

# The Strategies of China's Disinformation Campaigns in the 2020 Taiwan Presidential Election

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A Senior Honors Thesis Submitted to the Department of Political Science,  
University of California, San Diego  
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## Abstract

This thesis explores China's use of disinformation campaigns and propaganda on social media to interfere with the 2020 presidential election in Taiwan. Using a text analysis of approximately 167,612 tweets from suspended Twitter accounts affiliated with the Chinese government, the study investigates the potential correlation between China's disinformation campaigns on Twitter and their interference in the election. The findings suggest that China primarily focused on shifting public opinion of the 2019–2020 Anti-ELAB Movement in Hong Kong and Wang Liqiang's claims to promote a positive narrative of the Chinese government. Additionally, evidence of China denouncing specific candidates in Taiwan's elections highlights their continued effort to influence Taiwan's political landscape. The study sheds light on China's reactive strategy in Taiwan's election and the growing concern of external disinformation campaigns in global information warfare.

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# 1 Introduction

On November 24, 2019, the Australian TV program 60 Minutes aired a controversial episode titled "Chinese spy spills secrets to expose Communist espionage." In the episode, Wang "William" Liqiang, a self-proclaimed Chinese spy defecting to Australia, claimed he was ordered to undermine Hong Kong's democracy movement and intervene in the 2020 Taiwan presidential elections (60 Minutes Australia, 2019). Following Wang's claims, several individuals in Taiwan were accused of being his associates but were later cleared of national security charges due to a lack of evidence. The truth of China's meddling in Taiwan's elections remains disputed.

Given China's history of interfering in Taiwan's elections, there has been growing concern about the potential impact of fake news during elections. China's use of disinformation campaigns and propaganda on social media platforms has become an increasingly concerning issue in recent years (Cook et al., 2022). Many countries have been affected by information warfare at different levels. Some of the tactics used by China include the creation of fake social media accounts, the use of bots and trolls to amplify messages, and the spreading of false information through state-run media outlets. Although there has been limited research on the strategies behind China's external disinformation campaigns, an exception is the Australian Strategic Policy Institution (ASPI). According to several reports published by ASPI, the Chinese government has been externally spreading disinformation on social media to influence foreign public opinion on political issues since 2019, particularly in Hong Kong and Taiwan (Wallis et al., 2020). One of ASPI's reports analyzed the patterns and influence of disinformation campaigns targeting Hong Kong from 2018 to 2020, but provided less insight into those targeting Taiwan. However, evidence suggests that the Chinese government has been interfering in Taiwan's political events, such as elections, through military threats and economic sanctions since the 1990s, as well as by spreading disinformation through sponsored news media (Li, 2015).

By analyzing tweets posted by accounts affiliated with the Chinese government, this the-

sis studies the strategies behind China’s intervention in Taiwan’s elections on social media. Through an examination of suspended Twitter accounts affiliated with the Chinese government, this thesis demonstrates the strategy of China seeking to interfere with Taiwan’s presidential election in 2020 through disinformation campaigns on social media. To analyze the data, I used various models, including regression and topic models, to uncover patterns and strategies utilized in the disinformation campaigns to influence public opinion and shape the election outcome.

This thesis found that China did not use the common electoral intervention strategies of proactively confusing audiences and undermining specific candidates, and it is likely due to the distraction from the 2019–2020 Anti-ELAB Movement in Hong Kong. Instead, China reactively responded to the negative accusations. From our data, China did not seem to change its online strategy measurably during the 2020 Taiwan presidential elections. Instead, based on evidence from these suspended accounts, China reactively responded to negative accusations and promoted a positive narrative of Chinese government, but did not seem to have a clear proactive strategy.

Based on my analysis, it appears that China employed a different approach in its attempts to influence the 2020 Taiwan presidential elections through social media. In contrast to its previous election interference tactics, which were overt and direct, such as military intimidation and economic sanctions, China adopted a more subtle and indirect approach to shape public opinion through social media platforms.

## **1.1 Background and Historical Cases**

The Republic of China, currently located in Taiwan, was founded by the KMT, a political party, in 1912 in China (geographically). After being defeated by the Chinese Community Party, the Kuomintang (KMT) moved to Taiwan as the base of taking back China (geographically). Taiwan has been a democratic republic state since the 1990s, after ending the authoritarian governing by the KMT. Currently, there are two main parties competing in

politics, the KMT and Democratic Progressive Party (DPP). Although Taiwan is geographically small, it has advanced economic, medical, and technological developments.

The People's Republic of China, also known as modern China, was founded by the Chinese Communist Party (CCP) in 1949. China is an autocratic state ruled by a single party. Chinese Communist Party has been the sole governing party in China since its establishment (Mattingly, 2019). Chinese Communist Party was raised with the support of proletariat, especially the farmers, in the Chinese Civil War from 1927 to 1949. One unique characteristic of the Chinese constitution is that it specifically points out the Chinese Communist Party is the leader of China. Therefore, unlike most western democracies, where the president or the prime minister is the government's leader, the Chinese Communist Party's general secretary is the Chinese government's leader. After joining the World Trade Organization in 2002, Chinese economic growth increased rapidly. The increasing growth of the economy raised China's status and influence around the world. In 2010, China's Gross Domestic Product exceeded Japan, the former strongest economy in Asia, and became the second-biggest economy in the world (BBC News, 2011).

Following its victory over the KMT in the Chinese Civil War, the CCP asserted its governance over both mainland China and Taiwan. The long-term goal of "reunifying Taiwan" has been a central mission of the CCP, as affirmed by its leaders, including Xi (Xi, 2022). In an attempt to achieve this goal, the CCP initiated a military conflict at Kinmen, an island under KMT control, in 1958, but was unsuccessful (Kastner, 2022). Since then, the political status of Taiwan has played a significant role in China's national security strategy. Similarly, prior to the democratization of Taiwan in the 1990s, "reunification of mainland" had been a primary objective of the KMT.

The Chinese government's intervention in Taiwanese elections can be traced back to the Third Taiwan Strait Crisis in the 1990s, during which they attempted to deter the 1996 Taiwanese presidential election, the first direct presidential election, by conducting missile tests in the waters surrounding the island (Li, 2015). In the 2000 presidential election, the



first-ever party alternation, China published a report on "One China Principle and Taiwan Issues" to warn Taiwanese politicians (Tung, 2011). In addition to these significant instances, various researchers have found evidence of Chinese government manipulation of public opinion in several Taiwanese political events (Lee, 2016; Wu, 2009). China's electoral intervention typically involves economic sanctions, campaign funding, military threats, and, more recently, disinformation campaigns. In pursuit of its reunification goal, China also provides funding to the Chinese Unification Promotion Party, a Taiwanese political party (Matsumoto, 2019). Moreover, the Chinese government frequently offers support and incentives to Taiwanese businesspeople who establish businesses in China. These actions have had a significant impact on Taiwan's political landscape by shaping public opinion (Lee, 2016).

## **1.2 Significance**

The study of China's disinformation campaigns in Taiwan elections is significant because it can help safeguard Taiwan's democracy and provide insights for other countries facing electoral interventions. China's disinformation campaigns have targeted Taiwan due to a relatively minor language barrier and political conflicts between the two countries. As a result, combating propaganda and disinformation has become a security concern for Taiwan, and the ability to distinguish the authenticity of information has become one of the most critical skills in this era of information overload. Understanding China's disinformation campaigns can help Taiwan better prepare and respond to any attempts to influence its elections.

By analyzing the strategies of these disinformation campaigns, this thesis aims to enhance readers' understanding of government intervention in elections and equip them with the ability to combat electoral intervention.

## 2 Foreign Influence in Elections

### 2.1 Why and how does the government intervene in the foreign election?

Scholars have suggested that electoral intervention is more likely to be carried out by a powerful regional or global actor due to their greater interest in shaping the policy-making of other countries (Bubeck & Marinov, 2019). However, electoral intervention is neither an easy nor the only way to gain control over another country. There are many substitute options to achieve the same goal, such as negotiation, aiding coups, and starting a military invasion (Most & Starr, 2015). Although electoral intervention is a less costly way to influence the policy-making of a country than military operations, the chances of success are greatly varied due to the differences in the targets (Levin, 2020). Moreover, having allies in the target country is essential for electoral intervention. Thus, electoral intervention might not be a simple strategy for controlling foreign states for a government. However, when a "great power perceives an unusually high level of threat emanating from a certain actor concurrent with a complete lack of any other pre- or post-election options," it is likely that the government will choose to intervene in foreign elections (Levin, 2020).

There are several typical methods of electoral intervention, such as providing campaign funding and assistance to favored sides, making threats or promises on the election of specific candidates, and promoting negative news to harm certain candidates directly (Levin, 2020). In addition, in recent years, disinformation campaign has become a frequent method in propaganda, as well as in electoral interventions (Golovchenko et al., 2020).

Although electoral intervention has been a common phenomenon in history, this political issue did not receive much attention before the case of Russian intervention in the 2016 U.S. elections (Levin & Musgrave, 2022). The main reason that led to Russia's intervention in the 2016 U.S. elections was that Russia saw Clinton as an "existential threat" due to her support in sanctioning Russia for its military involvement in Ukraine (Levin, 2020; Golovchenko et al.,

2020). Similarly, China saw Tsai, the presidential candidate from DPP, as a threat because of her closer relationship with the U.S. and her standing on "Taiwan Independence."

Russia's interference in the 2016 U.S. presidential election was a prime example of how an external actor try to impact a democracy through social media. Authoritarian governments have long employed the strategy of influencing public opinion domestically and internationally by controlling social media (Cirone & Hobbs, 2022). However, it has since become a new tool in electoral intervention. By manipulating social media communities, foreign actors can potentially alter the outcome of an election and pose a significant threat to democracy. One of Russia's strategies involved "flooding," which is a technique of inundating audiences with a large volume of information to distract, demobilize, and confuse them (Roberts, 2018; Cirone & Hobbs, 2022). According to Cirone and Hobbs, the Kremlin-based Internet Research Agency (IRA) attempted to demobilize voters by shifting the focus from political issues to racial ones.

Scholars believed the IRA displaced political content from the election discourse to distract voters (Cirone & Hobbs, 2022). Another tactic used by the IRA to meddle in the 2016 U.S. presidential elections was the technique of "dividing," which involved amplifying regional cultural differences in order to split the voters (DiResta et al., 2018). These approaches demonstrated the potential dangers of social media manipulation by foreign actors.

## **2.2 How does Chinese propaganda work?**

The Chinese government is well known for censoring the press and media domestically. While there have been very few studies of external propaganda in China, significant work has studied China's internal propaganda apparatus. The common mechanisms used in censorship and internal propaganda by the Chinese government are fear, friction, and flooding (Roberts, 2018). Fear and friction are more generally used in censorship. Fear affects the spread of information by deterring media or individuals, while friction increases the inconvenience of accessing information. On the other hand, flooding, which means creating distractions from

certain information, is frequently seen in censorship and propaganda. Moreover, a significant strategy used in China's internal propaganda is promoting patriotism, which usually includes the cheerleading for the Chinese government, the history of CCP, and the powerful of the regime (King et al., 2017).

Additionally, CCP has been promoting a new propaganda principle in recent years: precise communication (精準傳播), which aims to maximize the international influence of its news media and other propaganda works (Thorne & Insikt Group, 2022). The principle of precise communication is to tailor the propaganda to a specific interest of target populations. The party-state media researchers have studied the differences between CCP's target audiences by analyzing big data and artificial intelligence. For example, research founded by the China Foreign Languages Publishing Administration (CFLPA; 中國外文出版發行事業局) suggested that propaganda targeting Latvia should emphasize the economic cooperation between the two countries and avoid mentioning the close relationship between China and Russia (Thorne & Insikt Group, 2022).

According to the Australian Strategic Policy Institution (ASPI), the Chinese government has been actively spreading disinformation on social media to influence public opinion on political issues since 2018, particularly in Hong Kong and Taiwan (Wallis et al., 2022). The scale of China's propaganda and disinformation campaigns has increased significantly in recent years, with many other countries now impacted, including the U.S., Australia, and the U.K. ASPI conducted an analysis of 348,608 tweets posted by 23,750 Twitter accounts recognized as Chinese state-linked actors by Twitter, between January 2018 and April 2020. Through disinformation campaigns on Twitter, the Chinese Communist Party (CCP) aimed to shape pro-China narratives and control potential threats outside of China (Wallis et al., 2022). The main threats identified by ASPI from the disinformation campaigns on Twitter between 2018 and 2020 can be classified into three types: Hong Kong, Taiwan, and Covid-19. While ASPI analyzed the content, patterns, and influence of the campaigns targeting Hong Kong, they did not do so to the same extent for those targeting Taiwan. There was

a significant spike in Twitter posts right around the 2020 election, suggesting that Taiwan was an essential target in China’s disinformation campaign on Twitter. As an important political event in 2020, Taiwan’s presidential elections are likely the campaign’s purpose.

## 3 Research Design

### 3.1 Categorizing Tweets

My research design involves analyzing a collection of Twitter data to investigate the strategies employed by the Chinese government during the 2020 Taiwan Presidential Election disinformation campaign. The data used in this study was published by Twitter. Twitter began releasing data sets of suspended accounts in 2019 that were suspected of spreading disinformation under government control. These suspended accounts were affiliated with various governments, primarily from China, Saudi Arabia, Serbia, Iran, and Turkey (The Australian Strategic Policy Institute, n.d.). Although Twitter did not disclose the specific methods used to identify government-linked accounts, it stated that these accounts violated its platform manipulation policies by engaging in activities such as spamming, coordinating actions, using fake accounts, claiming false attribution, and evading bans (Twitter Safety, 2019). The thesis data comprises 167,612 tweets published by suspended Twitter accounts that Twitter identified as affiliated with the Chinese government and disseminating disinformation in the past.

ASPI conducted a study on a particular set of data and discovered that several accounts posted a suspiciously high number of tweets that included the keyword "Taiwan" just before the country’s presidential election in 2020. While ASPI primarily focused on disinformation campaigns aimed at Hong Kong and the Anti-Extradition Law Amendment Bill Movement (Anti-ELAB Movement), its research did not delve much into the disinformation campaigns targeting Taiwan. In order to better understand the reason and strategy behind propaganda and disinformation campaigns aimed at interfering in the election, I examined the same data

set of suspended Twitter accounts.

The time-frame of my analysis covers a three-month period around the election, from November 1, 2019 to February 1, 2020. During the three-month election period, a total of 167,621 tweets were posted. To analyze this data, I randomly sampled 8,000 tweets and manually categorized them into six different categories based on their content. I created these categories based on the main issues the context focuses on to better understand the strategy used in the disinformation campaign on social media. The following are the criteria for each category:

- Non-politics
  - Inspirational quote: message promoting positive vibe
  - Healthy tips
  - Celebrity news: actors, singers
  - Random fact or story
- China political news (not cheer-leading)
  - the Anti-ELAB Movement in Hong Kong
  - Guo Wengui's news
  - Foreign countries' intervention
- Other political news
  - Non-China, non-Taiwan
  - Neutral and Negative news about other country
  - Taunting and criticizing other countries and western values
- Cheer-leading
  - Patriotism: showing a strong and powerful China

- Beauty of China: travel and cultural experiences
- Cheer for people who suffering Covid-19
- Taiwan political news
  - Wang Liqiang’s news
  - Political news about Taiwan
- Other
  - Meaningless text
  - Invalid link
  - Context hard to understand

### 3.2 TF-IDF Model

To gain a deeper understanding of each category, I utilized a TF-IDF model to analyze my data. TF-IDF stands for Term Frequency-Inverse Document Frequency and is commonly used to assess the significance of words in a corpus. This model calculates both the frequency and rarity of each word across all documents within a corpus. Words that frequently appear in a specific document but are rare across the corpus will have a high score, indicating their importance to that document. Conversely, words that frequently occur across the entire corpus but infrequently in a particular document will have a low score.

Before building the TF-IDF model, I first cleaned and transformed the raw text in my data. My steps of pre-process text include tokenization and stop word removal. To tokenize the text in the 8000-tweet sample, I used jieba as my tokenizer, which is a commonly used segmenter for Chinese words. To ensure accuracy, I added the names of some politicians and activities to my user-defined dictionary to prevent the tokenizer from treating these words as separate characters. Here are the words I added to my dictionary: 蔡英文(Tsai Ing-Wen), 郭文贵(Guo Wengui), 王立强(Wang Liqiang), 黑警(Gangster Police), 班农(Steve Bannon).

In contrast to English text, most meaningful Chinese words consist of at least 2 characters. Therefore, I excluded words containing only 1 character. Next, I filtered out some commonly occurring but meaningless words in the sample, such as "rt" (indicating retweet), "https" (indicating a tweet containing a URL), and "的" (a commonly used Chinese conjunction).

After calculating the TF-IDF scores for all words in the preprocessed text of the 8000 tweets, we can use these scores to identify the most important and relevant words in each category. By ranking the TF-IDF scores for each category, we can easily identify the words that are most frequently used and carry the most meaning in that category. These words can then be used to gain insights into the topics of the tweets.

### **3.3 Regression Model**

In order to investigate the potential correlation between China's disinformation campaigns on Twitter and their interference in the 2020 Taiwan presidential election, I conducted regression analysis on the 8000-sample data to test the significant effects of these two factors.

Under the time-frame of three-month around the elections, I especially examined 2 specific period, 2 weeks before the elections and 1 week after the release of the news about Wang Liqiang. The first specific period I examined is the two weeks immediately preceding the election, from December 28, 2019 to January 10, 2020. The second period is the week after the news of self-claim Chinese spy, Wang "William" Liqiang, was published by Australian media, from November 24, 2019 to November 30, 2019. Base on the distribution of tweets over the time, I set up two models testing different time in the hypotheses. The unit of analysis of my regression models is the tweet itself. In the first model, my null hypothesis states that the volume of tweets related to Taiwanese political news did not significantly increase in the two weeks leading up to the election, while my alternative hypothesis posits that there was a significant increase in these types of tweets during this period. Similarly, my second model has a null hypothesis of the volume of tweets related to Taiwanese political news did not significantly increase but in the time after Wang "William" Liqiang's news



first published. And my alternative hypothesis posits that there was a significant increase in these types of tweets during this period.

Hypothesis of model 1 (2019/12/28 – 2020/01/10):

$H_0$ : *Taiwan news did not significantly increase two weeks before the election*

$H_a$ : *Taiwan news significantly increased two weeks before the election*

Hypothesis of model 2 (2019/11/24 – 2019/11/30):

$H_0$ : *Taiwan news did not significantly increase during a week after Wang' s news*

$H_a$ : *Taiwan news significantly increased during a week after Wang' s news*

I generated a new dummy variable to serve as the independent variable. Any tweet that was published within the time-frame was assigned a value of 1, while tweets that were published outside of the time-frame were assigned a value of 0.

Regression Model 1:

Independent variable: whether or not the publish date of tweet is in the two-week period of the election, from December 28, 2019 to January 10, 2020.

Dependent variable: the number of tweets relating to Taiwanese political news.

$$\text{Amount of Taiwan news} = \beta_0 + \beta_1 * \text{Whether it is posted between Dec 28 and Jan 10} \quad (1)$$

Regression Model 2:

Independent variable: whether or not the publish date of tweet is in the late November, from November 24, 2019 to November 30, 2019.

Dependent variable: the number of tweets relating to Taiwanese political news.

$$\text{Amount of Taiwan news} = \beta_0 + \beta_1 * \text{Whether it is posted between Nov 24 and Nov 30} \quad (2)$$

### 3.4 Topic Modeling

To identify any underlying patterns within the data, I utilized structural topic model to analyze the context of the tweets. Moreover, the structural topic modeling is an unsupervised approach so it could uncover unseen categories in the data. Initially, I processed all the text in the 8000-tweet sample, following the steps of calculating TF-IDF scores. However, instead of treating each word as a separate value, I combined the words within each tweet to create a single document per tweet. Next, I prepared the documents before conducting the structural topic modeling, which consisted of 50 topics in total.

Upon constructing the model, I assessed the estimated relationships between each topic and the independent variable, which was whether the tweet was published around the time of the elections.

# 4 Results

## 4.1 Distribution of Tweets

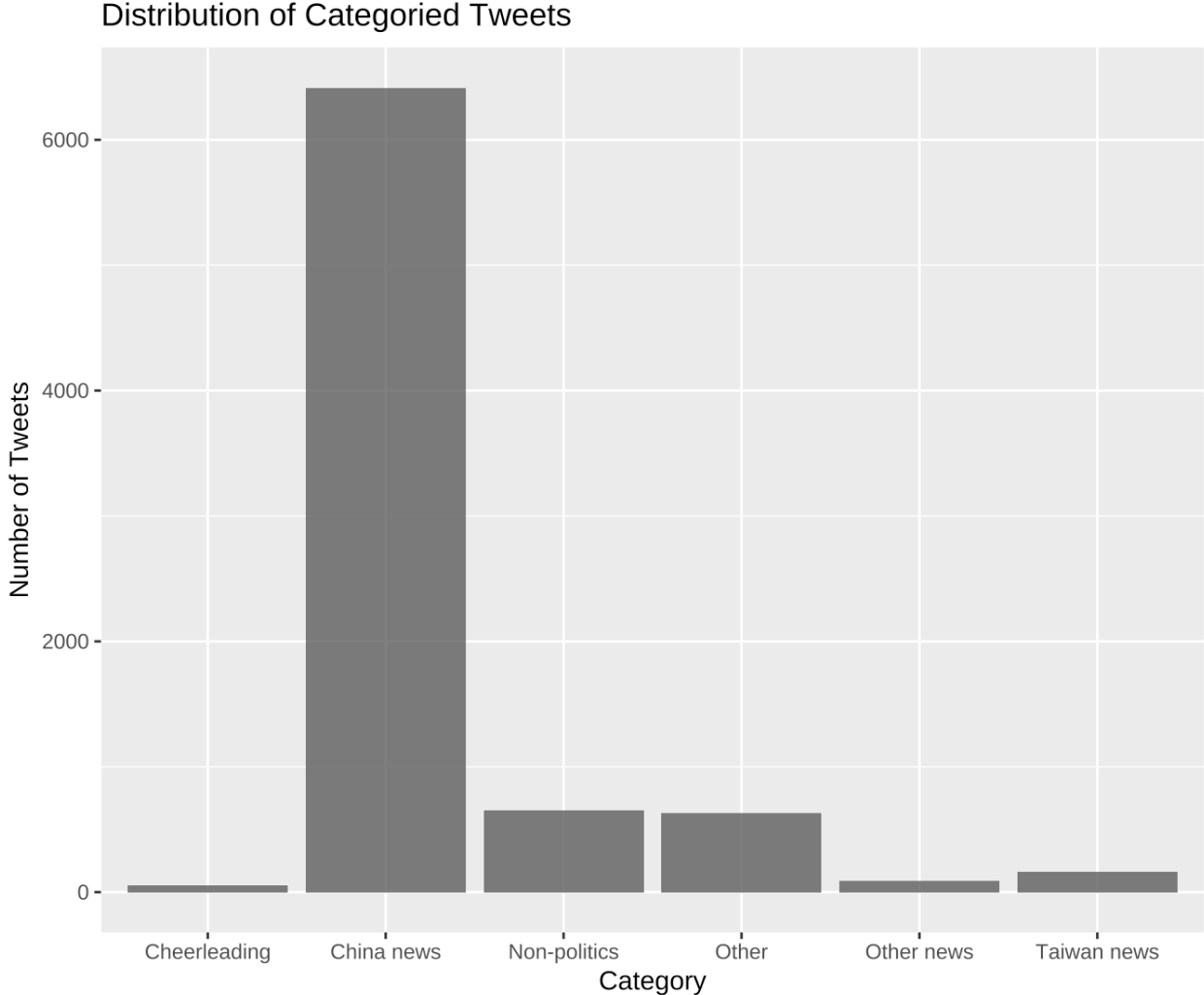


Figure 1: Distribution of Tweets in Each Category

The histogram above displays the distribution of tweet categories in our sample. The majority of tweets in our sample relate to Chinese political news, followed by a smaller number of tweets about non-political topics and other content. There are only a few tweets in our sample related to Taiwanese political news. Lastly, there are only a few tweets about cheer-leading and political news from other countries.

The following table shows the detailed distribution of categorized tweets.

Over 80 percent of tweets are related to Chinese political news, while only 0.02 percent are related to Taiwanese political news.

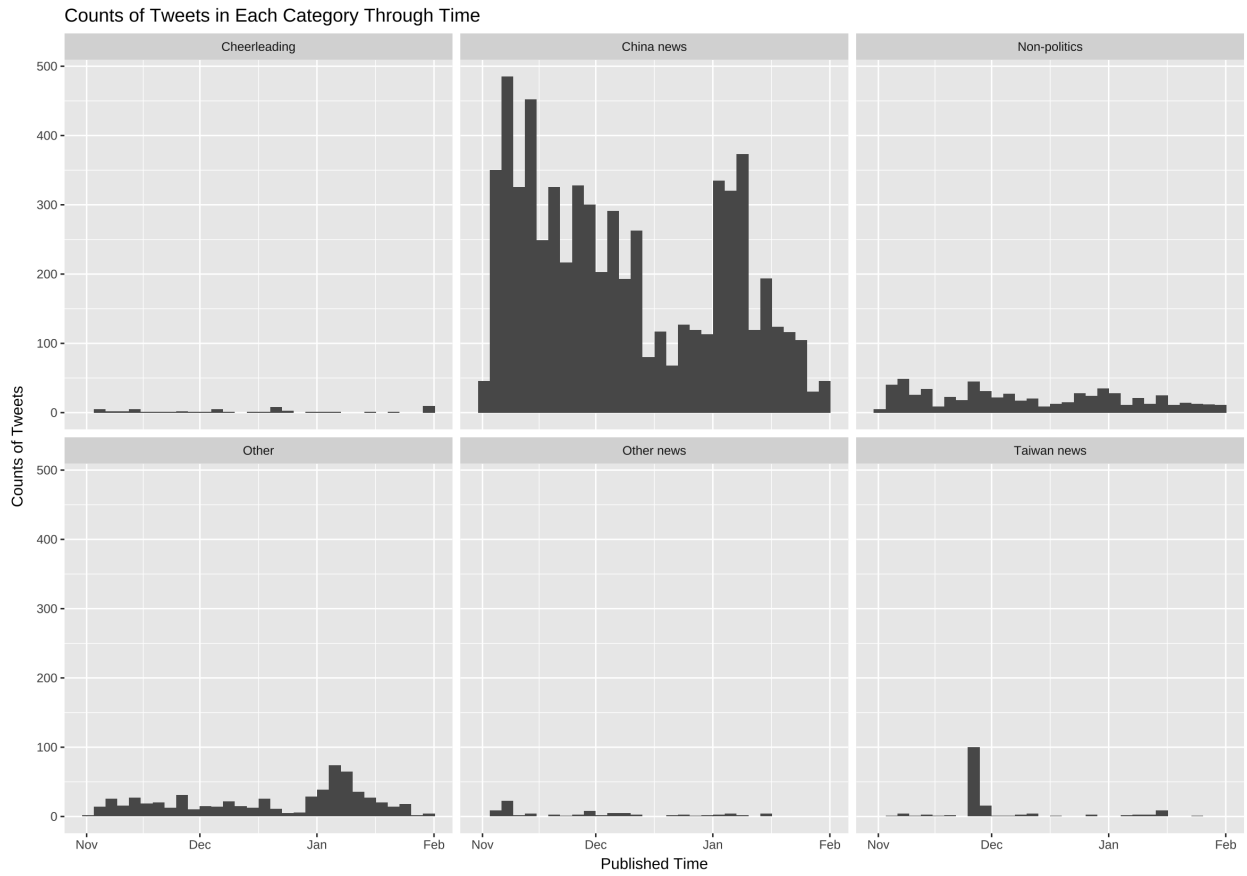


Figure 2: Counts of Tweets in Each Category Over Time

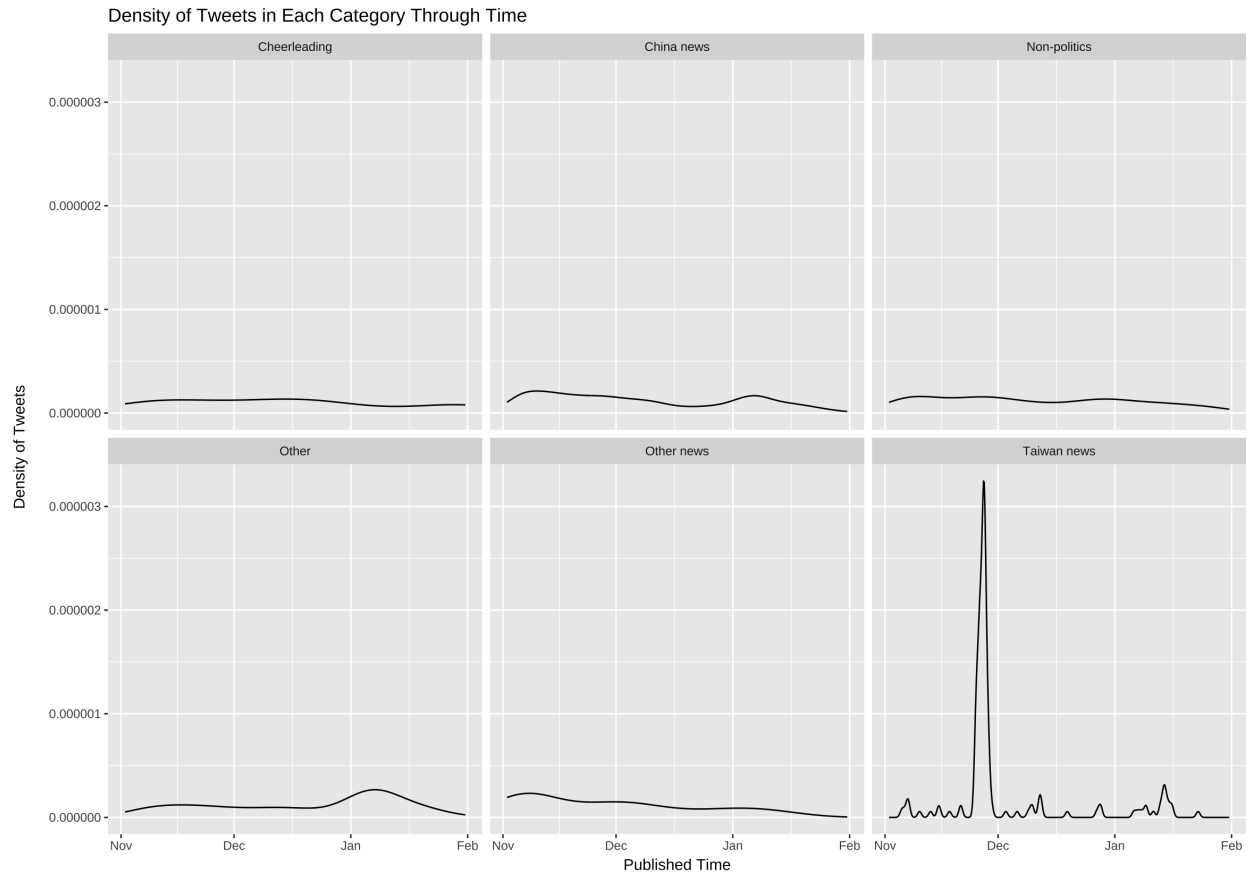


Figure 3: Density of Tweets in Each Category Over Time

Following that, I generated two graphs to visualize the distribution of each category over time. The histograms reveal a significant peak in the number of tweets related to Taiwan news posted around late November, coinciding with the release of news regarding Wang "William" Liqiang. In the news, Wang accused China of intervening in the election by providing funds to KMT candidates. Additionally, there were relatively few Taiwan news tweets posted before mid-January, which is when the election took place.

## 4.2 TF-IDF Model

In the TF-IDF model, I calculated the TF-IDF score for all the words in my sample data and found the top 10 word with highest frequency in each category.

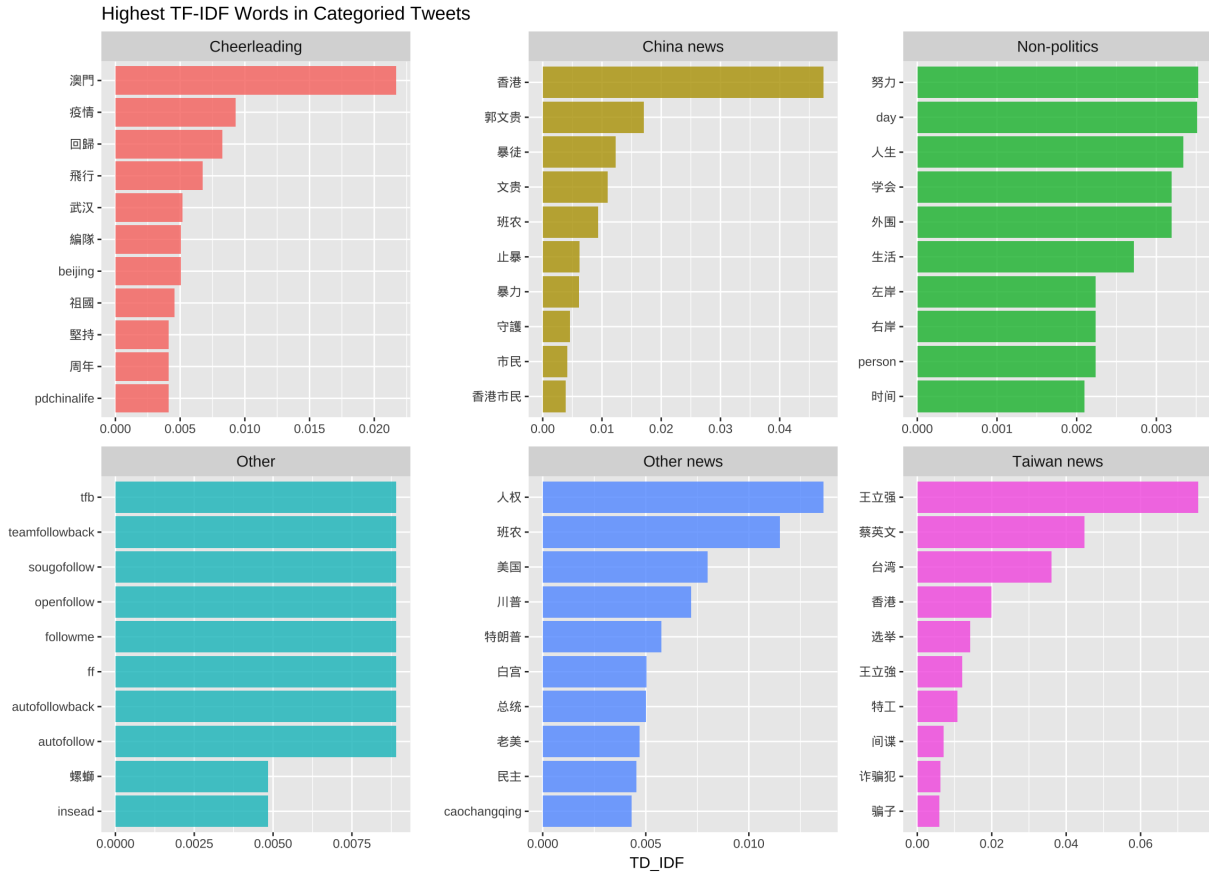


Figure 4: Top Words With Highest TF-IDF in Each Category

Following are the translations for the words arranging by the ranking shown in the graph.

- Cheerleading: Macao, Epidemic, Reunited, Flying, Wuhan, Formation, Beijing, Motherland, Persist, Anniversary, Channel of China life
- China news: Hong Kong, Guo Wenhui, Rioter, Wengui, Bannon (Steve Bannon), Stop violence, Violence, Defend, Citizen, Hong Kong citizen
- Non-politics: Hard working, day, Life, Learning, Outside, Livelihood, La Rive Gauche, La Rive Droite, Person, Time
- Other news: Human right, Bannon (Steve Bannon), United States, Trump (Donald Trump in Taiwanese translated term), Trump (Donald Trump in Chinese translated

term), White House, President, United States (in a slang term), Democracy, Cao Changqing (an anti-CCP Chinese political activist living in the U.S.)

- Taiwan news: Wang Liqiang (in Simplified Chinese), Tsai Ing-Wen, Taiwan, Hong Kong, Election, Wang Liqiang (in traditional Chinese), Agent, Spy, Fraud, Liar

By analyzing the top ten keywords in each category using TF-IDF scores, we can uncover the main focus areas of Chinese government-affiliated Twitter accounts. In the "China news" category, which includes tweets related to Chinese political news, the 2019-2020 Anti-ELAB Movement in Hong Kong emerged as a prominent topic. Meanwhile, in the "Taiwan news" category, which covers tweets related to Taiwanese political news, the focus was on self-proclaimed Chinese spy William Wang and Taiwan's President, Tsai Ing-Wen, with negative phrases such as "scammer" and "liar" being frequently used to describe them.

The "Cheer-leading" category, which centers around patriotism, highlighted the celebration of the 20th anniversary of the transfer of sovereignty over Macao and support for the defense against COVID-19 in Wuhan as the most prominent mentions. In the "Non-politics" category, the keywords promoted a positive attitude towards daily life, emphasizing values such as hard work and learning. Lastly, the "Other news" category, which encompasses tweets related to political news not associated with China and Taiwan, showed that American politics, human rights, and democracy were among the most discussed topics.

By leveraging TF-IDF scores to identify the most frequently used words in each category, we gain valuable insights into the key issues and sentiments being expressed in the tweets. This approach enables us to uncover the main themes and trends within the corpus of text data and can help us to better understand the priorities and interests of Chinese government-affiliated Twitter accounts.

### 4.3 Regression Model

In my regression analysis, I studied tweets by category and publication time. The first model investigated the relationship between the number of tweets related to Taiwan news category and whether they were published before elections. The second model explored the relationship between the number of tweets related to Taiwan news category and whether they were published after Wang's news.

#### 4.3.1 Regression Model 1

Table 1: Taiwan-Related Tweets Before Elections

	<i>Dependent variable:</i>
	Number of Tweets Related to Taiwan Politics
Whether it is posted between Dec 28 and Jan 10	-0.020*** (0.004)
Constant	0.024*** (0.002)
Observations	8,000
R <sup>2</sup>	0.003
Adjusted R <sup>2</sup>	0.003
Residual Std. Error	0.139 (df = 7998)
F Statistic	24.965*** (df = 1; 7998)

*Note:*

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

According to regression model 1, there was a slight decrease in the number of tweets related to Taiwan's political news during the two weeks leading up to the election, compared to the four-month period before and after the election. This finding suggests that the Twitter accounts affiliated with the Chinese government may have slightly reduced their posting of tweets related to Taiwan's politics.



Table 2: Taiwan-Related Tweets After Wang’s News

	<i>Dependent variable:</i>
	Number of Tweets Related to Taiwan Politics
Whether it is posted between Nov 24 and Nov 30	0.128*** (0.005)
Constant	0.006*** (0.002)
Observations	8,000
R <sup>2</sup>	0.081
Adjusted R <sup>2</sup>	0.081
Residual Std. Error	0.134 (df = 7998)
F Statistic	707.979*** (df = 1; 7998)

*Note:*

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

### 4.3.2 Regression Model 2

Based on the regression model 2, there was a significant increase in the number of tweets related to Taiwan’s political news during the week following the release of Wang’s news, compared to the four-month period before and after the election. This finding suggests that after the release of Wang’s news, Twitter accounts affiliated with the Chinese government significantly increased their posting of tweets related to Taiwan’s politics.

## 4.4 Topic Modeling

I analyzed a structural topic model that consists of 50 topics, and used a graph to understand the distribution of each topic.

### Top Topics

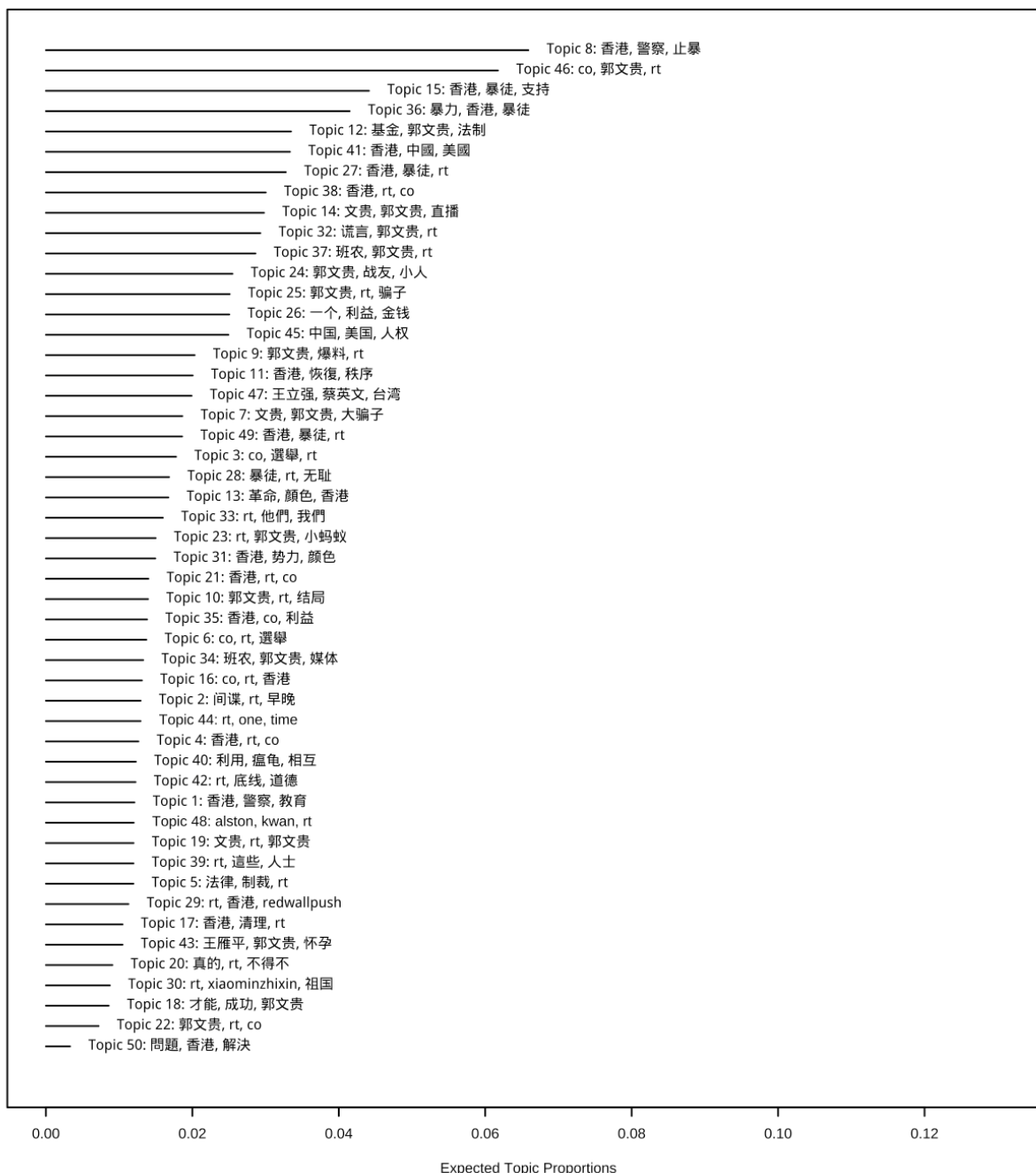


Figure 5: Expected Topic Proportions by Ranking

Following are the translations for the top 10 topics arranging by the ranking shown in the graph.

- Topic 8: Hong Kong, Policy, Stop Violence
- Topic 46: co, Guo Wengui, rt
- Topic 15: Hong Kong, Rioter (especially refers to the protesters in the Anti-ELAB Movement), Support
- Topic 36: Violence, Hong Kong, Rioter
- Topic 12: Foundation, Guo Wengui, Rule of law
- Topic 41: Hong Kong, China, the U.S.
- Topic 27: Hong Kong, Rioter, rt
- Topic 38: Hong Kong, rt, co
- Topic 14: Wengui, Guo Wengui, Live stream
- Topic 32: Lie, Guo Wengui, rt

According to the Figure 5, issues relating to the Anti-ELAB Movement in Hong Kong and Guo Wengui had the highest expected proportions. Topic 47, which relates to Taiwan's political news, was ranked 18th out of 50 and had an expected proportion around 0.02. In order to gain a better understanding of the relationship between publish time and the various topics, I utilized publish time as the co-variate and compared the co-variate levels. Specifically, a value of 1 indicated that the tweet was posted around the time of the election, while a value of 0 indicated that it was not.

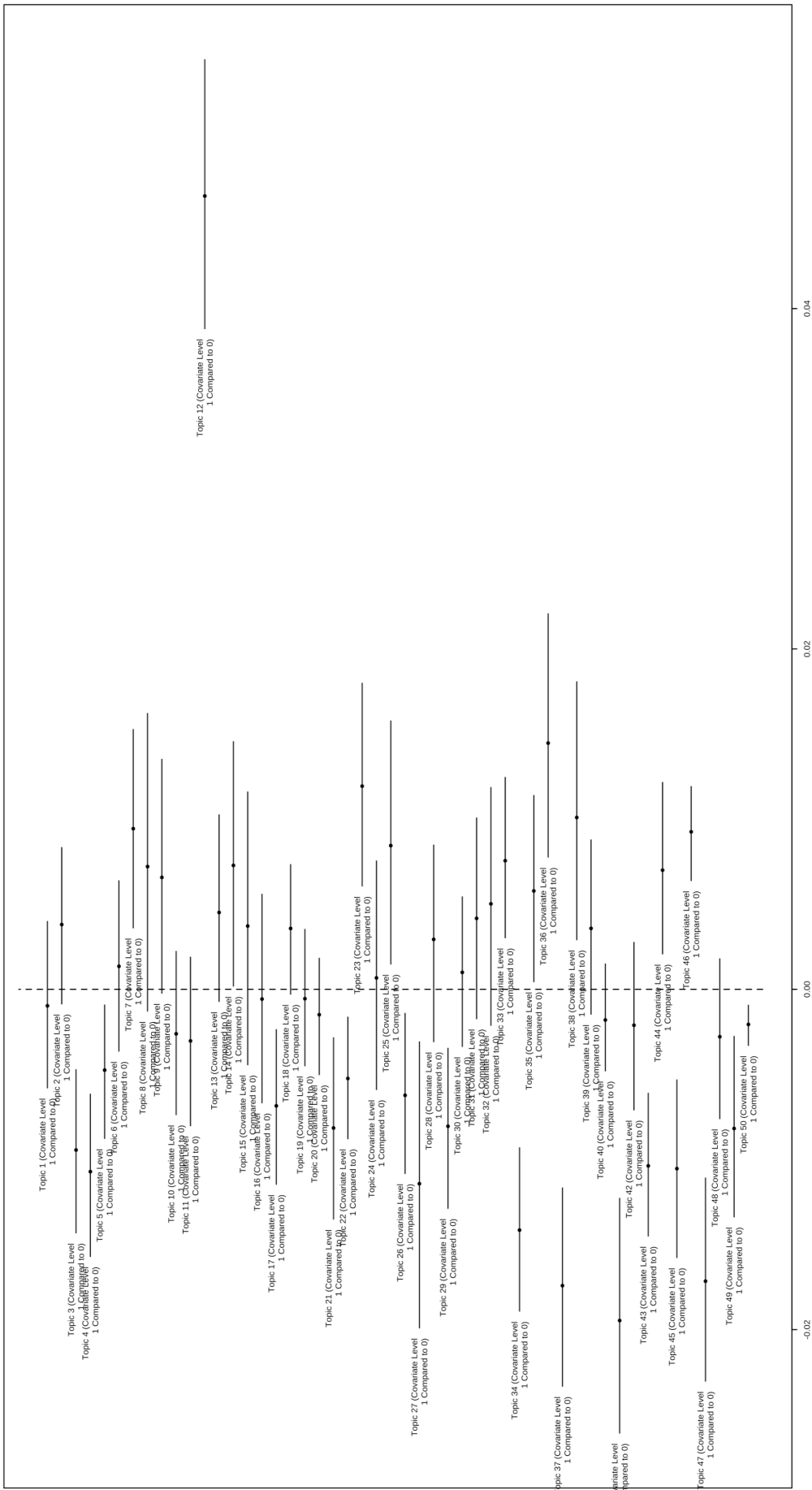


Figure 6: Co-variate Level of Each Topic

Figure 6 demonstrates that topic 12 was the most impacted by the co-variate variable, indicating that it experienced the most significant increase prior to the elections, in comparison to all other topics. As a result, I decided to delve deeper into the contents of topic 12 by examining its coefficients and contexts.

Table 3: Coefficients of topic 12

	<i>Dependent variable:</i>
	Number of Tweets Related to Taiwan Politics
Whether it is posted between Dec 28 and Jan 10	0.047*** (0.004)
Constant	0.024*** (0.002)

*Note:* \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Topic 12 Top Words:

Highest Prob: 基金, 郭文贵, 法制, 法治, rt, 捐款, 小蚂蚁

FREX: 黑客攻击, 创办, 当面, 作假, 挪用, 门户, 闹翻

Lift: 千亿, 查看, arzqtsgnuvegysedgi, bkwiveaypwmvc, qaqqvcmvomigpkxz, xperbhcgmwdczri, 从何而来

Score: 基金, 法制, 郭文贵, 捐款, 换汇, 骗钱, 龚小夏

Figure 7: Top words of topic 12

Following are the translations for the words arranging by the ranking shown in the graph.

- Highest Prob: Foundation, Guo Wengui, Rule of law, Rule of law (emphasizing the power of authority), rt, Donation, Little Ants (refers to Guo’s supporter)
- FREX: Hacker attack, Establish, In person, Cheat, Embezzle, Sect, Turn against
- Lift: Hundreds of billions, Checking, arzqtsgnuvegysedgi, bkwiveaypwmvc, qaqqvc-momigpkxz, xperbhcgmwdczri, Where does it come from
- Score: Foundation, Rule of law, Guo Wengui, Donation, Currency exchange, Scam money, Sasha Gong (a reporter at the Voice of America)

The coefficient chart for topic 12 indicated that the contents of this topic slightly increased during the two weeks before the elections. Moreover, based on the table displaying the top words associated with topic 12, it appears that this topic is primarily related to Chinese political news. This finding suggests that Chinese political news, particularly issues related to Guo Wengui and the Rule of Law Foundation, were more prevalent during this time period. Guo Wengui is a Chinese businessman living in exile in the United States. He has been wanted by the Chinese government since 2017 on charges of corruption. Guo was one of the founders of the Rule of Law Foundation, which aims to overthrow the CCP regime and establish a democratic government in China. The majority of tweets about Guo denounce him and accuse him of being a criminal.

The topic model provides insight into the type of content that was most prevalent in the lead-up to the elections. According to my data, topics related to Taiwan's political news did not show a significant increase during the two weeks before the elections.

## 5 Strategy Analysis

Upon analyzing our sample data using various models, it appears that China's intervention during the 2020 Taiwan presidential election was more reactive than proactive. Instead of applying tactics such as distracting audiences or undermining specific candidates, China focused on reactive strategies and promoting a positive image of itself. The data revealed a significant number of tweets related to China's political news, with the most frequently used words being associated with the Anti-ELAB Movement in Hong Kong. This indicates that the Chinese government was primarily focused on influencing public opinion about the Hong Kong protests, rather than directly intervening in the Taiwan elections. It is possible that the Chinese government prioritized the Anti-ELAB Movement in Hong Kong due to their impact on China's image at the international level. As a result, the Twitter accounts that were part of China's disinformation campaign may have had less focus on posting about

Taiwan's political news during the 2020 Taiwan election.

However, it is clear that China did attempt to intervene in the elections. The Hong Kong protests had a significant impact on the 2020 Taiwan presidential elections, as it highlighted the contrasting stances of the two candidates - Tsai, who was anti-China, and Han, who was pro-China. Although some Taiwanese may favor closer ties with China to gain economic benefits, the Anti-ELAB Movement in Hong Kong have raised concerns among pro-China Taiwanese regarding the potential for invasion. There is a growing worry that if Taiwan maintains a close relationship with China, it could face similar challenges to those experienced by Hong Kong (今日香港，明日台灣). This is why the Anti-ELAB Movement played a crucial role in the elections, and it may also explain the surge in tweets about Guo Wengui and the Rule of Law Foundation before the elections. As an anti-CCP political activist, Guo frequently criticized the Chinese government, particularly high-ranking officials of the CCP. Therefore, countering negative statements about China, particularly the CCP, became a primary objective on social media.

Although China did not significantly spread disinformation related to Taiwan's political news before the elections, it attempted to project a positive image of itself by influencing public opinion on several political issues to influence the elections. By focusing on issues such as the Anti-ELAB Movement in Hong Kong and Guo Wengui's criticism of the CCP, China sought to shape public opinion in Taiwan in a way that would favor pro-China candidates. For instance, by promoting positive narrative about Chinese government and denouncing Hong Kong protesters, China tried to influence voters to support candidates who were less critical of China's policies towards Taiwan.

Furthermore, the data from the TF-IDF model revealed that the top words regarding Taiwan's political news were Tsai, Wong, and liar, indicating that China attempted to denounce certain candidates. Although there was not a significant trend of an increasing number of tweets before the elections, the efforts to denounce certain candidates through targeted language can still have a notable impact on public opinion. It should be noted that

the analysis of this thesis may have been limited by the social media platform studied, as Twitter may not be as widely used in Taiwan as other social media platforms, such as LINE or Facebook, which could impact the strategies of China’s disinformation campaign.

## 5.1 Retweet

In addition to analyzing the timestamps of tweets, the number of retweets is another interesting indicator of how information spreads on Twitter and how effective the tweet was. The retweet function allows users to share other users’ tweets with their followers, increasing the likelihood of those tweets being seen by others. Instead of analyzed the 8000-tweets sample, I examined the whole data set. During the four-month period before and after the elections, a total of 167,612 tweets were posted by Twitter accounts affiliated with the Chinese government. Out of these tweets, 6,187 had been retweeted, which accounts for approximately 3.7%.

The majority of tweets were only retweeted once. However, there were a small number of tweets that had been retweeted several times. Furthermore, approximately 15 tweets had been retweeted over 20 times. The top tweet had a retweet rate of 89, which is higher than the average retweet rate, 70, of The New York Times in August 2012 (Smith, 2012).

Table 4: Top 15 retweets (Tweet Text only includes the first few sentences of the tweets)

Retweet Count	Category	Tweet Text	Translation
89	Non-politics	#Moomin #snorkmaiden	
53	Cheer-leading	中国是改革开放的社会，改革开放是当代中国发展进步的必由之路，是实现中国梦的必由之路	China is a society of reform and opening up. Reform and opening up is the only way for the development and progress of contemporary China and the only way to realize the Chinese dream.

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Table 4: Top 15 retweets (Tweet Text only includes the first few sentences of the tweets)  
(Continued)

45	Non-politics	#moomins #snufkin	
45	China news	林鄭特首的施政報告為解決香港問題指出了正確的道路，缺遭到一些反對派議員的無理阻撓	Chief Executive Carrie Lam’s policy address pointed out the right path for resolving the Hong Kong issue, but was unreasonably obstructed by some opposition lawmakers.
43	China news	触发香港特区政府修订《逃犯条例》的“陈同佳案”当事人陈同佳即将出狱。	Chen Tongjia, the person involved in the “Chen Tongjia case” that triggered the revision of the Fugitive Offenders Ordinance by the Hong Kong Special Administrative Region Government, is about to be released from prison.
34	Non-politics	騎乗位したいなあ、、、おちんぽはえてないかなあ？笑	I want to cowgirl, I wonder if the penis is growing? Laugh out loud
29	China news	今天，郭文贵之輩仍然口无遮拦攻击祖国，为一己私欲念念不忘崇洋媚外，真是可悲又可叹。	Today, Guo Wengui and his supporters still attacks the motherland with outspoken words, and never forgets to worship foreigners for their own selfish desires, which is really sad and deplorable.
27	China news	#香港 Are they doing this for the sake of the residents? #香港	#HongKong Are they doing this for the sake of the residents? #HongKong
26	Cheer-leading	#香港 今天上午，200多名香港市民自前往尖沙咀，行快活，合唱歌，表自己祖、香港的定立。	# HongKong This morning, more than 200 Hong Kong citizens spontaneously went to the Clock Tower in Tsim Sha Tsui for a flash mob, singing the national anthem, and expressing their firm stance of loving the motherland and Hong Kong.

Continued on next page

Table 4: Top 15 retweets (Tweet Text only includes the first few sentences of the tweets)  
(Continued)

26	Cheer-leading	中国是负责任、有担当的大国 在此次疫情 #肺炎 中的表现令 国际社会称赞。	China is a responsible and responsible major country, and its performance in this #pneu- monia epidemic has been praised by the international community.
24	China news	#郭文贵 最终，随着文贵自 掘的“爆料革命”坟墓在“蚂蚁 帮”成员添砖加瓦下逐渐建成， 或许当其躺入之时一定还死不 瞑目。	In the end, as the tomb of Wen- gui’s ”whistle-blowing revolu- tion” was gradually built up with the help of members of the ”Ant Gang”, perhaps when he lay down, he must still be dead.
22	China news	Miles Guo’s lies can indeed be printed, but even if they are publicized, they are still lies, and the dark can never look di- rectly at the sun.	
21	China news	什么新的建国日，什么郭战 装，什么爆料革命，都是噱 头。只是 #郭文贵 打的马虎 眼。他就是个彻头彻尾的人渣 败类。	The new founding day, the Guo’s clothing, the revolu- tion, are all gimmicks. It’s just #GuoWengui ’s trick. He’s a complete scumbag.
21	China news	#香港 香港警察英籍阿sir定怒 斥反派容和支持香港暴力活。	#HongKong Hong Kong po- lice officer with British citizen- ship, Chong Dingxian,angrily accused opposition lawmakers of conniving and supporting vi- olent activities in Hong Kong.
21	China news	#郭文贵 郭文贵现在也就是吹 吹牛，骗骗小蚂蚁了，每天都 在自我幻想，老郭啊，你醒醒 吧。	#GuoWengui Guo Wengui is just bragging now, deceiv- ing little ants, and fantasizing about himself every day, Guo, wake up.

Upon analyzing the content of the top 15 tweets with the highest retweet rates, I found that they are mostly related to China news and Cheer-leading categories. From the distribution of sample tweets in each category, we can infer that Cheer-leading tweets constitute

only a small portion of tweets. However, two top retweets belong to Cheer-leading. This shows that despite their small number, Cheer-leading tweets are still an essential tool for the Chinese government to shape public opinion internationally.

## 6 Conclusion

Foreign intervention in elections is a complex political issue that involves various strategies and tactics. Electoral intervention is a less costly way to influence the policy-making of a country than military operations. Still, the chances of success greatly vary due to differences in targets. Scholars suggest that powerful regional or global actors are more likely to intervene in foreign elections due to their greater interest in shaping the policy-making of other countries. The most typical methods of electoral intervention include providing campaign funding and assistance to favored sides, making threats or promises on the election of specific candidates, promoting negative news to harm certain candidates directly, and disinformation campaigns. Disinformation campaigns have become a frequent method of propaganda as well as in electoral interventions. The Russian interference in the 2016 U.S. presidential election was a prime example of how an external actor can impact a democracy through social media. Similarly, the Chinese government has been actively spreading disinformation on social media to influence public opinion on political issues in the past few years, particularly in Hong Kong and Taiwan. The CCP aims to shape pro-China narratives and control potential threats outside of China.

This thesis examines China's use of disinformation campaigns and propaganda on social media to interfere with the 2020 presidential election in Taiwan. Although China has a history of meddling in Taiwan's political events through military threats, economic sanctions, and sponsored news media, the evidence suggests that in the 2020 election, China primarily reacted to negative accusations on Twitter rather than proactively confusing audiences or undermining specific candidates. Additionally, China tried to promote a positive narrative to

shift the public opinions towards Chinese government to support the pro-China candidates in the 2000 Taiwan presidential elections.

This thesis utilizes a text analysis of 167,612 tweets from suspended Twitter accounts that Twitter identified as being affiliated with the Chinese government and spreading disinformation in the past. The time-frame of the analysis covers three months around the election, from November 1, 2019, to February 1, 2020. To analyze the data, a sample of 8,000 tweets was manually categorized into six categories based on their context. A TF-IDF model was utilized to gain a deeper understanding of each category. Regression analysis was conducted on the sample data to investigate the potential correlation between China's disinformation campaigns on Twitter and their interference in the 2020 Taiwan presidential election.

The findings suggest that Twitter accounts affiliated with the Chinese government primarily focused on the 2019-2020 Anti-ELAB Movement in Hong Kong and negatively portrayed Wang Liqiang and Taiwan's President, Tsai Ing-Wen. The analysis also suggests that Chinese political news, particularly issues related to Guo Wengui and the Rule of Law Foundation, were more prevalent in the lead-up to the elections. Instead of proactively spreading numerous information to distract audiences in the 2020 Taiwan presidential elections, China primarily focused on shifting public opinions of the Anti-ELAB Movement and Wang Liqiang's claims to promote a positive narrative of Chinese government. However, there was still evidence of China denouncing specific candidates in Taiwan's elections as part of their strategy, which could have had an impact on public opinion.

By analyzing tweets from suspended Twitter accounts affiliated with the Chinese government, this thesis sheds light on China's reactive strategy in Taiwan's election. The issue of Taiwan's political status is a significant concern for China, and the CCP's long-term mission of "reunification" with Taiwan continues to influence China's national security strategy. Although the evidence showed that China did not proactively target Taiwanese audiences for its disinformation campaign during Taiwan's presidential elections in 2020, China's external

disinformation campaigns remain a growing concern in global information warfare.

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