Reforms needed in the voting process | Explained

When were Electronic Voting Machines (EVMs) first introduced? What have been the concerns raised by activists about EVMs? What are the voting practices in other countries? How can the process of voting be made more robust?

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A poll official marks an Electronic Voting Machine (EVM) at a distribution centre in Coimbatore on April 11. | Photo Credit: AFP

The story so far: The Supreme Court has decided to hear petitions seeking 100% cross-verification of the Voter Verifiable Paper Audit Trail (VVPAT) slips with the vote count as per Electronic Voting Machines (EVMs).

What is the history of voting process?

In the first two general elections of 1952 and 1957, a separate box was placed for each candidate with their election symbol. Voters had to drop a blank ballot paper into the box of the candidate whom they wanted to vote for. Thereafter from the third election, the ballot paper with names of candidate and their symbols was introduced with voters putting a stamp on the candidate of their choice.

The EVM was introduced on a trial basis in 1982 in the Assembly constituency of Paravur in Kerala. They were deployed in all booths during the Assembly elections of Tamil Nadu, Kerala, Puducherry and West Bengal in 2001. The Supreme Court in various judgments has upheld the validity of using EVMs in elections. In the 2004 general elections to the Lok Sabha, EVMs were used in all 543 constituencies. In Subramanian Swamy versus Election Commission of India (2013), the Supreme Court ruled that a paper trail is an indispensable requirement for free and fair elections. The 2019 elections had EVMs backed with 100% VVPAT in all constituencies.

What are international practices?

Many western democracies continue to have paper ballots for their elections. Countries like England, France, The Netherlands and the U.S. have discontinued the use of EVMs, for national or federal elections, after trials in the last two decades. In Germany, the Supreme Court of the country declared the use of EVMs in elections as unconstitutional in 2009. Some countries like Brazil, however, use EVMs for their elections. Among our neighbours, Pakistan does not use EVMs. Bangladesh experimented in a few constituencies in 2018 but reverted to paper ballots for the general elections in 2024.

What are the features of EVMs?

EVMs bring significant benefits to the electoral process. First, the EVM has virtually eradicated booth capturing by limiting the rate of vote casting to four votes a minute and thus significantly increasing the time required for stuffing false votes. Second, invalid votes that were a bane of paper ballots and also a bone of contention during counting process have been eliminated through EVMs. Third, considering the size of our electorate which is close to one billion, the use of EVMs is eco-friendly as it reduces the consumption of paper. Finally, it provides administrative convenience for the polling officers on the day of the poll and has made the counting process faster and error-free. There are mechanisms to uphold the integrity of EVM and VVPAT process. These include random allocation of

EVMs to booths before polls; conduct of a mock poll to display the correctness of EVMs and VVPAT before commencement of the actual poll; and the serial number of EVMs along with total votes polled shared with agents of candidates to verify the same at the time of counting of votes.

Despite its advantages, there have been doubts raised about the functioning of EVMs by various political parties and civil society activists from time to time. The most repeated allegation is that EVMs are susceptible to hacking as it is an electronic device. The ECI has time and again clarified that it is a standalone device like a calculator with no connectivity to any external device and hence free from any kind of external hack. The sample size for matching of the EVM count with VVPAT slips at present is five per assembly constituency/segment. This is not based on any scientific criteria and may fail to detect defective EVMs during counting. The present process also allows for booth-wise polling behaviour to be identified by various parties that can result in profiling and intimidation.

What can be the way forward?

In a transparent democracy, each citizen must be able to comprehend and verify the steps in the election process without any special technical knowledge. The 100% use of VVPAT has enabled the voters to verify that their votes are 'recorded as cast'. However, few additional steps need to be adopted to make the entire process more robust and ensure that the votes are 'counted as recorded'. 100% match of EVM count with VVPAT slips would be unscientific and cumbersome. The sample for matching of EVM count and VVPAT slips should be decided in a scientific manner by dividing each State into large regions as suggested by experts. In case of even a single error, the VVPAT slips should be counted fully for the concerned region and form the basis for results. This would instil a statistically significant confidence in the counting process. Further, in order to provide a degree of cover for voters at the booth level, 'totaliser' machines can be introduced that would aggregate votes in 15-20 EVMs before revealing the candidate-wise count.

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