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A photograph of a modern, multi-story glass and steel building, likely the Central Bank of Ireland's headquarters, set against a clear blue sky. The building's facade is composed of large glass panels and metallic structural elements.

Central bank communication with non-experts - a road to nowhere? – Alena Wabitsch and Michael Ehrmann

Discussion – Conor Parle, Central Bank of Ireland/Trinity College Dublin

Disclaimer

- All views are my own and not those of the Central Bank of Ireland/Trinity College Dublin



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Quick reaction

- Genuinely think this paper is fantastic!
- Some novel results using a neat methodology. Looks at communication with non-experts by a central bank in a **non-experimental setting!**
- Take any comments I make here as general ideas/suggestions – many are probably not immediately feasible but could be used for a future extension on the work!



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Summary

- Paper aims to examine English and German Twitter traffic about the ECB, with a number of key topics explored:
 1. Examine the response to certain communication events by the ECB as measured through Tweets.
 - Explore differences in subjectivity, favourableness, total interactions etc. relative to non-event days.
 2. Segment this response into groups of experts and non-experts, to examine any heterogeneity in the style of responses around key communication events.
 3. Also contrasts nicely the differences in styles of communication between experts and non-experts.

- Taken together, the results can have some key interpretations from a policy perspective, and can in some sense answer the question **is Central Bank communication with non-experts a road to nowhere?**
- Contrast Blinder (2018) “central banks will keep trying to communicate with the general public, as they should, but for the most part they will fail” **with...**
- Haldane (2020): utilise... “3 E’s of public communication: Explanation, Engagement and Education. Central banks have made great strides in all three, but numerous challenges remain.”



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The Data

- Sample of tweets between 2012 and 2018
 - Two reasons for this timeframe (A) to account for the rise in popularity of twitter (don't want results polluted by the increase in takeup pre-2012 and (B) to stop prior to the changeover of presidency to Christine Legarde in 2019
 - **I agree wholeheartedly with these reasons! – a number of papers add to the sample needlessly, there's a nice consistent sample here!**
 - Only English and German tweets. Identifies if the tweets are about the ECB by using phrases (for English: “ecb” “European central bank” and “draghi”). Validates if the tweets are in a given language using **langdetect** in Python
 - Throws out tweets by authors with < 100 tweets
 - Accounts for the “England Cricket Board” vs. “European Central Bank” double coincidence, and the existence of a Samsung charger with “ECB” in its title.
- **Suggestion:** *Could a Topic Modelling approach be used to further check the sample for cleanliness (although in honesty I feel the sample is essentially as clean as is reasonably expected!)*
- **Data cleaning is all round best practice – very impressed!**



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Identifying the Experts

- **Two assumptions:**

- Experts comment on ECB events regularly.
- Experts dedicate a large amount of their discussion time to ECB affairs.

- **Thus, define an expert as:**

- Comments on at least one in every two Governing Council press conferences

- **Define a non-expert as:**

- Comments on less than one in every two Governing Council press conferences
- Is in the bottom 25th percentile of ECB centricity (i.e. most of their tweets aren't about the ECB)

- Has an impressive array of robustness “definitions of expertise” (some tighter, some looser)



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Some comments on this process

- **Positive:** It is apt to not use the centrality condition for “experts”
 - *Consider: FED experts who sporadically comment on the ECB? Journalists who examine many financial market concepts?*
 - *Good to keep these!*
- **Some alternative ideas [I am aware these data may not exist, but food for thought!]**
 - Perhaps it would be possible to exploit the network aspect of Twitter.
 - Identify some top experts and who they follow perhaps? May be able to expand the sample of experts.
 - Similarly, what if you identify those who are followed by prominent Governing Council members who have twitter accounts (e.g. Isabel Schnabel).
 - What about “non-experts” who are highly exposed to “experts”. Do non-experts who follow a wide range of people identified as “experts” behave in a different way to the non-experts?
 - What about biographies? Could you perhaps search for keywords such as “monetary policy” or “economist” etc. to create a sample of “self identified experts”.
 - Would a clustering analysis of users perhaps be appropriate? **(Although perhaps this may lead to a tad too much subjectivity in choosing who the experts are)**
- **A query:**
 - Is expertise truly being measured, or just intense interest in ECB affairs? The “quality of the content” is perhaps not examined.
 - Descriptive statistics on subjectivity etc. may indicate that this is not the case however!
 - What are the attributes of the third group? The “neither experts nor non experts”?



An alternative approach to identifying experts

Consider the approach of [Wei et al. \(2016\)](#)

- Exploits the structure of twitter across three categories:
 - Follower relations (i.e. who follows who, and what do they tweet about)
 - User-List Relations (i.e. which users are in which list)
 - List-List Relations (i.e. the similarity of the topics talked about by users who are on different lists)
- Uses this network to create a probabilistic measure of “expertise”. For a given query (i.e. a list of terms twitter users may discuss – in this case the query would be {ECB, European Central Bank, Draghi})
- Computes the local relevance to a term and hence global authority. The method outputs the top-N users with the highest ranking scores in terms of “broad expertise”.
- **Don’t have time to fully illustrate this method but it relies on a number of key assumptions leveraging these relationships:**
 - If a user is followed by a user with a high authority on a topic, they are more likely to be a user on that topic. (user-user)
 - The more followers of a user that are expert on a topic the more likely a user is to be an expert on that topic (user-user)
 - If a user is in a given list, they are more likely to be an expert on the topics covered in that list (user-list)
 - The more users that are experts in a given topic that subscribe to this list, the more likely the members are to also be experts (user-list)
 - If a the content of a list is similar to another list which is relevant to a given topic, the more likely that that list is likely to contain expertise on the same topic (list-list)



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Determinants of Retweets and Likes

- Tweets from accounts with more followers get more retweets and likes (expected!)
- English tweets from experts are more likely to be retweeted and liked than those from the bulk of accounts, non-experts less likely. **(In a sense this validates the classification approach!)**
- Strong views are more likely to be liked/retweeted.
- More subjective tweets are more likely to be retweeted.
- Policy implication: be aware that issues that attract “strong” opinions are more likely to be retweeted.

Additional line of inquiry:

- What about number of replies? Or more interestingly “ratioed” tweets (high amount of replies, but low retweets/likes?).
- Is behaviour different around times of economic uncertainty (could use the Bloomberg surprise index?)
 - Do more emotive/subjective tweets get more traction in times of volatility?
- Can we say anything about the differences in *what* experts and non experts are saying – is there room for a topic modelling dimension?



Communication Events

Next step: examine the behaviour of tweets in and around key ECB events [Event study approach]:

- Announcement of monetary policy decisions along with the accompanying press conferences
- Publication of the Economic Bulletin
- Publication of monetary policy accounts
- ECB tweets without any other ECB communication
- ECB presidents speeches
- Executive board members speeches
- Mario Draghi's whatever it takes speech

Quick comments:

- On the German language sample => Why not add Bundesbank/OENB releases/speeches by Bundesbank board members?
 - Interesting to contrast attitudes towards such releases?
- Re: "other ECB tweets", is it possible to segment these into categories? For example, monetary policy, financial stability, BLS/SAFE releases etc. May highlight some interesting heterogeneity here!
- *Also, as an aside, perhaps you could run a "dummy experiment" in and around the days of major English cricket matches (account for the "England and Wales Cricket Board" vs. "European Central Bank" issue. Not necessary for the paper, but could be a good way to highlight your sample has been correctly cleaned!*



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Results

- More tweets in and around events! Particularly strong results for press conferences and the “whatever it takes event”. (big leads/lags)
- Speeches by the President attract more responses than other Executive Board members.
- Most events reduce concentration => Its more users tweeting, not more tweets by the “usual suspects”.
- Stronger effects for experts than non experts, and non-experts tend not to tweet more *in advance of the press conferences, but leads exist for experts!*
- Non-experts tend to be less reactive to specialist communication events, which is perhaps to be expected.
 - **Important policy implication: we see what exactly non-experts are more likely to read.**
 - Whatever it takes had a similar magnitude response for both experts and non-experts.
- Tweet content -> Subjectivity declines in response to events, and is particularly the case for non-experts.
- Low impact on favourableness, but decreased “absolute” favourableness.
- German response to “Whatever it takes” was particularly stark – with a large reaction of both experts and non-experts.
 - Twitter traffic increased for a long lifespan.
 - Increased subjectivity, lower favourableness and higher “absolute favourableness”.
 - Shows how twitter can foster “controversial discussion”.
 - **Perhaps this illustrates the importance of looking at the differences in reactions to Bundesbank or OENB communication/publications?**
 - **Moreover, a future project could repeat this experiment for other languages**



In Summary

- Great paper!
- Not a road to nowhere!
- Non-experts clearly show a degree of reaction, even if its lower in magnitude than for the experts.
- The Whatever It Takes event truly illustrates this, and the German speaking reaction is particularly stark.
- Lots of potential for further extensions (NCBs vs. ECB responses, more languages to contrast country based users!).
- Central bank subjectivity lowering effect is a positive sign! Can comms be used to direct more “factual” discussions?



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