

**BERD**  
@NFDI

Open Science Day 2022

# Artificial Intelligence, Information Processing and Dissemination

Kevin Bauer (Leibniz Institute for Financial Research SAFE)  
Florian Pethig (Business School, University of Mannheim)  
Hartmut Hoehle (Business School, University of Mannheim)

October 2022



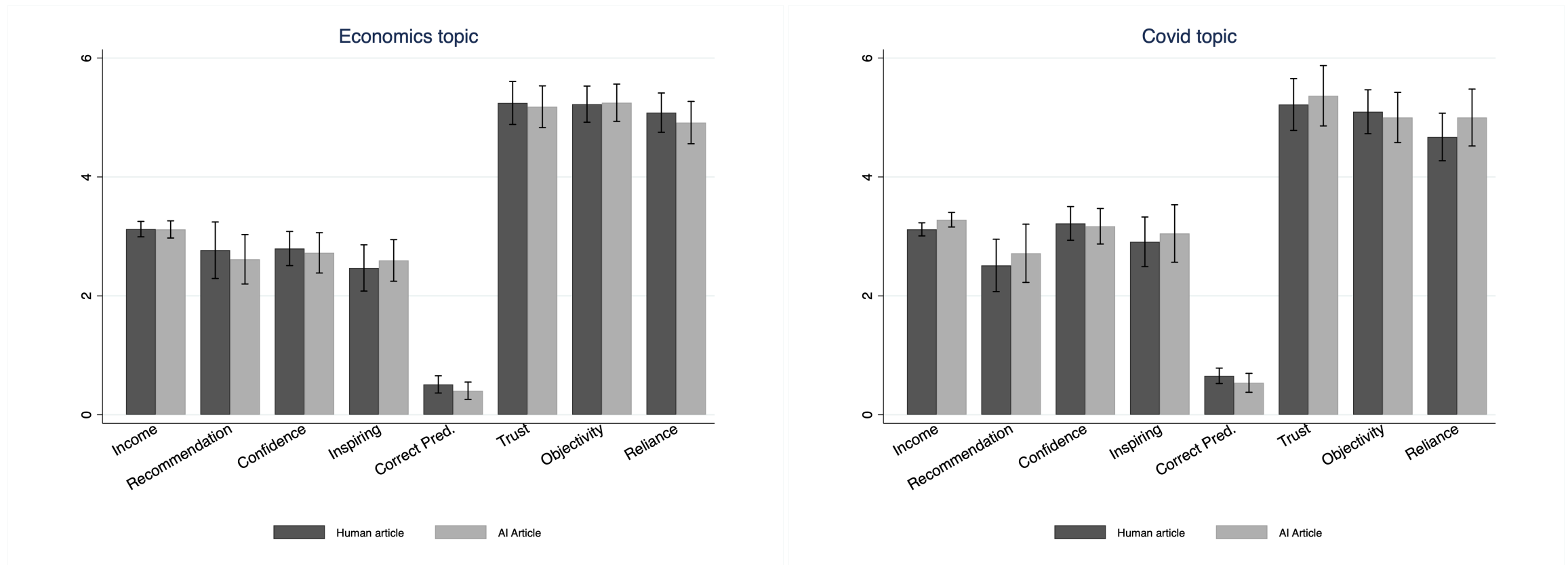
- Major news outlets, including *The New York Times* and *The Washington Post* employ AI to report on financial markets, politics, sports, and crime
- Longoni et al. (2021) show that humans perceive AI-generated news as less accurate than news written by humans
- Kreps et al. (2022) show that humans are largely incapable of identifying whether news articles are AI- or human-generated
- Research questions:
  - How do humans process and act upon AI-generated compared to human-generated information?
  - How do humans disseminate AI-generated information?

- We compiled two texts from several news articles written by professional journalists (NYT, CNN, ...)
  - Development of the US stock market index Dow Jones
  - Development of the number of Covid cases in the US
- We used Generative Pre-trained Transformer 3 (GPT -3), a state-of-the-art natural language processing (NLP) model, to paraphrase each text
- Participants were assigned to one of the texts, answered three incentivized questions about it and assessed the text along several dimensions (trust, objectivity, etc.)

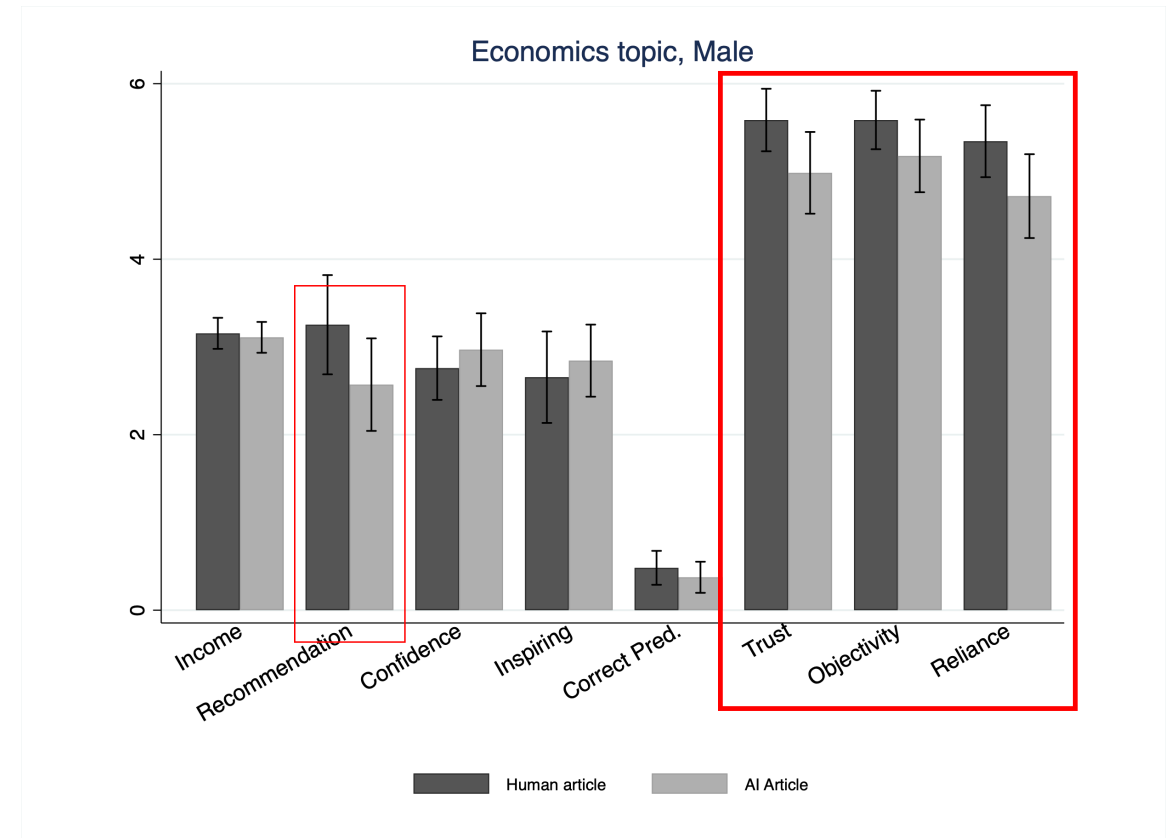
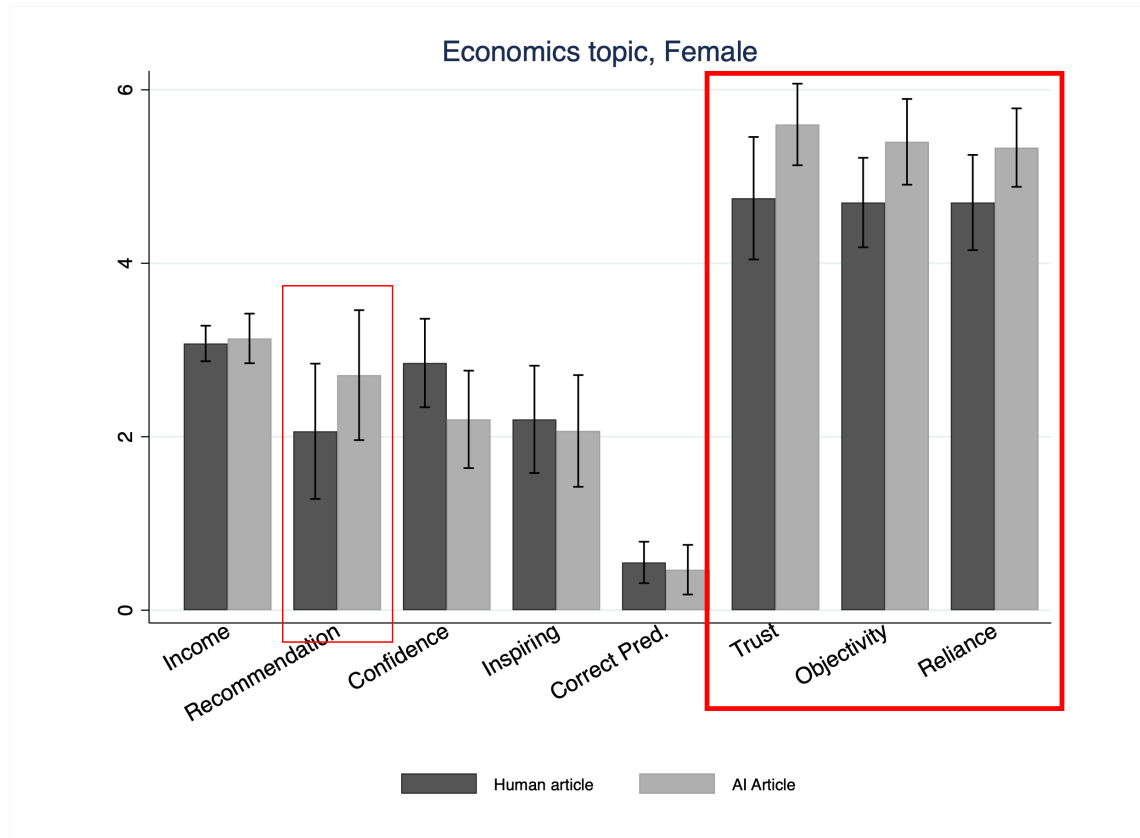
Table 1: Treatment conditions of study 1

	Human-generated	AI-generated
Correct disclosure	T1	T2
Incorrect disclosure	T3	T4
Opacity (no knowledge about source)	T5	T6

- Overall there are no differences in participants perception of article from human vs. article from the AI



- For the economics topic women exhibit more trust in the AI article, consider the AI article to be more reliable and objective, and are more likely to recommend it further
- For men we observe the opposite effect



Thank you!

Funded by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) – 460037581



- Kreps, S., McCain, R. M., & Brundage, M. (2022). All the news that's fit to fabricate : AI-generated text as a tool of media misinformation . *Journal of Experimental Political Science* 9(1), 104–117.
- Longoni, C., Fradkin, A., Cian, L., & Pennycook, G. (2021). News from artificial intelligence is believed less. *Working Paper*.