

Narratives of FinTech

The Political Economy of Disruptive Discourse

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BIS Fintech Speeches

Looking back, the 2014 conference marked the first time we used the term “digital financial inclusion”. It was also the first time most of the organisations present in this room came together to consider the shifting risks posed by the spread of digital transactional platforms designed to bring much needed services to the world’s financially under-served - then estimated at 2.5 billion.

- Jaime Caruana, [BIS](#), October 2016

Empirical Puzzle/Gap

Whereas prior studies on central bank speeches have focused on assessing competing ideas and narratives, I find a surprisingly high level of **thematic homogeneity** despite the **heterogeneity of speakers** in the corpus.

This suggests the existence of a **shared overarching policy narrative** among regulators which advocates for a **circumscribed disruption** of the financial system.

Policy Narratives and Fintech

Narratives are ubiquitous and their political and cognitive importance has been recognized for a long time. Nevertheless, their systematic analysis in political science and economics has lagged ([Schlaufer et al. 2022](#); [Roos and Reccius 2024](#)).

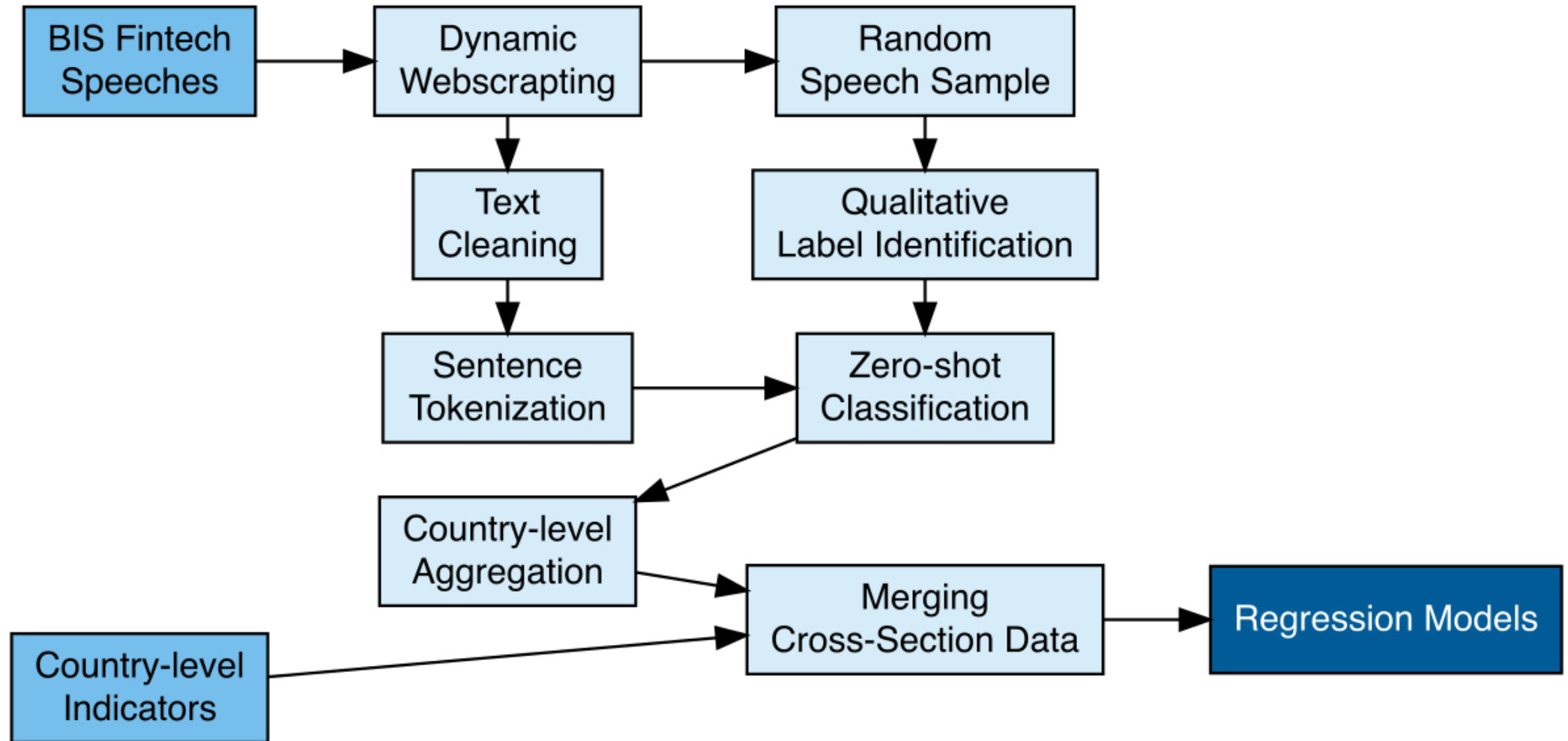
[A]ll narratives are essentially normative, even when the voice of the narrator is well hidden ([Patterson and Monroe 1998](#)).

The concepts we use to build theory are themselves narratives, or the symptoms of narratives ([Patterson and Monroe 1998](#)).

Central Bankers as an Epistemic Community

- Central bankers' discourse reflects a **shared normative belief** that monetary stability is a public good and that political independence is necessary to safeguard it ([Haas 1992](#); [Verdun 1999](#)).
- Their discourse tends to **circumscribe the range of legitimate alternatives**
- They use **technical and depoliticized language**, framing issues as matters of sound management and shared causal narratives.
- Disagreement are expected to occur within a bounded consensus. They may dispute timing or implementation but not principles or *hinge propositions* ([Steininger 2025](#))

Workflow



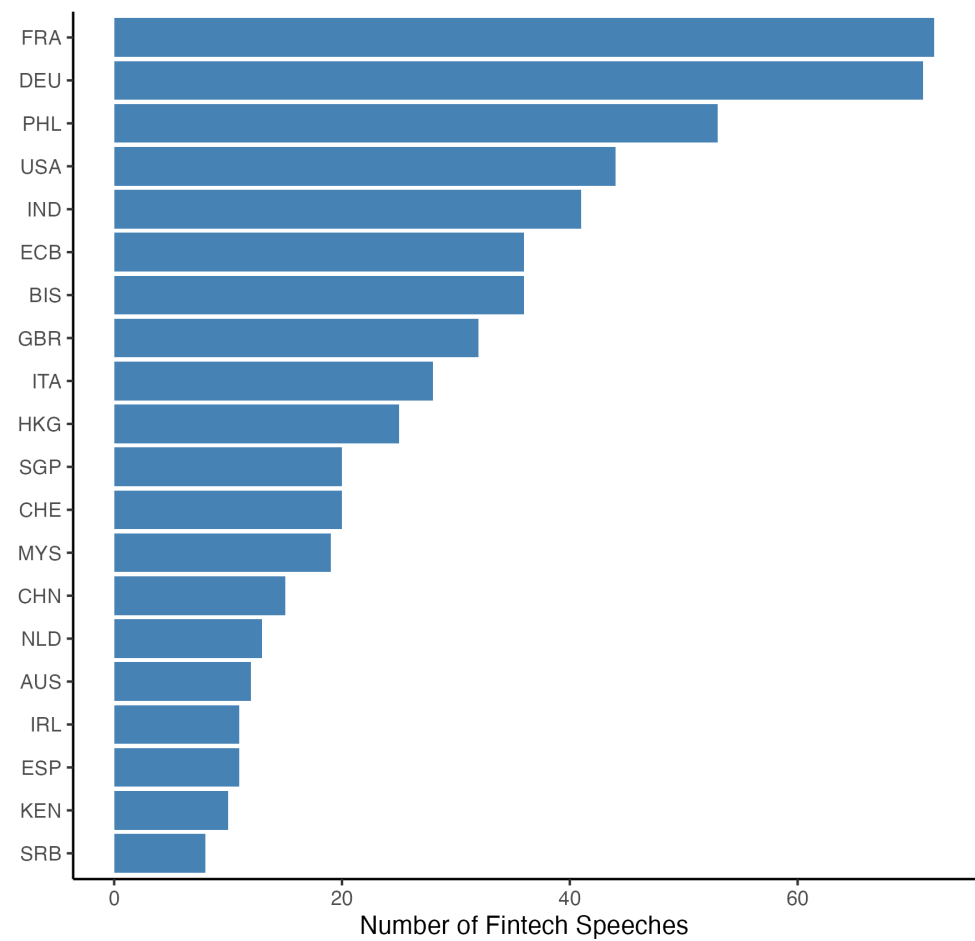
Data Collection

- Data was collected from the [BIS Fintech](#) collection which hosts monetary authority and BIS management speeches and lectures on the topic going back to 2014.
- The BIS ([2019](#)) defines fintech as “technology-enabled innovation in financial services”.
- The automated webscraping was performed using a headless firefox browser with the [RSeelenium](#) package on April 30th, 2025, resulting in 675 observations in total.

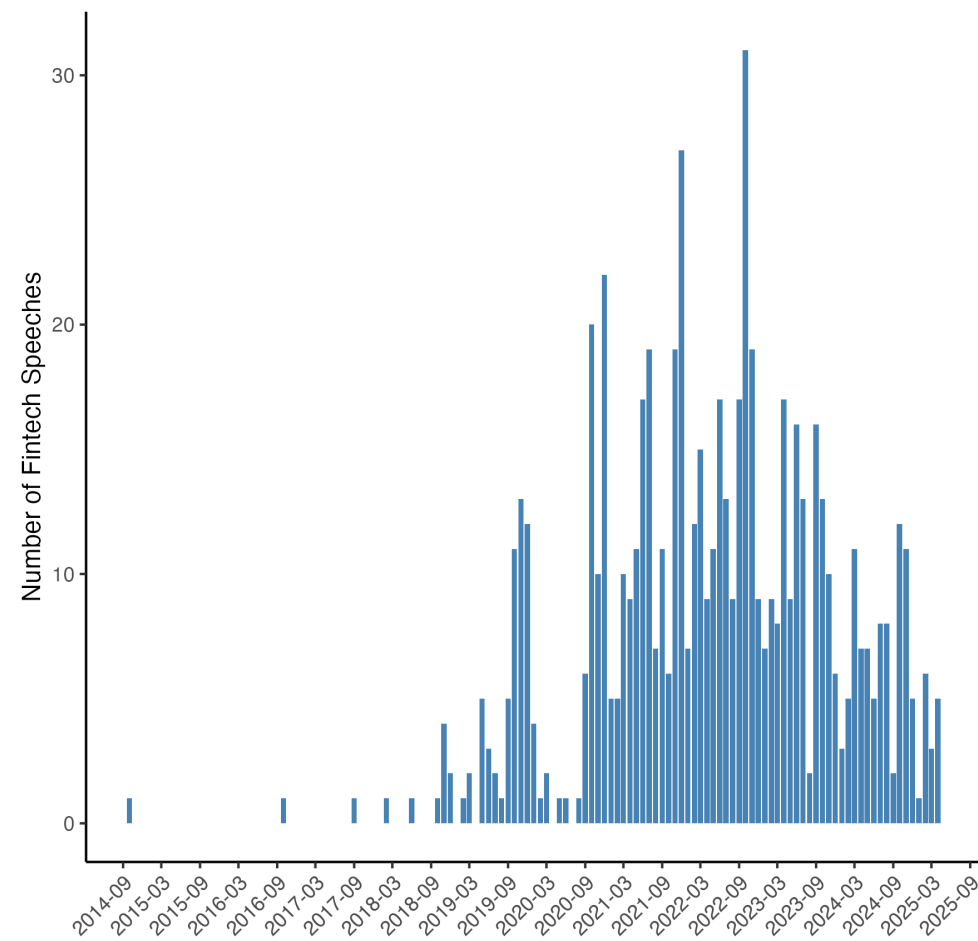
Webscraping (RSelenium)

```
1 library(RSelenium)
2
3 human_pause <- function(min = 0.5, max = 1) {
4   Sys.sleep(runif(1, min, max))
5 }
6
7 remote_firefox <- rsDriver(
8   browser = "firefox",
9   chromever = NULL,
10  verbose = F,
11  port = free_port()
12 )
13
14 remDR <- remote_firefox$client
15
16 remDR$open()
17
18 for (i in seq_len(nrow(df_urls))) {
```

Document Distribution

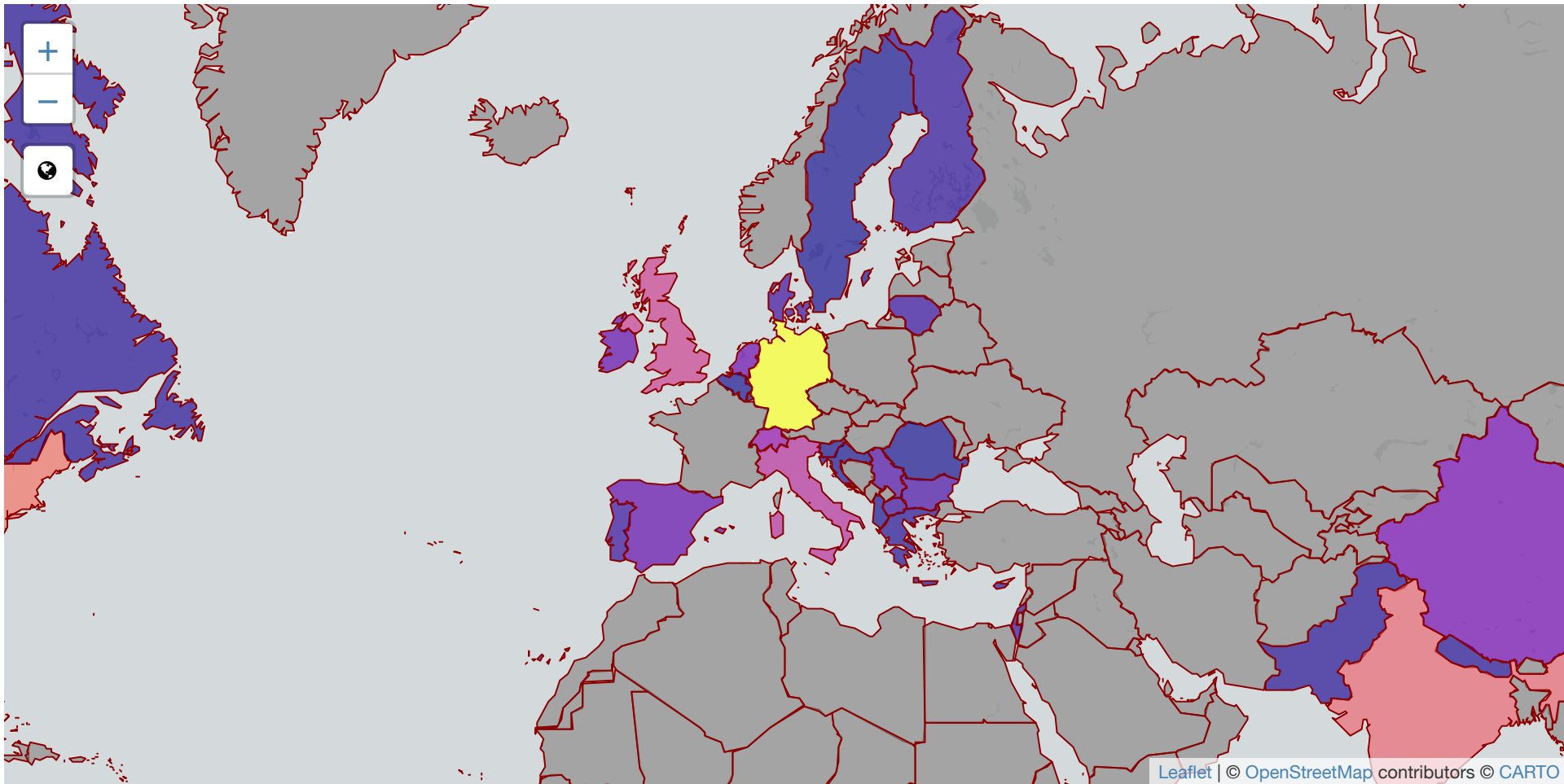


Source: Bank for International Settlements (2025)



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BIS Fintech Speeches Map



Natural Language Inference

- The process of manual labeling of text segments for training new models is both costly and time consuming ([Laurer et al. 2024](#)).
- Recently, researchers have shifted towards using pre-trained models such as LLMs and BERT-based models ([Di Leo et al. 2025](#); [Le Mens and Gallego 2025](#); [Ivacic et al. 2024](#)).
- Small BERT-based language models are just as efficient at classification tasks while being both deterministic and (mostly) open-source ([Burnham et al. 2024](#)).

Labeling Process

- Classification labels are derived inductively from a qualitative content analysis of a random sample of the corpus.
- Each document has its own **document id**, subsequently each sentence is given its own **sentence id** keeping in line with *tidy* data principles.

```
1 df_sample <- df %>%  
2   sample_n(30)  
3  
4 df_sample %>%  
5   select(doc_id, text) %>%  
6   pwalk(~ write_lines(.y,  
7                                     file.path("ou  
8                                     pas
```

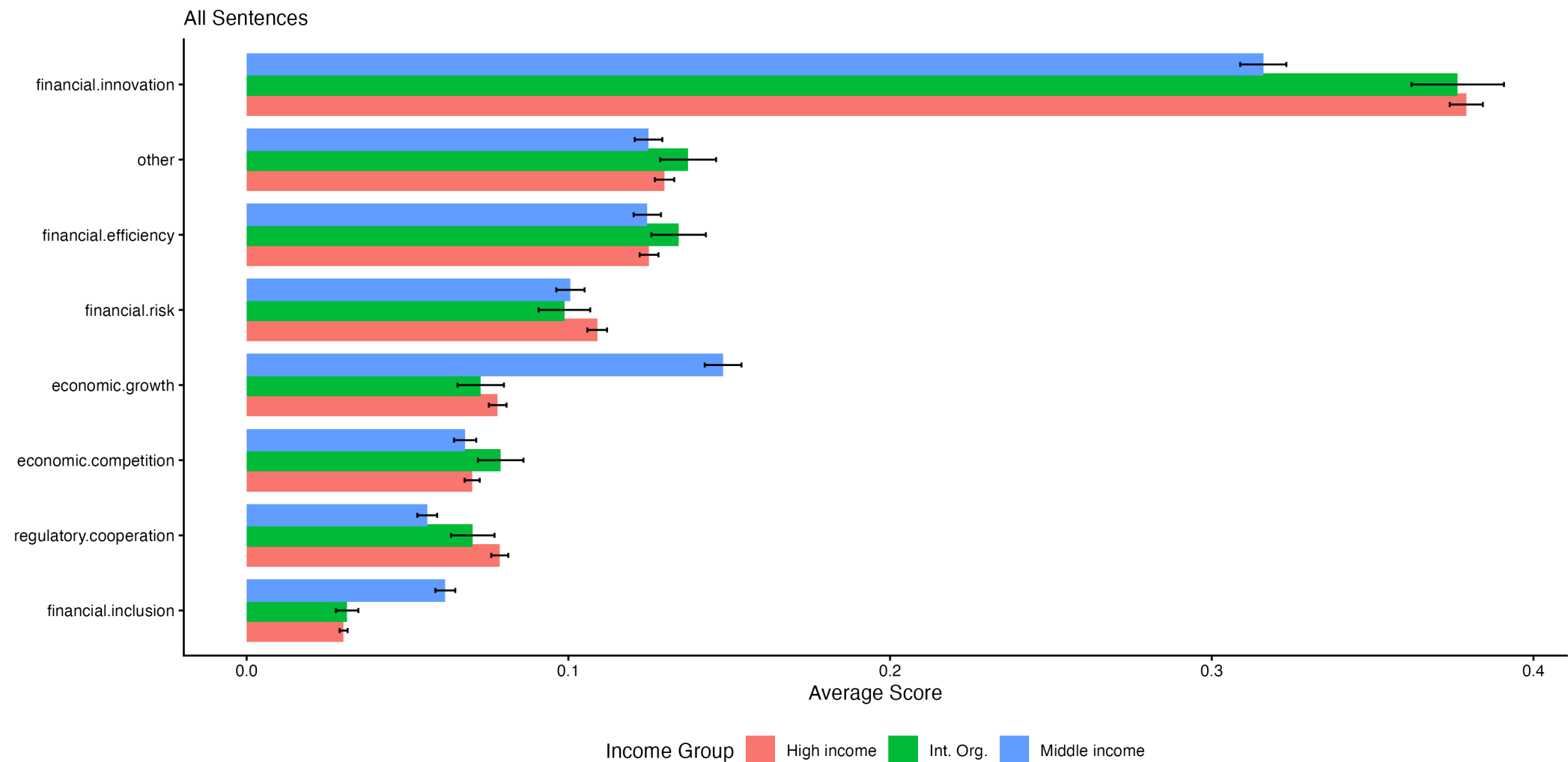
Zero-Shot Classification

```
1 library(reticulate)
2
3 transformers <- import("transformers")
4
5 classifier <- transformers$pipeline("zero-shot-classification",
6                                     model = "mlburnham/Political_DEBATE_large",
7
8 labels <- list("financial risk",
9               "economic growth",
10              "economic competition",
11              "financial inclusion",
12              "financial innovation",
13              "financial efficiency",
14              "regulatory cooperation",
15              "other")
16
17 # Define sentence classifier
18 classifv sentences adaptive <- function(df.
```

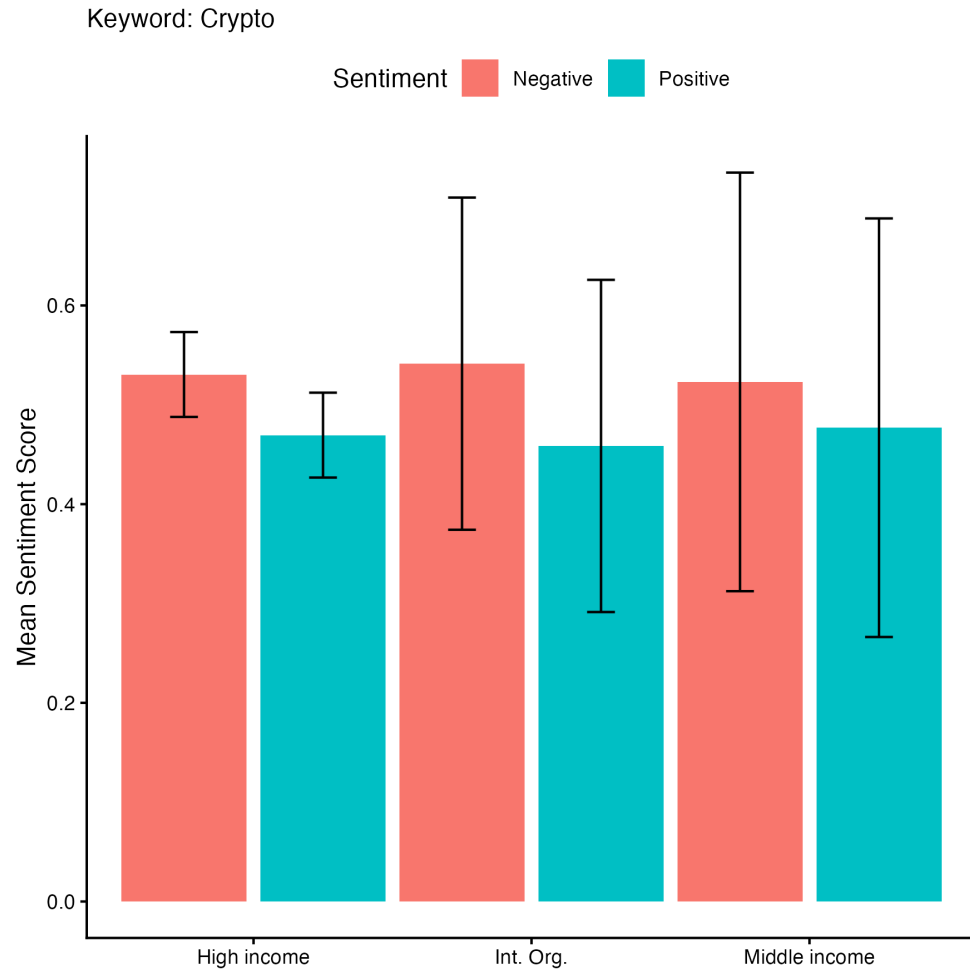
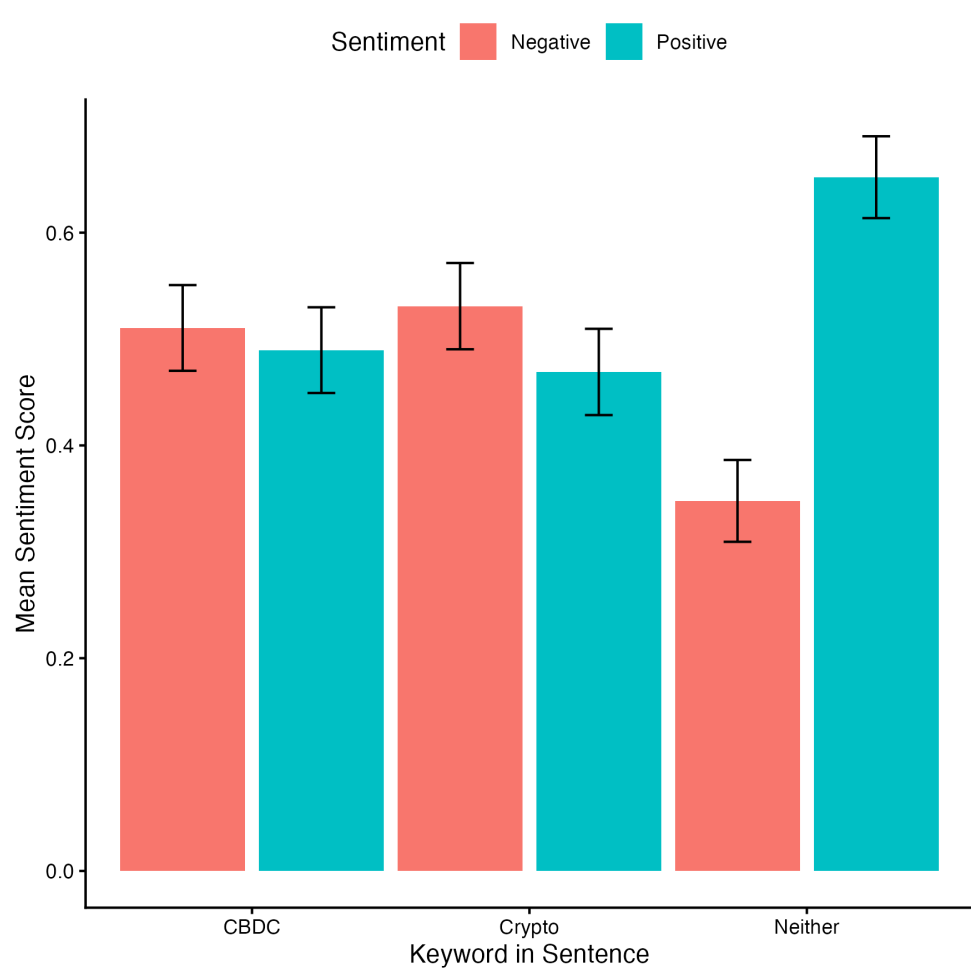
Classified Sentences Sample

doc_id	sentence_id	date	speaker_name	speaker_position	iso3c	sentence	financial.risk_score	economic.growth_score	econom
r240531a	r240531a_102	2024-05-31	Ms Rosanna Costa	Governor of the Central Bank of Chile	CHL	In short, we have reached a very efficient electronic transfer market with instant availability of funds.	0.000	0.000	
r211208c	r211208c_33	2021-06-09	Ms Nina Stoyanova	Deputy Governor and Head of the Banking Department	BGR	PISA framework aims to cover not only the traditional payment schemes and instruments (e.g. payment cards), but also innovative instruments, such as digital payment tokens backed by assets (e.g. stablecoins).	0.000	0.000	
r221017a	r221017a_36	2022-10-17	Mr Michael S Barr	Vice Chair for Supervision of the Board of Governors of the Federal Reserve System	USA	For example, it is important for banks to understand some of the heightened liquidity risks they may face from certain types of deposits from crypto-asset companies.	0.980	0.000	
r201223o	r201223o_44	2020-12-23	Yaron Amir	Governor of the Bank of Israel	ISR	An additional issue that we are promoting is securitization A securitization transaction is one in which a corporation	0.062	0.000	

Label Distribution (Checks)



Sentiment Analysis



Negative Crypto Talk

Cryptocurrencies lack the three fundamental qualities of money: medium of exchange, store of value, and unit of account.

- Ravi Menon, SGP, 2022

The recent collapse of FTX, one of the most important crypto-exchanges, followed by that of BlockFi, a crypto-lender, have highlighted a poor and weak internal control system.

- Alessandra Perrazzelli, ITA, 2022

People also rightly mistrust bitcoin because it does not fulfil most of the basic characteristics of a currency - nor any of its ethical requirements.

- François Villeroy de Galhau, FRA, 2022

Since May 2022, cryptos have lost more than two-thirds of their value, and the ecosystem is unravelling.

- Rabi Sankar, IND, 2023

Cross-sectional Analysis

- The dependent variable for the cross-sectional analysis is the average sentence classification (2020-2025) score aggregated at the **country level**.
- Independent variables are political-economy indicators for 2020. When data for 2020 is missing, 2021 is imputed.

```
1 cs_df <- classified_df %>%  
2   filter(date >= ymd("2019-12-31")) %>%  
3   group_by(iso3c) %>%  
4   summarise(across(ends_with("_score"),  
5                     list(mean = ~mean(.x, na.rm = TRUE)),  
6                     .names = "{.col}_{.fn}"))
```

Label Models

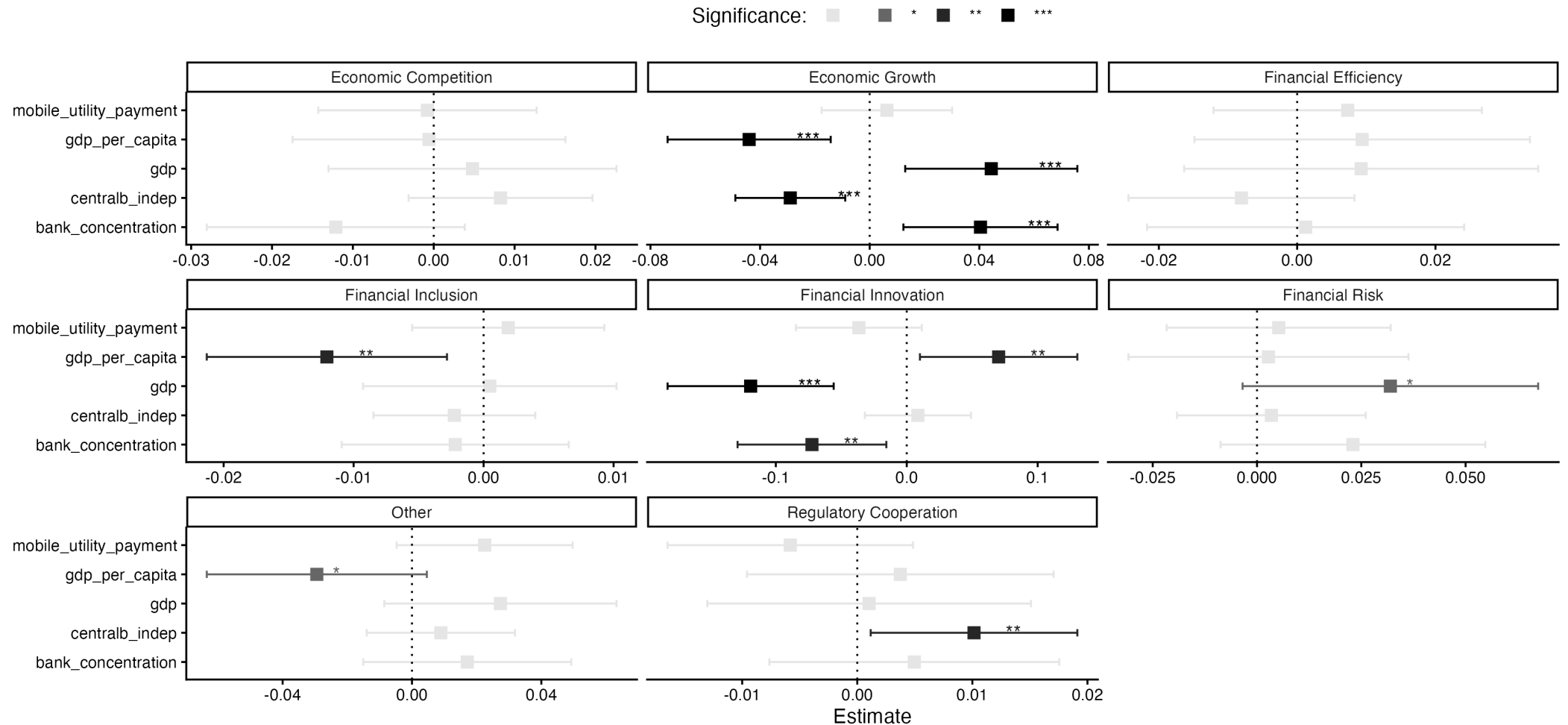
Equation 1 corresponds to the cross-sectional OLS model.

$$Y_{i,c} = \beta_0 + \beta_2 \text{Bank. Concentration}_i + \beta_3 \text{Mobile. Utilities}_i + \beta_4 \text{CB. Independence}_i + \beta_5 \log(\dots)$$

Where:

- $Y_{i,l}$ corresponds to the average propensity towards label c in country i
- $\beta_2 \text{Bank. Concentration}_i$ represents the share of the top 5 banks.
- $\beta_3 \text{Mobile. Utilities}_i$ represents the share of people that have paid utilities with digital means.
- $\beta_4 \text{CB. Independence}_i$ represents the independence of the central bank.

Results



Significance levels: $p.value < .01$ (***), $< .05$ (**), $< .1$ (*)

Findings

- Evidence suggests that regulators **emphasize certain themes** within a single shared policy narrative in ways that are aligned with the political, economic and institutional characteristics of the countries they represent.
- Despite still operating within this circumscribed disruption narrative, one more hostile to large structural changes, there is still a strategic use of (shared) language.

**Thank you for your
attention!**



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💡 The EU's AI Act sets the first global rules for artificial intelligence.

- ✂ Risk-based approach — from minimal to high risk
- ✂ Stricter rules for financial AI
- ✂ Promotes AI testing in supervised sandboxes

🔗 EU AI Act: di [digital-strategy.ec.europa.eu/en/policies/...](https://digital-strategy.ec.europa.eu/en/policies/)

#F inTech #D igitalFinance #U's AI Act sets the first global rules for artificial intelligence.

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#FinTech #DigitalFinance # U's AI Act sets the first global rules for artificial intelligence.

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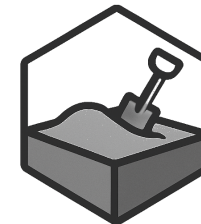
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#FinTech #DigitalFinance #EU

Disclaimer:

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Learn more at the [project website](#).

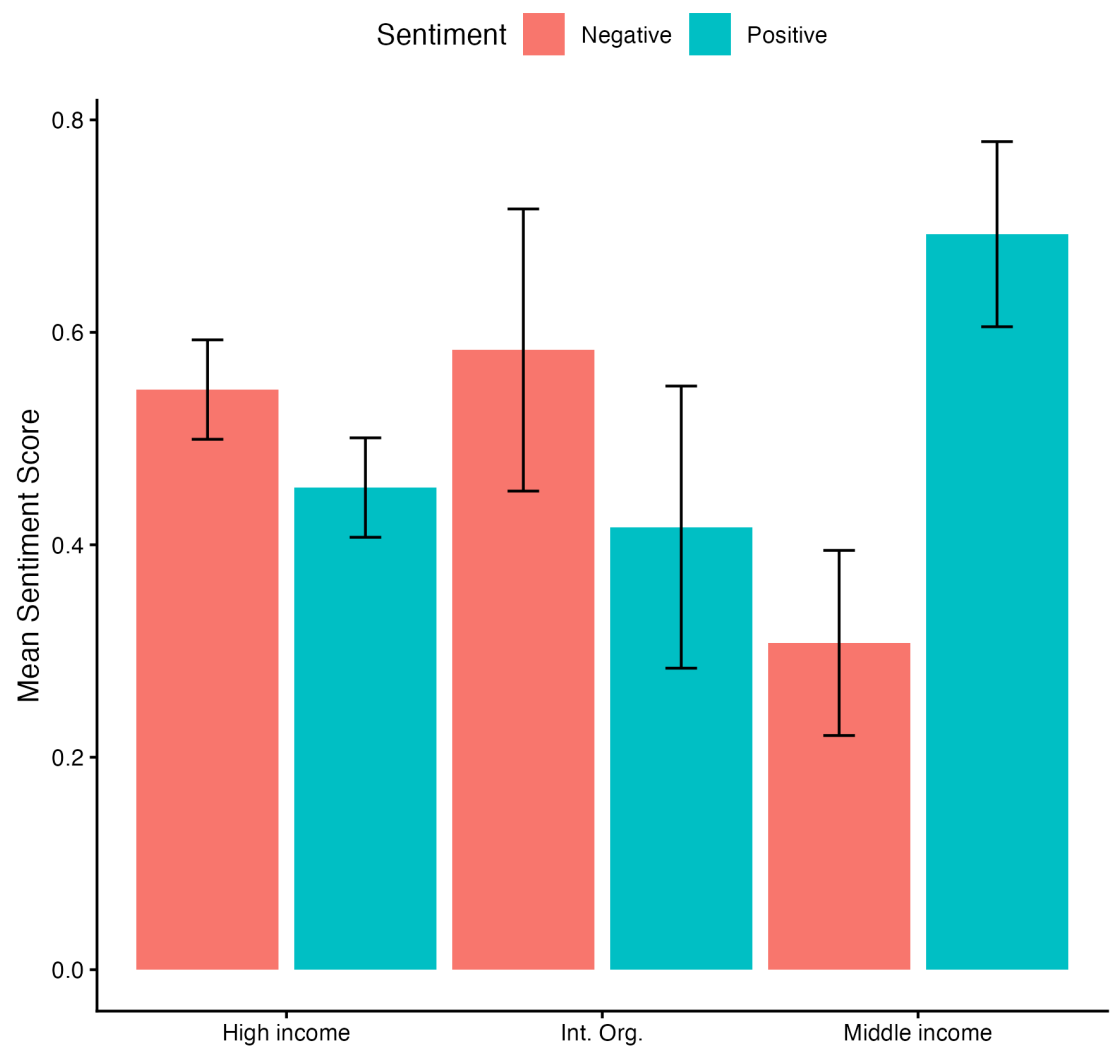


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Appendix

About CBDCs

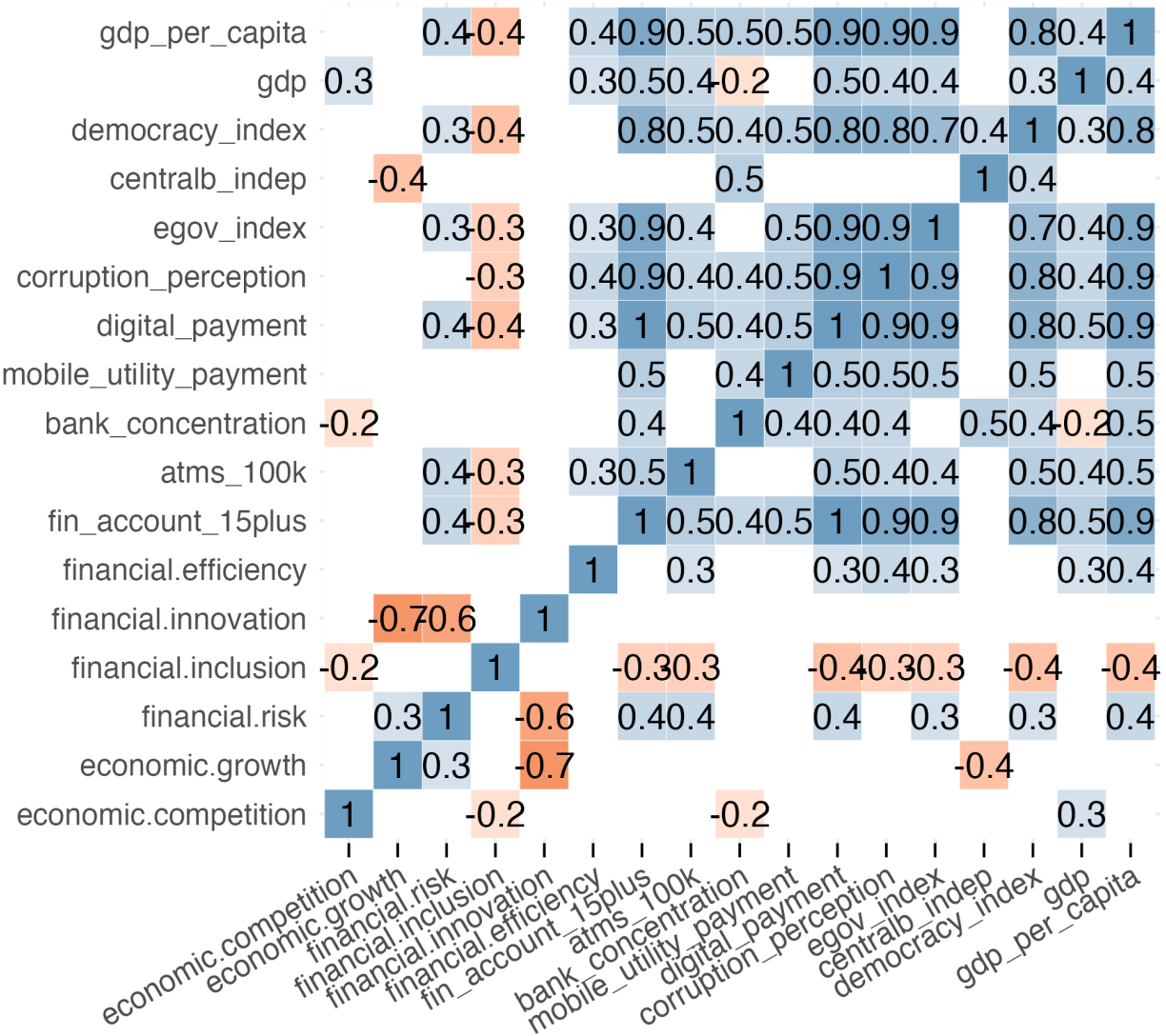
Keyword: CBDC



Data Cleaning (LLM)

```
1 gpt_get_structured_output <- function(desc_text, api_key) {  
2  
3   safe_desc <- gsub("\\\\", "\\\\\\\\", desc_text)  
4   safe_desc <- gsub("\"", "\\\"", safe_desc)  
5   safe_desc <- gsub("\n", "\\n", safe_desc)  
6   safe_key <- gsub("\\\\", "\\\\\\\\", api_key)  
7   safe_key <- gsub("\"", "\\\"", safe_key)  
8  
9   sys_prompt <- paste0(  
10    "Extract structured metadata from financial speech descriptions. ",  
11    "If multiple speakers are mentioned, infer the main speaker based on  
12    "Extract main speaker's position in organization. ",  
13    "Extract or infer the speaker's country from their position or affili  
14    "Extract the speech city. ",  
15    "Extract or infer the speech country from the city or context. ",  
16    "Extract the speech date, if it is two or more days, get the last. ",  
17    "Extract if multiple speakers are identified, return true or false. "  
18    "Return only the extracted data as key-value pairs. one per line. sta
```

Model Correlogram



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