

# Measuring economic outlook in the news

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## Methodology to measure economic outlook in news text

- combining embeddings with synthetic training data generated by large language models

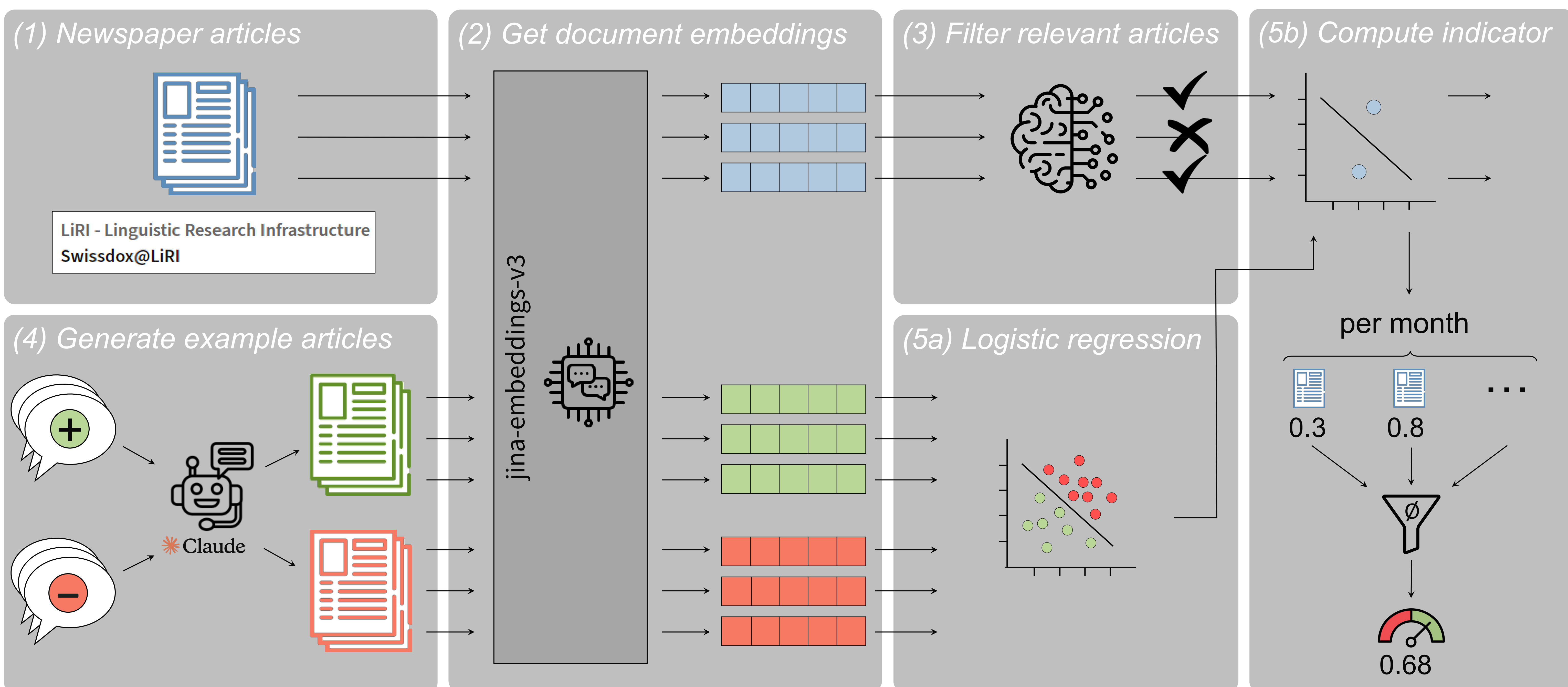
## Resulting indicator

- significantly improves GDP growth forecast accuracy
- captures sentiment shifts weeks before official releases
- is interpretable

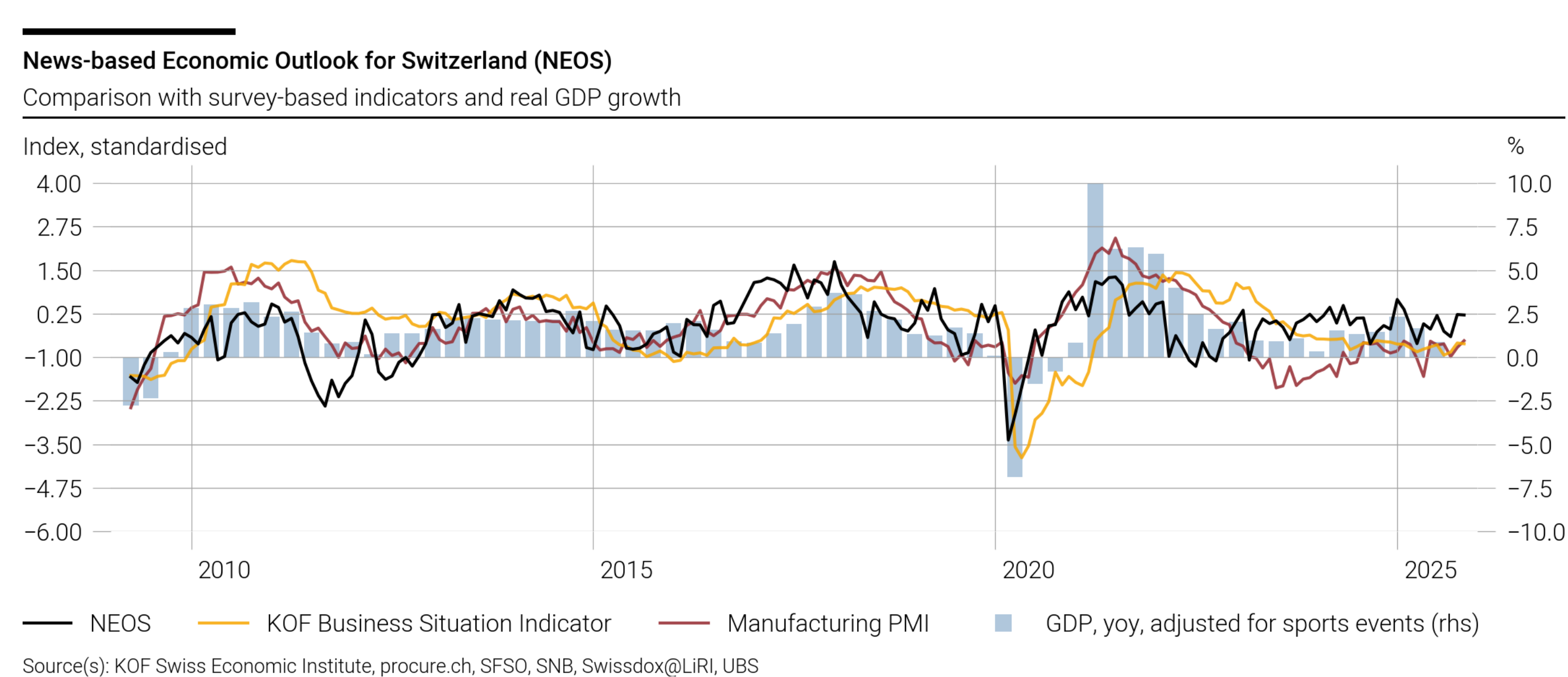
## Analyze proprietary news data

- without transmission to external services
- requiring comparably minimal computational resources

## Methodology



## Results – Correlation and forecasting



## Results - Timely and interpretable

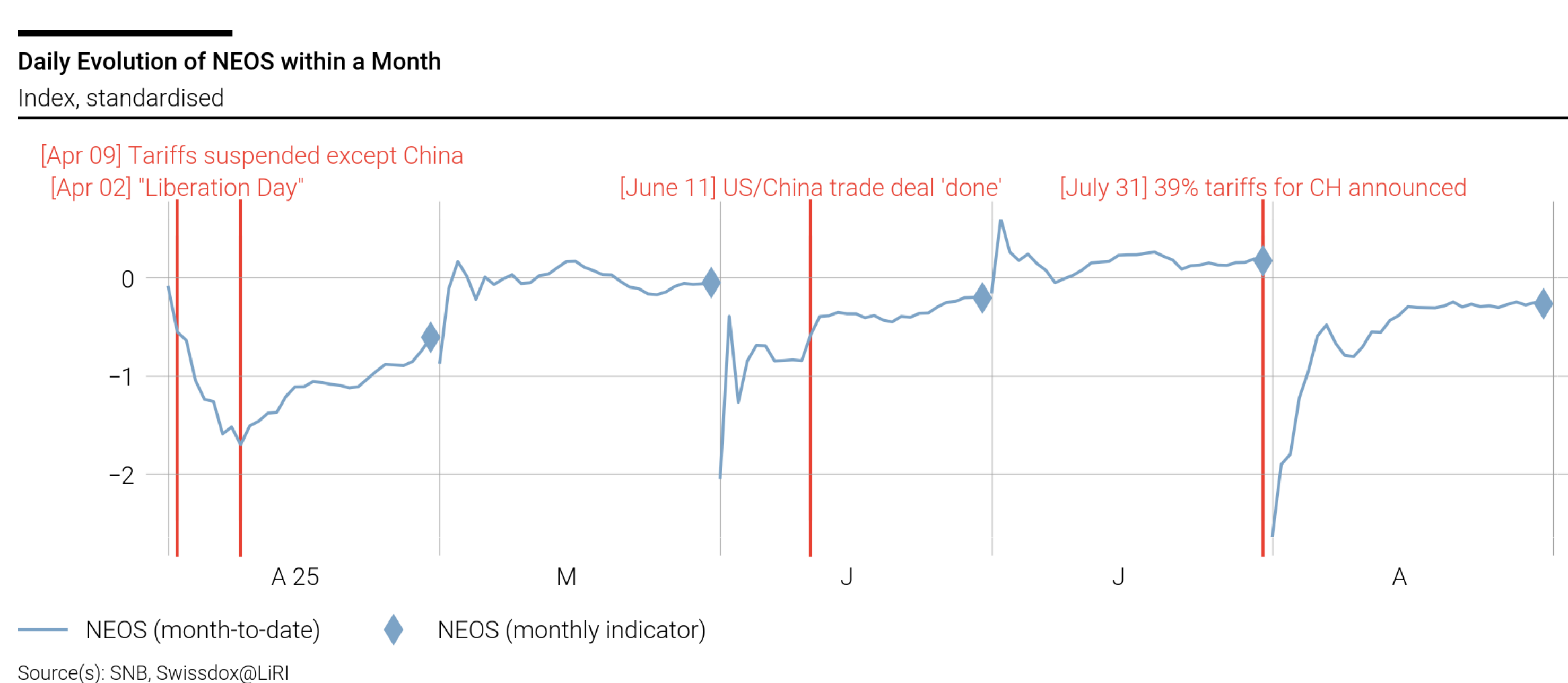


Table 1: Forecasting Swiss year-on-year GDP growth from Q1 1999 to Q1 2025

Indicator	$h = 0$	$h = 1$	$h = 2$
NEOS	0.88 (0.03)	0.78 (0.06)	0.80 (0.05)
NEOS (first 7 days in the third month)	<b>0.87</b> (0.03)	0.79 (0.06)	0.80 (0.05)
NEOS (first 14 days in the third month)	0.87 (0.03)	0.78 (0.06)	0.79 (0.04)
NEOS (first 21 days in the third month)	0.88 (0.03)	<b>0.78</b> (0.06)	<b>0.77</b> (0.03)
EPU for Switzerland	1.12 (0.09)	1.11 (0.89)	1.01 (0.52)
Lexicon-based approach	1.00 (0.49)	0.97 (0.41)	0.93 (0.30)
KOF Business Situation Indicator	1.06 (0.86)	1.01 (0.67)	1.00 (0.48)
SECO Consumer Sentiment Index	1.09 (0.80)	1.01 (0.53)	0.99 (0.47)
Manufacturing PMI for Switzerland	0.94 (0.22)	0.85 (0.16)	0.84 (0.09)
Services PMI for Switzerland	0.89 (0.10)	0.95 (0.10)	0.92 (0.12)

Notes: MAE ratios with the Diebold–Mariano p-values in parentheses. The best MAE values in bold.

Contributions of Automatically Detected Topics to NEOS

