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Let's speak more? How the ECB responds to public contestation

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ABSTRACT


Although the post-crisis politicisation of the ECB is widely acknowledged, little empirical evidence exists about how this important non-majoritarian institution has responded to public contestation. This article starts filling this gap by investigating whether and how public opinion affects ECB communication. Based on automated text analysis of the speeches delivered by Executive Board members (2001–2017), the article shows that negative public opinion is associated with an expansion of the scope of ECB communication and a reduction in the salience attributed to monetary policy issues. These results challenge the view according to which the ECB conceives of its sources of legitimation based almost exclusively on the achievement of its mandate. In particular, our findings suggest that increased politicisation leads the ECB to reassess the sources of its legitimation strategy from a strategy based on output achievement towards one based on participation to broader policy debates.

KEYWORDS ECB; legitimacy; politicisation; communication; central banking; public opinion

Introduction

On the heels of the sovereign debt crisis, the European Central Bank (ECB) has been widely credited for its pivotal role in helping the Eurozone navigate the worst crisis since its creation. Through the adoption of unconventional policies, the ECB has contributed to disperse risks in the Economic and Monetary Union (EMU) (Schelkle, 2017), limit the potential for mass unrest in the member states (Genovese, Schneider, & Wassmann, 2016) and display the leadership (Verdun, 2017) and independence (Lombardi & Moschella, 2016) that ultimately preserved the same existence of the single currency. However, the crisis has also spurred a large public contestation of the ECB and its role: public

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trust towards the ECB has sagged (Roth, Gros, & Nowak-Lehmann, 2014) and an unusual string of mass protests has brought to the surface widespread dissent towards the ECB and its policies.¹

While several studies have investigated the causes of public discontent towards the ECB (Braun, 2016; Jones, 2009; Högenauer & Howarth, 2016), the purpose of this paper is to systematically investigate whether the ECB has responded to the politicisation of its role and to help illuminate on the legitimisation strategies of this important non-majoritarian institution. Indeed, there is abundant evidence indicating that the ECB has not been impermeable to the criticisms, especially in the area of communication. For instance, in a notable shift for an institution that has been traditionally wary of disclosing too much information to the public (see Issing, 1999), the ECB moved in this direction by starting publishing accounts of its internal deliberations in January 2015. The ECB also started the practice of appearing before a number of national parliaments (Tesche, 2018), increased the frequency of communication with the European Parliament (Fraccaroli, Giovannini, & Jamet, 2018), engaged with debates on fiscal policy and structural adjustment (Ban & Patenaude, 2018; Diessner & Lisi, 2019); and even toured Europe in order 'to engage, explain and listen' to European public²

A straightforward explanation for the changes to the ECB traditionally guarded communication strategy lies in the (*de facto* and *de jure*) transformations in the ECB role throughout the crisis. As the ECB took on an increased political leadership by adopting unconventional policies and taking on new legal responsibilities in the realm of financial stability, its rhetoric expanded accordingly (Diessner & Lisi, 2019; Ferrara, 2019; Tortola & Pansardi, 2019). Although the changes in the policy context are certainly important to explain the ECB behavior, we argue that the ECB strategically responds to negative public opinion by using an expanded communication as a way to increase its perceived legitimacy. Expanding communication is instrumental to achieve this goal for two reasons. First, an expanded communication allows recasting the ECB public image so as to reject the accusation of being an institution obsessed with the achievement of price stability only. Second, an expanded communication allows the ECB to enhance its legitimisation by addressing the policy concerns of several national publics simultaneously rather than focussing on a limited number of concerns that might be salient in some countries only.

Empirically, we investigate the impact of public opinion on the ECB communicative strategies by analysing the speeches delivered by the members of the Executive Board from 2001 to 2017. Specifically, we apply quantitative text analysis to identify how ECB policymakers share their attention among monetary and non-monetary policy issues in their communication with the public. The advantage of measuring the impact of public opinion on the salience attributed to issues that do not directly fall in the remit of the ECB price stability mandate is that it allows assessing what the ECB prioritises in its

policy message and thus to appreciate whether the ECB deviates from past practice of focussing its rhetoric on its mandate as the way to achieve (output) legitimacy.

Our findings suggest that the ECB reacts to negative public opinion by allocating its attention to a wider set of issues rather than concentrating on those associated to its core mandate. This result challenges the view according to which the ECB conceives of its sources of legitimation based almost exclusively on the achievement of its mandate. In particular, our findings suggest that increased politicisation leads the ECB to reassess the sources of its legitimation strategy from a strategy based on output achievement towards one based on participation to broader policy debates.

The paper is organised as follows. Section 2 develops the theoretical arguments that inform our analysis. Section 3 details the research design used to gauge the impact of public opinion on ECB communication. Section 4 presents the results. Section 5 discusses the findings, their limitations and implications for future research.

Speaking (more) to the public: why and how

Central banks' communication is usually analyzed to gauge the effectiveness of monetary policy to achieve its goals of price stability and output stabilisation. Given the central role that financial markets play in the transmission of the monetary policy impulse, scholarship has overwhelmingly focused on central banks' communication with financial markets (Blinder, Ehrmann, Fratzscher, De Haan, & Jansen, 2008). Recently, however, increasing attention has been devoted to exploring how central banks' communication affects public expectations, including households and societal groups' expectations (Haldane & McMahon, 2018). This attention stems from the recognition that communication with the general public is 'at least as important' as communication with financial markets (Blinder *et al.*, 2008, p. 941) also because, ultimately, the evolution of inflation is shaped by public's inflation expectations, through wage claims and savings, investment and consumption decisions.

In spite of the increased attention to communication with the public, existing literature has mainly focused on how central banks' messages impact on the behavior of societal actors. In contrast, studies that investigate the impact of public attitudes on central banks' communicative behavior are still sparse.

Yet, the relationship with the public is crucial not only for the effectiveness of monetary policy but also for the independence of central banks. That is to say, like other non-majoritarian institutions, central banks care not only about effective policy solutions but also bureaucratic survival (Reh, Bressanelli, & Koop, 2020; Moschella & Pinto, 2019). Indeed, central banks' statutes are subject to legislators' interventions – unless the latter face a political cost for doing so. Indeed, several studies show that central bank independence

is endogenous to the political system (Keefer & Stasavage, 2003) and that independence is more likely to be preserved if policymakers face high audience costs for interfering with the central bank's structure and legal status (Lohmann, 2003).

Although the prospect of legislators' interventions is higher for most central banks than it is for the ECB, whose independence is enshrined in an international treaty and not in domestic legislation, '[t]he ECB cannot ignore the possibility of an unfavourable political reaction' too (Jones, 2009, p. 1093). Negative public opinion can indeed weaken elected policymakers' support for central bank independence thus jeopardising the key feature of non-majoritarian institutions (also Blauburger and Martinsen 2020). This risk is all the more concrete because, by design, the ECB insulation from politics 'make[s] it difficult for the ECB to attract political stakeholders who have the ability and incentives to protect the integrity of the institution when it comes under political attack' (Lohmann, 1999, p. 17). Furthermore, the ECB cannot simply shrug off negative public opinion because it is formally accountable to the European Parliament as the representation of all EU citizens (Article 284 (3) TFEU).

The challenges that the ECB confronts should public support falters thereby suggest that the ECB is likely to strategically respond to negative public opinion. In particular, we argue that the ECB attempts to increase the degree of perceived legitimation and win back public support by expanding the scope of its communication beyond issues related to its core mandate.³

To understand why an expanded communication can be regarded as a legitimation strategy, it is important to take into consideration the characteristics of the ECB 'traditional' communication and the public audiences the ECB speaks to.

To start with the characteristics of the ECB traditional communication output, since its creation, the ECB has taken great care in molding a very guarded communication strategy aimed at limiting the amount of information disclosed on internal policy views and decision-making process.⁴ Such cautiousness was a reflection of the view according to which ECB accountability lies primarily on the achievement of its mandate rather than on the amount of information provided to the public (Issing, 1999). The ECB has consistently justified its approach based on two arguments, both of which can be traced back to a conception of legitimacy as output legitimacy (Jabko, 2003; Schmidt, 2016). The first is that too much communication may confuse the European public about the central bank's policy intentions and decisions, thus undermining the central banks' ability to shape public expectations and achieve its mandated goal. The second argument against an expanded communication is that this practice could expose ECB policymakers to undue political pressures. The reasoning here is that the policy views expressed by ECB officials could be misread in national capitals leading

domestic policymakers to exercise pressures on ECB policy choices. Because of the alleged risks deriving from an expanded communication output, ECB communication has thus been tailored in a way to limit the amount of information disclosed to the public, including by reducing information on the differences in the policy views among ECB policymakers (Blinder *et al.*, 2008, p. 923). These features in EU communication have also contributed fueling the accusation that the ECB eschews democratic accountability (Buiter, 1999) and that, often, the ECB has been reluctant to engage in public dialogue on broader issues that affect the general public (Transparency International, 2017).

By ditching its guarded communication approach in favor of an expanded communication, the ECB can thereby respond to the critics by signaling to the public that it is an institution not only interested in price stability but also attentive to a large set of policy debates. For instance, increasing the amount of information and communication capacity with the public is one of the strategies that international organisations (IOs) systematically pursue to respond to the politicisation of their role and thus (re)legitimize their activity especially after major scandals and public protests (Ecker-Ehrhardt, 2018; Gronau & Schmidtke, 2016). Similarly to what has been found in the realm of IOs, the ECB can rely on an expanded communication to legitimize its role and decisions before external audiences by recasting the central bank's public image away from the criticisms of the past. Furthermore, an expanded communication helps the ECB to manage its public image by allowing it to set out its views on multiple policy issues and, possibly, shape policy debates around them.

The expansion in communication can also be conceived as a legitimization strategy in light of the characteristics of the public audiences the ECB speaks to. As a supranational central bank of 19 countries, the ECB finds itself in the unique position of having to communicate its decisions to audiences based in different countries with potentially different conceptions of legitimacy. Indeed, studies on public opinion show that, in spite of growing Europeanisation, the concerns of EU public are fragmented along national lines: what is salient issue in one country is not necessarily the most salient issue in another (Serricchio, Tstakatika, & Quaglia, 2013). By expanding its communication, the ECB can thereby enhance its perceived legitimacy by showing to be attentive to the multiple concerns that run throughout Europe rather than to some of them, as it would be the case if the ECB sticks to a rhetoric on monetary policy only. This strategy is similar to the one that international courts have been found to follow in the use case law citations in their rulings: as international courts tend to maximise their legitimacy by avoiding fragmentation in their case law along lines of legal culture or country-specific factors (Lupu & Voeten, 2012, p. 413), so the ECB can maximise its legitimacy by avoiding fragmentation in the attention allocated to policy issues along country lines.

In short, variation in the scope of communication is indicative of how the ECB reacts to public signals. An expanded communication provides the ECB with more opportunities to increase its perceived legitimacy across different national audiences because the central bank can so address multiple concerns on a wider range of issues. It also helps the central bank to improve its public image, allowing it to participate and possibly orient multiple policy and societal debates. Hence, we expect the ECB to respond to negative public opinion by expanding its communication because this strategy helps the central bank legitimize its role and decisions to public audiences.

Data and methods

Dependent variable

To determine whether the ECB responds to the politicisation of its role by expanding its communication, we develop two interrelated dependent variables using communication output of the six members of the Executive Board. The first – *issue diversity* – captures the distribution of ECB policy-makers' attention across the issues covered in their speeches. The second – *core salience* – tracks the salience attributed to monetary policy issues as compared to the other issues that appear in central bankers' speeches: the more the ECB communication is concentrated on the core mandate, the lower is issue diversity and vice-versa.

Specifically, we collected all the speeches delivered between 2001 and 2017 by the president of the ECB, the vice president, and the other four members of the Executive Board.⁵ Our database consists of 1,427 speeches issued by 17 different speakers (see Appendix B).⁶ Although the speeches do not exhaust the list of channels through which the ECB provides information on its activities,⁷ these documents present a number of empirical advantages for the purposes of the analysis. To start with, the speeches here collected are directed at multiple audiences, allowing us to control for the impact they exert on communication outputs. Furthermore, speeches are strategically delivered, meaning that monetary policymakers generally choose what audiences to address and what to say.⁸

In order to develop our dependent variables, we first applied unsupervised topic modeling techniques to identify the topics in ECB policymakers' communication; second, we computed an index gauging issue diversity and core salience.

Topic modeling: We used structural topic models (STM) to identify topics. STM allows estimating general semantic themes within a corpus of documents and to simultaneously analysing the prevalence of each topic conditional on a number of factors.⁹ Using STM we can, therefore, estimate the main topics that characterise our corpus of texts as well as the variation of

their prevalence over time or as a consequence of the impact of major political and economic events.

Figure 1 reports the 20 topics extrapolated by the STM following standard tests aimed at assessing the validity of the topic model (see Appendix C). Figure 1 also reports the words that are both frequent in and exclusive to a topic. Frequent words, such as ‘European’, ‘euro’, ‘central’, ‘bank’, are common across many topics; however, they are characterised by lower levels of exclusivity – the opposite applies to infrequent words. The most informative words are therefore those that balance exclusivity and frequency (Roberts *et al.*, 2014): these words appear with a bigger font in Figure 1.

Based on the results of the topic model, we interpreted the content of each topic in order to identify the substantive issues policymakers attend to in their communication. We grouped the 20 topics according to whether they pertain to one of the following broad issues: EU integration process, financial stability, fiscal policy, global economic issues, monetary policy, statistics, and structural reforms.¹⁰ These issues capture the main areas of operation of the ECB as well as its role in the functioning of the EMU. In order to validate topic interpretation, we examined the most frequent and exclusive words that characterise each topic as well as the most exemplar documents, e.g., the speeches that

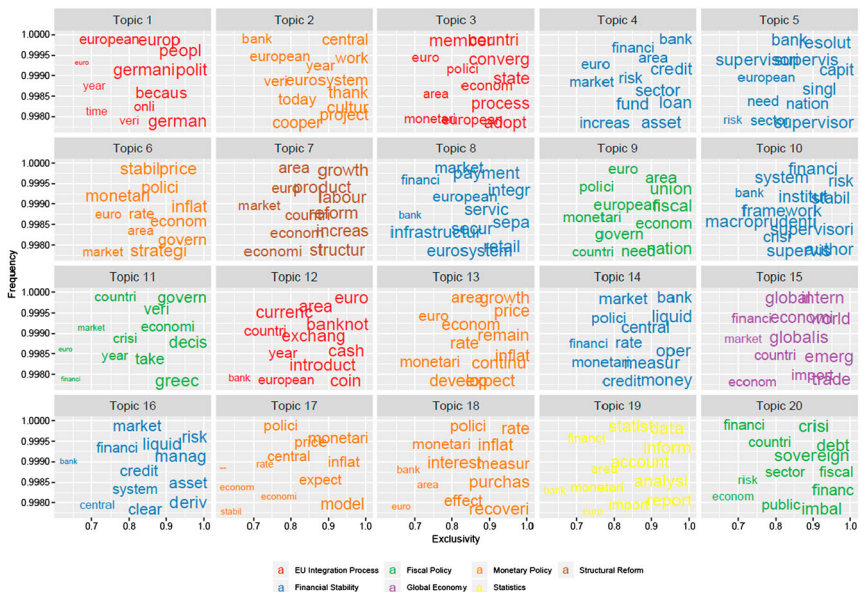


Figure 1. Topics in executive board members’ speeches, 2001–2017. Notes: Frequency indicates the probability of observing each word in the vocabulary of a given topic. Exclusivity identifies words associated with a topic that are unlikely to appear among the top words of another topic. Words’ labels are weighted by joint frequency and exclusivity. Words are presented in their stemmed form.

have the highest proportion of words associated with each topic. To further validate our interpretation, we plotted the variation in topic prevalence over time, together with the average value of the expected topic proportion for each topic in the entire corpus (Figure 2).

Figure 2 thus shows the variety of issues that appear on ECB policy-makers communication based on our interpretation and validation techniques. Since our analysis is meant to distinguish ECB communication at large from communication focussed on monetary policy issues, here we provide more information on the topics that we classified as monetary policy topics, namely Topic 2, 6, 13, 17 and 18 (detailed information on the other topics is provided in Appendix C). The most discussed monetary issue in our corpus is topic 13, which is also the most discussed topic in the entire corpus. This topic captures talk on the ECB mandate. Indeed, the most frequent and exclusive words includes terms such as ‘area’, ‘euro’, ‘price’, ‘rate’, ‘medium’ and ‘HICP’ (i.e., Harmonised Index of Consumer Prices). These terms clearly reflect the ECB formal responsibility to achieve price stability over the medium term and set an interest rate for the euro area as a whole. Topic 13 is also associated to Topic 6. Indeed, Topic 6 identifies the monetary policy strategy that the ECB follows to achieve its price stability objective, as attested by words such as ‘strategi*’, ‘stabil*’, ‘price’, ‘mediumterm’, and ‘pillar’ – the latter is an explicit

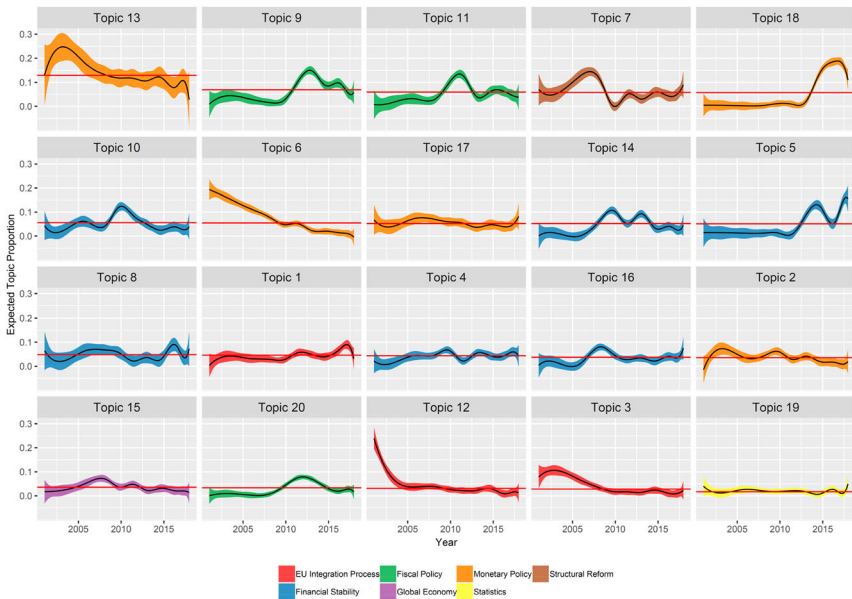


Figure 2. Topic prevalence over time in executive board members’ speeches, 2001–2017. Notes: Topics are ordered based on their average prevalence. Red horizontal lines refer to the average topic prevalence over the period of analysis (2001–2017). 95 percent confidence intervals are reported.

reference to the two-pillar strategy that informs ECB monetary activity. Topic 2 identifies the working of the ECB monetary committee being characterised by words such as 'Eurosystem', 'bank', 'central', 'European', 'work' and 'Frankfurt', where the ECB policymakers collectively take decisions. Finally, Topic 17 and 18 identifies the ECB monetary policy tools. Topic 17 refers to conventional, interest rates tools, including terms such as 'polici*', 'monetary', 'price', 'inflat*', 'bank' and 'rate'. Topic 18 instead refers to unconventional tools being characterised by words such as 'measur*', 'purchas*', 'guidanc*', 'reco-veri*', 'unconvent*', 'accommod*', 'negat*', 'zero'. All these words refer to the set of unconventional policies adopted by the ECB as interest rates approaches the zero lower bound, including asset purchases, forward guidance and even negative interest rates. The validity of interpretation of topic 18 as capturing talk on unconventional monetary policies is also supported by the prevalence pattern of this topic over time: the prevalence of this topic in the speech corpus intensifies following the sovereign debt crisis and the anaemic recovery in the Eurozone.

Issues diversity and Core salience: To compute our two dependent variables, we build on the STM's assumption according to which each speech can be represented as a mixture of a series of topics that always add up to one. This assumption implies that more attention on one topic in a speech necessarily reduces the attention on other topics (Roberts *et al.*, 2014).

To develop the measure of issue diversity, we retrieve the proportions of all the topics identified by our analysis and use Shannon's H entropy index to estimate the distribution of topics in a speech (Greene, 2016).¹¹ We then transform Shannon's H into a measure of issue diversity according to the following formulas, where θ_i is the prevalence of each topic in a given document (i.e., the proportion of words devoted about each topic in the speeches):

$$\text{Shannon's } H = - \sum_{i=1}^{20} \theta_i \ln \theta_i$$

$$\text{Issue Diversity} = \exp(\text{Shannon's } H)$$

Issue diversity can vary between 1, when the entire speech is devoted to only one topic, and 20, when all topics receive the same amount of attention. Higher values thus mean that Executive Board members distribute their attention across a greater number of different issues, whereas lower values indicate that they focus on a smaller set of topics. Among our speeches, issue diversity varies between 1.07 and 12.11, with a mean of 4.83 (see Appendix D for a plot of issue diversity as a function of time).

In order to measure core salience, we estimate the proportion of text belonging to the topics classified under the *Monetary policy* category for each document. The assumption here is that the higher the proportion of

text dedicated to the monetary policy issues, the higher the salience attributed to these issues. On average, about 33 per cent of our corpus is devoted to the discussion of topics associated with the *Monetary policy* category, which is therefore the most prevalent one in ECB members' speeches (followed by the one related to *Financial stability*). The variable varies from 0.1, meaning that only very few words are devoted to a *Monetary policy* topic in a given speech, to 0.99, indicating that almost the entire speech covers issues related to ECB core mandate.

Independent variable

Our argument suggests that the ECB responds to negative public opinion by strategically expanding the issues it deals in its external communication. Our main independent variable is thus a measure of public support. Specifically, we measure EU citizens' trust towards the ECB by coding the responses to the Eurobarometer question on this issue for each semester between 2001 and 2017.¹² In line with previous studies, we operationalise citizens' net trust as the difference between the percentage of respondents who tend to trust and those who tend to not trust the ECB (Roth *et al.*, 2014). In our data, net trust ranges from -17.64 to 27.57 , with an average value of 2.01 . Negative values indicate that a majority of respondents mistrust the ECB, vice-versa for positive values. Trust significantly declined with the onset of the sovereign debt crisis and its aftermath (see Appendix D).

Controls

As discussed in the Introduction, an alternative explanation for the changes in ECB communication lies in the changes in the economic policy context in which the ECB operates. To control for the influence of this argument, our analysis controls for the influence of economic growth, inflation and unemployment. Data were taken from the Eurostat database on a monthly base for unemployment and inflation (change of HICP) and on a quarterly base for GDP volume growth. To avoid multicollinearity problems, we also run a separate regression excluding unemployment because of its degree of collinearity with public trust variables (see Armingeon & Guthmann, 2014; Foster & Frieden, 2017; Roth *et al.*, 2014). As a further control for the economic situation, we employ a newspaper-based measure of economic policy uncertainty (EPU) that foreshadows declines in investment, output, and employment (Baker, Bloom, & Davis, 2016).

Since a more diverse communication could reflect the transformations in the ECB policies and legal role including in the area of financial stability and economic adjustment, we use a number of controls to investigate this counter-claim. In particular, we use the ECB balance-sheet liabilities as a

proxy of the expansion of ECB (unconventional) policy interventions that could justify a broadening of its communication.¹³ We also include a dummy variable that takes the value of one after July 2012, that is after the decision by European heads of government to create the Banking Union that has expanded the ECB mandate.

We also control for the characteristics of the audiences that central bankers address in their communication. Specifically, we classified each speech in three categories according to their target audience: political speeches, including hearings and testimonies before the European Parliament and national parliaments; press speeches, including press conferences and interviews to newspapers and magazines; and general speeches, including all the remaining speeches delivered, among the others, before societal actors and business associations.

Finally, we control for some characteristics related to the individual ECB policymakers, as their institutional duties and terms of office may be expected to influence communication. In particular, we distinguish between speakers' role by including a dummy variable coded one if the speaker is the President of the ECB and zero otherwise. We also control for the influence of the terms of office of each ECB policymakers by counting the number of days that are left to the end of the mandate when each speech is delivered. Lastly, to control for the longitudinal structure of the data, a year-counter variable is added to the model.

Results

We perform our analysis using a multilevel model to account for the hierarchical nature of the data (i.e., speeches are clustered across different speakers).¹⁴ Table 1 presents the regression results of our analysis. The dependent variable in Model 1 and 2 is issue diversity; while the dependent variable in Model 3 is core salience. Models 1 and 2 differ in the inclusion of the unemployment variable to address the multicollinearity problems discussed above, even if the results are consonant in both models.¹⁵ In our discussion below, however, we prioritise results from Model 2 because it shows the best goodness of fits with the data (as confirmed by both the Akaike and Bayesian information criteria [AIC and BIC]).

Our analysis reveals that public opinion attitudes are a statistically significant predictor of the diversity of issues covered in Executive Board members' communication. Specifically, an increase in public trust significantly decreases the level of issue diversity in ECB speeches. The salience assigned to issues related to the ECB core mandate is also influenced by public opinion attitudes: the results indicate that an increase in public trust significantly increases core salience. That is to say, ECB policymakers tend narrowing their attention to a few issues when public contestation is low and,

Table 1. Determinants of issue diversity and core salience in ECB speeches.

Dependent variable	Model 1	Model 2	Model 3
	Issue diversity		Core salience
Trust	-0.031* (0.015)	-0.029** (0.010)	0.003** (0.001)
Type of Audience			
General		Baseline	
Political Audience	0.461* (0.182)	0.462* (0.183)	-0.002 (0.031)
Press Audience	0.054 (0.151)	0.054 (0.151)	-0.005 (0.020)
Speaker			
EB member		Baseline	
President	-0.377* (0.153)	-0.377* (0.153)	0.211*** (0.051)
Time to end mandate	-0.010 ⁺ (0.005)	-0.010* (0.005)	-0.001 (0.001)
Economic Growth (GDP)	-0.061 ⁺ (0.036)	-0.059 (0.037)	0.013*** (0.003)
Inflation	0.065 (0.081)	0.067 (0.079)	-0.034*** (0.09)
Unemployment	-0.019 (0.068)	-	-
Uncertainty	-0.002** (0.001)	-0.002** (0.001)	-0.0000 (0.0000)
Time	-0.023 (0.050)	-0.021 (0.046)	0.005 (0.008)
Liabilities	0.043 (0.156)	0.050 (0.165)	0.010 (0.025)
ECB Mandate	-0.073 (0.185)	-0.074 (0.187)	-0.058 (0.038)
Constant	5.856*** (1.059)	5.617*** (1.040)	0.347*** (0.085)
SD (speaker)	0.372*** (0.081)	0.372*** (0.081)	0.094*** (0.019)
SD (residual)	2.003*** (0.090)	2.003*** (0.090)	0.284*** (0.023)
N	1427	1427	1427
N speaker	17	17	17
AIC	6082.1	6080.2	525.8
BIC	6161.1	6153.8	599.5

Notes: Robust standard errors are reported in parentheses. Significance: ⁺ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

consequently, expanding issue diversity when the ECB confronts higher levels of public contestation.

Substantively, moving from one standard deviation below the mean (roughly the average value of trust registered after 2010) to one standard deviation above the mean (the average value registered before 2010) results in a reduction of about one unit in the number of topics in ECB communication. The same shift in public trust increases the salience of core mandate-related topics by about ten percentage points. This is equivalent to say that, on average, issue diversity has increased by about 30 percent in relative terms before and after 2010, while core salience has decreased by the same figure.

To further assess the substantive magnitude of the findings, we use again STM to plot the relationship between net trust in the ECB and topic prevalence of the seven macro-areas of ECB communication identified above (Figure 3). STM allows testing the correlation patterns of public trust with topic prevalence in a regression-like framework.

Figure 3 shows an overall positive and strong correlation between public trust and the prevalence of most of the topics that pertain to *Monetary policy*. This result provides further support to the evidence reported above by showing that, in line with our theoretical expectations, ECB members tend to focus their public stance on price stability-related issues when net public trust is high – but not vice versa.

It is important to note, however, there is one relevant exception to this trend: Topic 18 shows a positive trend when public trust in the ECB decreases. As discussed above, this topic captures talk about unconventional monetary policy. While it is not straightforward to interpret this result, the positive relationship between public distrust and talk on unconventional policy may indicate that ECB policymakers felt the need to provide information on their unconventional actions given the lack of policy precedent and the widespread criticisms leveled by experts and elected policymakers levels. In general, however, the results reported in Figure 3 show that ECB policymakers

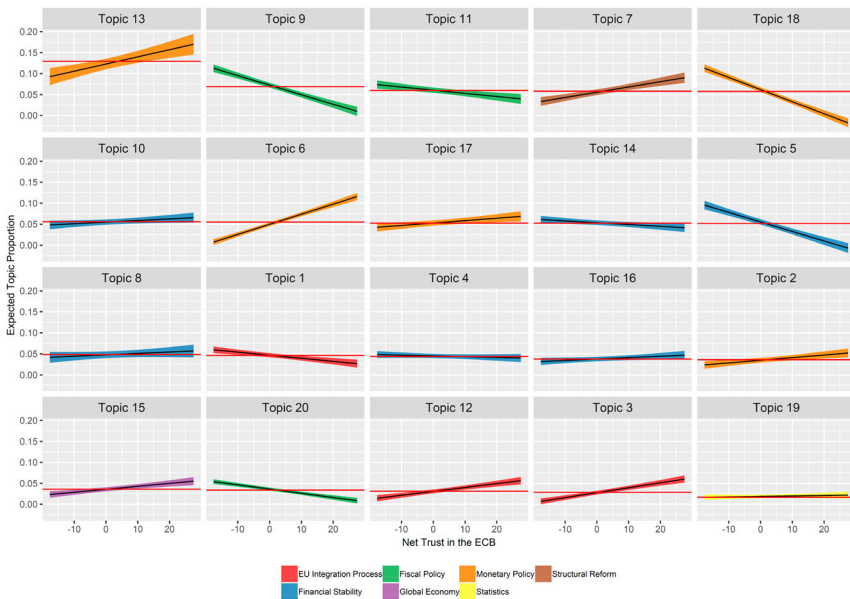


Figure 3. Topic prevalence in ECB communication and public trust in the ECB. Notes: Topics are ordered based on their average prevalence. Red horizontal lines refer to the average topic prevalence over the period of analysis (2001–2017). 95 percent confidence intervals are reported.

select the issues to include in their communication with great care when confronting a negative public opinion – including which issues within the monetary policy category.

In addition to the public opinion effect, [Table 1](#) shows that speaking before political audiences predicts the level of issue diversity but not the salience attributed to monetary policy-related issues. This result is broadly in line with the observation that the format of the exchanges between the ECB and political audiences favor the expansion of the scope of attention. For instance, for the speeches delivered in context of the Monetary Dialogue, which constitute about 75 per cent in the political audience category, it is common practice that the ECB President incorporates into her introductory statement the topics selected by MEPs in advance to the meeting as deserving particular attention. The lack of a significant effect in the speeches before the press might be read in light of the fact that these categories of speeches include the press conferences that the ECB President regularly delivers following the meetings of the Governing Council where monetary decisions are taken. Since press conferences are primarily directed at providing information on the monetary policy decision just adopted, it may be the case that the ECB President tries to minimise the ‘noise’ in the policy message by narrowing it on a limited number of issues.

Some of the individual characteristics of ECB policymakers also have an impact on the ECB communicative strategies. In particular, we find that ECB Presidents are less likely to expand the scope of their communication while devoting more salience to price stability issues as compared to other Executive Board members. This finding suggests that, as the highest official in the institution, ECB Presidents tends to project the ECB organisational image and thus tend focussing on the core mandate of the institution. The results on the effect of the term of office is mild on issue coverage and non-significant for the salience attributed to monetary policy. It should also be noted that neither the dummy on the ECB mandate nor the control variable for ECB policies significantly impact our dependent variables.

In contrast, both economic growth and inflation significantly affect the salience on monetary policy, although in different directions. Indeed, a positive variation of the GDP leads to a significant expansion of the relevance of the issues related to the ECB core mandate, while higher levels of inflation reduces it (Model 3). While it is not straightforward to interpret this effect, one way to think about this result is that the emphasis attributed to monetary policy issues when the macroeconomic outlook is positive reveals the ECB ‘anti-inflationary bias’ – that is to say, the ECB tends to be more reactive to the inflationary risks that may stem from a growing economy than to deflationary risks in light of its German-inspired hawkish approach to monetary policy (Howarth & Loedel, 2003, p. 52). It should also be noted that economic uncertainty exerts a negative effect on the diversity of issues covered in ECB

communication. This finding connects with the conclusion reached in monetary policy circles that ‘a central bank should perhaps be wary of communicating about issues on which it receives noisy signals itself – such as the evolution of the economy’ (Blinder *et al.*, 2008).

Conclusions

In recent years, a growing number of EU citizens have lost trust in EU institutions and EU integration process at large. Although important differences exist among member countries, the emergence of what Hooghe and Marks (2009, p. 7) have called the ‘constraining dissensus’ in the European public sphere has posed new challenges for EU institutions. Nowhere are these challenges as evident as it is the case for the ECB. Indeed, the ECB is one of the EU institutions that has suffered the most from the growing dissatisfaction of EU citizens. Furthermore, this dissatisfaction is not entirely new for the ECB. Since its creation, the ECB has faced accusations of eschewing democratic legitimacy behind the veil of its independence.

The contribution of this article has been to examine how the ECB responds to public dissatisfaction and what this response tells us about the sources of ECB legitimacy. In particular, we examined the impact of public opinion on how the ECB crafts its policy message in order to shed light on whether the selected communicative strategy is geared at giving pride of place to the achievement of its mandate. After controlling for economic conditions and changes to the ECB mandate following the sovereign debt crisis, our findings show that negative public opinion pushes the ECB to expand the scope of its policy message rather than narrowing it on issues related to its core mandate.

Our findings provide some nuances to the debate on the ECB accountability framework by showing that the ECB listens to the public. More precisely, the ECB adapts the way in which it delivers its message when it confronts public contestation. While ECB response falls short of the full-fledged democratic control mechanisms that several ECB critics have called for (Transparency International, 2017), it nonetheless helps recast the debate on the ECB legitimacy framework by bringing back into the picture the ECB relationship with the public in addition to the one with the European Parliament. Our findings also point to an unusual strategy to respond to public contestation for an institution that has traditionally signaled to rely on policy output as a justification for its independence and accountability.

In spite of these contributions, however, our analysis faces a number of limitations. For instance, a more detailed assessment of the extent to which the ECB seeks legitimacy by expanding communication would require a more refined analysis of the match between societal concerns and the topics covered in ECB policymakers’ communication. This analysis would

also allow assessing to what policy issues and national audiences the ECB is more attentive to. Still, a more fine-grained content analysis of ECB communication would allow assessing whether the ECB legitimation strategy is also informed by a blame-shifting logic. That is to say, by expanding its communication beyond monetary issues, the logic behind the ECB legitimation strategy might have been that of signaling to the public that the solutions to economic and societal problems lie not in central banks' hands. While future research will shed light on these important issues, our analysis provides the building blocks for this research agenda by shedding light on the importance of public trust for the ECB and showing the potential of applying automated content methods to further explore this relationship.

Notes

1. Financial Times, *Anti-capitalist protesters target ECB in Frankfurt*, March 18, 2015; Financial Times, *ECB adjusts to life amid the protests*, April 23, 2015.
2. Benoit Coeuré, ECB Executive Board Member, as reported in The Financial Times, *ECB hits the road to pitch its policies*, 8 October 2018.
3. We also investigated whether reverse causality exists between public support and communication expansion. Our empirical tests (Clausen, Kraay, & Nyiri, 2011) suggest that the presence of reverse causation does not undermine our conclusions (see Appendix A).
4. For instance, as compared to other major central banks in the advanced economies, the ECB has not published account of monetary policy meetings until 2015 and these accounts do not provide information on the individual preferences of ECB policymakers.
5. Our analysis starts in 2001 in order to discount potential problems related to data availability and public awareness of ECB activity that might have been limited in the first years of its operations.
6. All speeches were automatically retrieved from the Bank for International Settlements website. The speeches of Sirkka Hämäläinen (1998–2003) and Eugenio Solans (1998–2004) were not available.
7. Information is regularly provided also through research publications and, since 2015, through the publication of the accounts of monetary policy meetings.
8. More than 80 per cent of the speeches in our corpus are not part of the ECB legal and operational obligations such hearings and press conferences.
9. We estimate topic models using the *stm* package in R (Roberts, Stewart, & Tingley, 2018).
10. We aggregated topics to help the reader to better visualise the results of the topic model analysis. The only relevant macro-category for the purpose of the statistical analysis is the one on monetary policy, which we discuss in what follows.
11. Measures of issue or attention diversity have been extensively used in several studies related to public policy, agenda formation and party competition (see Greene, 2016).
12. Respondents were asked to choose among three categories: "Tend to trust it", "Tend not to trust it" and "Do not know". For each year, data were taken from the Eurobarometer of May and October. Data on net trust in the ECB were

matched to the speeches according to the date of the document. Population-weighted trust values are employed. We also compute a measure of net trust limited to Eurozone countries. The results show that there is no significant difference between the impact of the former compared to net trust at the European level (see Appendix E). Given the role played by the ECB also in non-eurozone countries, we thus used data on EU trust. We also included two variables measuring the difference between net trust toward the ECB and net trust toward the EU Parliament and the EU Commission. We found that only trust in the ECB is significant for ECB communication (data are available upon request).

13. Data are taken from the annual consolidated balance sheet of the Eurosystem at the end of each month.
14. We run the analysis using different model specifications: a speaker-level fixed effects; random intercepts for speaker and time; a random slope for time-counter between speakers; a model including all the ECB representatives who delivered at least ten speeches; and, finally, a model including only observations starting from 2002 (the year of Euro introduction). The results are similar to those reported. Data are available upon request.
15. Both unemployment and public trust show a very high variance inflation factor, indicating that knowing the former is possible to predict the latter quite well.

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