Democratising or Disrupting? The Role of Social Media in 2019 Indian Elections

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Abstract

Social media platforms provide level-playing fields for both political parties and the electorates, however, the kind of engagement determines its nature. Using Facebook Ads Library data and survey experiment, we examine the perception of the campaigners and the voters towards misinformation during the 2019 Lok Sabha elections in India. We analyse the case of Rafale deal – alleged corruption claim on the incumbent Bharatiya Janata Party (BJP) government by the Indian National Congress (INC). We had 115 Facebook advertisements on the topic of Rafale deal, which included misinformation/facts related to it. Results indicate that there is an effect of misinformation on the reach of misinformation among different age-gender groups and regions across India. Also, it was found that party preferences of the voters determine the believability of a misinformation.

Keywords: Lok Sabha Elections 2019, Rafale deal, BJP, INC, misinformation, Facebook, causal correction

1. Introduction

Fake news has been the new way of political communication and election campaigning. There has been an avalanche of studies on fake news and campaigning, post 2016 US elections, which speak about influencing an electorate (Allcott and Gentzkow 2017; Bovet and Makse 2019; Grinberg et al. 2019). This is a possibility which cannot be completely ruled out given the connectivity and digital social networks. In addition to the US elections, studies done in Brazil and other developing countries substantiate the same further.

Political parties in India during 2014 national election used social media platforms like Facebook, Twitter and messaging apps like WhatsApp for digital campaigning. Neyazi, Kumar, and Semetko (2016) found that "sharing of campaign information" – both face-to-face and electronically in the 2014 national election campaign – was "a significant predictor of political engagement" measured with a scale of engagement in each party's campaigning activities in key cities. The Bharatiya Janata Party (BJP) was the most active party online in

2014 and used it, like Barack Obama, largely for positive messaging during the campaign. The BJP announced early on that 160 constituencies were ripe for digital campaigning, and won these and more with its 282 seat absolute majority. It is no surprise that a number of studies credit digital campaigning with a large part of the BJP's victory (Chhibber and Ostermann 2014; Ahmed, Jaidka, and Cho 2016; Baishya 2015).

However, internet and social media use in India in 2014 was a fraction of what it is today. By 2017, there were already 734 million unique mobile phone users(Kemp 2017). India has 241 million active Facebook users, of which 84 percent access Facebook via mobile phones and 22.2 million use Twitter (Kemp 2017; PTI 2015). WhatsApp is a popular multimedia messaging app with more than 200 million monthly active users.

The 2014 national election has been described as the first social media election in India, and speculation is rife over what social media will mean for the 2019 election to be held April or May 2019. NDTV's "We the People," a leading prime-time current affairs programme, already in fall 2018 was debating this very question: "How will the internet, social media, affect India's elections?" Said that, it is important to understand the disruptive nature of social media and digital campaign communication. Social media has enabled citizen-initiated bottom-up communication, which was unimaginable just two decades ago. Social media platforms and digital payments together delivered "big data elections", "targeted political advertising" and "data-driven campaigning" which has been evident in recent elections in the U.S., UK, Europe and India (Semetko and Tworzecki 2018). However, social media also brings the problem of unregulated dissemination of disinformation as seen in the most recent presidential election in Brazil. The Election Commission of India (ECI) acknowledges the need for regulating social media space, given the vast presence of electoral candidates and their affiliates on social media, and its use to campaign during elections (ECI 2015).

In this regard, the objective of this paper is two folds: a) extent of exposure of fake news through social media from the sender/campaigner's perspective, and b) understanding the perceptions of fake news from the voter's perspective.

2. Literature Review

Allcott and Gentzkow (2017) define fake news as "news articles that are intentionally and verifiably false, and could mislead the readers". Lazer et al. (2018) define fake news "to be fabricated information that mimics news media content in form but not in organizational process or intent". Vosoughi, Roy, and Aral (2018) refer to fake news/misinformation as

"wilful distortion of the truth" (p. 1146). Berinsky (2017) while discussing the spread of rumours in political discourse, attributes rumours as a particular form of misinformation which he defines as "an acceptance of information that is factually unsubstantiated" (Berinsky 2017).

Usually, misinformation is characterised by a lack of "specific standards of evidence" and "acquire power through widespread social transmission" (Fine and Ellis 2010; Berinsky 2017). We can say that the unverifiable nature makes the fake news a tool for gaining political advantage. Said that, the social media influences can be widely seen in the spread of fake news/misinformation and has changed the dynamics of electoral politics (Rojecki and Meraz 2016; Allcott and Gentzkow 2017; Gainous and Wagner 2014). Yet, as Williamson (2016) notes "unchallenged untruth will never stop".

Exposure of misinformation and its impact on the voters cannot be undone completely, as Walter and Murphy (2018) assert, there is a need for rebuttal of such information. Therefore, we need to minimise the effect of misinformation. There have been various attempts to correct the misinformation and many studies attribute to role of fact-checking in correcting the misinformation, source based correction and causal correction (Walter and Murphy 2018; Nyhan and Reifler 2015). Causal correction seems to have been effective in displacing the perception of people around misinformation, although there is no perfect method to completely displace the perception (Nyhan and Reifler 2015).

2.1 Motivation

In this research we consider the electoral issue regarding Rafale deal, which the opposition parties claimed as a scandal, for analysis. Though it was alleged of corruption, it is yet to be proved, also various reports suggest there was no corruption in the deal made between India and France. In this regard, we obtained various news related to Rafale deal, say print media, digital only media, YouTube, discussion forums, among others via Google advanced search and also search on Bing. The keywords for advanced search included: "Rafale deal India", "Dassault Rafale India", "Rafale deal Reliance", "What is Rafale deal issue", so as to obtain a comprehensive result set. All these results were captured using open sources packages available in Python, and filtered the results based on the domain of the news articles. We obtained 944 distinct webpages related to Rafale deal in India, which we further categorised into three groups based on the claims each web page made, i.e., corruption, no-corruption and news. These webpages were manually coded based on the headlines of the article. For

instance, a news article which said, “Use common sense: PM Narendra Modi slams Opposition over Rafale deal”, was coded as ‘no-corruption’. News which said, “Exclusive: Hollande was very clear that Reliance was imposed in Rafale deal, says Mediapart president Edwy Plenel” was coded as ‘corruption’. Finally, articles which said, “CAG report on Rafale deal tabled in Parliament: Key points” were coded as ‘news’ related to Rafale deal. As a result of coding, we had categorised 944 webpages related to Rafale deal – 289 related to corruption, 203 related to no corruption and remaining 452 were related to general news on Rafale deal.

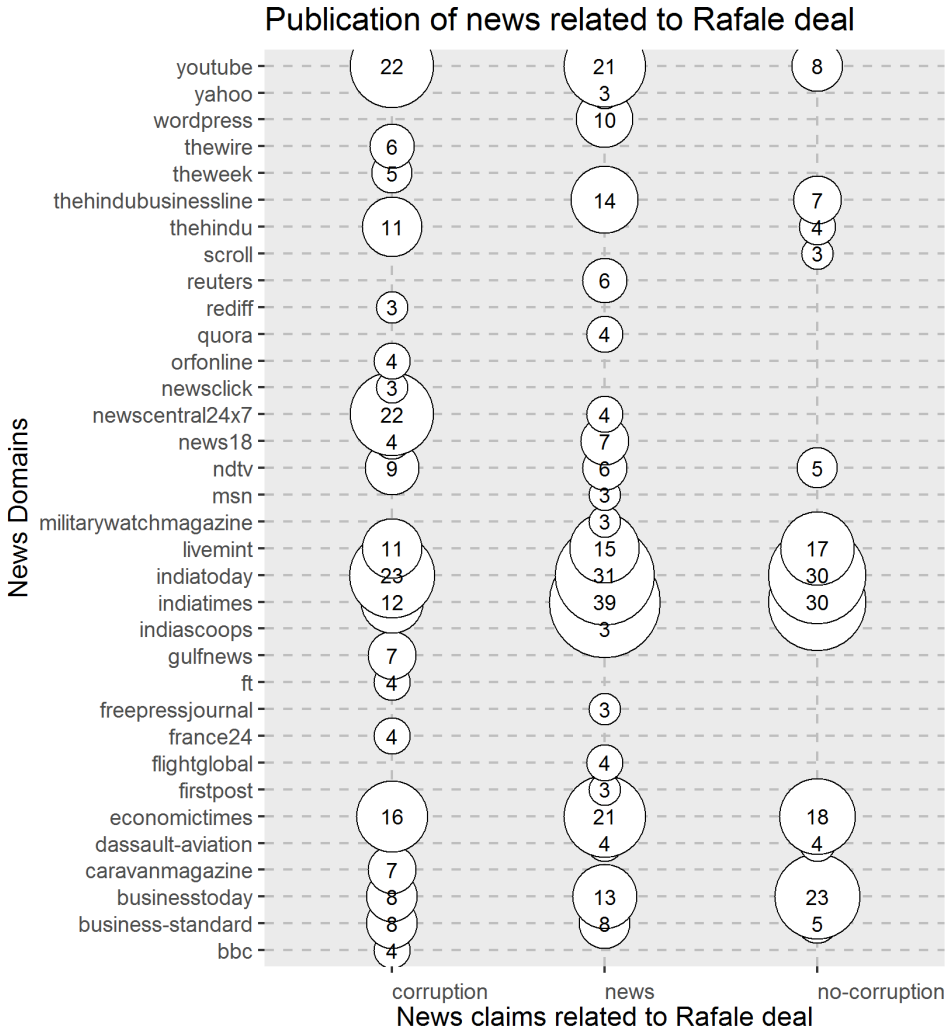

Figure 1: Publication of news related to Rafale deal

Figure 1, depicts the publication of news related to Rafale deal by top news domains based on news claims. We can see that media houses like Times of India, India today, and the Hindu published more articles related to Rafale deal, across three categories. Also, it can be seen that some news domains published with either corruption or no-corruption claim. To this end, it becomes clear that there has been wide discussion about Rafale deal claiming it to be a

scandal by the NDA government, or there was no corruption involved, among many others. Therefore, we seek to analyse misinformation around Rafale deal.

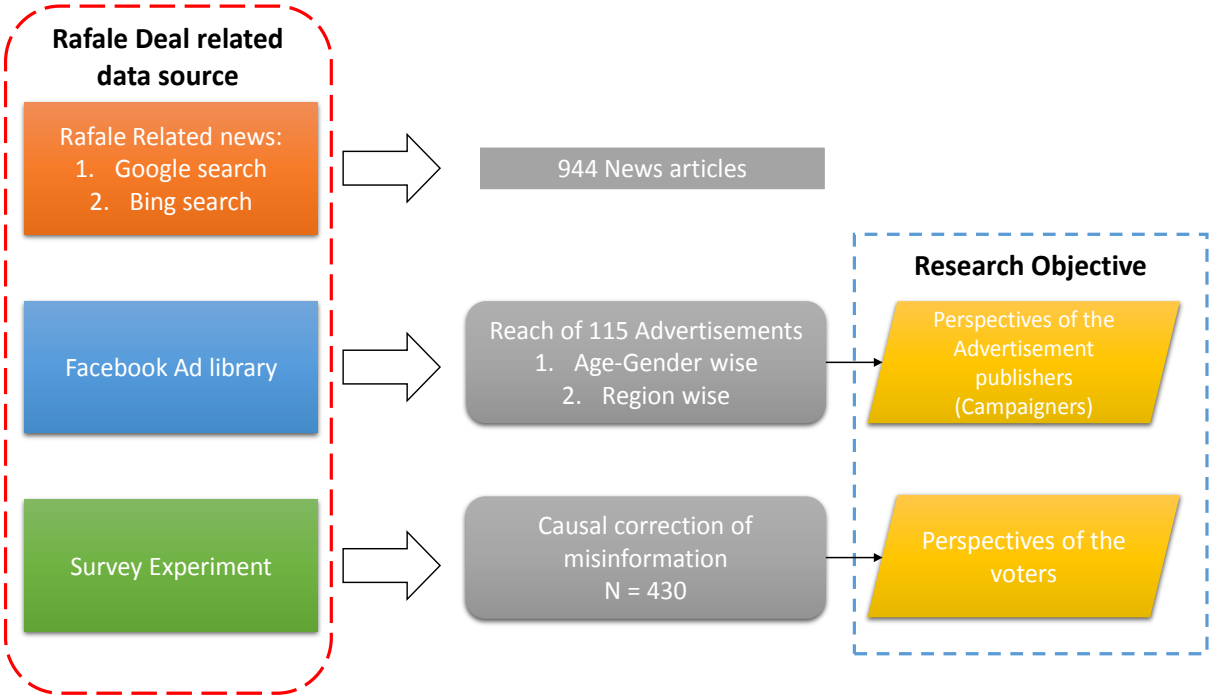

Figure 2: Design of the research

3. Data and Methods

The research objectives were operationalised by analysing the extent of exposure of fake news through social media was analysed using Facebook Ad Library – a platform which provides the details of advertisements made on Facebook, which captures the demography reached say geographical region, who saw the advertisement, among others. The data was obtained using Facebook Ad Library API. Further, we conducted an online survey to understand people's perception toward fake news through a correction experiment. Figure 2 shows the schematic representation of this research.

3.1 Exposure to Fake news

The authors obtained ads published on Facebook related to Rafale defence deal using the Facebook Ad Library API. We found 115 ads related to Rafale deal, which among others includes misinformation, clarification and news reports, promoted by Facebook pages of Indian National Congress, BJP, fact-checking platforms, and campaign pages of political parties, among others. The first advertisement related to Rafale was published in September 2018, and the latest was in May 2019. Figure 3 gives the name of Facebook pages which run the ads related to Rafale along its popularity – measured by number of likes for the page, along with the page type. The page type was manually coded, for example, pages which

produced political content, but not directly affiliated was coded as ‘propaganda’ page, ads which were published using personal pages of a user was coded as ‘person’, and so on.

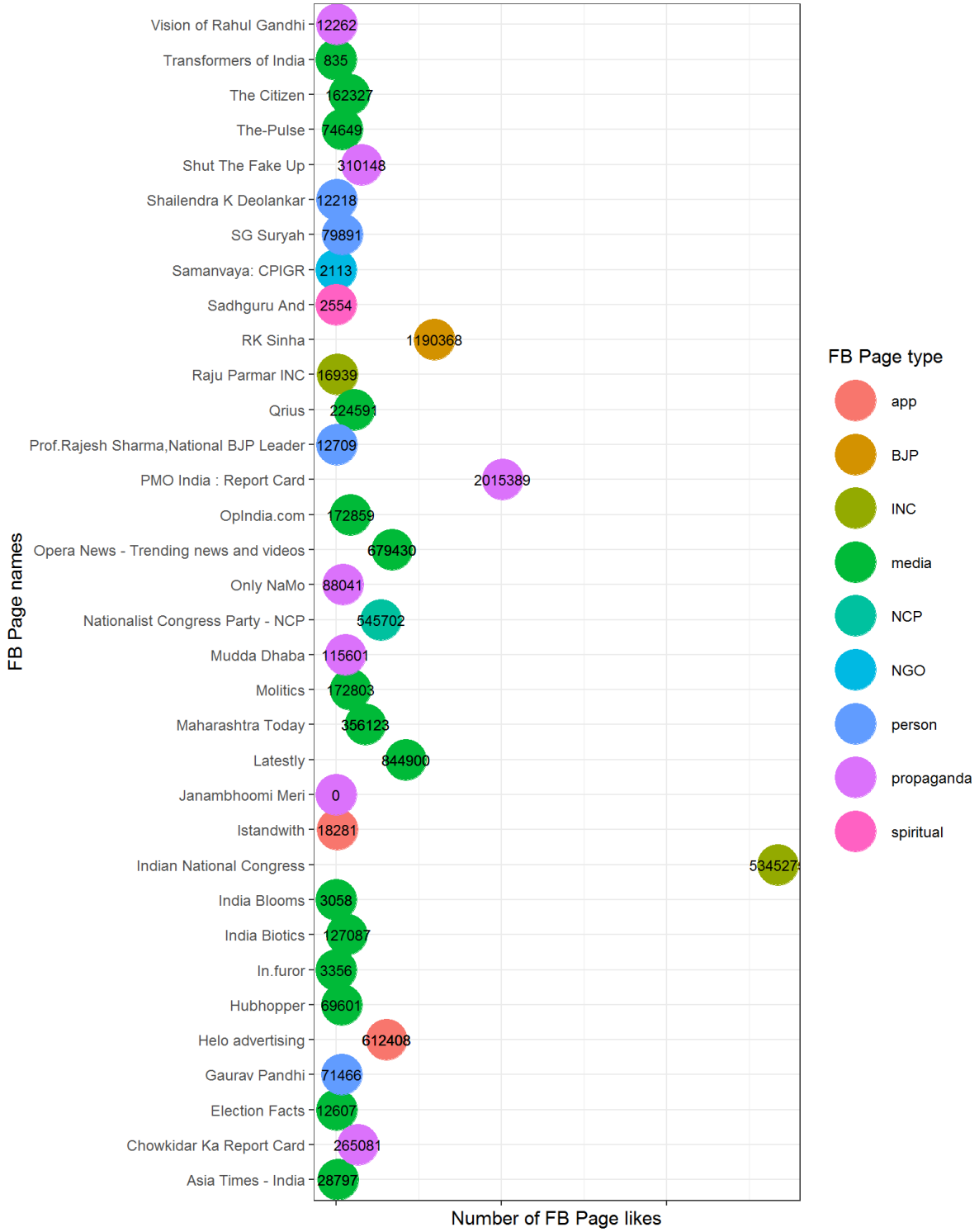

Figure 3: Facebook pages which published Ads related to Rafale deal

We can see a large number of pages related to news media, and interestingly a good number of propaganda pages by both INC and BJP parties used to attack and counter-attack the

narratives on Rafale deal. Also, the official pages of INC and their alliance partner, NCP (Nationalist Congress Party) had published ads related to Rafale deal.

Appendix A further shows the number of Ads that were published by individual pages. Media related pages have published more ads, for example, Maharashtra Today, Helo advertising, Opera News among others. Interestingly, a page related to spirituality has published one ad in this regard.

Table 1: Spending details of Facebook pages which published the Ads

Facebook Page name	Amount spent on Ads (Rs)	number of Ads
Asia Times - India	10500	3
Chowkidar Ka Report Card	14850	6
Election Facts	50	1
Gaurav Pandhi	50	1
Helo advertising	87500	25
Hubhopper	3000	1
In.furor	50	1
India Biotics	300	6
India Blooms	200	4
Indian National Congress	3000	1
Istandwith	100	2
Janambhoomi Meri	7000	2
Latestly	1050	2
Maharashtra Today	1700	24
Molitics	50	1
Mudda Dhaba	300	1
Nationalist Congress Party - NCP	3750	2
Only NaMo	3899	1
Opera News - Trending news and videos	2800	8
OpIndia.com	3000	1
PMO India : Report Card	300	1
Prof.Rajesh Sharma,National BJP Leader	750	1
Qrius	8150	7
Raju Parmar INC	3000	1
RK Sinha	300	1
Sadhguru And	300	1
Samanvaya: CPIGR	600	2
SG Suryah	3000	1
Shailendra K Deolankar	300	1
Shut The Fake Up	300	1
The Citizen	750	1

The-Pulse	6000	2
Transformers of India	50	1
Vision of Rahul Gandhi	750	1

Table 1 shows the number of advertisements published by different Facebook pages and the total money spent. We can see significant amount of money being spent by media advertisement pages like 'Helo Advertising', followed by propaganda pages like 'Chowkidar Ka Report card', 'Shut the Fake Up', among others. It is interesting to see there are few advertisement by the verified pages of the political parties.

Having said that, figure 4 shows the distribution of the target audiences who were exposed to the ads. As we can see, the ads were exposed to different age groups ranging 18 and above, among both female and male Facebook users. There is a huge gender gap in the amount of advertisements reaching the female users across all the age groups. Some of the advertisement seems to have been targeted only for men, we can observe nearly 100 percent reach. Male users have been exposed to many of these advertisement across the age group, not just among the youth. However, there is less targeted reach for male users who are 65+ years. The reach of advertisement becomes important characteristic because it determines the intentions of the advertisement publisher as they can choose their audiences based on demography. Clearly, we can see male users have been the target of many of the advertisers.

Figure 5 on the other hand, depicts the distribution of advertisements across different regions. Similar to age-gender reach, many regions. For example, regions like Andaman and Nicobar Islands, Daman and Diu, Pondicherry, have not been exposed with any of the advertisements related to Rafale deal. On the other hand, regions like Madhya Pradesh, Karnataka, West Bengal, among others, have received many advertisements. This also shows the regional targeting of the advertisers with regard to the Rafale related information.

Combining the age-gender and the regional targeting of the advertisements, we can examine how the advertisers, say the political parties, including their propaganda pages, media, and other interest groups seem to influence voters through advertisements. Later we will see how targeted advertisements could have an effect on the reach of advertisements, as some of which carry misinformation related to Rafale deal.

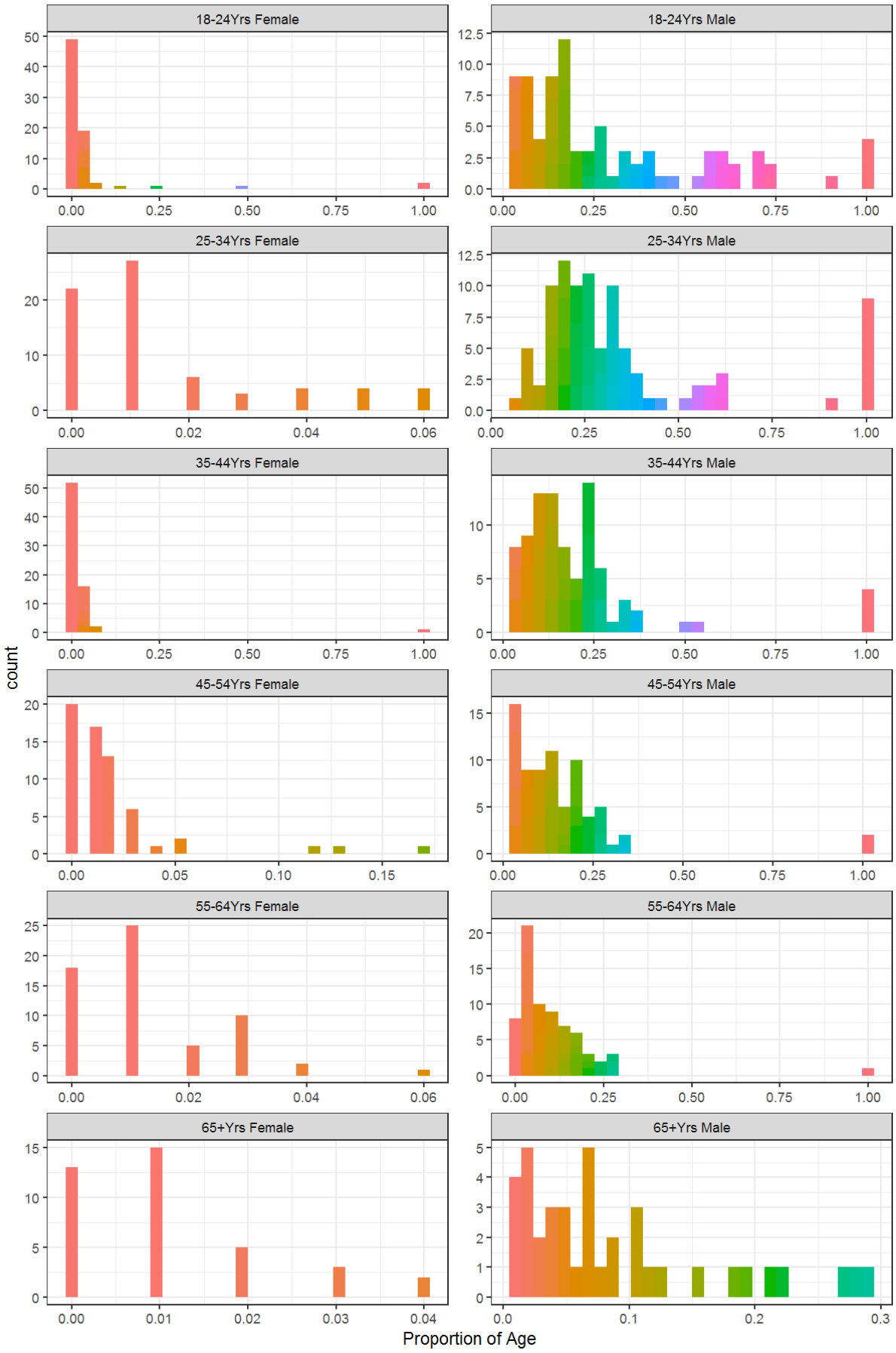

Figure 4: Distribution of target audience who were exposed to the Ads (Age and Gender wise)

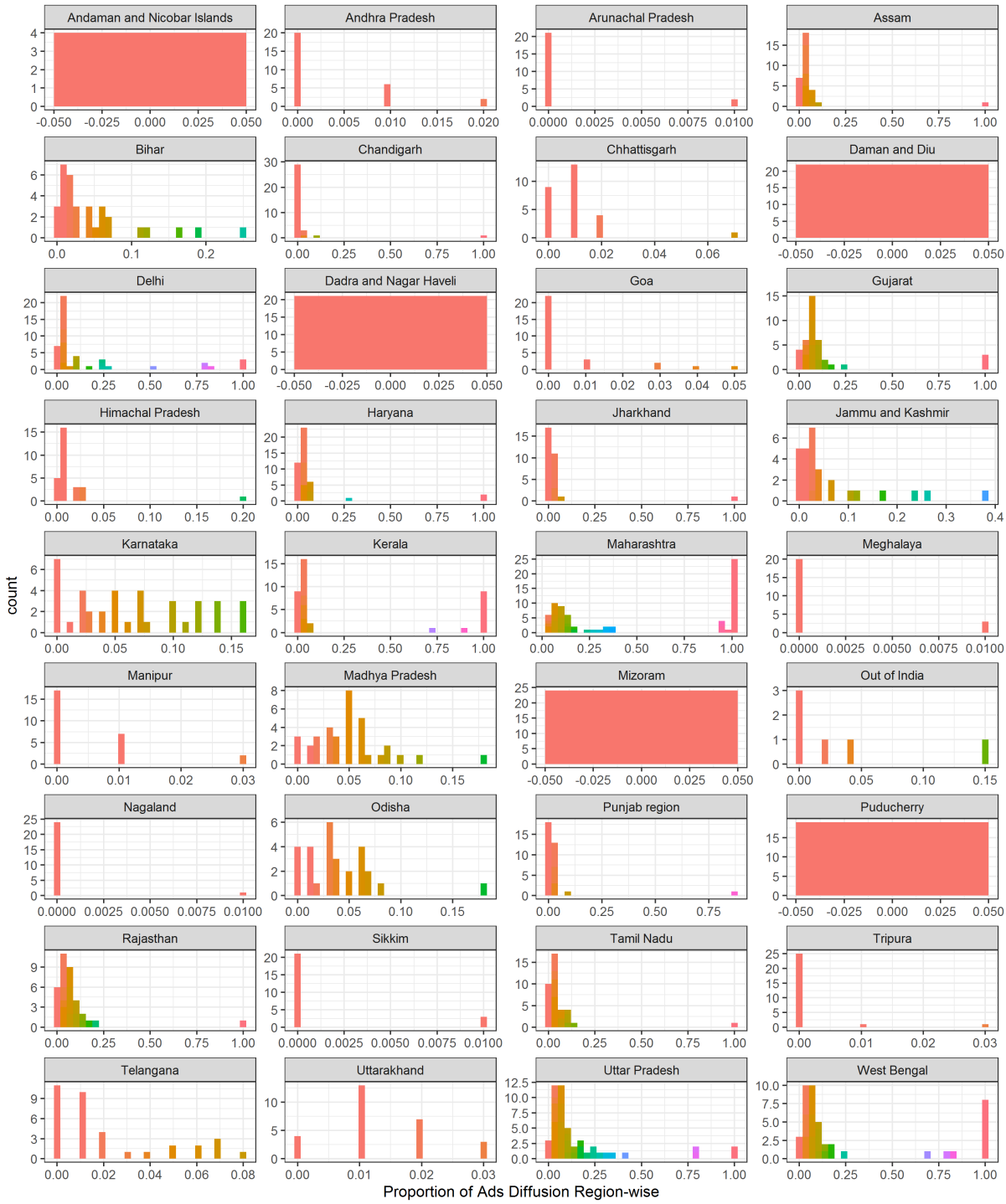

Figure 5: Distribution of target audience who were exposed to the Ads (Region wise)

In order to measure the extent of exposure of the ads related to fake news, we use the variable impressions, which denotes the number of people who have seen a particular advertisement, based on different geographic region and across different age-gender groups, as described above. The number of impressions we obtain from Facebook are scaled in range values, for example 1000-5000 impressions, therefore, for our analysis we take the mid-range values. Similarly, the money spent on each advertisement are in range values, so we convert them

into mid-range values for this analysis. We build a mixed effects model to estimate the effect of age, gender, spending of money on the reach of advertisement. Further, we analyse the effect of misinformation to understand the extent of its reach.

3.2 Experiment Design

The correction experiment was conducted during the Lok Sabha election phase – from 13th April to 23rd May 2019. The respondents were drawn from electorates in Bengaluru city through convenience sampling (n = 430) (Reichardt and Gollob 1999). The experiment comprised of a causal correction around the Rafale defence deal. In the causal correction experiment, the participants were given a series of information about the Rafale deal. The respondents were randomly assigned to three conditions where they received different information related to Rafale defence deal (Gerber and Green 2012; Nyhan and Reifler 2015). We had three groups (see table 2) and the information supplied to these groups are as shown in the table 3 below. The control group was shown the misinformation on Rafale deal, followed by a series of questions whether they have heard this news and how likely are they to believe that the government was involved in corruption. The innuendo group was shown the misinformation followed by a fact related to Rafale deal. Similarly, the causal condition group was shown with the misinformation, followed by the fact and a causal correction. For the all above groups, at the end the likelihood of believing that the government was corrupt was asked on a four point scale from "not at all likely" to "very likely".

Table 2: Proportion of respondents in each group

	Control	Fact	Causal
Gender			
Male	80.98%	78.01%	74.83%
Female	19.02%	21.98%	25.17%
Age			
18-29	26.05%	28.36%	39.43%
30-44	55.63%	56.02%	47.88%
45-59	15.49%	12.76%	10.56%
60+	2.81%	2.83%	2.11%
Education			
Post-graduate & above	30.28%	43.97%	31.97%
Graduate	50.70%	47.51%	51.70%
Technical diploma	4.22%	4.25%	9.52%
Non-technical diploma	0.70%	0.70%	0.68%
Higher secondary	0.70%	1.41%	3.40%

Matric/secondary	12.76%	2.12%	1.36%
Elementary	0.70%	0.00%	1.36%
Working Status			
Working full time	64.08%	67.37%	55.78%
Working part time	3.52%	0.00%	4.08%
Self-employed	7.74%	9.92%	14.28%
unemployed	5.63%	5.67%	4.76%
Maternity leave	0.70%	0.00%	0.68%
Retired - State Pension	1.40%	0.00%	0.68%
Retired	2.11%	2.83%	1.36%
Student	13.38%	10.63%	14.96%
Not Working/Not seeking work	1.40%	3.54%	3.40%

Table 3: Information supplied to different experiment groups

Information shown	**Control**	**Fact**	**Causal**
In the last few months, there has been a lot of debate/discussion in the news media about the Rafale deal (fighter jets). It was claimed that the Modi government has paid a higher price for each jet by 41% compared to the price offered during the Congress-led UPA government, along with an allegation of favouritism towards Anil Ambani's Reliance Defence Limited.	Yes	Yes	Yes
On Rafale Deal: 1. The Comptroller and Auditor General of India (CAG) say that Rafale jet deal was cheaper than the original deal made during Congress government 2. The Supreme court dismissed all petitions stating it found no irregularities in purchase of the jets	No	Yes	Yes
India chose to buy Rafale fighter jets as it was cheaper than technologically better-off than the 'Eurofighter Typhoon' fighter jet. Rafale fighter jets would ensure greater air-superiority to the Indian Air Force complementing the existing fighter jets like MiGs-21/Sukhoi Su-30MKI	No	No	Yes

4. Results

4.1 Exposure to Facebook Ads

4.1.1 Effect of Age-Gender

Table 4 presents the estimates of advertisement reach for different models. Model 1 estimates the advertisement reach based on the age group and gender. It suggests that age groups 45-55, 55-65, and 65+ have an effect on the advertisement reach. These age groups have negative effect on the reach compared to 18-24 age group. Further, it also suggests that the male Facebook users have an effect on the reach, i.e., compared to female users the reach of an advertisement is more among men. In model 2, we included the amount spent on each advertisement based on the proportion of demography reached. It was found that, age groups between 55-65 and 65+ have a negative effect, i.e., they have negative effects compared to the 18-24 age-group. Similar to the model 1, the male users have significant positive effect. Also, the money spent on the advertisements are more likely to increase the reach.

Table 4: Mixed model estimates for advertisement reach

	Advertisement Reach				
	(1)	**(2)**	**(3)**	**(4)**	**(5)**
Age Group					
25-34	236 (435.6)	170.1 (423.8)	-38.4 (400.9)	173.5 (416.9)	168.7 (423.8)
35-44	-383.2 (435.6)	-251.8 (423.9)	-352.8 (400.9)	-226.9 (418.1)	-249.0 (424.01)
45-54	-869.6* (435.6)	-577.2 (425)	-530.8 (401.8)	-554.2 (417.8)	-570.9 (425.04)
55-65	-1120.8* (435.6)	-729.3† (426)	-627.7 (402.9)	-636.2 (419.1)	-720.9† (426.05)
65+	-1416.2** (435.6)	-954.03* (426.9)	-810.9* (403.7)	-869.01* (419.9)	-944.1* (426.9)
Gender: Male	1982.0*** (251.5)	1474.1*** (251.2)	1107.6*** (240.6)	1318.2*** (248.3)	1463.2*** (251.2)
Money Spent	-	2.4*** (0.27)	1.7*** (0.2)	0.43 (0.3)	2.4*** (0.2)
Ad Type					
Misinformation	-	-	-173.7 (876.4)	-	-3995.5* (1687.4)
Fact	-	-	339.3 (1077.22)	-	-3289.1* (1427.9)
Money Spent x Misinformation	-	-	12.91*** (1.01)	-	-
Money Spent x Fact	-	-	1.7 (1.59)	-	-
Ad Favour					-

INC	-	-	-	623.8 (742.6)	-
BJP	-	-	-	535.5 (756.1)	-
Money Spent x Ads favouring BJP	-	-	-	3.4*** (0.6)	-
Money Spent x Ads Favouring INC	-	-	-	3.7*** (0.6)	-
Page Type					
BJP	-	-	-	-	6317.3† (3259.8)
INC	-	-	-	-	6471.2* (2699.9)
Media	-	-	-	-	1459.0* (666.3)
NCP	-	-	-	-	5575.9* (2700.3)
NGO	-	-	-	-	674.1 (2108.6)
Person	-	-	-	-	3415.8* (1699.5)
Propaganda	-	-	-	-	8329.2*** (1668.4)
Spiritual					4076.01 (3259.9)
Constant	773.9* (431.3)	498.2 (420.9)	482.5 (422.9)	11.1 (648.9)	-935.2 (632.7)
Observations	1380	1380	1380	1380	1380
Groups	115	115	115	115	115

*** p < 0.001, ** p < 0.01, * p < 0.05, † p < 0.1

Model 3 includes the type of advertisement – misinformation, fact, news, and its interaction with the amount spent on advertisements. Model 3 suggests similar features as model 2, however, the interaction between amount spent and misinformation advertisements have a positive significant effect on the reach of advertisement compared to the regular news ads on the Rafale deal. In model 4, we include the explanatory variable advertisement which favour BJP/INC or none of them, and its interaction with the amount spent. Model 4 suggests that reach of advertisements has a positive and significant effect with advertisements which favoured INC and BJP, compared to those which did not favour any parties, but just reported the news. And, in model 5, we included the variable page type – media page, BJP, INC, NCP, propaganda page, personal page, spiritual page and app related page. From the estimates we obtained, model 5 suggests, a negative and significant effect on the reach of advertisements

from the misinformation and fact related advertisement compared to the advertisement which simply reported news. Interestingly, propaganda pages, and other pages – INC, NCP, which published the misinformation have a significant effect on the reach of advertisement.

4.1.2 Vote share and regional effect

Figure 6 shows the fitted model for the reach of misinformation advertisement and vote share of BJP party in 2014 Lok Sabha elections. Each line indicates the model for 15 misinformation related ads plotted against the vote share.

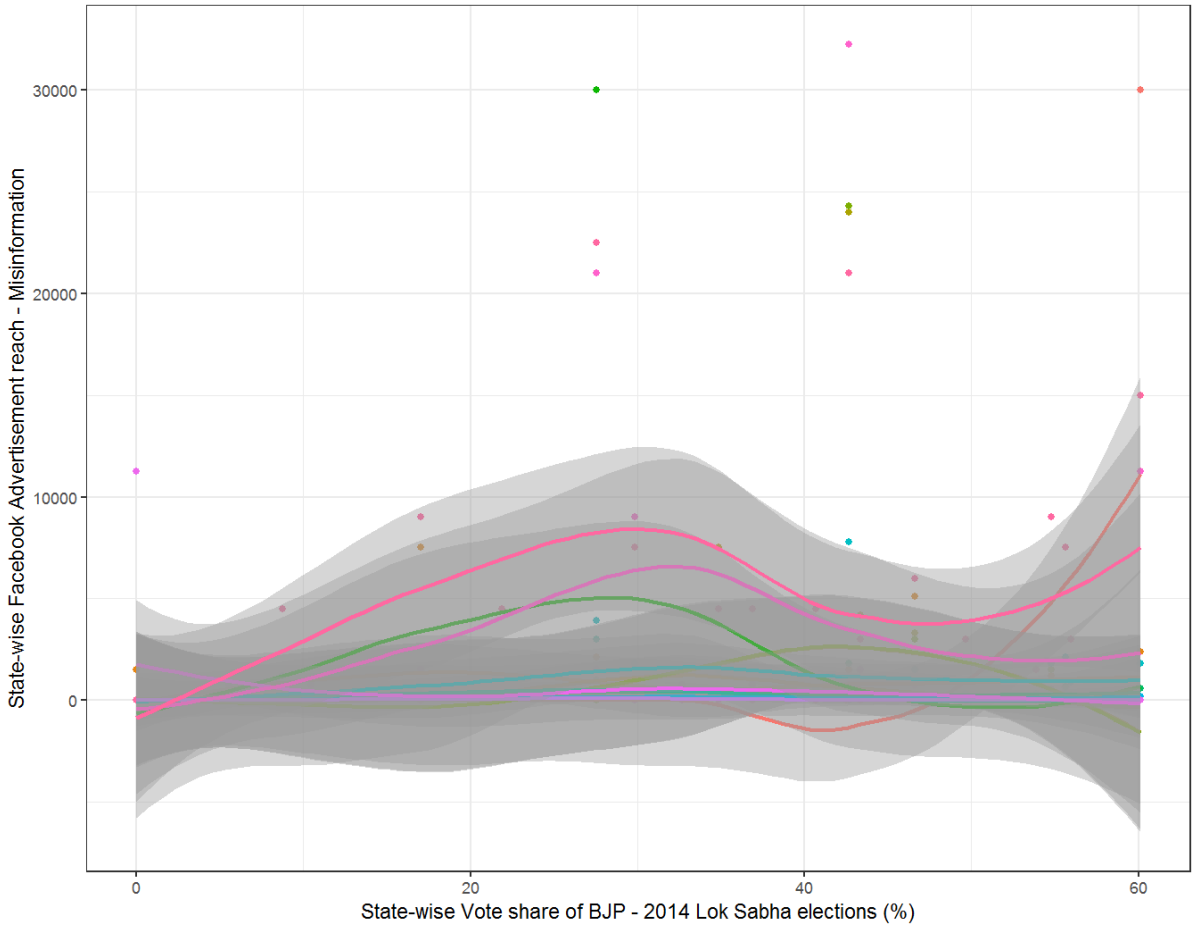

Figure 6: Reach of Facebook misinformation advertisement vs. vote-share of BJP in 2014 election state-wise

We can observe that the misinformation had higher reach in the regions where BJP had vote share between 20 percent and 40 percent, and also above 50 percent in 2014 ($p < 0.05$). Some of the ads doesn't seem to have large effects, however, overall the model suggests that the misinformation had positive reach in regions to influence the existing or trending popularity of BJP.

Similarly, figure 7 gives the model for the vote share among different regions for INC during 2014 elections. Here, we observe slightly opposite trend compared to the above model for BJP. The misinformation had higher reach where INC had lower vote share, and also in regions where they had higher vote share the reach was not higher ($p < 0.01$).

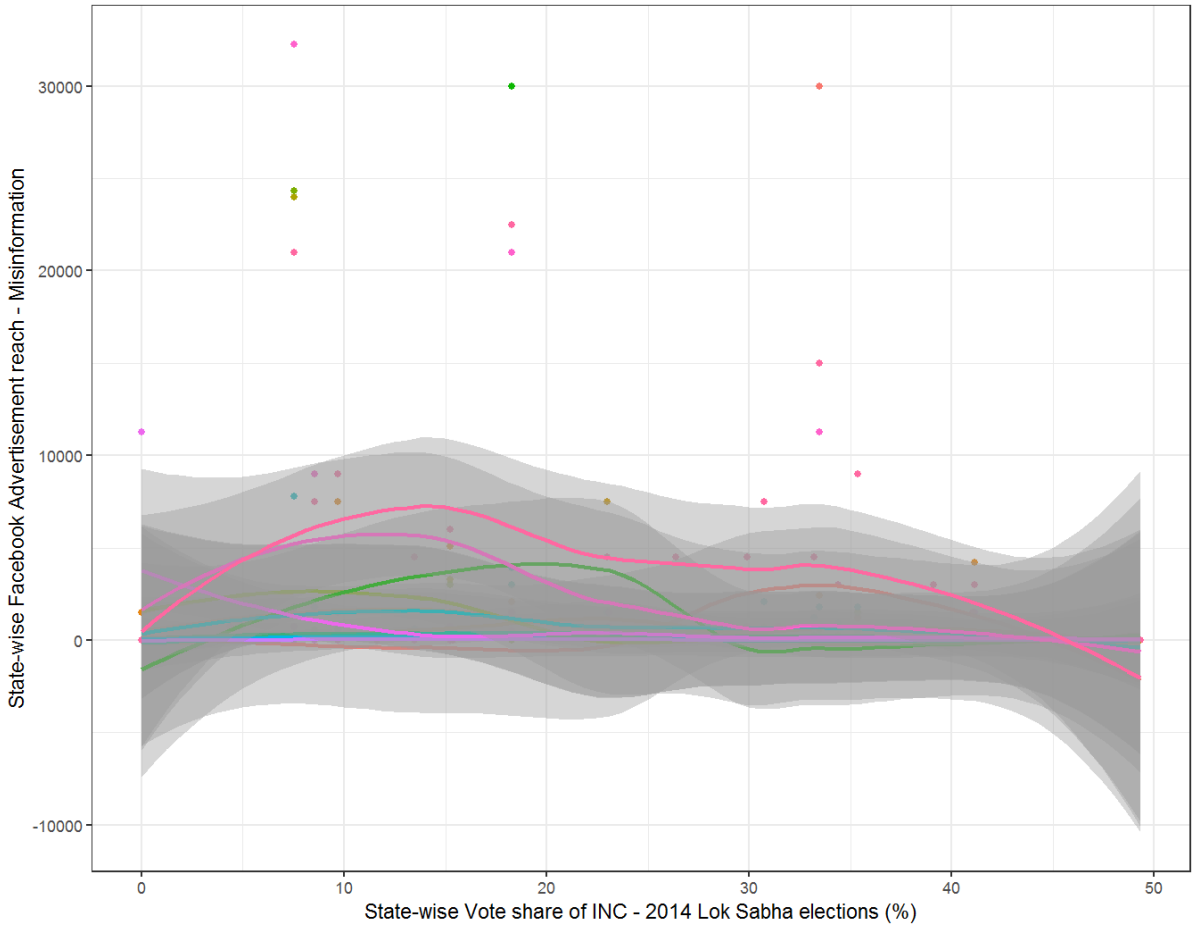

Figure 7: Reach of Facebook misinformation advertisement vs. vote-share of INC in 2014 election state-wise

From these two models, we can understand that the advertisements related to misinformation had higher reach in places where BJP had medium or higher vote share, and in places where the INC had lower and medium vote share.

Figure 8 shows the model where reach of advertisement related to facts of Rafale deal and vote share of BJP in 2014 elections. There were about 8 ads related to facts of Rafale deal. Comparing figure 8 with figure 6, we can observe that the ads related to facts complement the ads related to misinformation slightly. However, we did not find significant relationship between vote share and the reach of ads.

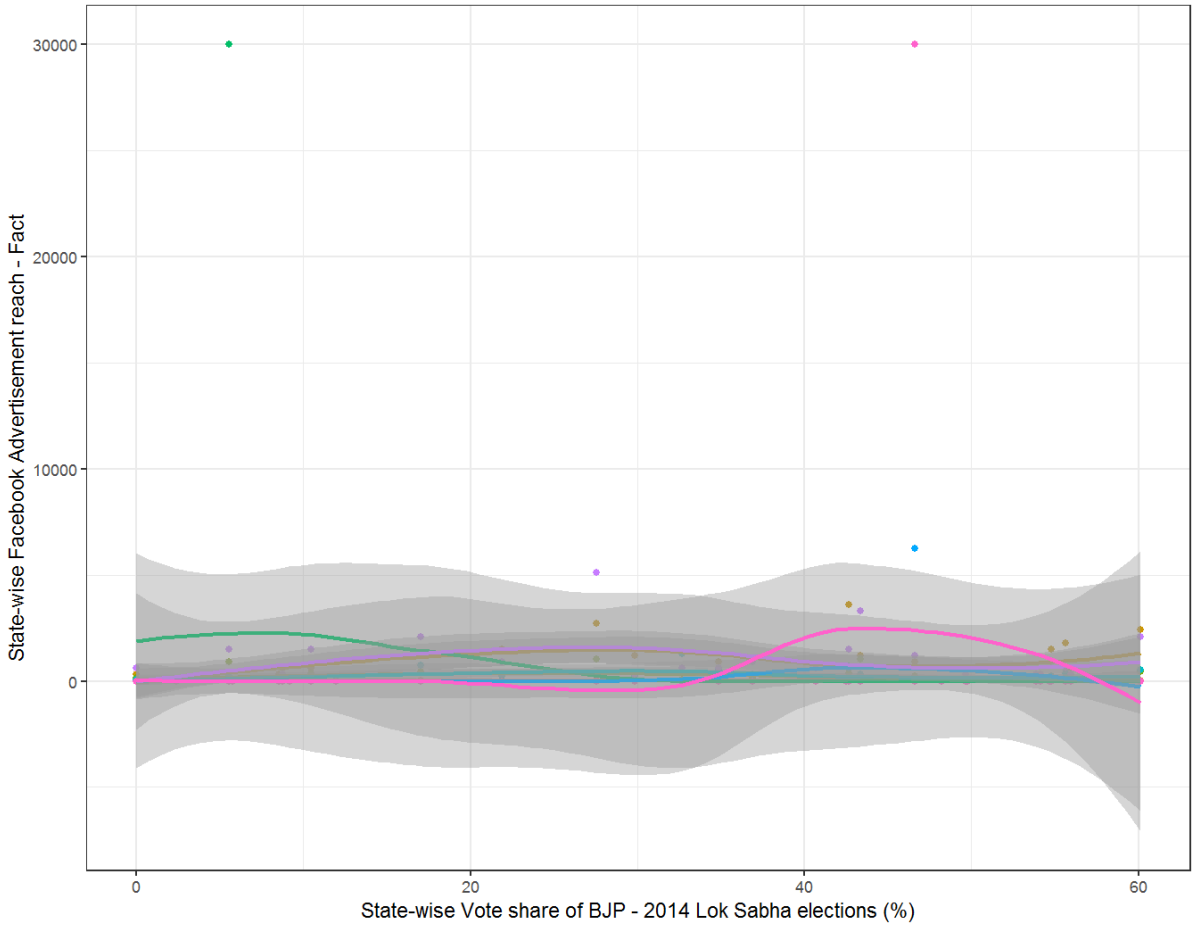

Figure 8: Reach of Facebook factual advertisement vs. vote-share of BJP in 2014 election state-wise

In figure 9, we observe the reach of facts related ads with the vote share of INC in 2014 elections. The model suggests that wherever the INC had lower vote share and medium vote share, these regions had significant effect on the reach of advertisements related to fact ($p < 0.05$). It can be observed that, the facts were significant in regions where the BJP had relatively higher vote share, and also where INC had lower vote share in 2014 elections. Further, the regions which had an increased reach of misinformation ads have been complemented by facts in regions where either BJP had lower vote share and/or INC had higher vote share.

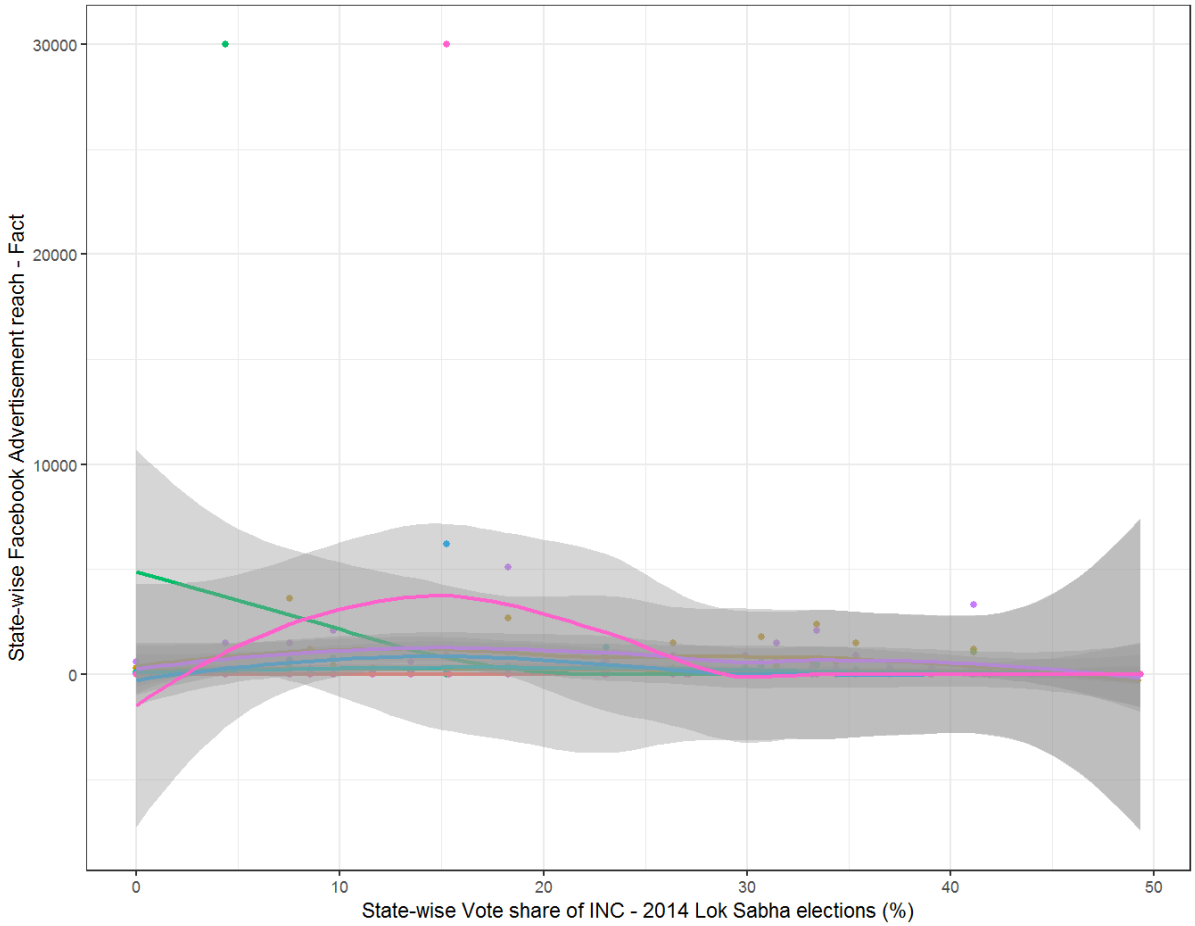

Figure 9: Reach of Facebook factual advertisement vs. vote-share of INC in 2014 election state-wise

4.2 Correction Experiment

Results of survey experiment is shown in figure 10, across three groups. From the initial observation, we can see that more than 60 percent of people across all the groups believe that the government was not corrupt. About 15 percent people are a little likely to believe that the government was corrupt, similarly, 10-15 percent are very likely to believe that the government was corrupt across all the groups. Interestingly, people who were treated with the causal correction, are less likely to believe that the government was corrupt, compared to the control group and the group which was just shown the fact related to Rafale deal (see Table 3).

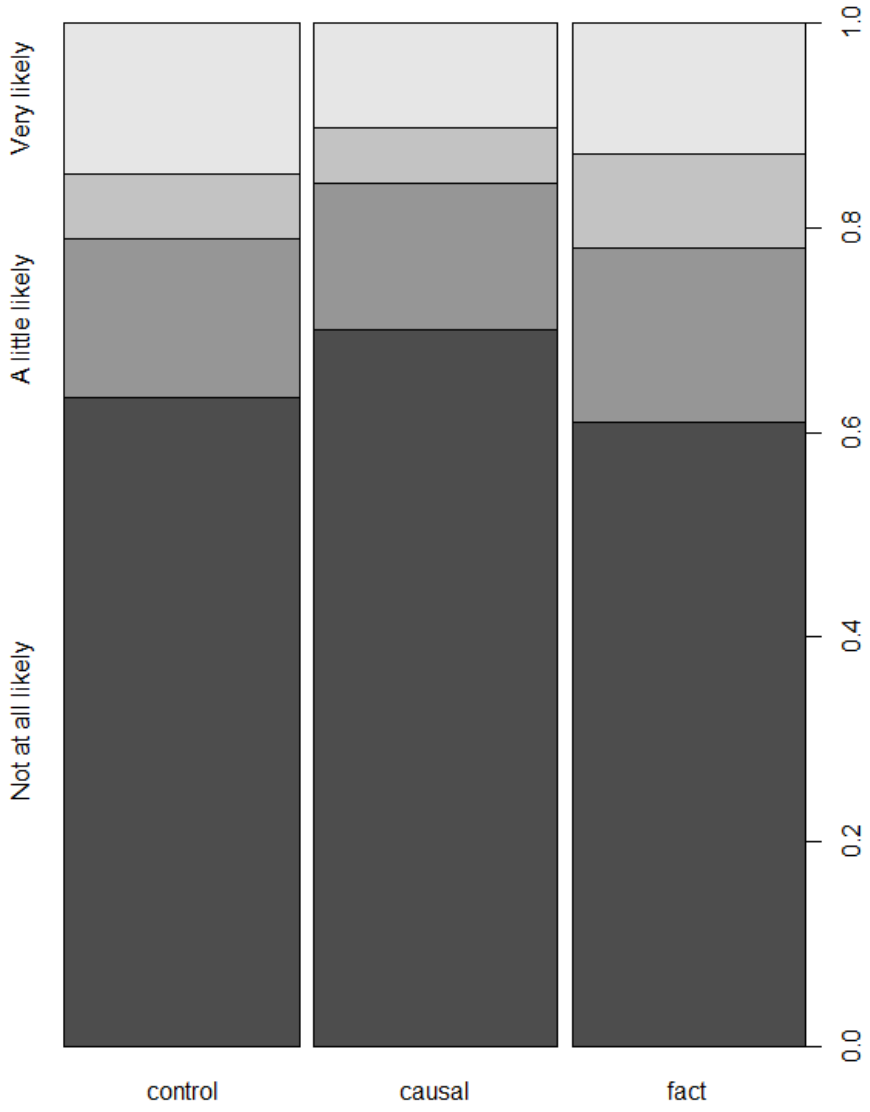

Figure 10: Likelihood of believing that the government was corrupt in handling Rafale deal

The results from the correction experiment are shown in table 5, where the estimates of OLS models are tabulated for the outcome on likelihood of believing that the government was corrupt. Model 1 indicates the treatment effect on the believability of the respondents, while model 2 and model 3 indicates the treatment effect along with their attitude towards political condition in the country and whether they have heard the misinformation regarding the Rafale deal, respectively. From these estimates we can observe that the causal correction doesn't seem to have significant effect on believing whether the government was corrupt compared to the control group. Model 2 and model 3 are based on the interaction between hearing the misinformation related to Rafale deal and political interest with the outcome, we can still see that the treatment effect is insignificant in believing the corruption charges.

Table 5: Experimental results based on OLS models

	Model 1	Model 2	Model 3
Control	1.72*** (0.089)	1.255*** (0.06)	2.04*** (0.21)
Fact	0.03 (0.12)	0.05 (0.08)	- 0.54 (0.43)
Causal correction	- 0.15 (0.12)	0.02 (0.08)	- 0.38 (0.29)
N	430	430	430

*** p < 0.001

Figure 11 shows the effects for each level of outcome from the model 1. We can see that the estimated average treatment effect across different levels, i.e., likelihood in believing whether the government was corrupt. Keeping the control group as reference, the estimated average treatment effect for the group which got the causal correction was - 0.15, while the group which received facts related to Rafale deal has an estimated effect of 0.03, and both are insignificant. The causal correction doesn't seem to have influenced the opinion, the respondents are likely to hold the opinion that the government was not corrupt.

Figure 11: Likelihood of government being corrupt

Even with the inclusion of pre-treatment effect of hearing the misinformation and also interest in politics (Model 2 and Model 3) doesn't seem to have significant effect on the group which received causal correction.

5. Discussion and Conclusion

We have seen the effect of age-gender on the reach of advertisements along with the effects on regions based on the vote-share, from the sender's perspective. On the other hand, from the receiver's perspective we examined how people perceive the misinformation and through causal correction whether they believe that the government was involved in corruption was examined. Figure 12 shows the timeline of the advertisements related to the Rafale deal, based on the type – misinformation, fact or just news, and grouped by the advertisement which supports the claims of INC or BJP or none of them. The discussion on alleged corruption on Rafale deal was started in 2018, which sought huge media attention within India and outside India. Many media outlets even framed the news as the government's biggest scandal.

So, we can see the trend of Facebook advertisement related to Rafale emerging in October 2018, which includes just reporting of news and also the misinformation. Most of these advertisements were in favour of the claims of INC, as some of which were published by the propaganda pages or some media outlets. We observe a peak in the publishing of misinformation in the run-up to the elections and during elections especially in the month of April and beginning of May 2019. As the election process is prolonged over 7 phases, the timeline of the advertisements coincided with the elections in different regions, as Facebook advertisement can be targeted based on demography.

Further, we can also see surge in counter advertisements related to Rafale deal during the run-up to the elections. Two peaks can be seen during March and April, which includes advertisements by BJP, individual users who support BJP. Some of these are in the form of rebuttals, while some of them are warnings, which is in similar terms with what Walter and Murphy (2018) suggest for reducing the belief in misinformation.

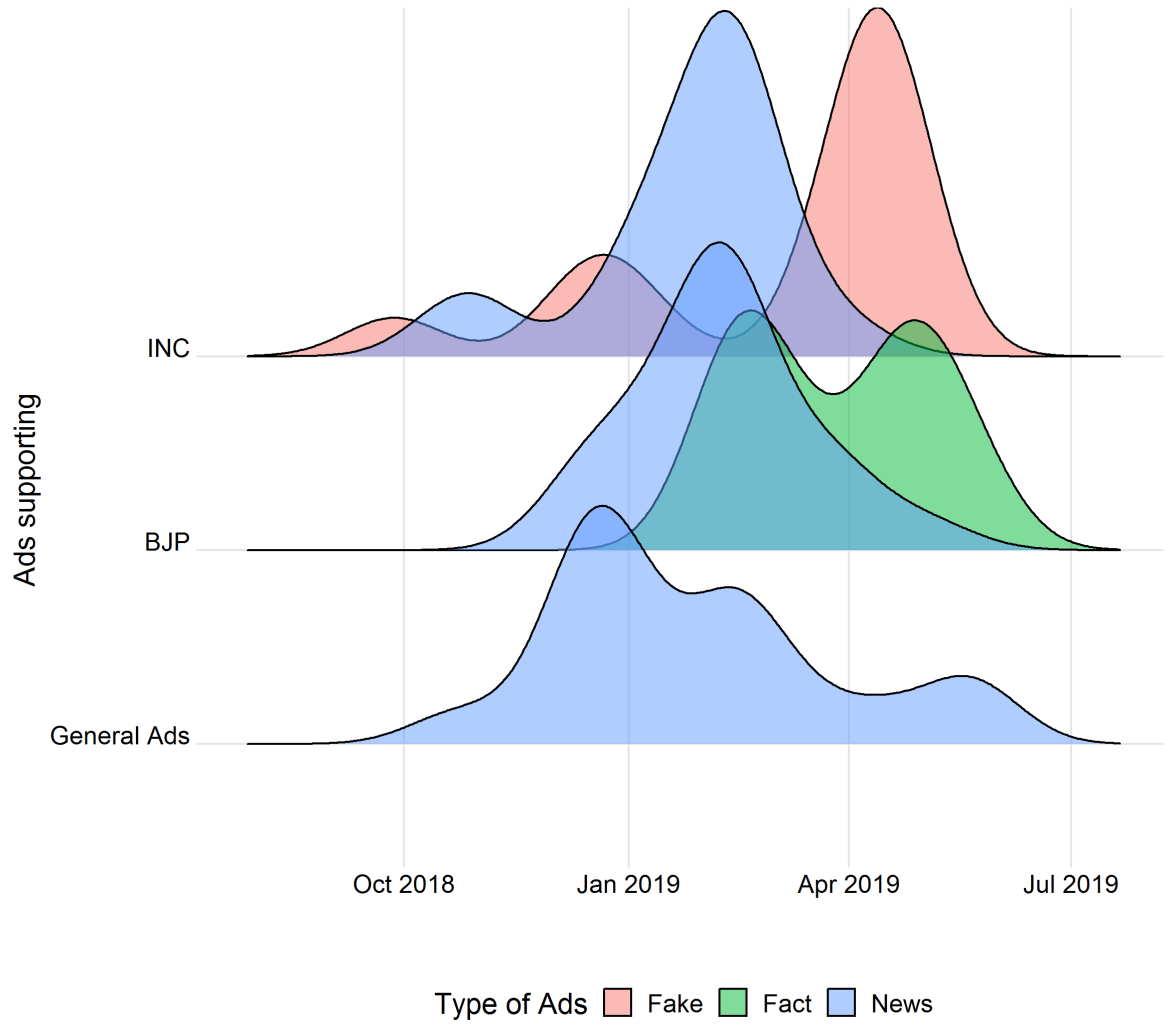

Figure 12: Timeline of advertisements based on type advertisement

It is interesting to observe, how propaganda pages have been used as a proxy to influence voters and disseminate information. For example, pages like 'Chowkidar ka report card', 'Vision of Rahul Gandhi', 'Shut the Fake Up' and 'Mudda Dhaba', have disseminated misinformation regarding the Rafale deal, not only through the advertisements, but also through various posts on their pages. All these pages were created post October 2018, pages like 'Shut the Fake Up' was created in March 2019. Surprisingly, most of the pages have high page likes, further investigation of these pages shall determine the validity of the users, say fake accounts or bots. We claim that most of the pages are propaganda pages of INC party with substantive evidence, not just by the type of posts or advertisements being made. Given that the advertisement company which publishes the advertisement – DesignBoxed, has been the publisher for most of the INC party official pages/users verified by the Facebook. Therefore, we can say that there has been an attempt by the INC party to influence the voters across different regions using the misinformation related to Rafale deal. As discussed in the

previous section, we found significant effect of the propaganda pages on the reach of advertisements.

When we look at the media outlets which published advertisements related to Rafale deal, there seems to be an attempt to gain popularity or as a proxy to the party propaganda. For example, the page 'Maharashtra Today' has advertised just the news, on the other hand, 'Helo advertising' page has promoted advertisements which includes misinformation and general news about Rafale deal.

We found a significant gender gap across all the regions. Most of the advertisements are targeted at the male users from different age groups. We found significant effect of male users compared to women on the reach of advertisements. Further, the reach of advertisement had significant effect from the misinformation. Based on the reach of advertisements across different regions, it can be observed that the states where the BJP had high vote share in the 2014 elections, there is an increase in misinformation related ads. Also, wherever INC had lower vote share there is an increase in the misinformation ads. This suggests that there is an effort to influence the voters with the misinformation related to Rafale deal, either by cutting through higher vote share regions of BJP or targeting the lower vote share regions of the both INC and BJP. For instance, regions like Madhya Pradesh, Rajasthan, Gujarat, which had high vote share for BJP in 2014 elections, but in 2018 assembly elections BJP lost its power in Madhya Pradesh and Rajasthan, shows that there was an attempt to build on the opportunity and influence the voters through misinformation.

Finally, from the user's perception, we found that most of the respondents did not believe that the government was involved in corruption. The causal correction doesn't seem to have a significant effect on the respondent's opinion as their party preference seems to have higher influence over believing the misinformation. For example, people who said they are likely to vote INC irrespective of the treatment, tend to hold an opinion that the government was corrupt. On the other hand, people who were likely to vote for BJP believe that the government was not corrupt. Though it is difficult to assess the treatment effect, given the sample size, but it was for sure that most of the participants have heard the news related to Rafale deal, which indicates that the believability of the news as misinformation or not depends on their party preference.

Overall, there seems to be a deliberate attempt to use misinformation on the Rafale deal and influence the voters on social media (Allcott and Gentzkow 2017). As Facebook has

predominant users among other social media users in India, political parties and other interest groups have used it to disseminate information. The results seems to provide the campaigner's perspective and their strategies to influence voters across different regions and age-gender groups. At the same time the receiver's believability of the misinformation. It shows the interaction among various Facebook pages affiliated to different parties in showcasing the misinformation and otherwise. Also, causal correction provides little evidence on the believability of the misinformation, i.e., whether due to party preferences. To this end, we can say that social media has become an important medium to disseminate misinformation for the political parties, at the same time there is need to minimise the effect of false claims through "post-warnings, or rebuttal" (Walter and Murphy 2018).

References

Ahmed, Saifuddin, Kokil Jaidka, and Jaeho Cho. 2016. "The 2014 Indian Elections on Twitter: A Comparison of Campaign Strategies of Political Parties." *Telematics and Informatics* 33 (4): 1071–87. https://doi.org/10.1016/j.tele.2016.03.002.

Allcott, Hunt, and Matthew Gentzkow. 2017. "Social Media and Fake News in the 2016 Election." *Journal of Economic Perspectives* 31 (2): 211–36. https://doi.org/10.1257/jep.31.2.211.

Baishya, Anirban K. 2015. "#NaMo: The Political Work of the Selfie in the 2014 Indian General Elections." *International Journal of Communication* 9: 1686–1700.

Berinsky, Adam J. 2017. "Rumors and Health Care Reform: Experiments in Political Misinformation." *British Journal of Political Science* 47 (02): 241–62. https://doi.org/10.1017/S0007123415000186.

Bovet, Alexandre, and Hernán A. Makse. 2019. "Influence of Fake News in Twitter during the 2016 US Presidential Election." *Nature Communications* 10 (1). https://doi.org/10.1038/s41467-018-07761-2.

Chhibber, Pradeep K., and Susan L. Ostermann. 2014. "The BJP's Fragile Mandate: Modi and Vote Mobilizers in the 2014 General Elections." *Studies in Indian Politics* 2 (2): 137–51. https://doi.org/10.1177/2321023014551870.

ECI. 2015. "Social Media Consultation." New Delhi: Election Commission of India. https://eci.nic.in/eci_main/Library&Publications/SocialMediaDocument_05042017.pdf.

Fine, Gary Alan, and Bill Ellis. 2010. *The Global Grapevine: Why Rumors of Terrorism, Immigration, and Trade Matter*. Oxford ; New York: Oxford University Press.

Gainous, Jason, and Kevin M. Wagner. 2014. *Tweeting to Power: The Social Media Revolution in American Politics*. New York: Oxford University Press.

Gerber, Alan S., and Donald P. Green. 2012. *Field Experiments: Design, Analysis, and Interpretation*. 1st ed. New York: W. W. Norton.

Grinberg, Nir, Kenneth Joseph, Lisa Friedland, Briony Swire-Thompson, and David Lazer. 2019. "Fake News on Twitter during the 2016 U.S. Presidential Election." *Science* 363 (6425): 374–78. https://doi.org/10.1126/science.aau2706.

Kemp, Simon. 2017. "India Overtakes the USA to Become Facebook's #1 Country." *We Are Social* (blog). July 18, 2017. https://wearesocial.com/uk/blog/2017/07/india-overtakes-usa-become-facebooks-1-country.

Lazer, David M. J., Matthew A. Baum, Yochai Benkler, Adam J. Berinsky, Kelly M. Greenhill, Filippo Menczer, Miriam J. Metzger, et al. 2018. "The Science of Fake News." *Science* 359 (6380): 1094–96. https://doi.org/10.1126/science.aao2998.

Neyazi, Taberez Ahmed, Anup Kumar, and Holli A. Semetko. 2016. "Campaigns, Digital Media, and Mobilization in India." *The International Journal of Press/Politics* 21 (3): 398–416. https://doi.org/10.1177/1940161216645336.

Nyhan, Brendan, and Jason Reifler. 2015. "Displacing Misinformation about Events: An Experimental Test of Causal Corrections." *Journal of Experimental Political Science* 2 (1): 81–93. https://doi.org/10.1017/XPS.2014.22.

PTI. 2015. "India Has 22.2 Million Twitter Users: Report." *Huffington Post*, January 28, 2015. https://www.huffingtonpost.in/2015/01/28/twitter-india-userbase-report_n_6562950.html?guccounter=1&guce_referrer_us=aHR0cHM6Ly93d3cuZ29vZ2xlLmNvLnVrLw&guce_referrer_cs=7XFUaol0xIJ9R4J2WqbWzg.

Reichardt, Charles S., and Harry F. Gollob. 1999. "Justifying the Use and Increasing the Power of a t Test for a Randomized Experiment with a Convenience Sample." *Psychological Methods* 4 (1): 117–28. https://doi.org/10.1037/1082-989X.4.1.117.

Rojecki, Andrew, and Sharon Meraz. 2016. “Rumors and Factitious Informational Blends: The Role of the Web in Speculative Politics.” *New Media & Society* 18 (1): 25–43. https://doi.org/10.1177/1461444814535724.

Semetko, Holli A., and Hubert Tworzecki. 2018. “Campaign Strategies, Media, and Voters: The Fourth Era of Political Communication.” In *The Routledge Handbook of Elections, Voting Behavior and Public Opinion*, edited by Justin Fisher, Edward Fieldhouse, Mark N. Franklin, Rachel Gibson, Marta Cantijoch, and Christopher Wlezien. London ; New York, NY: Routledge.

Vosoughi, Soroush, Deb Roy, and Sinan Aral. 2018. “The Spread of True and False News Online.” *Science* 359 (6380): 1146–51. https://doi.org/10.1126/science.aap9559.

Walter, Nathan, and Sheila T. Murphy. 2018. “How to Unring the Bell: A Meta-Analytic Approach to Correction of Misinformation.” *Communication Monographs* 85 (3): 423–41. https://doi.org/10.1080/03637751.2018.1467564.

Williamson, Phil. 2016. “Take the Time and Effort to Correct Misinformation.” *Nature* 540 (7632): 171–171. https://doi.org/10.1038/540171a.

Appendix A

#	**Page Name**	**Page Type**	**no. of Ads**
1	Asia Times - India	media	3
2	Chowkidar Ka Report Card	propaganda	6
3	Election Facts	media	1
4	Gaurav Pandhi	person	1
5	Helo advertising	app	25
6	Hubhopper	media	1
7	In.furor	media	1
8	India Biotics	media	6
9	India Blooms	media	4
10	Indian National Congress	INC	1
11	Istandwith	app	2
12	Janambhoomi Meri	propaganda	2
13	Latestly	media	2
14	Maharashtra Today	media	24
15	Molitics	media	1
16	Mudda Dhaba	propaganda	1
17	Nationalist Congress Party - NCP	NCP	2
18	Only NaMo	propaganda	1
19	Opera News - Trending news and videos	media	8
20	OpIndia.com	media	1
21	PMO India : Report Card	propaganda	1
22	Prof.Rajesh Sharma,National BJP Leader	person	1
23	Qrius	media	7
24	Raju Parmar INC	INC	1
25	RK Sinha	BJP	1
26	Sadhguru And	spiritual	1
27	Samanvaya: Center for Policy, Implementation and Governance Research	NGO	2
28	SG Suryah	person	1
29	Shailendra K Deolankar	person	1
30	Shut The Fake Up	propaganda	1
31	The-Pulse	media	2
32	The Citizen	media	1
33	Transformers of India	media	1
34	Vision of Rahul Gandhi	propaganda	1