Seeing the Forest for the Tree: Using hLDA Models to Evaluate Communication in Banco Central do Brasil

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Discussion

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This paper's contribution

Estimate an hLDA model to explore communication by the Banco Central do Brasil

- Main motivation is dual:

  $\implies$ From the policy perspective, communication by central banks is a powerful tool.

  $\implies$ From the methodology perspective, text analsys/computational linguistic techniques, including LDA, are limited.

- Main contributions:

  $\implies$ use hLDA to filter the topic structure of Copom's minutes;

  $\implies$ calculate sentiment (and uncertainty) indexes for each topic;

  $\implies$ compare indexes with financial cycle variables;

  $\implies$ evaluate coherence between minutes and statements

Comments

- Very interesting topic; nice application of the methodology; and well-written paper.
- Many interesting findings but some more structure is needed
- My comments:
    - $\Longrightarrow$ Big picture: What is the main goal of the paper and how does it contribute to the literature?
    - $\Longrightarrow$ Methodology 1: Effect of structural breaks
    - $\Longrightarrow$ Methodology 2: Timing of release, coherence, and informational content
    - $\Longrightarrow$ Methodology 3: Topic-specific dictionaries

- The authors provide intuition for why hLDA is better than LDA, and I am convinced topic selection is more useful.
- If this is the main goal, authors could provide more empirical evidence for comparisons across techniques (fairly; for instance, by assuming the same number of topics in LDA and hLDA; 4?).
- Why not a more naive index calculated using sentences with "inflation" and "inflation expectations" (if inflation expectations are the main topic)
- What is the price to pay for going from LDA to hLDA? Topics still need a title (to be relatable), you probably need more texts for hLDA, etc.

- How useful are topic indexes?
- Indexes need to be rigorously validated (beyond correlations with financial cycle indicators)
- Timing: what information do we obtain first, the text or the economic variable?
- Show lead-lag relations between indexes and economic variables
- Is the information in indexes additional to that of other lead indicators (for instance, market-based measures)?

- Authors should explain better why exploring coherence between minutes and statements is interesting
- Explore why sentiment or uncertainty in text deviates from economic indicators (see my paper on governance with Ricardo Correa and Stijn Claessens)
- Investigate changes in the structure of texts or in the dynamics of the index as changes in communication strategies.

- A side effect of a somewhat unstructured punchline is a contribution that is hard to understand
- The structure of the current literature review is just a summary of existing papers in several related branches of the literature
- What is the story? How are these branches connected among them and with your contribution?

- Changes in the structure of statements and minutes during the sample pose significant challenges
- If we were to assume that communication strategies have changed, should we:
    - $\Longrightarrow$ use the full sample to obtain topics and compare topic indexes before and after the structural break, or
    - $\Longrightarrow$ estimate the topics using text before and after the structural break?
- Are there other ways to investigate if communication strategies have (intentionally) changed (time fixed effects, chair fixed effects)?

- I am a bit confused for why minutes are released a week after (the FED has its own considerations).
- Are the minutes modified before release? Is it to prevent large market swings (even when markets are closed at the time of release)?
- Current setting for coherence is as follows:

$$Minutes_t = \alpha_0 + \alpha_1 Statements_t + ...$$

$$Statements_t = \alpha_0 + \alpha_1 Minutes_{t-1} + ...$$

- They are released on different dates but occur on the same day. Why the lag on the second equation?
- Overall, why should minutes and statements provide different information?
- Has the difference in informational content between minutes and statements changed with the structural change?

- Why not a lead-lag analysis
- Why not a VAR, as in Baker, Bloom, and Davis' papers and other uncertainty papers?
- EPU and uncertainty index are different. Which one is more informative (missed opportunity to validate your methodology)?

- I understand the intuition for why each topic would need a different dictionary (add this to the literature review, including my paper with Ricardo Correa)
- How are these dictionaries defined?
- Are they validated?