Analysis of Voting Using EVM System

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ABSTRACT

This Process deals with the Electronic voting Machine and its details. It allows users to vote for the candidate in voting Machine by recent approach. It is helpful to get the details of the candidate after voting in internet. That is, without wastage of time, the voter can vote the respective candidate. Earlier, people used ballot paper for voting and counting the number of votes. It took lot of time for process and to overcome the drawbacks Electronic voting Machine was proposed to mark our work much easier and to reduce wastage of time. Moreover it did not give accurate results in the earlier system. So there is a need for Electronic voting Machine. The election system was completely changed by electronic voting machine in which the whole process is carried out by the machine itself i.e. no need of ballot paper, boxes, stamps, etc. But authentication issues still persist with this system. It saves time, avoid error in counting and there will be no invalid votes. It makes the election process easy.

Keywords: Election, politics, candidate, population.

I. INTRODUCTION

Electoral Process in India starts with the declaration of dates by the election commission. Publishing of electoral rolls is a key process that happens before the elections and is vital for the conduct of elections in India. The Indian Constitution sets the eligibility of an individual for voting as any person who is a citizen of India and above 18 years of age. It is the responsibility of the eligible voters to enroll their names. The model code of conduct comes in force from the day the dates are announced. The candidates are required to file the nomination papers following which the candidate list is published after scrutiny. No party is allowed to use the government resources for campaigning. No party is allowed to bribe the candidates before elections. The government cannot start a project during the election period. The campaigning ends at 6:00 pm of the second last day before the polling day. The polling is held normally from 7:00 am to 5:00 pm, whereas it might be changed under special circumstances. The Collector of each district is in charge of polling. Government employees are employed as poll officers at the polling stations. Electronic Voting Machines (EVMs) are being increasingly used instead of ballot boxes to prevent election fraud via booth capturing, which is heavily prevalent in certain parts of India. An indelible ink is applied usually on the left index finger of the voter as an indicator that the voter has cast his vote. This practice has been followed since the 1962 general elections to prevent a bad vote. Re-polling happens if the initial polling is unsuccessful due to reasons such as adverse weather, violence etc. The polled votes are counted to announce the winner. India follows first past the post methodology to declare the winner.

II. FUNDAMENTAL OF VOTING SYSTEM

An election is a formal decision-making process by which a population chooses an individual to hold public office. Elections have been the usual mechanism by which modern representative democracy has operated since the 17th century. Elections may fill offices in the legislature, sometimes in the executive and judiciary, and for regional and local government. This process is also used in many other private and business organizations, from clubs to voluntary associations and corporations.

III. PAPER BASED BALLOT ELECTION

A **ballot** is a device used to cast votes in an election, and may be a piece of paper or a small ball used in secret voting. It was originally a small ball (see blackballing) used to record decisions made by voters. Each voter uses one ballot, and ballots are not shared. In the simplest elections, a ballot maybe a simple scrap of paper on which each voter writes in the name of a candidate, but governmental elections use preprinted ballots to protect the secrecy of the votes. The voter casts his/her ballot in a box at a polling station.

Manual counting requires a physical ballot that represents voter intent. The physical ballots are read and interpreted; then results are individually tabulated.[1] This method is used in Sweden for example, and conducted as follows. The voter casts three ballots, one for each of the three elections (national, regional, and local), each in a sealed envelope. The party and candidate names are pre-printed on the ballot, or the voter can write them in on a blank ballot. When voting has finished, all envelopes are opened on the counting table, for one election at a time. They are sorted in piles according to party, inspecting them for validity. The piles are then counted manually, while witnesses around the table observe. The count is recorded, and the same pile is counted again. If the results do not agree, it is counted a third time. When all piles are counted and the results agree, the result is certified and transmitted for central tabulation. The count as received is made public, to allow anyone to double-check the tabulation and audit the raw data. There appears to be a high level of confidence in this system among the population, as evidenced by the lack of criticism of it. After use for EVM in paper based Election in Tamil Nadu

Table:1-Tamilnadu election in 1996

No	Consistency	Electors	Valid vote	Percentage
1	Royapuram	45947	21341	54.91%
2.	Harbour	45947	21341	54.91%
3.	Dr.Rathakrshnan Nagar	106436	58154	56.45%
4.	Parktown	54091	29274	58.71%
5.	Perambur	110421	66863	61.01%
6.	Purasawalkam	120112	63441	58.26%
7.	Ignore	58865	31358	58.42%
8.	Anna nagar	138422	75578	54.63%
9.	Theyagarayanagar	99904	51824	55.51%
10.	Thousand lights	81461	45443	58.715
11.	Chepauk	47603	25670	61.31%
12.	Triplicane	588899	35901	60.42%
13.	Malapore	102049	55581	57.93%
14.	Saidapeat	111965	61533	56.38%
15.	Gumudipundi	92884	62628	71.27%
16.	Ponneri	108265	67934	67.81%
17.	Thiruvettiur	153507	84049	57.95%
18.	Vilivakkam	263323	120513	51.30%
19.	Alandur	152445	71207	56.97%
20	Thambarm	230785	115637	54.53%

IV. ELECTRONIC VOTING MACHINE

Electronic Voting Machines ("EVM"), Idea mooted by the Chief Election Commissioner in 1977. The EVMs were devised and designed by Election Commission of India in collaboration with Bharat Electronics Limited (BEL), Bangalore and Electronics Corporation of India Limited (ECIL), Hyderabad. The EVMs are now manufactured by the above two undertakings.

An EVM consists of two units:

Control Unit
Balloting Unit

The two units are joined by a five-meter cable. The Control Unit is with the Presiding Officer or a Polling Officer and the Balloting Unit is placed inside the voting compartment.

Security Problems

One can change the program installed in the EVM and tamper the results after the polling. By replacing a small part of the machine with a look-alike component that can be silently instructed to steal a percentage of the votes in favor of a chosen candidate.

Electronic Voting Machines ("EVM") are being used in Indian General and State Elections to implement electronic voting in part from 1999 elections and recently in 2017 state elections held in five states across India. EVMs have replaced paper ballots in local, state and general (parliamentary) elections in India.

Table: 2-Tamilnadu election in 2001

No	Consisty	Electors	Valid vote	Percentage
1	Royapuram	156528	78338	50.055%
2.	Harbour	129157	51563	39.92%
3.	Dr.Rathakrshnan Nagar	272666	128175	47.01%
4.	Parktown	140145	64268	45.86%
5.	Perambur	276886	132799	47.96%
6.	Purasawalkam	307376	143574	46.71%
7.	Egmore	155310	69590	44.81%
8.	Anna nagar	376745	160469	42.59%
9.	Theyagarayanagar	277999	119216	42.38%
10.	Thousand lights	21047	95428	45.34%
11.	Chepauk	128399	57477	44.76%
12.	Triplicane	162839	70179	43.01%
13.	Malapore	288708	119385	41.03%
14.	Saidapeat	279266	129075	46.22%
15.	Gumudipundi	209468	131096	62.59%
16.	Ponneri	243530	149148	61.24%
17.	Thiruvettiur	432947	207167	47.85%
18.	Vilivakkam	819547	341837	41.71%
19.	Alandur	423174	198708	46.96%
20.	Tambaram	776058	322120	41.51%

The **thirteenth legislative assembly election**, of Tamil Nadu was held on May 8, 2006. It was held for all 234 constituencies to elect the government in the state of for the following five years. The votes were counted three days later on May 11, 2006 and all the results were out by the end of the day. The Dravida Munnetra Kazhagam-led (DMK) front won the elections and its leader, M Karunanidhi was sworn in as Chief Minister. He served his fifth term.

Since no single party could gain a majority of its own in this election, DMK formed a minority government with its allies, which is the first in the state since the 1952 election. 13th Assembly was instituted due to this election.

Table:3-Tamilnadu election in 2006

No	Consistency	Electors	Valid vote	Percentage
1	Royapuram	137772	95090	69.02%
2.	Harbour	105115	60007	57.09%
3.	Dr.Rathakrshnan Nagar	239326	167730	70.08%
4.	Parktown	117016	72915	62.31%
5.	Perambur	268704	182627	67.97%
6.	Purasawalkam	294352	191680	65.12%
7.	Egmore	122297	79326	64.86%
8.	Anna nagar	352829	217235	61.57%
9.	Theyagarayanagar	242771	152680	62.89%
10.	Thousand lights	169506	108295	63.89%
11.	Chepauk	105252	67082	63.73%
12.	Triplicane	132523	85505	64.52%
13.	Malapore	235246	147345	62.63%
14.	Saidapeat	248483	163396	66.16%
15.	Gumudipundi	195425	156263	79.96%
16.	Ponneri	248155	175234	70.61%
17.	Thiruvettiur	496267	341404	68.795
18.	Vilivakkam	941112	611251	64.95%
19.	Alandur	431953	284421	65.85%
20.	Tambaram	872877	561918	64.38%

Table:4-Tamilnadu election in 2011

No	Conistuency	Electors	Valid vote	Percentage
1	Royapuram	159349	112614	70.67%
2.	Harbour	152817	97201	63.61%
3.	Dr.Rathakrshnan Nagar	195179	141942	72.72%
4.	Parktown	211108	179443	85.00%
5.	Perambur	232344	162166	69.80%
6.	Purasawalkam	183634	151466	82.48%
7.	Egmore	164768	112133	68.06%

8.	Anna nagar	226836	151671	66.86%
9.	Theyagarayanagar	194922	129851	66.62%
10.	Thousand lights	200020	1336011	66.79%
11.	Chepauk	187305	130009	69.41%
12.	Triplicane	187305	130009	69.41%
13.	Malapore	215350	142997	66.40%
14	Saidapeat	219038	154408	70.49%
15	Gumudipundi	215443	179722	83.42%
16	Ponneri	202449	162888	80.465
17	Thiruvettiur	221495	164823	74.415
18	Vilivakkam	193221	130834	67.71%
19	Alandur	239939	168135	70.07%
20	Tambaram	255030	178331	69.93%

V. ANALYSIS OF VOTING SYSTEM

Polling took place on 2 May 1996 and results were announced on 12 May. The turnout among registered voters was 66.95%. The assembly elections were held simultaneously along with the Indian parliamentary elections he 2006 Tamil Nadu State Elections saw a record voter turnout of 70.70% and 11% increase compared to the last 2001 elections and the highest since the 1991 elections which saw an 85% voter turnout. The ruling party AIADMK was voted out of power with the DMK alliance regaining power after losing out in the previous elections with a paltry 37 seats. This time however, no party reached the simple majority of 117 of the 234 seats.At the 2011 India census, Tamil Nadu had a population of 7, 21, 47,030. A total of 1, 44, 38,445 people the total population (SC) and 7, 94,697 people constituting 1.10% of the population belonged in the direction of Scheduled tribes (ST).Other Backward Classes (OBCs) form 68% of the population. As per the religious census of 2011, Tamil Nadu had 87.6% Hindus, 5.9% Muslims, 6.1% Christians, 0.1% Jains and 0.3% following other religions or no religion.Vote % reflects the percentage of votes the party received compared to the entire electorate that voted in this election. Adjusted Vote %, reflects the % of votes the party received per constituency that they contested. It is seen that the percentage of polling is increased after the use EVM in elections work of counting is simplified, polling results for compared to ballot method ,polling can't be done an more than one party.
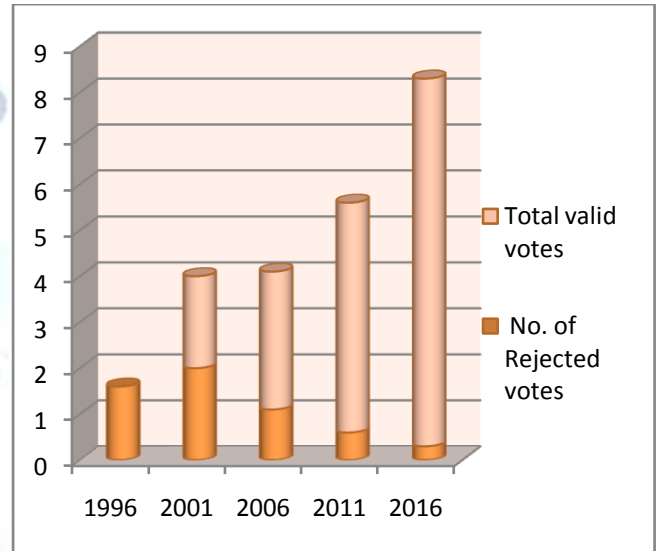

Figure1: Analyzing data

VI. LEVEL OF PROBLEM IN ELECTION

Political parties and politicians in Tamil Nadu have shown that it is possible to make almost everyone in the State corrupt by offering money and other freebies, former Chief Election Commissioner of India N. Gopalaswami said on Sunday."Tamil Nadu is in a unique position. It is the only State in the country where they (politicians) have made voters corrupt. It has come to a situation where voters now bargain with parties as to how much (money) they will get to vote for a particular party," Mr. Gopalaswami said addressing a voter awareness event organized by Bharat Vicars Paris had, Anna Nagar, and J-16 Civic Exnora on Sunday. The former CEC added that politicians are willing to spend more money on elections as they believe they can "recoup this and earn back even more. If they spend five lakh rupees, they believe they can easily make 50 lakh or five core rupees once they come to power.""There is no fear of law anymore. Cases take ages to be completed. This could be due to a variety of reasons. But people now believe they can get away by doing anything," he said. He urged residents associations to create a list of all candidates filing nominations in their constituency and spread awareness among the residents. This would go a long way in helping reduce bad politicians from

being voted to power. "Improvements are happening slowly. We have come a long way since our first elections," he said. When a member of the audience asked him about the efficacy of the NOTA option, he said voters should make use of it if they find none of the candidates are good or worthy of being voted to power. There will come a day when NOTA will become more powerful. The decision of the Supreme Court to allow the option was a step in the right direction.

VII. RESULT AND DISCUSION

Tamil Nadu has registered voters' turnout of 73.76 per cent during the 2016 Assembly election as compared to 78.02 per cent recorded during the 2011 election. Despite the several attempts by Tamil Nadu Election Commission for 100 per cent voting, the voters turnout was low.The 15th Assembly election has started off with slow turn around and till lunch it continued in slow pace due to rain in southern and delta districts. In Chennai also average rain has impacted the voting. For instance, at Vedaranyam in South Tamil Nadu 10.2 centimeter rain was reported till afternoon.Polling started at 7 a.m. and went till 6 p.m. across the state. The Election Commission has wanted to extend the timing for one hour in districts where heavy rains were reported.Tamil Nadu has registered voters' turnout of 73.76 per cent. The highest turnout was at Palacodu constituency (88.5%) and Pennagaram constituency (87.6%), in Dharmapuri district, followed by Edappady constituency in Salem district and Kulithalai constituency in Tirupur district (both 85.77%). Harbour constituency in Chennai reported 55.27 per cent polling lowest in the state.In 1996, total turnout was 66.95 per cent, which dropped to 59.07 per cent in 2001 and it increased to 70.82 per cent in 2006 and further went up to 78.01 per cent in 2011. Despite the fact that in the last five years around 10 million voters were added, polling percentage was dropped.3,776 candidates are in the race, of which 3,454 are men, 320 women and two third genders. The total number of polling stations was over 66,000. A total of 1,07,210 electronic voting machines, including reserves were made available for the election and there are 75,908 control units including reserves. Voter Verifiable Paper Audit Trail (VVPAT) were allotted to booths in 17 constituencies, for the voters to verify their vote has been cast to the intended candidate.

According to Tamil Nadu Assembly website, the Legislative Assembly consists of 234 elected Members from 189 General and 45 reserved constituencies (42 SC Constituencies and 3 ST Constituencies).The largest assembly constituency in terms of electorate is Sholinganallur, in Chennai, which has over 0.602 million voters, while smallest assembly constituency electorate wise is Kilvelur, where there are 0.163 million voters.

VIII. CONCLUSION

Day by day the population is increasing enormously which in turns demands the improvement in the voting system. The primary goal of every voting system is to increase the participation of the civic. Undoubtedly the above discussed voting techniques are exceptionally good, but there is always scope for further improvement. This paper can be helpful for finding the loopholes and drawbacks of current voting systems. A comparative study all these systems would definitely help in developing a new system that combines all the advantages and overcomes the drawbacks of these systems.

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