



DEPARTMENT
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TECHNOLOGIES
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Digital propaganda and voting behaviour in the case of Albania

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Objectives:

❑ Main Objective:

- To investigate the perception and awareness of computational propaganda among the general public and voter behaviour in Albania.

❑ Partial Objectives:

- Investigate the historical context and background of electoral irregularities in Albania
- Compare the experiences of Albania with other countries in terms of electoral manipulations and computational propaganda
- To perform sentiment and statistical analysis



Methodology

The methodology will encompass the implementation of: **surveys** and **interviews** targeting individuals directly or indirectly affected by mentioned phenomenon, as this has not yet been thoroughly examined in the case of Albania.

As mentioned in the objectives, there will be sentiment and statistical analyses performed

The study will serve as a starting-point from which to conduct and compare similar studies concerning Albania and/or the Balkan political diaspora.

DATASET EXTRACTION & PREPARATION

FOR THE STATISTICAL ANALYSIS APPROACH:

- Dataset extraction: Survey results from 101 respondents.
- Dataset preparation: Using SPSS software & formulation of hypotheses.

FOR THE SENTIMENT ANALYSIS APPROACH:

- Dataset extraction: Manual scraping of comments from Instagram posts.
- Dataset preparation: Using VADER libraries and python scripts to clean the dataset

FOR THE INTERVIEW ANALYSIS APPROACH:

- Data extracted from the individual interviews .
- Transcript and audio-files saved in **Appendix**

Time Frame of Data Collection: September 2023 – January 2024

Keywords: Computational Propaganda, Elections, Albania, Sentiment Analysis, Statistics, Social Media, Interviews



Practical PART

□ PART 1 – STATISTICAL ANALYSIS APPROACH

- **4 HYPOTHESES IN TOTAL, 3 LINKED WITH THE MAIN OBJECTIVE:**

- a) Hypothesis for Confidence level of participants in Voting Process:
- b) Hypothesis for the relationship between the residence of living and the belief of computational propaganda as part of voting behaviour and political events in Albania
- c) Hypothesis related to the education level and the fact if respondents of the survey have heard about the digital propaganda or not.

- **1 HYPOTHESIS LINKED WITH THE PARTIAL OBJECTIVES**

- d) Hypothesis about the level of digital propaganda in Western Balkan countries scores based on the gender of the respondents.

Hypotheses	Test Method	p-value	Confidence Interval	Test (t) Statistic	Effect Sizes
a)	One sample t-test	0.0000 874	[0.36 ; 1.04]	-	<i>Cohen's d</i> = 1.067 <i>Hedges' correction</i> = 1.088
b)	Chi-square	0.386	-	0.753 with 1 df	Cramer's V = 0.086 Phi Symmetric Measures = - 0.086
c)	Chi-square	0.030	-	8.968 with 3 df	Cramer's V = 0.298 Phi Symmetric Measures = 0.298
d)	Independent Sample t-test	0.308	[-0.484 ; 0.814]	0.504 with 99df	<i>Cohen's d</i> = 1.642 <i>Hedges' correction</i> = 1.655



Practical Part

□ PART 2 – SENTIMENT ANALYSIS APPROACH

- Manual extraction of Instagram comments due to API restriction of META.
- Cleaning of the data/comments with python scripts, including tokenization, lemmatization; removal of special characters etc.
- Sentiment analysis using VADER & pandas libraries.
- Everything is anonymous.

□ PART 3 – INTERVIEW ANALYSIS APPROACH

- Individual interviewing sessions between the author of the thesis and interviewees.
- The aim: To bring real life experiences of real-life people related to the topic of thesis.
- Transcript and audio-recording available at the Appendix.
- Everything is anonymous.

Results and discussions

a) Results from Statistical Analysis Approach:

- Null Hypotheses of Hypothesis 1,3. ➡ **Rejected.** Low p-value & large effect size
- Null Hypotheses of Hypothesis 2,4. ➡ **Failed to be Rejected.** High p-value and chi-square test results

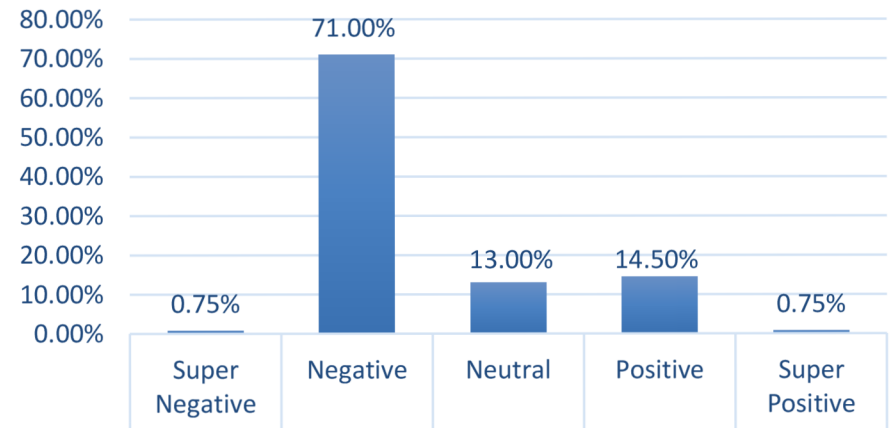
b) Results from Sentiment Analysis Approach:

- A bar chart with the sentiment scores from the sentiment analysis was created, accompanied with a word cloud and word frequency analysis from the sentiment.

c) Results from Interview Analysis Approach:

- The majority of the interviewees had a negative story to share such as:
 - bribes
 - corruption in voting rooms
 - double standards in universities/workplace etc

Sentiment Score of the comments



Results from the Interview

Interviewee	Residence	City*	Experience	Option to return to/leave Albania	Suggested Improvements
1	Not in Albania	Tirana	Bribery in social media/by phone call promising monetary rewards	Never	Improve technology and security during voting elections
2	Not in Albania	Lezhe	They were registered as a voter, even though being abroad during elections	Never	Security of data in voting areas
3	Not in Albania	Kukes	Bribery in social media/by phone call promising monetary rewards	Never	Educational Systems
4	Not in Albania	Kukes	Double standards in universities, students who were bribed for their votes, got rewarded better grades	Yes, but in 5-10 years	Nothing, according to them, propaganda will be more structured in the future
5	Not in Albania	Durres	Violence of the personal information & voting history of the individual	No	Data Security improvement & the elimination of corruption
6	Not in Albania	Tirana	Attempt of monetary rewards and bribery via email/phone call & f Facebook group chats	No	Improve the communication of the parties with the voters and be respectful of your personal data
7	Not in Albania	Lezhe	Propagandistic conference/meeting with students	No	Improve transparency in digital communication platforms
8	In Albania	Lezhe	Unfair firing from work & Bribe	Yes	Improve security, add more scholarships, help the youth

Conclusions

- ❑ Following the results from all 3 parts of the practical part, whether the respondents of the survey; the people whose comments were gathered from Instagram or the interviewees from the interviews, the result is the same:
 - The selected sample is not satisfied with the current situation of digital propaganda in Albania.
 - They don't believe the political stability in their homeland and the transparency in voting processes.
 - The selected sample is leaving the country in serious numbers and do not intend to come back.
 - They are pessimistic about the future and there is just a slight percentage of people hoping for a better future.