

Appendix to the Article “User perceptions of news recommender systems and trust in media outlets: A five-country study” accepted for publication in Journalism Studies

Date: May 24, 2024

A. Additional Tables & Figures

Table A: Descriptive statistics for all variables per country and overall

	<i>UK</i>	<i>US</i>	<i>CH</i>	<i>PL</i>	<i>NL</i>	<i>Overall</i>
Age	47.1 (17.3)	48.1 (18.8)	43.3 (15.6)	42.2 (13.7)	53.0 (17.4)	46.7 (17.1)
Gender (male)	48.2%	47.7%	48.5%	49.9%	49.2%	48.7%
Education	1: 28.8% 2: 32.3% 3: 38.9%	1: 4.3% 2: 38.3% 3: 57.4%	1: 8.5% 2: 73.2% 3: 18.4%	1: 10.1% 2: 43.8% 3: 46.1%	1: 18.5% 2: 19.3% 3: 62.2%	1: 13.8% 2: 41.0% 3: 44.1%
Political orientation	5.2 (2.2)	5.9 (2.7)	5.3 (2.0)	3.1 (2.6)	5.0 (2.2)	5.3 (2.4)
Perceived NRS use	4.4 (1.2)	4.7 (1.4)	4.3 (1.2)	4.5 (1.2)	4.2 (1.2)	4.4 (1.2)
Social media use	3.9 (2.3)	4.4 (2.4)	4.3 (2.1)	5.0 (1.9)	3.4 (2.1)	4.2 (2.2)
News aggregator use	3.6 (2.1)	4.2 (2.2)	4.0 (1.9)	3.9 (2.0)	2.6 (1.8)	3.6 (2.1)
Use of specific outlets ¹	3.2 (2.2)	3.9 (2.2)	3.5 (2.1)	3.7 (2.0)	3.0 (2.1)	3.4 (2.1)
Algorithmic knowledge	3.1 (2.0)	3.3 (1.9)	3.7 (1.8)	3.6 (1.9)	3.8 (1.9)	3.5 (1.9)
Algorithmic skills	4.3 (1.5)	4.7 (1.5)	4.6 (1.2)	4.4 (1.5)	4.2 (1.3)	4.4 (1.4)
Trust in specific outlets ¹	4.1 (1.6)	4.4 (1.8)	4.2 (1.6)	3.9 (1.7)	4.6 (1.4)	4.2 (1.7)
NRS benefits	4.2 (1.6)	4.7 (1.6)	4.3 (1.4)	4.6 (1.4)	3.7 (1.5)	4.2 (1.5)
NRS concerns	4.9 (1.4)	5.1 (1.4)	4.8 (1.3)	4.8 (1.3)	5.4 (1.3)	5.0 (1.3)

Note: Mean and standard deviation (in brackets). ¹ This refers to the average across all specific outlets.

Table B: Cronbach’s α per index and country

	<i>UK</i>	<i>US</i>	<i>CH</i>	<i>PL</i>	<i>NL</i>	<i>Overall</i>
Algorithmic knowledge	0.78	0.70	0.71	0.77	0.75	0.75
Algorithmic skills	0.85	0.87	0.80	0.87	0.77	0.84
NRS benefits	0.94	0.94	0.90	0.92	0.92	0.93
NRS concerns	0.94	0.94	0.90	0.92	0.92	0.93

Note: Cronbach’s α scores for all use indices and country. For the detailed operationalization of the variables, see the pre-registration. For additional EFA/CFA for the self-developed scales see the supplementary materials on OSF.

Table C: Varying intercept model with the perceived use of NRS by news outlets as dependent variable (H1, H2, RQ2)

	<i>Perceived use of NRS by news outlets</i>			
	<i>Est</i>	<i>SE</i>	<i>t</i>	<i>p</i>
(Intercept)	2.676	0.094	28.504	0.000
Algorithmic knowledge	0.094	0.007	12.697	0.000
Perceived algorithmic skills	0.211	0.011	19.312	0.000
Social media use	0.014	0.007	1.931	0.053
News aggregator use	0.029	0.007	4.002	0.000
Age	0.001	0.001	1.390	0.164
Gender (male)	0.056	0.026	2.144	0.032
Education	-0.042	0.02	-2.150	0.032
Use of news outlet	0.023	0.004	6.240	0.000
Country:				
Netherlands	0.056	0.038	1.467	0.142
Poland	0.181	0.042	4.350	0.000
United Kingdom	0.263	0.044	5.916	0.000
United States	0.478	0.048	9.900	0.000

Note: *N level 1* = 30'514 observations, *N level 2* = 3'371, *AIC* = 99'260.1, *BIC* = 99'384.98, *Log Likelihood* = -49'615.05. Switzerland is the baseline for the country comparison.

Table D: Varying intercept model with trust in specific news outlets as dependent variable (RQ1, H3a, H3b)

	<i>Trust in specific news outlets</i>			
	<i>Est</i>	<i>SE</i>	<i>t</i>	<i>p</i>
(Intercept)	1.944	0.161	12.062	0.000
Perceived NRS use	-0.093	0.029	-3.157	0.002
Benefits	-0.085	0.02	-4.252	0.000
Perceived NRS use				0.000
*benefits	0.061	0.004	15.763	
Concerns	0.383	0.022	17.434	0.000
Perceived NRS use				0.000
*concerns	-0.061	0.004	-14.108	
Age	0.007	0.001	8.081	0.000
Gender (male)	0.037	0.027	1.363	0.173
Education	0.084	0.02	4.278	0.000
Political orientation	-0.021	0.006	-3.691	0.000
Use of news outlet	0.277	0.004	68.987	0.000

Note: *N* level 1 = 25*764 observations, *N* level 2 = 3*070, *AIC* = 84*052.64, *BIC* = 84*158.67, *Log Likelihood* = -42*013.32.

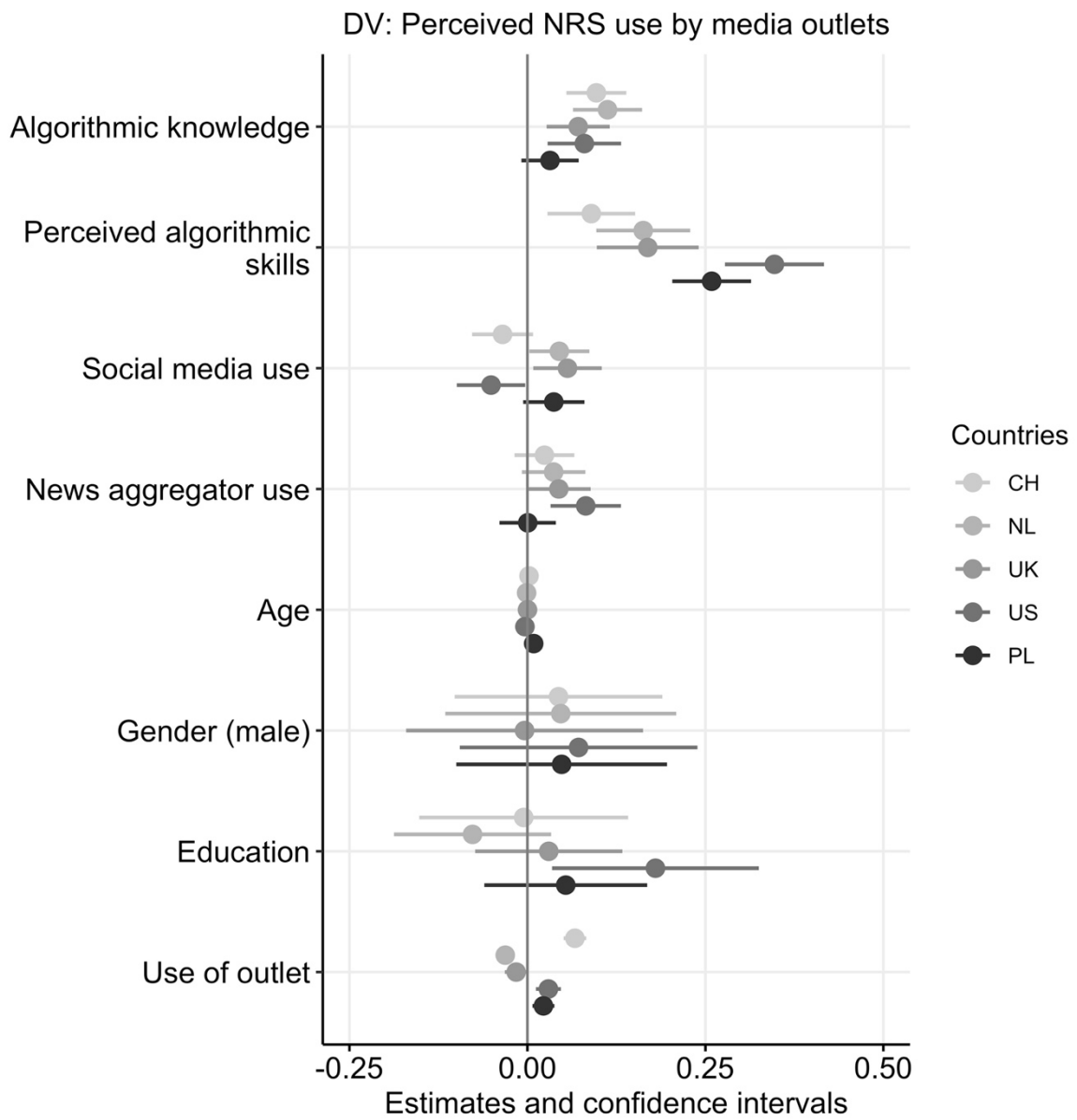


Figure A: Predicting the perceived NRS use by news outlets separately per country.

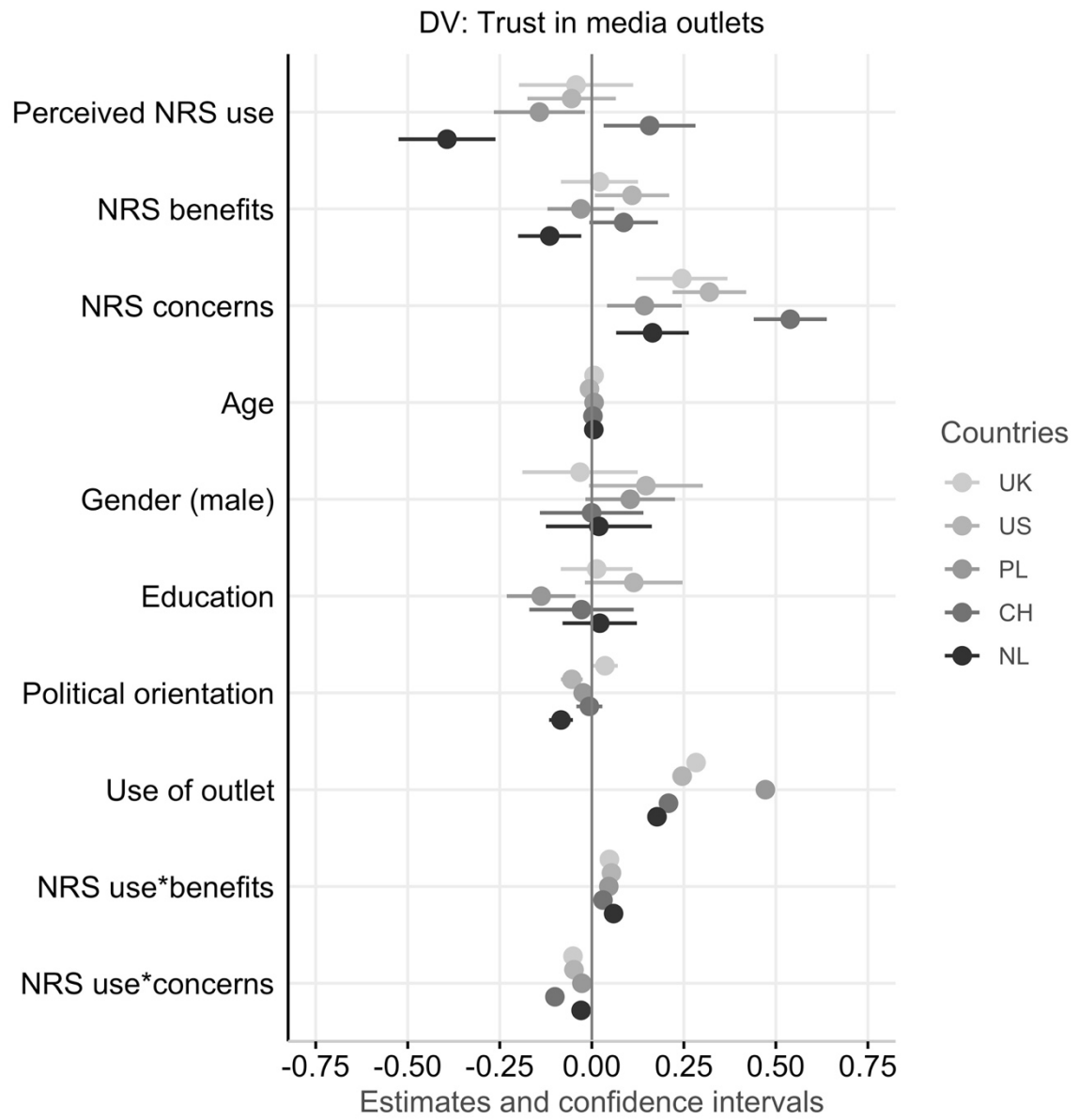


Figure B: Predicting trust in media outlets separately per country.

B. Deviations from the pre-analysis plan

Table E: Deviations from pre-analysis plan

Element	Deviation	Reason
H1, H2, RQ2, and RQ3a	Using the disaggregated data set and regression models with varying participant intercepts instead of a mean index for the perceived NRS use across media outlets.	Accounts better for the data structure, better alignment with analysis strategy for H3a and H3b, and allows to control for the use of specific news outlets.
Control variables to answer H1, H2, RQ2, and RQ3a	Adding use of the specific news outlets as control variable to predict perceived NRS use.	Users may find it easier to assess NRS use for media that they use regularly. The use of the disaggregated data set allowed us to add this as a control variable.
General trust in news as dependent variable	Only testing H3a and H3b with trust in specific news outlets and dropping the original RQ1 on general trust in news.	Focus on outlet level and country differences.
Attitudes towards NRS as independent variables for H3	Focus on perceived benefits and concerns; omission of analyses with general attitudes towards NRS.	The perceived benefits and concerns seem better suited to answer H3a and H3b. The results for general attitudes towards NRS are similar to the analyses with perceived benefits and therefore only documented in the additional material.
H3 and RQ3b	In response to a suggestion by the reviewers, we have integrated perceived benefits and concerns, and the respective interaction terms, as independent variables into one single model instead of calculating two separate models.	This approach allows to see how each factor is related to trust, when considering the other factor and therefore provides a more nuanced picture. Notably, the results stay largely the same with this approach in comparison to the separate models, which can still be found in the supplementary material on OSF.