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Piergiuseppe  
Fortunato and  
Marco  
Pecoraro

Division on Globalisation  
and Development  
Strategies, UNCTAD

piergiuseppe.fortunato@unctad.org  
marco.pecoraro@unine.ch

# Social Media, Education and Euroscepticism

## Abstract

We study how the advance of nationalistic and sovereigntist ideas in Europe relates to the new technologies of political communication, education, and their interaction. Using both European-wide and national surveys, we find a strong relationship between exposure to online political activity and Euroscepticism only among less educated individuals. When distinguishing between different forms of online political activity we also find that it is not the use of the internet per se that matters, but the specific use of social networks, like Twitter or Facebook, for obtaining information about politics. Our results turn out to be robust to the use of instrumental variables intended to capture the speed of connection available and the relative easiness of using internet and social media.

**Key words:** Euroscepticism, Internet, Social Media, Education



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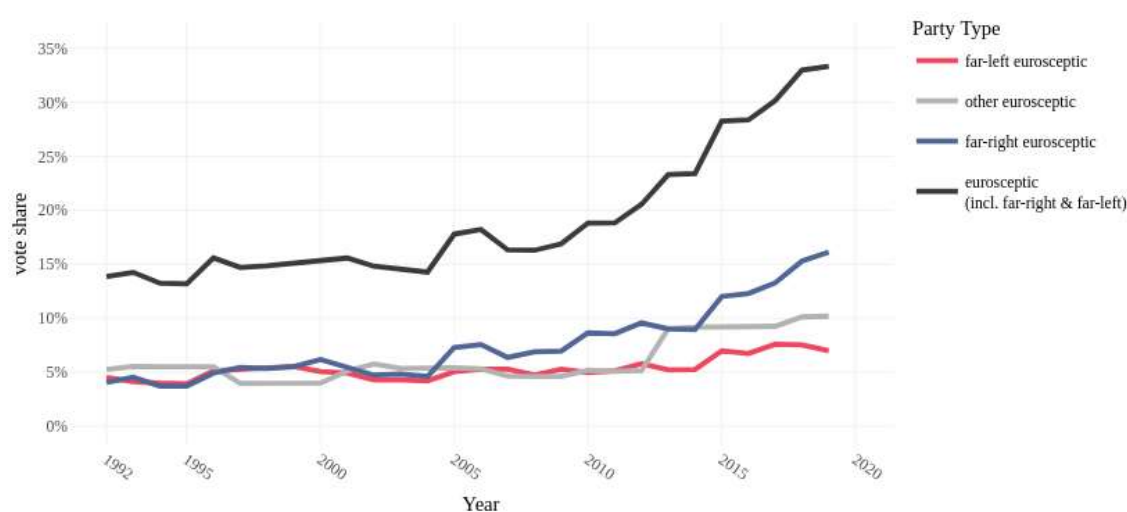
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# 1. Introduction

The popular sentiment towards European institutions has changed enormously along the last three decades, especially after the turn of the millennium. The support for Eurosceptic parties has more than doubled since the early 1990s, with the combined vote share of parties proclaiming themselves Eurosceptic reaching almost the 34 per cent in 2019. Figure 1 displays this explosive dynamic, driven mostly by anti-establishment parties on the far-right of the spectrum. The last time we saw a comparable diffusion of anti-establishment movements in the continent was in the mid-1930s, right before the collapse of the Weimer Republic (Dalio et al., 2017 and Hopkin and Blyth, 2018).



Note: Data from ParlGov, European Countries; Classifications The PopuList, link: <https://popu-list.org/>.

**Figure 1.** Share of Eurosceptic, far right and far left parties' votes weighted by population size

The turn of the millennium also witnessed significant changes in the mass media space and in political communication technologies that affected the process of opinion formation. Citizens generally draw on information from the mass media to form political opinions. This is also the case for European integration. When the coverage is negative or framed in divisive terms, public support for European integration drops (Norris 2000). The growing relevance of political information online and the emergence of 'social' media have increased the exposition of voters to divisive messages (Maldonado, 2017). In some cases, as revealed recently by Frances Haugen, social media algorithms consciously privilege the most divisive content to amplify traffic on the networks. As a matter of fact, during the 2016 UK's referendum campaign, the leave side dominated the day-to-day volume of tweets. Overall, along the last three weeks leading up to the vote, support for leaving on the platform outstripped support for remaining by a factor of four (Bauchowitz and Hänska, 2017). Similarly, from October 2018 to May 2019 before the EU parliamentary elections, eighty-five per cent of all shared Facebook's posts originated from all German political parties stem from AfD (Diehl et al., 2019).

Social media do not bear sole responsibility for the rapid spread of Euroscepticism. Animosity against European integration has been certainly aided by the worsening economic outlook and increasing inequality. The 2008–2009 global financial crisis and the following 2010–2011 European debt crisis resulted in job losses and significant drops in pensions, subsidies, and transfer payments, contributing to the progressive deterioration of the income distribution (European Parliament, 2015). This generated a diffuse sense of anxiety, especially

among the most vulnerable sectors of the population, and increased the space for populist Eurosceptic political platforms designed to match the emerging demand of social justice (Algan et al., 2017).

Several studies have linked political support for nationalistic or populist movements to economic shocks and insecurity. Gozgor (2021) finds increases in total populism and right-wing populist voting behavior in Europe from 1980 to 2020 to be strictly related to increased global economic uncertainty. Higher penetration of Chinese imports has been found to be associated to support for Brexit in Britain and to the emergence of nationalist parties in continental Europe (Colantone and Stanig, 2016a, 2016b and 2018). And in Sweden, increased labor-market insecurity has been linked empirically to the rise of the far-right Sweden Democrats (Dal Bo et al., 2019).

Although online politics and social media are unlikely to be the sole, or even the main, driver of the diffusion of sovereigntist sentiments, we posit that they can represent a key facilitator, especially among those less educated and less politically sophisticated individuals that are on average more susceptible to negative news (Schuck and De Vreese 2006, and De Vreese et al. 2010). Analyses of the 2016 referendum that paved the way to the exit of the United Kingdom from the European Union (EU), reveal a clear polarization of the vote along educational lines. A significant share of those with a lower level of education voted to leave, while citizens with the highest educational credentials voted remain in vast majority (Hobolt, 2016). This educational divide is not a distinctive British feature. The data from the 8<sup>th</sup> round of the European Social Survey (ESS), held in the same year of the Brexit referendum, reveal that the share of respondents that would vote for leaving the EU in case of a hypothetical referendum decreases consistently with the educational achievements. Almost half of the respondents having completed only the primary education cycle would be in favor of an exit from the EU while this figure drops down to around ten percent for respondents holding a master or an equivalent post-tertiary title.

We employ the 8<sup>th</sup> and 9<sup>th</sup> rounds of the ESS data to show that, in line with our hypothesis, exposure to political information online reinforces sovereigntist and Eurosceptic preferences only among individuals with relatively low levels of education. For instance, we find that the correlation between exposure to political information online and being in favor for their own country leaving the EU is statistically significant only for individuals that underwent less than twelve years of education, roughly equivalent to the first two educational cycles in most European countries.

To study whether the specific use of social media matters, we further employ several rounds of the Italy's Multipurpose Household Survey (MHS) that allows us to distinguish generic exposure to political information online and exposure mediated through social media. We find that it is not the use of internet per se that is associated with distrust in EU institutions but the specific use of social media by lower-educated individuals. Overall, our results confirm the existence of a strong association between sympathy for Eurosceptic ideas and exposure to online political activity documented by Galston (2018), Hendrickson and Galston (2017), and Alcott and Gentzkow (2017), among the others, but move one step forward characterizing the exact conditions under which exposure to online political activity matter.

In discussing our findings, we acknowledge that causality is hard to establish because our explanatory variables measuring the exposure to internet and social media are likely to be endogenous. Anti-EU activists and other politically motivated citizens might in fact be more prone to make use of internet (and social media) to get access to political (and politically biased) information and propaganda, and later share this material within their communities (Neumann and Gregorowicz, 2010). We deal with this issue following Campante et al. (2018) and instrumenting the exposure to online politics and social media using a series of variables intended to capture the speed of connection available to the respondent and therefore the relative easiness of using internet and social media to get access to political information. We show that our results are robust to the use of these instrumental variables.

The remaining of this paper is organized as follows. Section 2 reviews the literature on the linkage between online politics and diffusion of divisive messages, such as regaining national sovereignty. It also discusses the way in which education can affect this linkage. Section 3 presents the datasets that we employ. Section 4

outlines our empirical strategy and reports the main empirical findings. Section 5 discusses the results of the robustness checks. Section 6 concludes.

## 2. Related Literature

There is an emerging consensus in the cognitive and social sciences literature on the effects that the growing importance of political activities mediated through the internet, especially through social media, can have on partisan divisiveness. Several recent contributions find that exposure to political information online plays often an influential role in fostering the diffusion of divisive ideas, and aids polarization and political sectarianism (Barret et al, 2021, Van Bavel et al, 2021, and Finkel et al, 2020).

In a randomized experiment, Alcott et al. (2020) find that deactivating Facebook for the four weeks before the 2018 US midterm election and reducing online activity while increasing offline activities such as watching TV alone and socializing with family and friends, led to a significant reduction of both factual news knowledge and political polarization and to an increased subjective well-being. It did not reduce divisiveness based strictly on party identity, however. This is consistent with the view that people are seeing political content on social media that does tend to make them more upset, angrier at the other side and more likely to develop stronger and divisive views on specific issues.

It is the very design of the automated systems that run the platforms the main responsible for the amplification of divisive content. Social media technology employs popularity-based algorithms that tailor content to maximize user engagement thereby generating self-reinforcing feedback loops. Maximizing engagement in turn increases polarization, especially within homogeneous networks or groupings of like-minded users. Levy (2021) find that Facebook's content-ranking algorithm may limit users' exposure to news outlets offering viewpoints contrary to their own — and thereby increase polarization.

The consequences of this heightened partisan animosity include the unprecedented diffusion of conspiracy theories, an increase in political violence and the erosion of trust in elections and in traditional democratic institutions. In Europe, the consolidation of digital media aided a massive circulation of populist messages that question the political legitimacy of the European Union and diffuse mistrust in its chief institutions (Alonso-Muñoz and Casero-Ribolles, 2020). Several studies document the extensive use of social media propaganda by part of Eurosceptic and sovereigntist movements before and after Brexit (see e.g., Galpin and Hans-Jörg, 2017, and Zappettini and Maccaferri, 2021).

But are the effects of exposure to sovereigntist political propaganda online homogeneous across different social groups? This paper investigates whether low education, an individual characteristic commonly found to predict Euroscepticism, become a more potent driver of Eurosceptic beliefs when it co-exists with a reliance on social media as a news source. Our hypothesis is that education reduces exposition to negative feedback loops on social media since higher educated individuals are on average less sceptic towards the European integration project.

Furthermore, highly educated individuals are likely to discern more easily between mainstream and false news (Guess et al, 2020).<sup>1</sup>

Recent empirical literature shows the existence of a clear correlation between educational level and preferences towards European integration. Across Europe, those with less education are consistently found to be more Eurosceptic than those with higher education (Hooghe and Marks, 2005; Lubbers and Scheepers, 2010), and this gap has significantly widened over time (Lubbers and Jaspers, 2011).

Many reasons have been called upon to explain this evidence (for a detailed literature review, see Hakhverdian et al., 2013). From a purely economic perspective, one of the seminal explanations of the phenomenon asserts that higher educated individuals are likely to be more favorable to integrated labor markets, and therefore less Eurosceptic, because they face less competition and insecurity (Gabel and Palmer 1995).<sup>2</sup> Analogously, cognitive, creative, and functional skills predominantly transmitted in formal education might enable individuals to remain flexible and to successfully interact in an internationalized environment (Rosenau et al. 2004). From a more sociological perspective, in a wide variety of national contexts and time periods, low education has been repeatedly shown to be a powerful predictor of ethnic exclusionism and nationalism. Inglehart and Baker (2000), for example, argue that through their education individuals acquire the ability to cope with abstract and extensive political communities such as the EU.

### 3. The Data

This section presents the datasets that we employ; the 8<sup>th</sup> and 9<sup>th</sup> rounds of the European Social Survey and several iterations of ISTAT Multi-purpose Survey of Italian Families on 'Aspects of Everyday Life' (Indagine Multiscopo sulle Famiglie). The discussion of our empirical strategy and of the main results is the object of Section 4.

#### 3.1 European Social Survey

The European Social Survey (ESS) is a multi-country survey that monitors changing public attitudes and values within Europe and develops a series of European social indicators, including attitudinal indicators. The survey covers at least 23 countries and over 40,000 individuals per round (see [www.europeansocialsurvey.org](http://www.europeansocialsurvey.org)). The key topics covered by the ESS include social trust; political interest and participation; socio-political orientations; social exclusion; national, ethnic and religious allegiances; climate change, energy security and energy preferences; welfare; human values; demographics and socioeconomics. More importantly for our aims, the survey also investigates the attitude towards the EU and, only from the 8<sup>th</sup> round on, it includes a series of questions on online political activity, to assess whether the respondent posted or shared anything about politics online, for example on blogs, via email or on social media.

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<sup>1</sup> As discussed by Fortunato and Panizza (2015), education generally improve the functioning of democratic institutions by increasing informational flows and developing the cognitive skills that are necessary to effectively participate in a representative democracy.

<sup>2</sup> As a matter of fact, increased exposure to immigrants appears to induce more negative attitudes towards immigration among low-educated workers or those working in economically declining sectors (e.g. Mayda, 2006; Pecoraro and Ruedin, 2016 and 2020).

To measure Euroscepticism, we use two specific questions as recorded in the 8<sup>th</sup> and 9<sup>th</sup> rounds of the ESS, which were collected in 2016 and 2018. The first question allows us to measure the level of trust in European Parliament from 0 (no trust) to 10 (full trust); the second question is interested on whether respondents declare themselves in favor for their own country leaving the EU. These questions were asked in the 17 EU countries that participated to the 2016 and 2018 rounds of the survey.<sup>3</sup> While we keep the ordinal values from 0 to 10 for trust in European parliament, we construct the dummy variable EU exit equal to 1 if respondents would vote for his country to leave and 0 in the case of voting to remain member of European Union. As shown in Table A.1 in the Appendix, the average levels of trust in European parliament correspond to 4.26 among the full ESS sample in Panel I and to 4.33 among the sample of workers in Panel II, but these average values are not statistically different at the 95% confidence level. In addition, the average share of respondents in favor of leaving the EU is 19 per cent either based on the full ESS sample (Panel I) or on the sample of individuals in paid work (Panel II). The variance across countries is considerable (results not shown); residents from Ireland emerge as the least Eurosceptic (with a trust level in European parliament of at least 5 and around 8 per cent of the population in favor of leaving the EU, on average) while on the other side of the spectrum we find the UK (at least 3.7 and around 40 per cent, respectively).

The key correlates of Euroscepticism considered in our analysis are the level of education and exposure to politics online. The ESS contains detailed information on the number of years of education of the respondents. While we measure the exposure to politics online (labelled online politics below) with a dummy variable that takes value equal to 1 if the respondent declares to have posted or shared something about politics online, for example on blogs, via email or on social media such as Facebook or Twitter, during the last 12 months, and 0 otherwise. As shown in Table A.1, between one fifth of the respondents from the full sample (Panel I) and one quarter from the sample of employed (Panel II) have posted or shared something about politics online. In addition, on average, employed respondents appear to be more educated than those from the full sample (mean years of education is at least 13 in Panel I and more than 14 in Panel II), this difference being statistically significant at the 95% confidence level.

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<sup>3</sup> Not all EU countries are covered by the ESS. For more details and to see which countries took part in each ESS round, please consult [https://www.europeansocialsurvey.org/about/participating\\_countries.html](https://www.europeansocialsurvey.org/about/participating_countries.html) on the official ESS website.



### 3.2 ISTAT Multipurpose Household Survey

The second dataset that we employ is the ISTAT Multipurpose Household Survey on 'Aspects of Everyday Life' which covers the Italian permanent resident population in private households by interviewing a sample of 20,000 households and 50,000 people. The survey provides information on the citizens' habits in different thematic areas including school, work, family and social life, spare time, political and social participation, health and lifestyle.

Interestingly, the ISTAT survey includes not only questions on trust in major EU institutions and on online participation in politics, but also distinguishes between the use of social networks to acquire information about politics and online political activities not mediated through these networks (e.g., consultation of websites linked to traditional media or blogs). It therefore allows us to refine the analysis based on ESS data and to assess also the impact on attitudes toward the EU of exposure to social media versus traditional media internet platforms (newspapers, televisions, etc.). We consider the years ranging from 2013 to 2016 (the latest available).

The key outcome variable here is represented by trust in European Parliament that ranges between 0 and 10, with higher values being associated with higher trust in the EU Parliament. As presented in Table A.2 in the Appendix, the average level of trust in European parliament over the period 2013-2016 is approximatively 3.75 in the sample of employed individuals (Panel B) and is slightly higher considering the full sample (Panel A), indicating that the average Italian is rather Eurosceptic. Attitudes towards the European parliament have deteriorated over the period 2013-2015 and then stabilized around its lowest value. The average level of trust among employed individuals was 3.90 in 2013, 3.75 in 2014 and 3.68 in 2015 and in 2016.

The ISTAT survey contains detailed information on the level of education of the respondents (i.e., the highest diploma achieved). It also offers the possibility of controlling for sex, age group, civil status, household type, and the urban dimension of the city of residence.

As anticipated above, with regards to the exposure to politics online, the survey distinguishes between acquiring information about politics through social networks, like Facebook or Twitter, and acquiring information about politics on internet but in other ways (e.g., through websites related to traditional media or blogs). This distinction allows us to investigate whether different ways of using internet in the political realm are associated with different attitudes towards the EU.

As shown in Table A.2, 23 per cent of the respondents from the full sample (Panel I) are exposed to politics online, and about 40 per cent of them rely on social media to

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