

# Mark my words: the transmission of central bank communication to the general public via the print media

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## Question

What causes central bank communication to be reported on in newspapers? And - is it something central banks can control if they want to reach the general public?

## Data

Newspaper text

- Every newspaper article from 5 major UK newspapers since 1998: The Daily Mail, The Daily Mirror, The Guardian, The Sun, and The Times
- Estimated reach of 115 mill. people

Central Bank Communication text

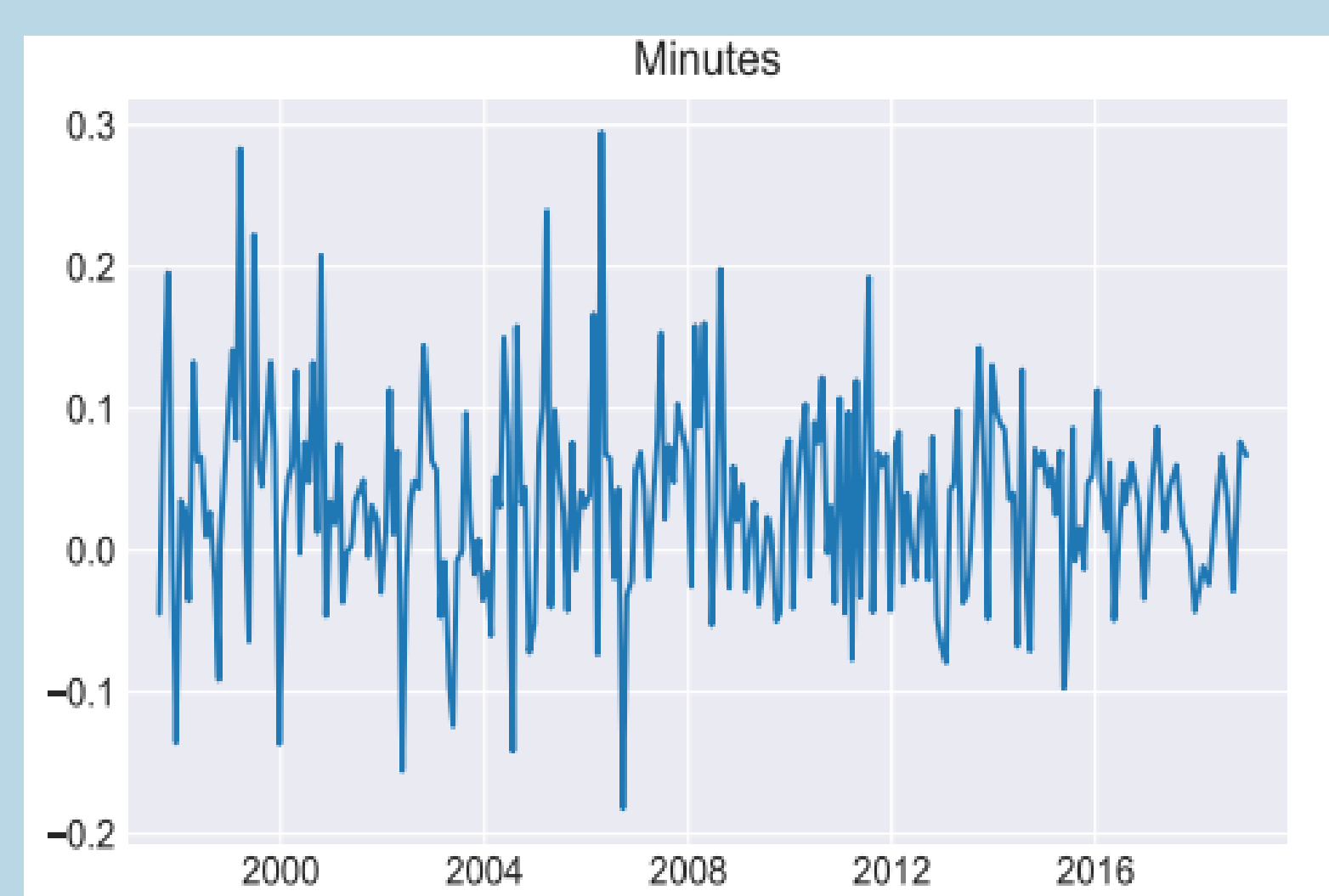
- Every Bank of England monetary policy communication since 1998
- Minutes, Inflation Reports, Speeches, Introductory Statements, Q & As
- Total 1211 communication events, 5.8 million words

## Model

Simple model shows that linear relationship can exist under general equilibrium between (i) news coverage and, (ii) features of the communication that consumers care about + state of economy + interaction terms

## Time series visualisation

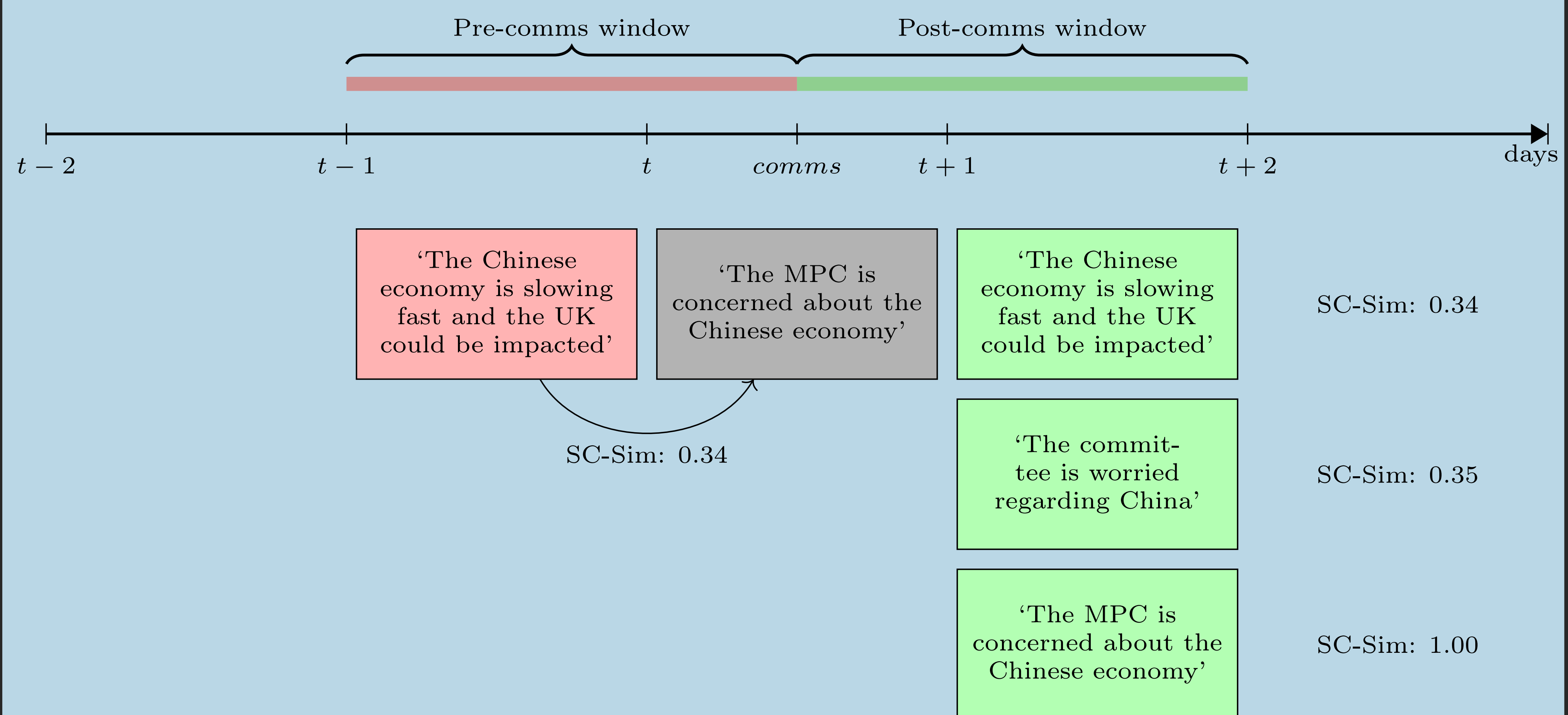
We calculate a score of news coverage based on the method outlined in (1). Below is the time series produced for Bank of England minutes



## Method

### (1) Measure news coverage

Identification strategy: Communication *surprise* imparted by the Bank of England for each communication event. This is the change in average similarity between (i) the news the day before and the central bank communication, and (ii) the news the day after and the central bank communication.

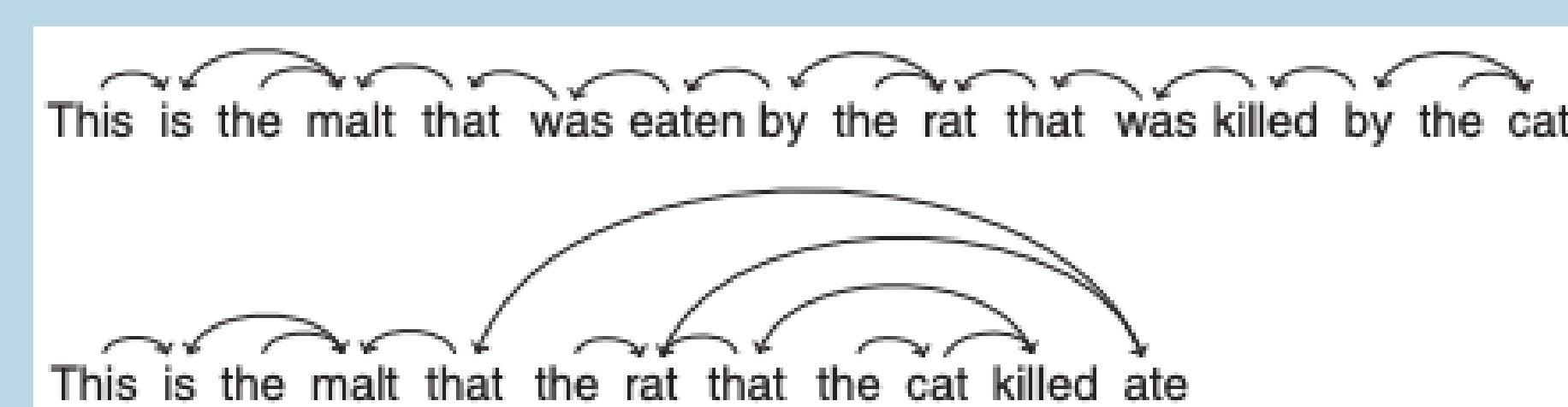


Similarity calculated using word2vec neural network representation of communications (Mikolov et al. 2013) to leverage soft-cosine similarity (Sidorov et al. 2014).

### (2) Measure features of communications

TOPIC: We measure 49 different topics using simple dictionary methods, based on 50K tags attached to *Guardian* articles and grouped through *k*-means clustering.

LINGUISTIC PROCESSING: Based on research into the psychology of human language processing, we use a range of NLP techniques to capture 3 essential dimensions with many measures: lexical (word) access, syntactic processing (parsing), and discourse processing.



—Jaeger & Tily (2011)

NEWS-VALUES: Drawing on research in journalism studies, we measure 9 aspects of events that are claimed to make stories more likely to get coverage; e.g. sentiment, impact, novelty.

### (3) Estimate relationship between (1) and (2)

De-sparsified LASSO for feature selection + inference (Van de Geer et al. 2014; Adamek, Smeekes, and Wilms 2020)

## Results

### Does communication matter at all?

Yes. Joint test that textual feature don't explain news coverage rejected with  $p = 0.000$

### What is not important when drafting communication?

Most features we measure are not significant. These include:

- The state of the economy on its own
- Whether or not a monetary policy decision was made (including if it was surprising)
- Word bulk (e.g. used in Flesch-Kincaid)
- Type of communication
- Many of the topics

### What is important?

**Keep things simple.** Our results show that one should avoid introducing embedded clauses and particle verb structures.  
**Personalize the text.** Use *we/us/you* to engage the reader.  
**Use facts and figures.**  
**Summarise your message in the first sentence.**  
**Write in short sentences, keeping related ideas together.** Super long dependency arcs make things unintelligible and thus reduce the likelihood of newspaper coverage.