

An Assessment of the Digitalization of the Electoral Process in India and its Impact on Voter Turnout

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The digital technology has significantly enhanced the convenience of communicating with the society. Technology platforms like social media, website blogs, and block chain have helped in furthering fast and effective interaction among the various segments of the society. While it is true that digital technologies can be effectively used for enhancing communication with voters in an election, there are ambiguities about the relative effectiveness of different types of digital interventions. It is against this context that we decided to conduct the study reported in this paper. In the first part of our research we identified common patterns of using digital platforms by international societies in promoting their election campaigns. In the second part of our research we chose a sample of 154 respondents eligible for voting in India and collected data from them using five-point Likert scale on their preferences for the use of digital platforms. These data were analyzed using Partial Least Squares (PLS) based Structural Equation Modeling (SEM) to test our research model. While digitalization of decentralized polling booths, e-mail communications, social media exposure, telecommunications emerged as significant factors for improving voter turn outs, duration of social media usage, discussion forums, voters' portal and image sharing have not been found to be effective.

Key Words: Digitalization, Digital Campaigns, Electoral Participation, India, Social Media

INTRODUCTION

The common man is usually perplexed with a number of questions on any election day to select his constituency's representative. It is similar to research excerpts describing a decision conflict hovering consumers in selecting a specific product given varieties available in the market (Dhar, 1996). It is here that the individual conscientiousness of the voter and his state of a mind that forces him to look at the range of choices

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available before going to vote. Voting, is an opportunity to create a social change, has in recent times, become a ritualistic exercise that has consecutively under-delivered in evolving a democratic solution. The turnouts and irrational voting, has always been recognized as a threat to democracy with solutions drawn from different viewpoints in marketplace and society (Barzel and Silberberg, 1973; and Jayal, 2007). One among the many reasons for having a low turnout in elections are due to the fact that the voting system is prone to have large constraints in encouraging participation in the process for which different approaches are prescribed by researchers to practitioners (Manikandan, Anandaraju and Karthikeyan, 2020). Modern methods of behavioral interventions too have often been used by social scientists in helping the first time voters register their names in the electoral rolls. Further the experiments and nudges are used by public administration as an exercise to improve the voter turnouts (Gill, 2006; Hansen and Tummers, 2020).

The use of social media platforms by the election commission (ECI) for creating awareness in voter participation during 2016 assembly elections in certain states has encouraged collaborations of institutions within to improve turnouts (Sharma and Parma, 2016). Good turnouts offer a good fit with democratic norms of equality, rights and political obligation. The continuous efforts of Election Commission of India (ECI) in improving the public participation on elections with voter outreach programs and policy initiatives of the electoral body has increased the percentage of voters between the two general elections of 2014 and 2019 respectively (Katju, 2020). The digital campaigns using social media by international cities has helped in making conventional moves for improving percentage turnouts of voters making large impact on influencing electoral campaigns assessing effectiveness of people's choice in voting (Gomez, 2010; Nasr, 2020). This paper brings out these literature in brief on positive steps taken by administration to adopt measures in improving voter turnout and the effect of using social media in technology platforms as an impact for improving turnouts in commoners to vote during elections.

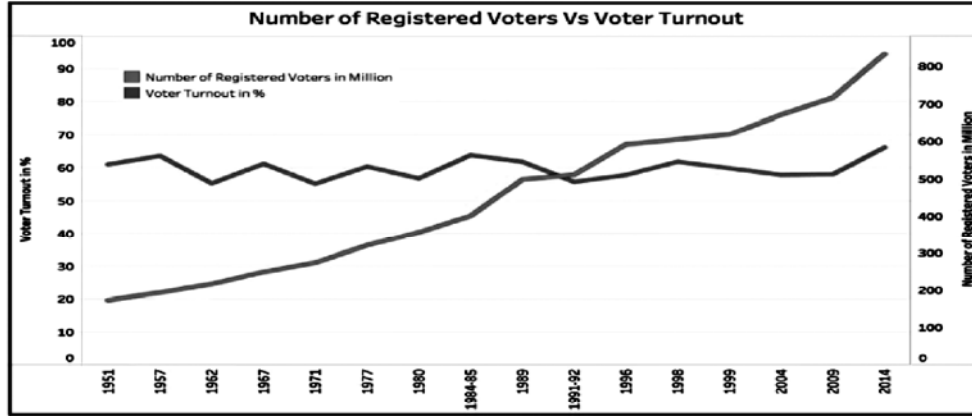
INITIATIVES FOR IMPROVING VOTER COUNTS

A detailed graph depicting the number of voters versus the percentage turnouts of voters right from 1951 till 2014 is provided in Figure 1. This graph provides information on number of registered voters versus the percentage turnouts on voters and gives an opportunity for academicians to discuss the ways and means to improve voter turnouts.

2009 when initiatives were undertaken by ECI to improve voter percentage for a better democratic evolution. These measures are enlisted below.

1. During 2009 general elections, the commission had reviewed overall measures and steps taken for creating awareness campaigns to increase the voting percentages from 50-51 to 75-80 respectively through discount offers in hotels for voting in elections by displaying ink-marked fingers.

Figure 1: Number of Registered Voters Vs. Voter Turnout



Note: Reference: Report on ECI New Initiative 2015, Election Commission of India Nirvachan Sadan, Ashoka Road, New Delhi – 110001.

2. During 2009 elections, offering continuous discourses to voters, civil society groups and media by service organizations like Systematic Voter Education and Electoral Participation Wing (SVEEW) elaborating the culture and need for improving electoral participation.
3. During 2009 elections, introducing initiatives like having photograph of candidates on ballot paper, amending elections symbols, having NOTA (none of the above), NERAP (national electoral roll purification and authentication program), National voters services' portal, Matdata for voters, Matdaan for campaigns, Pre-Certification of political advertisements, Intensive Social Media Campaign, Allotment of Broadcast or Telecast time to political parties during election, Election Related News Management System. These measures did make improvements in number of registrations, but did not show any growth in voter turnouts. The picture graph in Figure 1 also shows the percentage improvements in number of registered voters and their turnouts in national general elections across different timelines.
4. Established in 2010, the Systematic Voters' Education and Electoral Participation (SVEEP), a program that makes different modes and media specially designed to educate electors, eligible citizens and voters about electoral process so that their awareness, involvement and participation in the electoral processes can be increased.
5. The adoption of technology through introduction of Information Technology and E-Media, e-Governance initiatives by Election Commission of India in 2010 enabled seamless operations across all the offices in the country for

effective usage of digital platforms like—Social Media, Mobile apps, and portals for campaigning. This has helped in widely improving voter turnouts.

6. Campaigns through social media has made huge impacts in reaching out to young generations on voter awareness, implications of model code of conduct, dos and don'ts of candidates, citizen interaction, sharing of information on voter enrollment procedures, and application for such enrollments. In total, the Social Networking Management Cell (SNMC) at ECI, would help update and analyse social media trends, reporting, moderation and interventions of citizen engagement by designing relevant contests.
7. Efforts by ECI in 2013 on encouraging Anganwadi workers to support Women and child development department staff in spreading messages on the importance of voting. This was followed with appointment of "Campus ambassadors" in Madhya Pradesh to ensure college-goers to vote in assembly elections (Sirothia, 2013).
8. Critical decisions of ECI in 2014 to adopt a proper election management recognizing voter education to improve voter participation in elections. In doing so, the commission also involved celebrities from different streams like sports and state personalities to spread the message of importance of voting.
9. Campaigns conducted by ECI in 2016 on social media platforms such as Facebook encouraging people in rural areas to register for voting in assembly elections of Uttar Pradesh, Punjab, Goa, Manipur, and Uttarkhand enhanced the citizen involvement in politics.
10. The efforts of ECI in 2016 enrolling transgender communities on the voters' list as "third genders" for Kolkata improved the turnouts in West Bengal.
11. The efforts of implementing SVEEP in late 2017 has almost decentralized the work on creating campaigns to vote giving scope for district administration to choose their icons to spread the message of voting.

Apart from the initiatives adopted by ECI, the measures undertaken by social activists on specific social issues like action against corrupt practices in government and harassment against women in general, has improved greater involvement of people participation in voting exercise for general elections in both 2014 and 2019 respectively (Katju, 2020).

VOTER TURNOUT – PARABLES LINKED ON SOCIAL MEDIA

The elections in US during 2012 exhibited the active presence of social media and its network on creating a significant impact on turnouts of voters. The campaigns of "get out the vote", "today is election day" and "I voted" with pictures of self and peers who

have voted almost increased the turnaround in percentages (Bond, Fariss, Jones, Kramer, Marlow, Settle, and Fowler, 2012). The impact of involving the youth has created impressions in social media to adore them as frequent influencers in society (Paliszkievicz and Madra-Sawicka, 2016). The influences and perceptions of an image created and controlled by people through social media is often termed “impression management” by social scientists in research literature (Drory and Zaidman, 2007; Van Dijck, 2013). The spread of messages on current affairs of politics in national news channels often creates a larger awareness among youth in the present day context as a paradigm shift in use of online portals for information sharing (Rajvanshi, 2016). The news information published in social media has gathered a higher reliability due to the fact that youth have a freedom to express issues in such forums. In addition, the social movements undertaken by activists too have mobilized people more towards increasing voter participation or for sharing information among individual and communities on issues (Davis, 2010; Nasr, 2020).

“NO CHOICE” – AN EXCEPTION TO VOTING

The constitution of India, has given its legal provisions for citizens not to vote but can exercise their franchise using “None of the able (NOTA)” symbol as per Article 19(1). Elections often has created intriguing anomalies through continuous online-activism conceptualized as “Hegemony” in social media creating a no-choice among candidates in elections (Duile, 2020). However, in countering this situations, it is observed from literature that political organizations have in the past made careful choices of having suitable candidates who can stand for elections as their “representatives” (Hiremath, 2017). It is only when people who arrive to vote, vote in majority, can values and principles of democracy be upheld by these solemnized institutions.

PROVIDING TECHNOLOGY BASED SOLUTIONS – A SELECT STRATEGY - WAY FORWARD

The technology has made its efforts in mobilizing internet and other lead platforms for creating a set of hypothesis on relative use of social media for social interactions in society (Vedel, 2003; and Thomas and Streib, 2005). Demonstrated use of technology has helped creation of outreach programs and social action plans using different media platforms influencing societies against an incumbent political organization posed for the elections (Launius, 2003). The peaks of idealism and troughs of disillusionment too has engaged political organizations to use Internet and Communication Technology (ICT) for e-campaigns on influencing individuals in society (Hill and Hughes, 1998; and Bimber, 2003). For campaigns such as general elections, alternate methods to technology such as creating direct appeals to potential supporters who negate strong media effect has been enabled for citizens to better inform society on the outcome of elections through a networked society (Trippi, 2004). For digital platforms users on the other hand, portals like collective blogs, video-sharing sites and applications,

make citizens more independent from other media thereby enabling contacts between individuals in sharing common interests, and coordinating joint action plans for making the learning more cross-national (Kluver, 2007; and Lilleker, Pack and Jackson, 2010).

The use of technology and hypermedia was found to be effective in campaigns undertaken by former French leader Nicholas Sarkozy and Segolene Royal where the publication of an online manifesto endorsed her presidential bid along with her bottom up style of communication for the society. This approach of adopting online communication, video-telecasted services were also influential for the Obamas in their presidential race during 2008 (Vedel and Koc-Michalska, 2009). In addition, the Obama's campaigners proactively fed news information through online portals such as twitter to their supporters on his campaign details and whom he would be having as his running mate through MyBO community groups. These details helped provide insights, support and suggestions in policy making decisions for him (Lilleker and Vedel, 2013).

For India, where the improvements in technology prompted the election commission (ECI) to use an online voting method (proposed in 2013) for the first time in improving voter turnouts by providing security passwords to voters with confirmations on successful voting to their preferred candidate (Agarwal and Pandey, 2013). A speeder resolution to the process of voting was envisaged later through the use of Electronic Voting Machines (EVMs) to trace votes recorded as is presently available mapped to Aadhar making it an Aadhar-based voting system (Kasliwal, Gadekar, Lavadkar, Thorat and Deshmukh, 2017).

Using internet and digital media today has become an accepted norm and a strategic tool in assessing the success rates of candidates in elections. Promises made by prominent leaders across international cities use e-mail communications as a medium of campaign during polls (Epstein and Broxmeyer, 2020). The technology enabled solutions for social action plans in improving voter counts has involved digital platforms such as twitter in political campaigns to mobilize databases, use data and analytics, market intelligence to predict outcome of elections or in changing voter behaviors during communication of poll promises (Singh, Dwivedi, Kahlon, Pathania and Sawhney, 2020).

On the other hand, past research literatures do observe effects of a visibly low turnout in elections indicating an unhealthy evolution of a civic society leading to a bias in candidates getting themselves elected as people's representatives (Rubenson, Blais, Fournier, Gidengil and Nevitte, 2004). A number of associated factors have also been quoted in literatures for low turnout vis-à-vis pattern of power and wealth, campaign contributions, community participations, lobbying and running for office, people abstaining from voting (Lijphart, 2018). This paper brings out significant factors observed by respondents as influential in improving the turnouts for voting.

FACTORS INFLUENCING DIGITAL TECHNOLOGY TO DRIVE VOTER TURNOUT

Research literatures describing the influence of technology in election campaigns and its turnout on voters across the world have observed association of specific factors that contribute to improve voter turnouts using technology enabled tools. A similar approach to measure them in Indian scenario has kindled the interest in pursuing the present study. The critical factors observed from different research literatures include digitalization of decentralized polling booths, e-mail updates, social media exposure, effectiveness of NOTA and telecom media.

Digitalization of Decentralized Polling Booth: Decentralizing polling booths have significantly improved turnouts on voters during elections in international cities. The physical presence of voters in today's context is slowly being decentralized and replaced by an Aadhaar-based voting system with block-chain technology. This system helps youth and millennials who are mostly out of town or in far reaching places to exercise their franchise from anywhere (Mishra, Bajpai and Mishra, 2020). The variables assessed in this factors includes online voting system and voting online at polling booths.

Email Updates: With over 300 million usage of smartphones in a country like India, e-mail communications have become common in society to transcend ideas within societies. Political organizations too have stepped up in recent times to communicate promises and development agendas through e-mails. Research literatures based on international cities reveal the involvement of e-mail communications help influence and improve turnouts (Epstein and Broxmeyer, 2020). The variables assessed for this construct includes creating awareness through digital media and campaigns through e-mail communications.

Social Media Exposure: The evolution of internet has developed different forums in its portals for discussion of issues that have national and social interests. The opinions driven from these portals create a positive impact on its users so as to ensure an effect on improving voting percentages. In today's context of using technology, the data driven from these portals and its analysis helps administrators identify methods to improve voter turnouts (Nasr, 2020; and Singh, Dwivedi, Kahlon, Pathania, and Sawhney, 2020). The variables assessed for this construct includes different platforms and number of applications used in such platforms.

NOTA Effectiveness: Amongst several notable reasons for low turnout in elections, the most important and a significant reason was the absence of voters or abstaining of voter on the polling day. The other few reasons for having an increased percentage of no-choice evolves from a cognizance of projections done by a candidate's political organization as representation of people with no other alternatives available. Research literatures reveal an existence of this type of situation where administrators have included "no-choice" as an alternative option has been significantly influencing voters

to exercise their franchise thereby improving turnouts. Interestingly the choice of “NOTA” also enables organizers and participants in the electoral process to serious cognizance of a lack in people’s representation for the locality (Duile, 2020). The variables assessed in testing the effectiveness of NOTA includes effectiveness of the option in voicing public opinion, abstaining from choice of candidates, and the motivation to vote for NOTA.

Telecom Media: The campaigns undertaken by organizers and participants using ICT encourage public to exercise their franchise. The campaigns in TV and radio during early 90s and the millennium on rural areas have become effective for improving the turnouts. The frequent table discussion on issues pertaining to elections and governance has influenced in increasing voter turnouts. Research literatures on using telecommunication as a tool for improving turnouts in voters has found them to be significant in the exercise (Mishra, Bajpai and Mishra, 2020). The variables assessed for this construct includes no effect upon electoral campaigns, advertisements for voting encourages participation and campaigns (governmental) for voting.

The other constructs and variables used in our study are enlisted in Table 1.

Constructs	Variables
Frequency of Usage	Login to Social Media
	Instantaneous verification on Social Media
Duration of Usage	Voicing Suitable opinion on Social Media
	Connectivity problems with Social Media
National Voters Portal	Awareness of Government Efforts.
	Online Voting System a tool to vote
Personal Blogs	Reading personal blogs of politicians
	Information insights from blogs
Discussion Forums	Effectiveness of Online discussion forums
	Active involvement in Online discussion forums
Video and Image Sharing	Clarity on Video and Online digital media
	Image description of participators vision (candidates) in campaigning

METHODOLOGY

The research note is prepared by collecting first-hand information on factors influencing voter turnout through a focused-group discussion where several questions covering use of newer technology—digital and social media’s effect on casting of votes in elections were posed to participants on drawing their inferences upon improving voter turnout. These discussions were held as an in-depth interview with a purpose of observing what contributes to the inclination of voting pattern in elections and to what extent it improves the turnouts on voting. Respondents from different backgrounds

constituted the group discussion. A unique set of factors were generated from the discussion held in the focus-groups. These factors were tested with the respondents chosen for our study. A total of 154 respondents from online social media portals such as Facebook, Twitter, and Whatsapp recorded their opinions from the infinite population. In addition, several key assumptions were made from literature. These assumptions were framed into statements of hypothesis for observing their significance on voting turnouts in Indian context among our native respondents. The brief set of hypothesis statements are provided below for each of the factors observed from literature:

SOCIAL MEDIA EXPOSURE

H_0 : *There exists no positive impact on voters' turnout in elections through a high social media exposure among public and community groups.*

H_a : *There exists a positive impact on voters' turnout in elections through a high social media exposure among public and community groups.*

The above hypothesis takes into account independent variables frequency of usage and duration of usage on social media by voters.

NOTA EFFECTIVENESS

H_0 : *There exists no positive impact on voters' turnout in elections where the government involves initiatives for a digital campaign.*

H_a : *There exists a positive impact on voters' turnout in elections where the government has persisted the use of digital campaigns.*

The above hypothesis takes into independent variables such as NOTA effectiveness, Telecommunications media, and National voters portal.

DIGITALIZATION OF DECENTRALIZED POLLING BOOTHS

H_0 : *There exists no positive impact on improving voter turnout where polling booths are decentralized by the electoral body.*

H_a : *There exists a positive impact on improving voter turnout where polling booths are decentralized by the electoral body.*

The above hypothesis takes into account decentralization using aadhar and aadhar centres as independent variables.

E-MAIL COMMUNICATIONS

H_0 : *There exists no positive impact on voters' turnout in elections where use of personal blogs, video-sharing and email communications are prevalent.*

H_a : *There exists a positive impact on voters' turnout in elections where use of personal blogs, video-sharing and email communications prevail.*

The above hypothesis takes into account personal blogs, video/image sharing, email updates and discussion forums.

RELIABILITY, NORMALITY AND TEST OF SIGNIFICANCE ON INFLUENCING FACTORS

The variables observed here for our study were tested for its reliability using Cronbach alpha. The results indicated a score of 0.6 in favor of further processing the data for a critical analysis. The tests of normality too indicated the data and its responses to be non-normal allowing us to create a structural model using smart PLS.

The factors and its variables were tested for its significance in this study to assess their on improving the voter turnout. The test of significance is prepared through assessment of *P*-values in output of descriptive statistics given by the system on the data we have fed and analysed thus far. The accepted values of significance as per prescribed threshold norms should be less than 0.05. The values that are more than this threshold limit are insignificant for the study. The results of the significance test inferred that for factors digitalization of decentralized polling booths, email updates, NOTA effectiveness, social media exposure, and telecom media, the probability values (*P*-values) indicate to be significant for the data, whereas on other factors they are not. These factors and their probability values are presented in Table 2.

Table 2: Descriptive Statistics					
Descriptive Statistics					
	Original Sample	Sample Mean	Standard Deviation	T Statistics	P Values
Decentralized Polling Booth	0.528	0.521	0.083	6.348	0.000
Discussion Forums	-0.024	-0.034	0.054	0.448	0.654
Duration of Usage	-0.035	-0.024	0.054	0.637	0.524
E-Mail Updates	0.077	0.078	0.047	1.659	0.098
Frequency of Usage	-0.079	-0.073	0.056	1.424	0.155
NOTA Effectiveness	0.468	0.462	0.051	9.138	0.000
National Voters Portal	0.049	0.047	0.068	0.716	0.474
Personal Blogs	-0.030	-0.032	0.060	0.505	0.614
Social Media Campaigns	0.125	0.112	0.059	2.109	0.035
Telecom Media	0.283	0.286	0.073	3.873	0.000
Video and Image Sharing	0.007	0.013	0.055	0.129	0.897

Source: Author's calculations

This test of significance was prepared after drawing the structural model in smart PLS application that inferred these factors after several iterations within the applications. The variables taken completely for the study was reduced in this iteration process using the factor loading. The final structural model is presented below with factor

AN ASSESSMENT OF THE DIGITALIZATION OF THE ELECTORAL PROCESS IN INDIA
AND ITS IMPACT ON VOTER TURNOUT

loading greater than 0.65 to meet the criteria of goodness of fit test. In addition, the average variance explained in all these significant factors appear to be greater 0.50 which is a prescribed norm for assessing the validity of the model. The composite reliability of the factors included in the model also is greater than 0.70 as per threshold norms. The structural model drawn from the first iteration is presented below in Figure 3.

Figure 3: Structural Model (First Iteration)

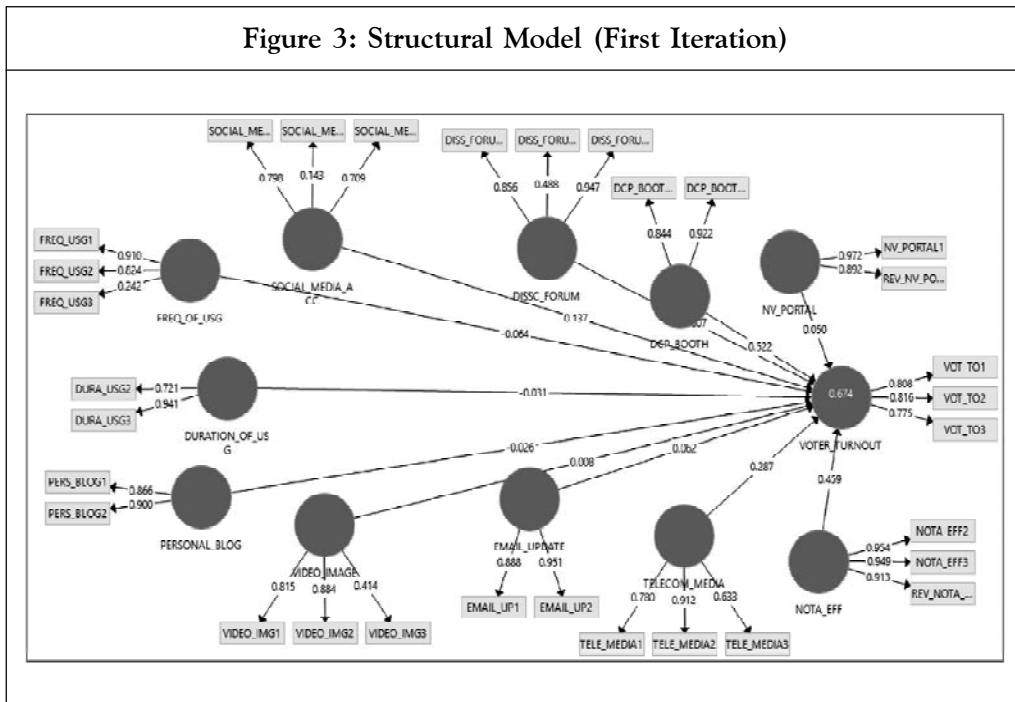
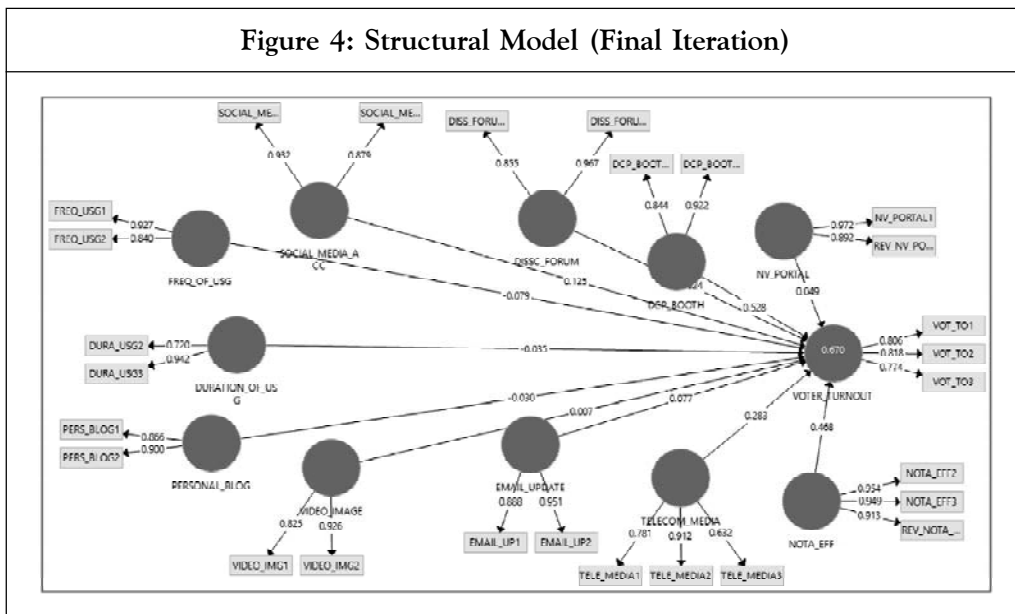


Figure 4: Structural Model (Final Iteration)



This model has associated factors that have a lower factor loading after the data for the variables were captured. The variables that have a factor loading of less than 0.70 was removed to adhere to the goodness of fit test. The second model post removal of inconsistent variables that had less factor loading is presented in Figure 4.

FINDINGS, DISCUSSIONS AND CONCLUSIONS

The analysis of data reveals the significance of associated factors – Digitalization of Decentralized polling booths, Email updates, Social Media content, NOTA effectiveness and Telecom media among all factors taken for the study. The hypothesis prepositioned for testing significance reveals these variables to have a positive impact on improving voter turnout and to have influenced the turnouts. The test of significance taken for all factors inclusive, revealed duration the usage on social media, discussion forums or image/video sharing conducted on personal blogs, frequent campaigns conducted through national voters' portal or initiatives carried out by ECI have been less significant in improving the voter turnouts. In one of his research studies, Lawsons-Borders and Kirk (2005) observed that failure of political organizations in initiating discussions on personal blogs and other forums of the deliverables on elections with the participants involved in this democratic process of evolution. These succinct observations are contrary to the discussions carried throughout in the literature review of this paper where several measures undertaken by ECI have not been getting a significant impact in overturning the voter turnout. Moreover, measures like the digital campaigns conducted in social media, the introduction of a NOTA of candidates as a separate choice for voters, sharing of information through e-mail can otherwise help create an improvement in voter turnouts as opined by the respondents.

The results of the study reveals a significantly different opinion from the respondents as observed from the relevant literatures reviewed on this topic. Interestingly, these results and its analysis are also conducted taking into account the responses received during the field surveys for the variables or factors absorbed from literatures. This study and its results have given us an understanding of how well can political organisations take the advancements of technology to the doorstep of public and community groups in making their future strategies for reaching voters in large numbers to make a turnaround in voting.

LIMITATIONS OF OUR STUDY

This study is limited to observing factors that associate to improving voter turnout in elections and other extraneous factors that has an impact to the economy of a state or country were not included as variables to study in this paper. The analysis, results, and its inferences of this study was completely based on the samples drawn from the infinite population who are users of technology. The biasness shown in their responses although has been given considerable due diligence in inferring the results and its observations was also recorded for analysis but the results did not show them to have made an

impact on this study. The claims of administrative measures set-in by the government also more relevantly available in literature review undertaken too has been partially insignificant in creating an impact on voters except for stringent efforts made in appealing through traditional and social media. Lastly to say, this study, a work-in-progress has in a short span of time was able to collect relevant literature of factors influencing voter turnouts and data from a small sample size. But it has a future scope of adding other similar variables qualifying for a large empirical study and extending this field survey to include other uncovered areas of the sampling frame since the sample size observed is fairly small to make large conclusions.

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