# **Auto-EPU**

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#### **Outline**

Add Defition Of EPU Into Prompt

Add Defition Of EPU Into Prompt With Self Consistency

Comparsion with Human Expert - Policy Category Across Countries

References

## Add Defition Of EPU Into Prompt

You are building indices of policy-related economic uncertainty based on { country } newspaper coverage frequency, with the aim to capture uncertainty about who will make economic policy decisions, what economic policy actions will be undertaken and when, and the economic effects of policy actions (or inaction) — including uncertainties related to the economic ramifications of "non-economic" policy matters, e.g., military actions.

The process of building the index is as follows:

1. Define three sets of keywords, E, P, U, containing keywords corresponding to the economy, policy, and uncertainty, respectively.

- 2. Given a collection of news articles x, an article is considered related to policy-related economic uncertainty if it "meets the following three criteria simultaneously":
- Contains a word belonging to the E set
- Contains a word belonging to the P set
- Contains a word belonging to the U set
- 3. The index is calculated as the number of news articles related to policy-related economic uncertainty divided by the total number of news articles in x.

"You must consider the concept of Word Segmentation and output non-compound words, but rather simple and common words."

Your task is to "define and list  $\{n\_items\}$  keywords in bullet points for each E, P, U set".

#### Output Instructions:

- 1. List in bullet points
- 2. { language\_instructions }

## With Self Consistency

Add Defition Of EPU Into Prompt

#### Add Defition with SC

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#### Add Defition With SC

"You must consider the concept of Word Segmentation and output non-compound words, but rather simple and common words."

Please proceed with the following tasks step by step.

- "Define and list { n\_items } keywords in bullet points for each
  P, U set".
- 2. Provide an example of a news article, including its title and content, which is related to policy-related economic uncertainty.
- 3. Identify a word from the article in task 2 that belongs to the set defined in task 1 as  $\rm E$

#### Add Defition with SC

- 4. Identify a word from the article in task 2 that belongs to the set defined in task 1 as  $\mathsf{P}$
- 5. Identify a word from the article in task 2 that belongs to the set defined in task 1 as  $\mbox{U}$

"Warning: The words listed in tasks 3, 4, and 5 must be consistent with those you defined in task 1; do not list words that you did not define in the E, P, U sets in task 1."

#### Output Instructions:

1. List in bullet points language instructions

# Comparsion with Human Expert -

**Policy Category Across Countries** 

(1)	(2)	(3)
country	vote	definition
TW	8.571429	8.571429
CN	12.903226	9.677419
JP	6.250000	9.375000
KR	17.391304	13.043478
US	25.000000	37.500000
AU	23.076923	15.384615

Note: this table show the converage percentage of LLM suggestion over human experts. The referenced keywoeds of Taiwan(TW) come from Chen et al. (2024), China(CN) come from Huang and Luk (2020), Japan(JP) come from Arbatli Saxegaard et al. (2022), and US, Australia(AU), South Korea(KR) come from Baker et al. (2016)

#### **Add Definition With SC**

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country	vote	definition	definition with SC
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JP	6.250000	9.375000	12.500000
KR	17.391304	13.043478	13.043478
US	25.000000	37.500000	50.000000
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### References

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