF: bootstrapped standard errors. 2SLS: robust standard errors clustered by constituency. Online (ordinal) instrumented with broadband coverage. The baseline model includes living in rural areas, income, education, and age. The extensive model also adds Reading newspapers and Being ideologically close to Euroskeptic parties. Response categories for the outcome variables are coded as ‘not at all responsible’ 0, ‘a little responsible’ 1, ‘moderately responsible’ 2, ‘very responsible’ 3, ‘extremely responsible’ 4.

	(1)	(2)	(3)	(4)	(5)
	Ordered Probit	LARF	LARF	2SLS	2SLS
Online	-0.05 [-0.07, -0.02]	0.35 [0.17, 0.53]	0.33 [0.16, 0.51]	0.02 [-0.10, 0.13]	0.02 [-0.13, 0.18]
Online (ordinal) instrumented	no	yes	yes	yes	yes
Baseline model	yes	yes	no	yes	no
Extensive model	no	no	yes	no	yes
Observations	1636	1636	1636	1636	1636

95 percent confidence interval in parentheses

Table 18: Is the Euro responsible for the crisis? LARF: bootstrapped standard errors. 2SLS: robust standard errors clustered by constituency. Online (ordinal) instrumented with broadband coverage. The baseline model includes Living in rural areas, Income, Education, and Age. The extensive model also adds Reading newspapers and Being ideologically close to Euroskeptic parties. Response categories for the outcome variables are coded as ‘not at all responsible’ 0, ‘a little responsible’ 1, ‘moderately responsible’ 2, ‘very responsible’ 3, ‘extremely responsible’ 4.

	(6)	(7)	(8)	(9)	(10)
	Ordered Probit	LARF	LARF	2SLS	2SLS
Online (ordinal)	-0.04	0.20	0.19	-0.06	-0.07
	[-0.07, -0.02]	[0.01, 0.41]	[0.01, 0.39]	[-0.21, 0.10]	[-0.30, 0.16]
Online instrumented	no	yes	yes	yes	yes
Baseline model	yes	yes	no	yes	no
Extensive model	no	no	yes	no	yes
Observations	1570	1570	1570	1570	1570

95 percent confidence interval in parentheses

The Role of Traditional Media

In the theory section, we suggest that traditional media in general, and newspapers in particular, tend to be biased in favor of the EU. This allows us to indirectly test whether the internet modifies respondents' attitude towards the EU or whether respondents select online news since they are closer to respondents' political views.³² How do we do that? We implement two different tests.

First, we split the original sample in two groups: (1) those respondents who read a newspaper five times or more a week; (2) those respondents who read a newspaper less than five times a week.³³ Then we run our baseline models on these two sub-samples. The results (Table 8 and Table 9 in the Appendix) shows that Online is still positive and statistically significant at the conventional level in both sub-samples and for both dependent variables with 2SLS. For the sub-sample Newspaper<5, Online is not statistically significant at the conventional level with LARF, although the coefficient is still positive. This might be explained by the fact that the number of observations is dramatically reduced in this sub-sample.

In any case, there is preliminary evidence that browsing online news increases the probability of blaming the EU and the Euro also for those respondents who are exposed to traditionally pro-EU media, i.e., newspapers. In other words, the more informed respondents are, the more they hold a negative attitude towards the EU during the crisis.

Second, a skeptical reader might still note that there is a large heterogeneity among newspapers in terms of EU coverage, i.e., some newspapers are pro-EU and some others are less euro-enthusiastic. We are fortunate that a question from the survey asks which newspaper(s) respondents regularly use for political information. We rely on this question to split the original sample into two groups: (1) those respondents who read the *Irish Times* and the *Irish Independent*, which are generally pro-EU newspapers; (2) those respondents who read the *Irish Examiner*, the *Irish Star*, the *Evening Herald*, and the *Irish Sun*, which are less euro-enthusiastic newspapers. Again, we run our baseline models on these two sub-samples.

Table 10 and Table 11 (in the Appendix) show that the variable Online is positive and statistically significant at the conventional level in both sub-samples and for both depen-

³²For an extensive discussion on news selectivity, see Tewksbury and Rittenberg, 2012: 83-104.

³³Ideally, we would like to use an interaction term between the variables Online and Newspaper. However, that would require us to find two other instruments, which we do not have, to endogenize the three variables, i.e., Online, Newspaper, and the interaction term between these two variables.

dent variables with 2SLS. When we perform LARF, the coefficients of the variable Online are not always statistically significant at the conventional level, although they are still positive. The aforementioned considerations on the sample size hold here as well.

We want to highlight the importance of this result. Even for those respondents who read regularly the *Irish Times* and the *Irish Independent*, browsing online news increases the probability of a negative attitude towards the EU and the Euro. In sum, there is evidence that the internet has a blaming effect also for these respondents who are confronted with different view-points on EU issues. This finding should mitigate the concern that, in relation to the EU, respondents “make exposure decisions that reflect their predisposition and [...] prefer attitude-consistent news” (Tewksbury and Rittenberg, 2012: 86).

Table 19: Is the EU responsible for the crisis? – The Internet and Newspapers. LARF: bootstrapped standard errors. 2SLS: robust standard errors clustered by constituency. Online instrumented with broadband coverage. The baseline model includes Living in rural areas, Income, Education, and Age. Response categories for the outcome variables are coded as ‘not at all responsible’ 0, ‘a little responsible’ 1, ‘moderately responsible’ 2, ‘very responsible’ 3, ‘extremely responsible’ 4.

	(29) LARF	(30) 2SLS	(31) LARF	(32) 2SLS
	Newspaper<5		Newspaper>=5	
Online	1.73 [-17.48, 26.27]	1.39 [0.44, 2.33]	2.17 [0.93, 3.42]	2.18 [1.19, 3.17]
Online instrumented	yes	yes	yes	yes
Baseline model	yes	yes	yes	yes
Observations	676	676	960	960

95 percent confidence interval in parentheses

Table 20: Is the Euro responsible for the crisis? – The Internet and Newspapers. LARF: bootstrapped standard errors. 2SLS: robust standard errors clustered by constituency. Online instrumented with broadband coverage. The baseline model includes Living in rural areas, Income, Education, and Age. Response categories for the outcome variables are coded as ‘not at all responsible’ 0, ‘a little responsible’ 1, ‘moderately responsible’ 2, ‘very responsible’ 3, ‘extremely responsible’ 4.

	(33) LARF	(34) 2SLS	(35) LARF	(36) 2SLS
	Newspaper<5		Newspaper>=5	
Online	1.31 [-7.57, 10.20]	1.31 [0.06, 2.68]	1.48 [0.13, 2.82]	1.47 [0.16, 2.68]
Online instrumented	yes	yes	yes	yes
Baseline model	yes	yes	yes	yes
Observations	635	635	1012	1012

95 percent confidence interval in parentheses

Table 21: Is the EU responsible for the crisis? – The Internet and Pro-EU vs. Anti-EU Newspapers. LARF: bootstrapped standard errors. 2SLS: robust standard errors clustered by constituency. Online instrumented with broadband coverage. The baseline model includes Living in rural areas, Income, Education, and Age. Response categories for the outcome variables are coded as ‘not at all responsible’ 0, ‘a little responsible’ 1, ‘moderately responsible’ 2, ‘very responsible’ 3, ‘extremely responsible’ 4.

	(37)	(38)	(39)	(40)
	LARF	2SLS	LARF	2SLS
	Pro-EU Newspapers		Anti-EU Newspaper	
Online	1.20	1.20	3.08	2.99
	[0.12, 2.28]	[0.20, 2.20]	[-4.59, 10.75]	[1.08, 4.91]
Online instrumented	yes	yes	yes	yes
Baseline model	yes	yes	yes	yes
Observations	783	783	519	519

95 percent confidence interval in parentheses

Table 22: Is the Euro responsible for the crisis? – The Internet and Pro-EU vs. Anti-EU Newspapers. LARF: bootstrapped standard errors. 2SLS: robust standard errors clustered by constituency. Online instrumented with broadband coverage. The baseline model includes Living in rural areas, Income, Education, and Age. Response categories for the outcome variables are coded as ‘not at all responsible’ 0, ‘a little responsible’ 1, ‘moderately responsible’ 2, ‘very responsible’ 3, ‘extremely responsible’ 4.

	(41) LARF	(42) 2SLS	(43) LARF	(44) 2SLS
	Pro-EU Newspapers		Anti-EU Newspapers	
Online	1.31 [-7.57, 10.20]	1.31 [0.06, 2.68]	1.48 [0.13, 282]	1.47 [0.16, 2.68]
Online instrumented	yes	yes	yes	yes
Baseline model	yes	yes	yes	yes
Observations	635	635	1012	1012

95 percent confidence interval in parentheses

SUTVA Violations

Within each village, spillover effects could cause the exclusion restriction to fail. For instance, respondents who do not use the internet, but live in a village with broadband coverage might learn about online news from neighbors who use the internet. The same mechanism is not possible in villages without broadband coverage. In other words, we might violate the stable unit treatment value assumption (SUTVA). To check how severe such violations are, we replicate our analysis using the median value of blaming the EU and the Euro at the village level as dependent variables. The results are similar in terms of sign of the coefficient and level of significance, although the magnitude of Online coefficient is smaller than in previous analyses.

Table 23: SUTVA Violations. LARF: bootstrapped standard errors. 2SLS: robust standard errors clustered by constituency. Online instrumented with broadband coverage. The baseline model includes Living in rural areas, income, Education, and Age. Response categories for the outcome variables are coded as ‘not at all responsible’ 0, ‘a little responsible’ 1, ‘moderately responsible’ 2, ‘very responsible’ 3, ‘extremely responsible’ 4.

	(29)	(30)	(31)	(32)
	LARF	2SLS	LARF	2SLS
	EU Responsible		Euro Responsible	
Online	2.44	2.59	2.23	2.20
	[0.81, 4.08]	[1.82, 3.36]	[1.28, 3.18]	[1.35, 3.05]
Online instrumented	yes	yes	yes	yes
Baseline model	yes	yes	yes	yes
Observations	1,636	1,636	1,570	1,570

95 percent confidence interval in parentheses

2012 Referendum on the European Fiscal Compact

On May 31st the Republic of Ireland voted to amend the Irish constitution in order to permit Ireland to ratify the 2012 European Fiscal Compact (Treaty on Stability, Coordination and Governance in the Economic and Monetary Union). Although the referendum is not related to the economic crisis *per se*, it nonetheless has broad implications for EU governance, and the poll was presented by domestic and international media as a ‘yes’ vote or ‘no’ vote to Brussels, given the deep political and economic difficulties faced by the Union.

Irish voters backed the fiscal treaty by a large majority – with 60.3% voting ‘yes’ and 39.7% voting ‘no’. Only five of the 43 Irish constituencies rejected it. This referendum, which was the only one held in any EU member country on the Fiscal Compact, represents

an unique opportunity to re-estimate the effect of the internet on attitude towards the EU. Specifically, we use original data from 1,000 electors interviewed by the polling company Red C the same day in which the referendum was held. We try to keep the research design as close as possible to that presented above. Below we describe the main variables.

Our dependent variable is a dummy that scores one if the respondent voted ‘yes’ and zero if the respondent voted ‘no’.³⁴ Our treatment captures whether or not respondents went online to browse for political news on the Fiscal Treaty at least once during the referendum campaign. Importantly, in this survey we are able to know which websites respondents visit. Specifically, 47% of respondents went online to browse political news; 38% browsed a newspaper website; 19 % browsed political blogs and forums; 24 % went on the EU Commission website. As above, we instrument our treatment using broadband coverage. Finally, we control for age, social grade, working status, level of support for the current government, and knowledge about the Fiscal Treaty (self-assessed).

In summary we find that: (1) browsing online political news has a negative effect on the probability of voting ‘yes’ in the referendum on Fiscal Compact; (2) This negative effect does *not* depend on the type of websites visited by respondents, i.e., the negative effect holds across websites; (3) the negative effect also holds for those respondents who visited both pro-EU websites, e.g. the EU Commission, and Euroskeptic websites, e.g., political blogs and forums.³⁵ Given the overwhelming majority that the ‘Yes’ vote received in the referendum, the negative impact of the Internet on approval of the Fiscal Compact strongly reinforces and further validates the results obtained from the 2011 Irish elections.

³⁴We dropped those observations in which respondents refused to answer, i.e. 24, observations.

³⁵We not are able to use LARF with these data, since the number of compliers is too low. The results are not sensitive to the type of instrumental variable models used, i.e. we obtain similar results with IVREG, TREATREG, and BIPROBIT.

Table 24: 2012 referendum on EU Fiscal Compact. 2SLS: robust standard errors clustered by constituency. Online instrumented with broadband coverage. Control variables include Age, Social status, Working status, Level of support for the current government, and Knowledge about the Fiscal Treaty (self-assessed). The outcome variable is coded 'voted no' 0 and 'voted yes' 1.

	(61) IVREG	(62) IVREG	(63) IVREG	(64) IVREG
	Internet	Newspapers (online)	Blogs	EU Commission website
Online	-0.35 [-0.66, -0.08]	-0.32 [-0.59, -0.05]	-0.57 [-0.73, -0.42]	-0.52 [-0.67, -0.37]
Online instrumented	yes	yes	yes	yes
Control	yes	yes	yes	yes
Constituency FE	yes	yes	yes	yes
Observations	960	960	960	960

95 percent confidence interval in parentheses