You Won't Believe Our Results!

But They Might: Heterogeneity in Beliefs About The Accuracy of Online Media

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1 Online Appendix

1.1 Recruitment Instrument

Figure 1: Recruitment Instrument for Facebook Sample

Translation:
New paid survey on current events [or possibly "ongoing issues"]. Earn up to 250 answering our quiz!
Earn up to 250 Paid NYU survey
Opinion Survey

1.2 Online Media and the Italian Context

In many ways, Italy has been a bellwether for the trends in media and populism that have swept through Western democracies in recent years. Silvio Berlusconi's lengthy tenure in power has been followed by a series of short-lived center-left governments. More recently, Matteo Salvini, secretary of the far-right party Lega, has taken Berlusconi's place as leader of the Italian right, espousing a populist and xenophobic agenda.

Largely as a result, Italy was also the first European nation to be governed by a coalition of new-wave populist parties: Lega and Movimento Cinque Stelle. These parties experienced rapid growth in the past 10 years, attacking both the legacy media and the traditional parties as part of the same corrupt establishment.[1]

Both parties, who were together in a coalition government at the time when our study was conducted, have encouraged their voters to acquire information through online outlets and affiliated Facebook pages (Santoro 2012). The mechanisms for generating credibility in this context are completely different from the broadcast era of media. In particular, these mechanisms include "credibility cascades," where the extent of the spread of a given piece of news (as quantified by social media likes and shares) can generate credibility even for stories produced by media firms with little name recognition. (Munger 2019) calls this "Clickbait Media," and indeed the clickbait headline is indicative of a news outlet that understands the existence of this type of audience.

In Italy, this kind of communication was adopted early and successfully by the comedian, blogger and founder of the *Movimento Cinque Stelle* Beppe Grillo, whose blog became a centralized platform for all the important communications of the party, as well as "counter-information" articles reporting news that mainstream media would (Grillo claimed) not report. The internet and unmediated communication between the party and its voters played a crucial role in the emergence of the Movimento (Bordignon and Ceccarini 2013) and Grillo's communication has always been characterised by emotionally-charged wording and a strong critique of the establishment and printed media.

[1] Salvini's Lega was born as an independence movement for the North of Italy in the 1990s. As such, it never managed to go beyond 10% at the national level until Salvini changed its political message to a xenophobic anti-establishment one, receiving vote totals of 17.6% in 2018 and 34.3% in 2019. Luigi Di Maio's Movimento Cinque Stelle ran for the first time in a general election in 2013, obtaining 25.6% of the votes and improved its performance in 2018 to 32.7%.

1.3 Descriptive Statistics

Table 1: Descriptive statistics by chosen article

	None	CB-Pro	CB-Anti	NCB-Pro	NCB-Anti	Neutral	All
Men	0.23	0.25	0.30	0.20	0.25	0.38	0.27
Age	39.03	45.34	42.06	34.66	35.64	35.89	38.49
Education	1.84	2.05	2.19	2.14	2.20	2.39	2.19
Like_GVT	5.23	5.28	3.74	4.50	3.52	3.81	4.34
Internet	6.58	6.36	6.44	6.50	6.60	6.55	6.48
Facebook	5.52	5.91	5.83	5.40	5.48	5.66	5.65
Twitter	1.55	1.86	1.71	1.86	1.98	2.02	1.89
News_Offline	3.55	3.74	3.56	3.13	3.50	3.51	3.47
News_Online	6.10	5.77	5.81	5.53	5.77	5.92	5.75
Digital Literacy	0.85	0.82	0.84	0.88	0.89	0.91	0.87
n	31.00	365.00	145.00	405.00	168.00	383.00	1497.00

Cell entries are the average value of each trait among people who opted to read the headline defined by each column.

Education is a measure on a 1 to 5 scale of the respondent's level of education; *Like GVT* measures on a 1 to 7 scale how much the respondent likes the Conte Government, a coalition of the populist *Movimento Cinque Stelle* party and the far-right *Lega*. All of the following variables are on a 1 to 7 scale where 7 means "*Very Often*": *Internet* refers to how often respondents use the Internet; *Facebook* and *Twitter* refer to the how often they use these named social media platform; and *News Offline* and *News Online* refer to how often they consume news on TV and newspapers or on web magazines, blogs and social media. Finally, *Digital Literacy* is a % score on the 14 questions that comprise (Hargittai, Piper, and Morris 2019)'s measure of "digital literacy": respondents are asked to declare how familiar they are with a set of computer-related terms (eg *phishing, selfie, tag*)

1.4 Descriptive Taste for Clickbait

Table 2: Taste for CB

	OLS	*Probit*
	(1)	(2)
Education	-0.398^{***}	-0.072^{***}
	(0.087)	(0.016)
Age	0.014^{**}	0.003^{***}
	(0.006)	(0.001)
Men	-0.626^{***}	-0.084^{***}
	(0.178)	(0.031)
Internet	0.287^{**}	0.046^{**}
	(0.134)	(0.024)
Facebook	0.028	0.002
	(0.061)	(0.011)
Twitter	0.043	0.003
	(0.049)	(0.009)
Like GVT	0.387^{***}	0.040^{***}
	(0.046)	(0.008)
Often Online	-0.044	-0.011
	(0.068)	(0.012)
Often Offline	0.032	0.014^{*}
	(0.043)	(0.008)
Dig Literacy	-4.308^{***}	-0.605^{***}
	(0.694)	(0.126)
Constant	6.792^{***}	
	(1.022)	
Observations	1,410	1,410
R^2	0.164	
Log Likelihood		-887.234

$^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.
In column (1) we show the results of an OLS regression having the Clickbait Score as dependent variable. In columns (2) we show the results of a Probit model on the likelihood of choosing at least one Clickbait article as first article.
Coefficients and standard errors in brackets.

In column (1) we regress the *CB-Score* discussed above on the characteristics of the reader. In column (2) we run a Probit on the likelihood of ranking a CB article in the first position at least once. Both models show the strong link between choosing Clickbait and the age, gender, education and digital literacy of subjects. Table 2 shows that older, less educated, more pro-government, less digitally-literate people are more likely

to choose clickbait. This finding nicely replicates previous research from the United States. However, in the Italian case, we also find a relationship between support for the government and taste for clickbait after controlling for other demographics.

1.5 Manipulation Check

Table 3: Effort under different treatments

	Time spent choosing the article			Time spent reading the chosen article		
	(1)	(2)	(3)	(4)	(5)	(6)
Intrinsic Inc		0.054	0.054		−0.025**	−0.023*
		(0.035)	(0.035)		(0.012)	(0.012)
Monetary Inc		0.056*	0.061*		0.039***	0.040***
		(0.034)	(0.035)		(0.012)	(0.012)
CB Score	−0.011**	−0.011**		−0.006***	−0.006***	
	(0.005)	(0.005)		(0.002)	(0.002)	
Study	−0.008	−0.009		0.003	0.003	
	(0.016)	(0.016)		(0.006)	(0.006)	
Age	0.011***	0.011***		0.001*	0.001**	
	(0.001)	(0.001)		(0.0004)	(0.0004)	
Sex	−0.085***	−0.084***		−0.033***	−0.034***	
	(0.032)	(0.032)		(0.011)	(0.011)	
Internet	−0.070***	−0.069***		−0.019**	−0.017**	
	(0.024)	(0.024)		(0.009)	(0.008)	
Facebook	−0.049***	−0.048***		−0.018***	−0.018***	
	(0.011)	(0.011)		(0.004)	(0.004)	
Twitter	−0.028***	−0.027***		0.0005	0.0001	
	(0.009)	(0.009)		(0.003)	(0.003)	
LIke GVT	0.002	0.002		−0.001	−0.001	
	(0.008)	(0.008)		(0.003)	(0.003)	
Often Online	−0.019	−0.020*		−0.009**	−0.009**	
	(0.012)	(0.012)		(0.004)	(0.004)	
Often Offline	−0.023***	−0.023***		−0.008***	−0.008***	
	(0.008)	(0.008)		(0.003)	(0.003)	
Dig Literacy	0.271**	0.273**		0.123***	0.123***	
	(0.127)	(0.127)		(0.045)	(0.044)	
Constant	4.063***	4.015***	3.599***	0.543***	0.528***	0.329***
	(0.187)	(0.189)	(0.025)	(0.066)	(0.066)	(0.009)
Observations	1,410	1,410	1,497	1,383	1,383	1,466
R^2	0.125	0.127	0.002	0.062	0.082	0.019
Adjusted R^2	0.118	0.119	0.001	0.055	0.073	0.017

$^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.
OLS on the log of the time spent choosing and reading the article, as a proxy of the effort undergone by users
Standard error in brackets

1.6 Main Results

Table 6 depicts the main results. Each column represents the results of a Probit model where the dependent variable is whether the subject selected a clickbait article in the incentivized article task. Column 1 includes only demographic controls, and displays only the variables that were related to pre-treatment taste for clickbait and dummy variables for the two treatment conditions. Reassuringly, the likelihood of selecting a clickbait headline is strongly predicted by this *CB Score*. Even controlling for preference for clickbait, age and digital literacy remain highly significant, although not education.

In the aggregate, there are no significant effects of either incentive on the propensity to select clickbait in Column 1. The remaining columns in Table 6 demonstrate that this null main effect is masking offsetting heterogeneous treatment effects for the Monetary Incentive, as predicted in Hypothesis 2 ("The addition of incentives for accuracy will increase the preference for clickbait among the elderly, the less educated and the less digitally literate"). In contrast, there are generally null effects for the Intrinsic Incentive.

Column 2 interacts the treatment conditions with the subjects' age. There are strongly heterogeneous effects for the Monetary Incentive, with the additional salience of accuracy increasing the likelihood that older people select clickbait headlines.

1.7 Pre-treatment articles

1.7.1 Batch 1, ITA

- **CB Pro** Il PD è furioso! Ecco cosa non vogliono farti sapere sull'Air Force Renzi.
- **CB Anti** Basta chiacchiere! Tutte le menzogne sull'aereo di Stato
- **Non-CB Pro** Il costo dei voli di Stato aumentato durante gli ultimi 5 anni
- **Non-CB Anti** Un aereo di servizio è necessario per i voli ufficiali e fa risparmiare soldi
- **Neutral** Quanto costano i voli di Stato

1.7.2 Batch 1, ENG

- **CB Pro** The democrats are furious! Here's what they do not want you to know about the Air Force Renzi.
- **CB Anti** Stop the fake-news! All the lies on the State Aircraft
- **Non-CB Pro** The cost of the State Aircraft rose during the last 5 years
- **Non-CB Anti** A State Aircraft is useful and it actually saves us money
- **Neutral** The cost of the State Aircraft

1.7.3 Batch 2, ITA

- **CB Pro** "■Abbiamo paura ad uscire di casa", ecco quello che la sinistra non vuole farvi sapere

  CB Anti La propaganda leghista vi sta mentendo! Ecco la verità sulla sicurezza in Italia

  Non-CB Pro 2013-2017, in aumento la criminalità in tutta Italia

  Non-CB Anti Nonostante un piccolo aumento, la criminalità in Italia resta ai minimi storici

  Neutral Tutto quello che c'è da sapere sulla criminalità in Italia

Table 4: Likelihood of choosing CB

	(1)	(2)	(3)	(4)	(5)
Intrinsic Inc	0.046	−0.053	−0.016	0.172**	0.037
	(0.034)	(0.085)	(0.068)	(0.070)	(0.147)
Monetary Inc	0.030	−0.190**	−0.137**	0.190***	−0.237*
	(0.034)	(0.081)	(0.067)	(0.069)	(0.135)
CB Score	0.040***	0.040***	0.041***	0.039***	0.041***
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Education	−0.005	−0.006		−0.008	−0.035
	(0.015)	(0.016)		(0.015)	(0.042)
Age	0.004***	0.001	0.004***	0.004***	0.002
	(0.001)	(0.002)	(0.001)	(0.001)	(0.002)
Dig Literacy	−0.436***	−0.439***	−0.449***		
	(0.126)	(0.126)	(0.128)		
Intrinsic Inc*Age		0.003			0.001
		(0.002)			(0.002)
Monetary Inc*Age		0.006***			0.005**
		(0.002)			(0.002)
Intrinsic Inc*Low Educ			0.197*		0.155
			(0.101)		(0.108)
Monetary Inc*Low Educ			0.364***		0.339***
			(0.081)		(0.088)
Intrinsic Inc*Medium Educ			0.039		0.035
			(0.083)		(0.084)
Monetary Inc*Medium Educ			0.161*		0.177**
			(0.083)		(0.084)
Intrinsic Inc*Medium Dig Lit				−0.169**	−0.128
				(0.077)	(0.084)
Monetary Inc*Medium Dig Lit				−0.206***	−0.127
				(0.073)	(0.083)
Intrinsic Inc*High Dig Lit				−0.146*	−0.089
				(0.085)	(0.099)
Monetary Inc*High Dig Lit				−0.190**	−0.059
				(0.081)	(0.101)
Num. obs.	1410	1410	1410	1410	1410
Log Likelihood	−887.558	−883.547	−879.501	−883.532	−874.126

$^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.
Probit model on the Likelihood of choosing a CB articleeffects and standard error in brackets

1.7.4 Batch 2, ENG

- **CB Pro** "We're afraid to get out", here's what the democrats do not want you to know
- **CB Anti** The League's propaganda is lying to you! Here's the truth about safety in Italy
- **Non-CB Pro** 2013-2017, crime is on the rise throughout the country
- **Non-CB Anti** Despite a small increase, crime is still at the historical low
- **Neutral** Everything you need to know about crime in Italy

2 Flexible model specification; Moderators as Percentiles

Imposing a functional form (linear or otherwise) on multiplicative interaction models can produce misleading estimates, per Hainmueller, Mummolo, and Xu 2019, so we used the R package 'interflex' to flexibly determine the most appropriate model for our data. The marginal interaction effects displayed in Figure 1 are replicated below.

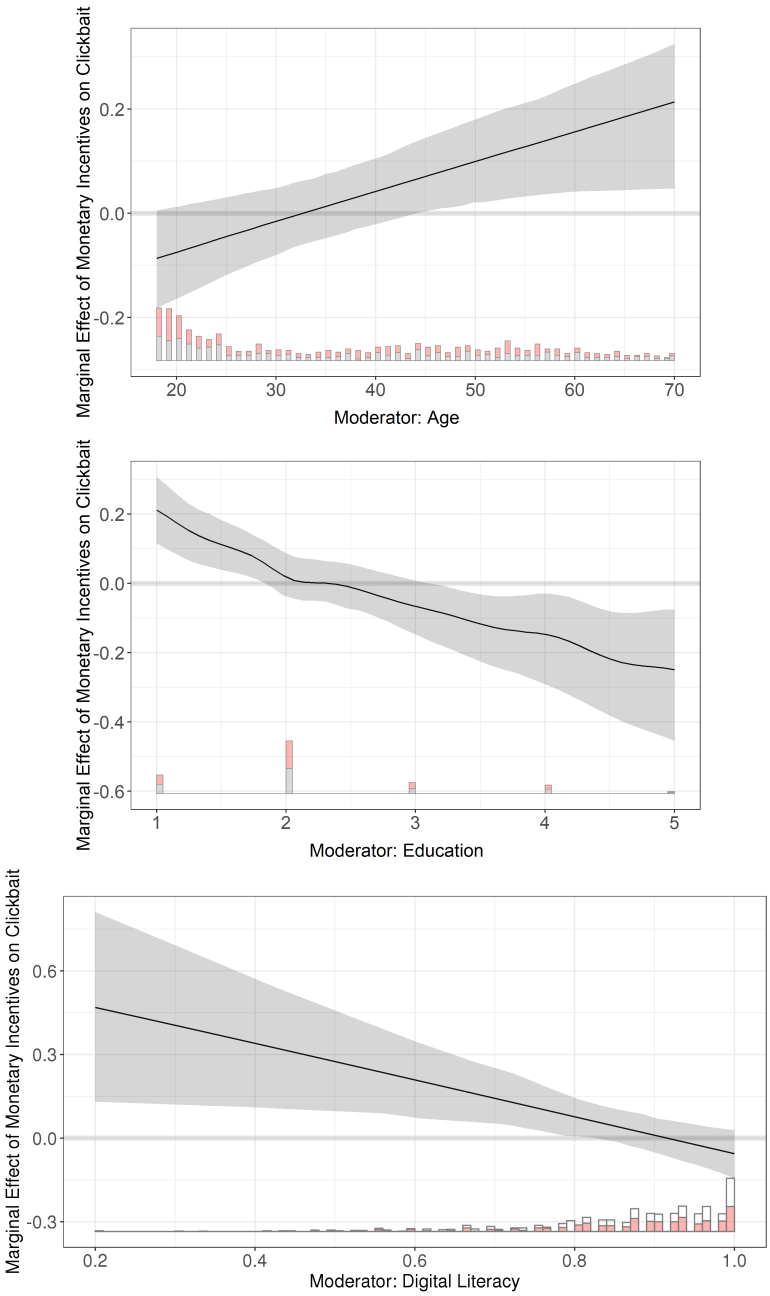

Figure 2: Flexibly calculated interaction between treatment and *Age* (top panel), *Education* (middle panel), and *Digital Literacy* (bottom panel).

As an additional robustness check, Table 5 presents the same analysis as Table 4, but this time each of the three treatment moderators is treated as a continuous percentile value. The categories presented in

Table 5: Likelihood of choosing CB

	(1)	(2)	(3)	(4)	(5)
Intrinsic Inc	0.045	−0.042	0.226**	0.135**	0.168
	(0.034)	(0.070)	(0.098)	(0.067)	(0.131)
Monetary Inc	0.028	−0.152**	0.346***	0.145**	0.184
	(0.034)	(0.068)	(0.089)	(0.066)	(0.130)
CB Score	0.039***	0.040***	0.040***	0.040***	0.041***
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Education	−0.001	−0.001	0.002**	−0.001	0.002*
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Age	0.003***	0.001	0.003***	0.003***	0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Digital Literacy	−0.002***	−0.002***	−0.002***	−0.001	−0.002*
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Intrinsic Inc*Age		0.002			0.001
		(0.001)			(0.001)
Monetary Inc*Age		0.004***			0.003**
		(0.001)			(0.001)
Intrinsic Inc*Educ			−0.003*		−0.002
			(0.001)		(0.001)
Monetary Inc*Educ			−0.005***		−0.004***
			(0.001)		(0.001)
Intrinsic Inc*Dig Lit				−0.002	−0.001
				(0.001)	(0.001)
Monetary Inc*Dig Lit				−0.002**	−0.000
				(0.001)	(0.001)
Num. obs.	1410	1410	1410	1410	1410
Log Likelihood	−885.800	−881.403	−879.128	−883.546	−875.329

$^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.
Probit model on the Likelihood of choosing a CB article
Marginal effects and standard error in brackets

Table 4 use somewhat arbitrary cut-offs for ease of presentation, and the bottom of the rug plots in Figure 3 demonstrate the problem with using the raw values of education and digital literacy in a standard probit model.

Table 5 shows that the results of Table 4 are robust to this alternative estimation strategy. Column 5 finds significant treatment moderation in the full model for Age and Education for the Monetary Incentive condition but not the Intrinsic Incentive condition; neither condition is significantly moderated by Digital Literacy.

3 Treatment Effects on Co-Attitudinal Article Selection

The analysis in Table 5 replicates the main analysis in Table 4, but replaces the dependent variable with whether the respondent selected a pro-attitudinal article headline. The DV takes the value 1 if either the respondent was pro-government and selected a pro-government headline or if the respondent was anti-government and selected an anti-government headline; it takes 0 if a partisan respondent selected a counter-attitudinal headline. We excluded non-partisan respondents (who were neither supported or opposed the government) from the analysis.

Overall, there is little evidence that the treatment caused respondents to be more likely to select pro-attitudinal news.

Table 6: Likelihood of Choosing Pro-Attitudinal Article

	(1)	(2)	(3)	(4)	(5)
Intrinsic Inc	0.005	0.045	−0.068	−0.017	−0.142
	(0.044)	(0.107)	(0.100)	(0.084)	(0.220)
Monetary Inc	−0.006	0.123	−0.116	−0.099	−0.082
	(0.042)	(0.094)	(0.100)	(0.087)	(0.191)
CB_Score	0.006	0.006	0.006	0.004	0.004
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Age	0.005***	0.007***	0.005***	0.005***	0.006**
	(0.001)	(0.002)	(0.001)	(0.001)	(0.002)
Like_GVT	0.105***	0.104***	0.106***	0.104***	0.104***
	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)
Digital Literacy	0.220	0.232	0.245*		
	(0.145)	(0.146)	(0.145)		
Intrinsic Inc*Age		−0.001			−0.001
		(0.003)			(0.003)
Monetary Inc*Age		−0.004			−0.002
		(0.003)			(0.003)
Low Educ			−0.189		0.076
			(0.127)		(0.152)
Educ Medium			−0.142*		0.021
			(0.076)		(0.124)
Intrinsic Inc*Low Educ			0.155***		0.179***
			(0.059)		(0.042)
Monetary Inc*Low Educ			0.062		0.087
			(0.105)		(0.096)
Intrinsic Inc*Educ Medium			0.054		0.083
			(0.095)		(0.091)
Monetary Inc*Educ Medium			0.128*		0.116
			(0.076)		(0.080)
Medium Digital Lit				0.042	0.051
				(0.076)	(0.078)
High Digital Lit				−0.031	−0.021
				(0.092)	(0.096)
Intrinsic Inc*Medium Digital Lit				0.009	0.042
				(0.103)	(0.099)
Monetary Inc*Medium Digital Lit				0.116	0.095
				(0.073)	(0.081)
Intrinsic Inc*High Digital Lit				0.062	0.094
				(0.096)	(0.089)
Monetary Inc*High Digital Lit				0.092	0.072
				(0.081)	(0.094)
Num. obs.	656	656	656	656	656
Log Likelihood	−258.651	−257.650	−256.591	−255.667	−251.323

$^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.
Probit model on the Likelihood of choosing a CB articleeffects and standard error in brackets

4 Digital Literacy Scale

Italian: Ultimissima domanda: quanto ti sono familiari i seguenti termini? scegli un numero tra 1 e 5 dove 1 significa "Non so cosa sia" e 5 "Conosco bene".

[Note: Most of these terms do not have an Italian word, and Italians currently use the English word.]

- Phishing
- Selfie
- App
- Hashtag
- Social Media
- Status Update
- Spyware
- Smartphone
- Wiki
- Ricerca avanzata
- PDF
- Taggare
- Tablet

English translation:
A very last question: how familiar are you with the following items? Please, pick a number between 1 and 5 where 1 means "I do not know it" and 5 is "I know it very well".

Notice that this scale consists of the 8-question "social media expansion" described in Hargittai, Piper, and Morris 2019 (app, hashtag, selfie, smartphone, social media, status update, tablet, tagging), combined with the 6-question "Abbreviated Web-Use Skills Index for Populations With Low Levels of Internet Experience" proposed in Table 5, Column 1 of Hargittai and Hsieh 2012: (advanced search, PDF, Spyware, Wiki, phishing). Note that there was an error in our survey instrument and that we only in fact included 5 of the 6-question battery; we neglected to include "preference setting." This should have slightly reduced the reliability of our index.