How to Cite:
Kumar, A., & Jha, A. (2022). Repeal of farm laws & end of farmers protest: A Twitter based sentiment analysis using NVivo. *International Journal of Health Sciences*, *6*(S1), 2539–2552.
https://doi.org/10.53730/ijhs.v6nS1.5244

Repeal of Farm Laws & end of Farmers Protest: A Twitter Based Sentiment Analysis using NVivo

Amit Kumar
Research Scholar, School of Communication, GD Goenka University, Gurugram

Amaresh Jha
HoD & Professor, School of Communication, GD Goenka University, Gurugram

***Abstract*---**It was a big day for the farmers, media, and the people living around the three borders of the Indian capital New Delhi on 19th November 2021 when the Prime Minister announced to roll back the three controversial farm laws which sparked the yearlong farmers' protest, making the life of the people in and around the national capital a hell. Throughout these protests, supporters and opponents of the farm laws took to twitter to express themselves. So, the researcher planned to analyze tweets between the day this repeal was announced and the day when farmers eventually ended their protests to understand the sentiments of the users on this rollback. The researcher selected the tweets with the help of seven popular hashtags on this issue. The researcher found after the sentiment analysis that the mood was largely moderately negative to very negative on the repeal of the farm laws.

***Keywords*---**Farm laws, Farmers' Protest, Hashtags, NVIVO, Repeal, Sentimental Analysis, Twitter.

Introduction

Farm Laws, Rollback, and End of Protests

The Prime Minister of India Mr. Narendra Modi announced to roll back the three controversial farm laws on 19th November 2021 on the eve of 'Guru Purab', the biggest festival of the Sikh community. The three acts were: The Farmers' Produce Trade and Commerce (Promotion and Facilitation) Act, The Farmers' (Empowerment and Protection) Agreement of Price Assurance and Farm Services Act, and The Essential Commodities (Amendment) Act. These Acts, according to the government, would have "changed Indian agriculture" and "attracted private investment." The Farmers' (Empowerment and Protection) Agreement on Price

International Journal of Health Sciences ISSN 2550-6978 E-ISSN 2550-696X © 2022.
***Corresponding author**: Kumar, A.; Email: amitchhabra2206@gmail.com*
Manuscript submitted: 18 Nov 2021, Manuscript revised: 09 Feb 2022, Accepted for publication: 27 March 2022

Assurance and Farm Services Act, 2020, was to establish contract farming, in which farmers produce crops in exchange for a mutually negotiated remuneration under contracts with corporate investors.

The Indian government had expected that the farmers would go back to their homes from the Delhi borders soon after the announcement. But it did not happen. The protesting farmers raised six other demands to end their 12-month long stir at the three borders of the national capital of New Delhi. During this, the Farm Laws Repeal bill was cleared by both the houses of the parliament on the 29th of November 2021. After an exchange of letters between the farmers and the government, both parties finally settled. The government agreed to five out of six demands which paved the way for the end of the farmers' protests which started on 26th November 2020. The protesting farmers pledged to celebrate the settlement date i.e. 11th of December as 'Vijay Diwas' i.e. Victory Day. The farmers left the borders of Delhi by the 15th of December.

Although the protests ended and a truce was done but the consensus was not there. Both sides had their own story in favor or against the three repealed laws. The supporters of both sides on Twitter remained active with their tweets. In this paper, the researcher wishes to analyze the sentiments expressed via tweets on the repealing of the farm laws and the end of protests.

The Farmers' protest and role of Twitter

It is established that 22 out of 32 protesting groups formed a political entity called 'Sanyukt Samaj Morcha' to contest the Punjab elections 2022 and the 'Sanyukt Kisan Morcha' was against this idea but it is also unhidden that the government always saw a political backing behind these protests.

The farmers' issues were broadly discussed by the users on Twitter right from the beginning of the sit-in. Many hashtags were made and propagated by supporters and opponents. Many international groups and handles also tweeted in support of the farmers. During this time, farmers announced a tractor rally on 26th January, the Republic day of India. After the Republic day celebrations, India saw daylong violence in New Delhi and the whole world witnessed it on TV channels and social media especially Twitter.

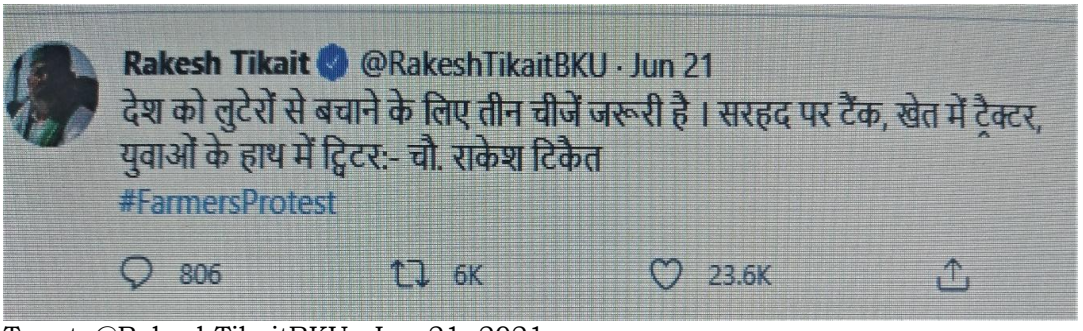
After the violence on 4th February, a toolkit was shared by Climate Change activist Greta Thunberg on Twitter. Many other foreign celebs like Mia Khalifa, Rihanna, and Meena Harris also tweeted for the farmers. The subsequent outpouring of global support led to a one-to-one tussle between the government and Twitter. According to news reports, the Indian government directed Twitter to block 250 accounts and take down 100 tweets which it initially declined but later blocked and restored saying it is committed to the cause of freedom of speech and expression. This led to a 'Twitter war' between the government and the social media giant. The government ultimately came out with a new Intermediary rules 2021 which made the 3rd party social media companies responsible for any objectionable users' content propagated on their platforms.

The whole Twitter saga was an important episode in the 12 months of farmers' protests. The platform made the farmers' protests known to the international

community. It helped foreign groups, celebs and personalities intervene in the protests. This tweet by farm leader Rakesh Tikait on 21st June 2021 makes it clear why Twitter as a platform was so important for the protests. It says,

"देश को लुटेरों से बचाने के लिए तीन चीजें ज़रूरी हैं। सरहद पर टैंक, खेत में ट्रैक्टर, युवाओं के हाथ में ट्विटर"

It means, three things are needed to save the country from the robbers. Tanks on the borders, Tractor in the field and Twitter in the hands of youth.



Tweet: @RakeshTikaitBKU- Jun 21, 2021

It means, three things are needed to save the country from the robbers. Tanks on the borders, Tractor in the field, and Twitter in the hands of youth. Rakesh Tikait is the spokesperson of Bharatiya Kisan Union and he was the most important face of the agitation and was also very active on Twitter during the protests. It proves that Twitter has been an important platform during the farmers' protest so the researcher planned to do the sentiment analysis of the tweets on the repealing of farm laws and the end of farmers' protests.

Tweets, Hashtags, and the Sentiments

On the internet, there is no dearth of social networking sites that allow people to express their views regarding a topic every day which can be helpful for sentiment analysis. Twitter is considered the "Gold Mine of Data". (Narang, A. et al, 2020) Twitter as a social tool is helpful to measure the sentiments of people, be it the death of any personality, a mass protest, epidemic, or natural calamity.

According to the India Today report on 3rd February 2021, it was 'Battle of the Hashtags' after celebs like Rihanna, Mia Khalifa, and Greta Thunberg tweeted for farmers.

The hashtag #FarmersProtest became an overnight rage in India. But before that also several hashtags supporting the farmers' protests were trending on social media those days. Most trending hashtags were #FarmersProtest, #standwithfarmerschallenge, #SpeakUpForFarmers, #iamwithfarmers, #kisanektazindabaad, #tractor2twitter, #isupportfarmers.

According to the Tribune News service report of 4th December 2020, BKU (Ekta Ugrahan) posted on its page: "It is good that hashtags supporting farmers are trending on social media, but our target should also be clearer in these hashtags." The report further said Facebook had been the medium of choice to issue appeals to pro-farmer people to join Twitter and respond to "attacks against the Punjabi farmers' agitation that are coming mainly through tweets".

As per the same report, farm union leaders claimed that social media was much needed for public outreach. Moreover, youth were using the platform to counter the negative narratives being run by the national media. Many more hashtags were also trending for the protests and against the ruling party BJP like #FarmersAreIndia, #FarmersStandingFirm, #BJPdestroysDemocracy, #ModiPlanningFarmersGenocide, #AntiNationalBollywood, #FarmersLifeMatter etc.

So, throughout the farmers' protests, hashtags on Twitter became an important aspect of digital interaction which helped categorize posts, increase engagement, attract followers and build required emotions. Hashtags helped in identifying the relevance by identifying the degree of activeness to a particular context or incident and thus gave hints to the reader's inferential process. Using hashtags on Twitter helped users join conversations, connect with what's happening, and become discoverable. It also linked a Tweet to all other Tweets with the same hashtag. This is the reason the researcher planned to analyze the tweets with some popular hashtags on farms laws roll back and end of farmers' protests.

Review of literature

Twitter: 'Gold Mine of users' data'
"Social media gives public a platform to share in real-time their experiences, views, information, or to express their opinions on specific subjects, political issues, or social events. Facebook and Twitter, the most popular social media platforms with huge user bases have remained instrumental in this regard" (Gul et al., 2016). Twitter.com is a popular microblogging website. Tweets are generally used to express a tweeter's sentiment on a subject or an issue. Some organizations are also engaged in Twitter-based surveys for studying sentiment on a particular subject. The challenge is to collect all such significant data, identify and encapsulate the overall emotion on a topic. "Twitter as a social tool is helpful to gauge the emotions of people, be it the death of any personality, natural calamity or activities of political figures during different political processes" (Gul et al., 2018).

Twitter is a popular microblogging service that is used to read and write millions of short messages on any topic within a 280 character limit. Popular or influential users tweet their status and are retweeted, mentioned, or replied to by their audience. Sentiment analysis of the tweets by popular users and their audience reveals whether the audience is favorable to popular users. Twitter messages reflect the landscape of sentiment toward its most popular users. (Bao, Y.; Lee, H. 2012)

A large number of tweets on Twitter are about politics, so the political leaders want to make use of it and connect to the general public. People express their views regarding various government policies and decisions on the platform. So, opinion mining about policies and politics-related issues can be used to understand the public sentiments. This is again helpful for the masses at large, news organizations, media, surveyors, and politicians.

Sentiment Analysis

People on the internet express their opinions, views, and insights about numerous topics on various social networking sites and other sites, these sites can be used to mine data, which act as a source for sentiment analysis.

Sentiment Analysis refers to the process that helps an organization extract information about how their clientele or any group of people is reacting to a particular product, service, or a newly launched policy. (Narang, A. et al, 2020)

Sentiment Analysis indicates opinion mining through texts to methodically recognize, extract, evaluate, and examine emotional states and subjective information. As it is known on Twitter, users can share their opinions in the form of tweets within 280 characters.

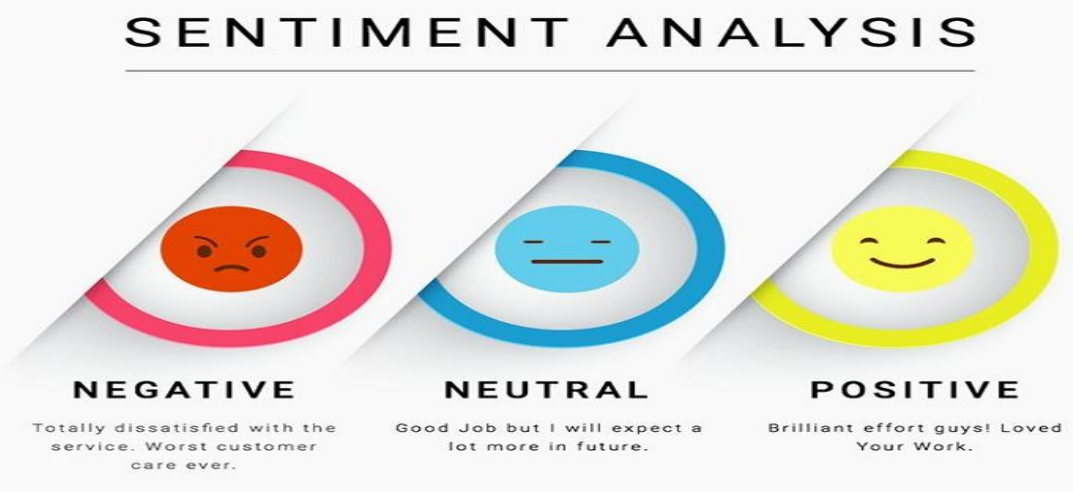


Figure 1: Classes used in Sentimental Analysis (Symeon Symeonidis, 2018)

The above picture shows the three classes positive, negative and neutral. This leads to people abridging their statements by using slang, abbreviations, emoticons, etc. Along with this, people also use sarcastic and polysemy language in their tweets. Hence it is common knowledge that Twitter language is unstructured. To retrieve meaningful information from tweets, sentiment analysis is used which gives results in terms of the total number of tweets that are positive, negative, and neutral. The results are obtained using various classifiers and the most accurate classifier is taken into consideration. These results can be effectively utilized for various purposes including analyzing the general reaction of citizens towards a newly drafted policy or a recently launched act. (Narang, A. et al, 2020)

Sentiment analysis is also known as opinion mining and/or subjectivity analysis. It is used to extract opinions, sentiments, and subjectivity in unstructured text, that is, to identify whether the expressions indicate positive (favorable) or negative (unfavorable) opinions toward the subject (Pang & Lee, 2008). Sentiment analysis normally deals with detecting polarity, i.e., only positive or negative sentiment, rather than discrete emotions (e.g., happiness, sadness).

Microblogging social networks have become one of the most useful ways for people to express personal opinions and sentiments. Sentiment analysis aims to automatically analyze the user-generated data to discover the sentiments of various users toward products, services, and events. Sentiment analysis is essential for analyzing individual behavior and can be used in several applications, such as forecasting political election results, mental health care, review analysis, and product analysis. (Liu, B. et al, 2020)

Sentiment analysis is an opinion mining process, in which computational analysis and categorization of the opinion of a piece of text are done to obtain an unbiased understanding of the writer's opinion towards any specific topic. (Narang, A. et al, 2020). Sentiment analysis is a technique for determining people's feelings as conveyed in the form of opinions, sentiments, and expressions expressed in the text (Sharma, 2017)

Theoretical Foundation

Appraisal theory, (Magda Arnold)

Appraisal theory is the theory in psychology that emotions are extracted from our evaluations (appraisals or estimates) of events that cause specific reactions in different people. Essentially, our appraisal of a situation causes an emotional or affective, response that is going to be based on that appraisal. Appraisal theories of emotion are theories that state that emotions result from people's interpretations and explanations of their circumstances even in the absence of physiological arousal (Aronson, 2005)

Rhetorical structure theory, (William Mann, Sandra Thompson, Christian M.I.M. Matthiessen, and others)

RST is a theory of text organization that describes relations that hold between parts of the text. The theory was developed as part of studies of computer-based text generation.

Diffusion of Innovation Theory **(E.M. Rogers)**
DOI Theory is one of the oldest social science theories. It originated in communication to explain how, over time, an idea or product gains momentum and diffuses (or spreads) through a specific population or social system. The result of this diffusion is that people, as part of a social system, adopt a new idea, behavior, or product. Adoption means that a person does something different than what they had previously (i.e., purchase or use a new product, acquire and perform a new behavior, etc.). The key to adoption is that the person must perceive the idea, behavior, or product as new or innovative. It is through this that diffusion is possible.

Rumor Transmission Theory (HT Buckner)

Buckner's theory on rumor transmission indicates the accuracy and speed of rumor passing were affected by the structure of the network and the mental sets of individual actors in the network.

Agenda setting theory (Dr. Max McCombs and Dr. Donald Shaw)
The influence of media affects the presentation of the reports and issues made in the news that affects the public mind.

Social Exchange Theory (George Homans)

Social exchange theory states that human beings form close relationships through self-disclosure.

Conspiracy Theory

Wikipedia says a conspiracy theory is an explanation for an event or situation that invokes a conspiracy by sinister and powerful groups, often political in motivation when other explanations are more probable. The term has a negative connotation, implying that the appeal to a conspiracy is based on prejudice or insufficient evidence. A conspiracy theory is not the same as a conspiracy; instead, it refers to a hypothesized conspiracy with specific characteristics, such as an opposition to the mainstream consensus among those people (scientists or historians) who are qualified to evaluate its accuracy.

Uncertainty Theory, (Werner Heisenberg)

Uncertainty theory is a branch of mathematics based on normality, monotonicity, self-duality, and countable subadditivity axioms. The goal of uncertainty theory is to study the behavior of uncertain phenomena such as fuzziness and randomness.

Research Methodology

The study was conducted on the tweets related to Farmers' protests. There were dozens of hashtags that users (Pro or against farm laws) propagated through Twitter to organize the supporters on the platform. During this study, the researcher found that these seven hashtags were most used while expressing themselves about the farm laws repeal followed by the end of farmers' protests.

Table 1
Number of Tweets captures using NCapture

HASHTAGS	No of Tweets gathers via NCapture
1 : #FarmersProtest	23745
2 : #FarmersProtestEnds	127
3 : #FarmersDefeatedArrogance	97
4 : #FarmersWon	448
5 : #FarmLaws	9914
6 : #FarmLawsRepealed	2500
7 : #KisanoKiJeet	26

Hashtags #FarmersProtest, #FarmLawsRepealed, #FarmLaws, FarmersProtestEnds, #FarmersWon, FarmersDefeated Arrogance & #KisanoKiJeet were searched and tweets were collected from Twitter from 19th November to 20th December 2021. The study was conducted on tweets. The tweets extraction and analysis of the data have been done with the help of Quantitative data analysis software NVIVO.

NVivo is important software to analyze unstructured data. It helps in researching to organize, analyze and visualize qualitative data so that new insights and better conclusions are achieved. Tweets from Twitter were extracted with the help of the NCapture Plugin. NCapture helps in rapidly and effortlessly capturing content like web pages, PDFs, Excel sheets, Twitter tweets, and Facebook posts and import into NVIVO 12 (Trail Version) for Windows.

Data Analysis

The extracted data were analyzed by the qualitative software tool NVivo. NVivo 12 (Trial Version) of the software was used and several parameters were identified. The data set revealed that the sentiments of a majority of users using these hashtags were moderately negative followed by very negative.

Themes identified

NVivo 12 enables automated “topic modeling” or the automated identification of themes from text sets and text-based datasets. NVivo enables in extracting themes out of the topic and tweets text extracted with the hashtags #FarmersProtest, #FarmLawsRepealed, #FarmLaws, FarmersProtestEnds, #FarmersWon, FarmersDefeated Arrogance & #KisanoKiJeet. The Tables below represent the major themes that were extracted by using these hashtags.

Table 2,3,4
Major themes that were extracted by using these hashtags

HASHTAGS	A : blatant disregard	B : bye	C : farmers	D : farmers issues
1 : #FarmersProtest	0	802	1996	843
2 : #FarmersProtestEnds	0	0	0	0
3 : #FarmersDefeatedArrogance	0	0	2	0
4 : #FarmersWon	0	0	33	0
5 : #FarmLaws	802	0	528	47
6 : #FarmLawsRepealed	0	0	107	2
7 : #KisanoKiJeet			11	2

HASHTAGS	E : hasty repeal	F : ignorance	G : issues	H : laws
1 : #FarmersProtest	0	841	859	87
2 : #FarmersProtestEnds	0	0	0	0

3 : #FarmersDefeatedArrogance	0	0	0	0
4 : #FarmersWon	0	0	1	0
5 : #FarmLaws	802	0	61	244
6 : #FarmLawsRepealed	0	0	2	100
7 : #KisanoKiJeet	0	0	2	7

HASHTAGS	I : next episode	J : policies	K : repeal	L : self-serving policies
1 : #FarmersProtest	0	16	1	0
2 : #FarmersProtestEnds	0	0	0	0
3 : #FarmersDefeatedArrogance	0	0	0	0
4 : #FarmersWon	0	0	0	0
5 : #FarmLaws	777	811	803	802
6 : #FarmLawsRepealed	0	3	4	0
7 : #KisanoKiJeet		1	2	

It can be seen from the thematic analysis, the top themes identified are revolving around the farm laws, the hasty repeal, farmers' issues, and blatant disregard aspect of the issue.

Sentiment analysis

In recent years a lot of work has been done in the field of "Sentiment Analysis on Twitter by 62 researchers. (Sharma and Gupta, 2021). In its early stage, it was intended for binary classification which assigns opinions or reviews to bipolar classes such as positive or negative only but NVivo 12 allows to extract of up to four sentiments as seen in the mentioned graph (Gupta et al, 2020; Kharde and Sonawane, 2016). There are automated ways to extract sentiment from the written text as well as from tweets that were posted on Twitter. With sentiment analysis techniques, we can automatically analyze a large amount of available data and extract opinions that may help both customers and organizations to achieve their goals. This is one of the reasons why sentiment analysis has been spread in popularity from computer science to management and social sciences (Farhadloo and Rolland, 2016).

Table 5
Sentiment analysis of the seven selected hashtags- Twitter Search ~ Twitter

HASHTAGS	A : Very negative	B : Moderately negative	C : Moderately positive	D : Very positive
1 : #FarmersProtest	3499	15220	1512	521
2 : #FarmersProtestEnds	0	0	2	0
3 : #FarmersDefeatedArrogance	2	66	6	1
4 : #FarmersWon	74	107	92	72
5 : #FarmLaws	1343	4396	1300	107

6 : #FarmLawsRepealed	73	425	78	35
7 : #KisanoKiJeet	0	0	4	1
TOTAL	4991	20214	2994	737

1: Very negative 4991 2: Moderately negative 20214 3: Moderately positive 2994 4: Very positive 737

Table represents the sentiment analysis of people based on tweets. Most of the tweets are moderately negative followed by very negative. It is clearly visible that only a few tweets are very positive or moderately positive. Overall, it is visible that based on these seven hashtags the twitter users are showing moderately negative to negative sentiments about the farm laws repeal.

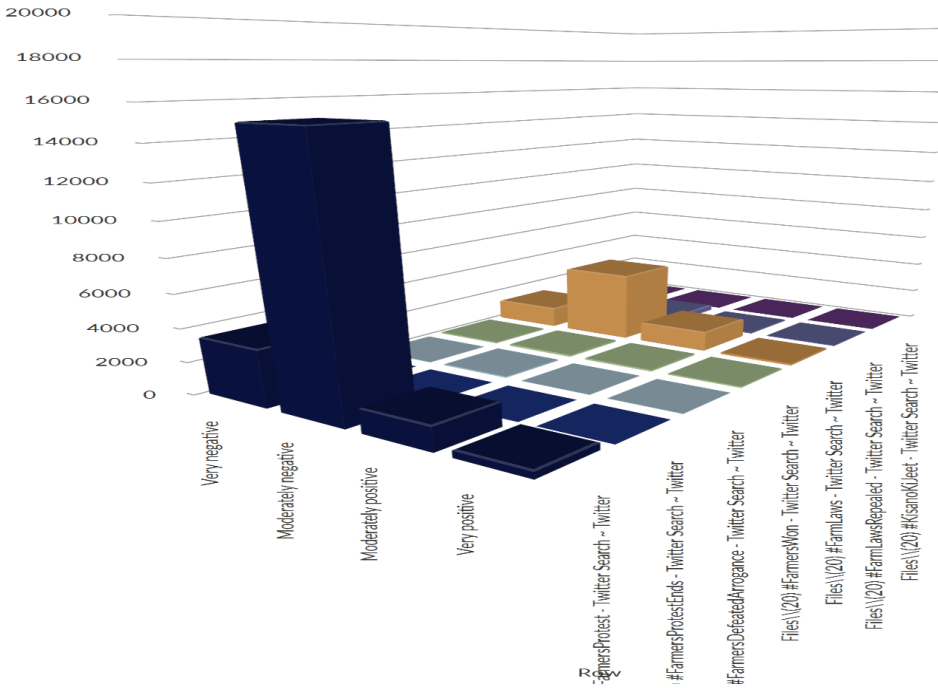


Figure 2. Sentiment Analysis in numbers from Very Negative to Very Positive

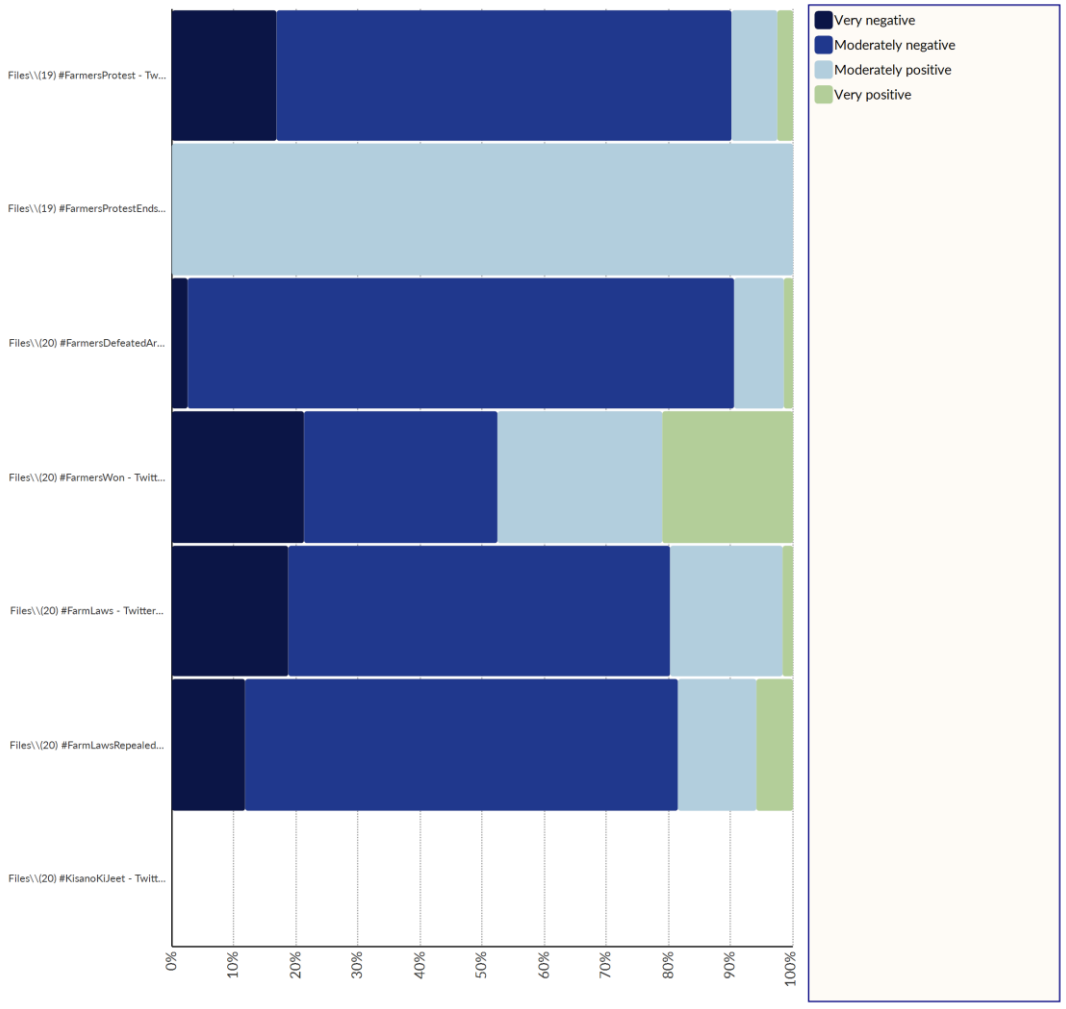


Figure 3. Sentiment Analysis in percentage from Very Negative to Very Positive

Word Map and Word Cloud

A word cloud is a word frequency query used to generate a word cloud and help us find commonly used words and phrases in the samples of the study. This is useful as an end product and a good tool to help us learn about what is going on with our data. This represents the key and main areas of discussion and this is quite evident from the picture below that all the tweets were revolving around “FarmersProtest” and “FarmLaws”. The hashtag #FarmersProtest is at the center and is surrounded by words mostly related to the farmers’ issues, protest, and laws, and their repealing by the government.

Figure 4. Word Cloud showing '#farmersprotest' at the center

Discussion

In the immediate term, the repeal can be looked at as if the government was on the wrong path and against popular sentiments, although it claims the contrary. This is the second rollback by the ruling NDA-2 government- in 2015 it rolled back land acquisition reforms. Given that it took the government a year to realize the socio-political costs, the repeal also exposes the weakened political feedback mechanism of the BJP.

For the Prime Minister, although he and his government tactfully retreated the laws, he has always suggested that the three laws were in the interests of farmers and that his decision to repeal them was in the national interest. The PM was balancing his political posture that has thrived on the image of strong and decisive leadership.

The paper examined the theoretical background of Twitter as a medium of expression by the users and the sentiment analysis through tweets using hashtags. It also examined the theories related to this study. Both the negative and positive sentiments were examined in this paper through tweets on Twitter. Farm Laws as the government says were for the benefit of the farmers and the farmers felt the other way around but the way these were repealed was also not taken by the Twitter users in a moderately negative way.

NVIVO is a qualitative research tool that is used to check respondent frequency and sentiments. We analyzed people's opinions about the repealing of the farm laws using hashtags on Twitter. The tweets were taken between the period 19th November 2019 to 20th December 2020, people's sentiments were found to be moderately negative followed by very negative.

Conclusion

There may be some deficiencies in the exact design and mechanism of the reforms proposed in the three farm laws, but most advocates of agricultural reform would agree that they were in the right direction. That the government chose to push these reforms through its own set of consultations left many stakeholders feeling left out, and created a backlash. The repeal underlines that any future attempts to reform the rural agricultural economy would require a much wider consultation, not only for better design of reforms but for wider acceptance. The repeal would leave the government hesitant about pursuing these reforms in stealth mode again. Following the sentiments on Twitter can be a big help here also.

References

Liu, B. (2012). Sentiment analysis and opinion mining. *Synthesis lectures on human language technologies*, *5*(1), 1-167.

Paul, D., Li, F., Teja, M. K., Yu, X., & Frost, R. (2017, August). Compass: Spatio temporal sentiment analysis of US election what twitter says!. In *Proceedings of the 23rd ACM SIGKDD international conference on knowledge discovery and data mining* (pp. 1585-1594).

Farhadloo, M., & Rolland, E. (2016). Fundamentals of sentiment analysis and its applications. *Springer International Publishing Switzerland.* Doi:10.1007/978_3_319_30319_2_1

Giachanou, A., & Crestani, F. (2016). Like it or not: A survey of twitter sentiment analysis methods. *ACM Computing Surveys (CSUR)*, *49*(2), 1-41.

Gul, S., Shah, T.A., Ahad, M., Mubashir, M., Ahmad, S., Gul, M., Sheikh, S. (2018).Twitter sentiments related to natural calamities: Analysing tweets related to the Jammu and Kashmir floods of 2014. *The Electronic Library*. 36(1), 38-54. doi: 10.1108/EL–12–2015–0244

Gupta, S., Sharma, J., Najm, M., & Sharma, S. (2020).Media Exaggeration And Information Credibility: Qualitative Analysis Of Fear Generation For Covid-19 Using Nvivo. *Journal of Content Community and Communication,* 12(6). 14-20

Kouloumpis, E., Wilson, T., & Moore, J. (2011). Twitter sentiment analysis: The good the bad and the omg!. In *Fifth International AAAI conference on weblogs and social media*.

Liu, B., Tang, S., Sun, X., Chen, Q., Cao, J., Luo, J., & Zhao, S. (2020). Context-aware social media user sentiment analysis. *Tsinghua Science and Technology*, *25*(4), 528-541.

Neogi, A. S., Garg, K. A., Mishra, R. K., & Dwivedi, Y. K. (2021). Sentiment analysis and classification of Indian farmers' protest using twitter data. *International Journal of Information Management Data Insights*, *1*(2), 100019.

Pang, B., & Lee, L. (2008). Opinion mining and sentiment analysis. *Foundations and Trends in Information Retrieval,* 2(1–2), 1–135.

Ye, Q., Li, Y., & Zhang, Y. (2005). Semantic-Oriented sentiment classification for Chinese product reviews: An experimental study of book and cell phone reviews. *Tsinghua Science and Technology*, *10*(S1), 797-802.

Reyes-Menendez, A., Saura, J. R., & Alvarez-Alonso, C. (2018). Understanding# WorldEnvironmentDay user opinions in Twitter: A topic-based sentiment

analysis approach. *International journal of environmental research and public health*, *15*(11), 2537.

Sarlan, A., Nadam, C., & Basri, S. (2014). Twitter sentiment analysis. In *Proceedings of the 6th International conference on Information Technology and Multimedia* (pp. 212-216). IEEE.

Sharma, M. (2017). Twitter Sentiment Analysis on Demonetization an Initiative Government of India. *International Journal of Recent Trends in Engineering and Research,* 3(4), 486–490. https://doi.org/10.23883/ijrter.2017.3173.vs93y

Sharma, R., & Gupta, S. (2021). BHARAT TOWARDS ATMANIRBHARTA: A TWITTER BASED ANALYSIS USING NVIVO. *Journal of Content, Community and Communication*, 58-65.

Syamili, C., & Rekha, R.V., (2021). Twitter and Social Movement: An Analysis of Tweets in Response to the #metoo Challenge. *International Journal of Media and Information Literacy*. 6(1), 231-238. doi: 10.13187/ijmil.2021.1.231

Anand, T., Singh, V., Bali, B., Sahoo, B. M., Shivhare, B. D., & Gupta, A. D. (2020, June). Survey Paper: Sentiment Analysis for Major Government Decisions. In *2020 International Conference on Intelligent Engineering and Management (ICIEM)* (pp. 104-109). IEEE.

Zhai, Z., Xu, H., & Jia, P. (2010). An empirical study of unsupervised sentiment classification of Chinese reviews. *Tsinghua Science and Technology*, *15*(6), 702-708.

5 things you need to know about Sentiment Analysis and Classification from: https://www.kdnuggets.com/2018/03/5-things-sentiment-analysis-classification.html