

LEGALFOXES LAW TIMES

IS EVM A BOON OR PAPER BALLOT A BANE?

By DEVADHARSHANIS and POONGUZHALI R P

INTRODUCTION

The ballot is stronger than the bullet, in knowing this preponderance India cracked voting as it's a legal right, this right is universally granted to all Indians. Vote is codified as the formal expression of opinion or choice by an individual; it can either be negative or positive. As per the constitution of India, citizens who are foremost at the age of 18, are eligible to vote. Every eligible individual must register themselves in their constituency where they live, based upon which they will be issued a photo election identity card - EPIC CARD. Any individual who doesn't possess a voter card or if they have not registered, they will not be permitted to participate in the election process. Every voter is allowed cast only one vote. No individual can be denied from the voting process unless they fulfil the criteria for disqualification. Thus, all citizens regardless of their race, caste, colour, or previous condition of subjugation have the right to VOTE under the Citizenship Act, which grants equal protection under the 15th amendment of the constitution. As a democratic country, India is built on the basis of election, our Parliament and legislatures are of the people, by the people, and for the people. Voting is a constitutional right that we are privileged to have but we take it for granted only a few people genuinely cast their vote, but many squanders their opportunity to flourish their nation on voting day. Thus, the election comes and goes without half of the population paying attention. The maximum recorded voter turnout in India was recorded in 2014 for the Lok Sabha election at 66.4%. Elections in India are held by The Election Commission, which is an independent constitutional authority since 25th January 1950. The election commission is responsible for the conduct of elections to Parliament, State legislature, and to the Office of President and Vice-president. It also facilitates the coverage of the election process by the media, organizes the polling booth, looks after the counting of votes and declaration of results, all these are done to prove that the election takes

place in an orderly, free and fair manner. Cl. (4) OF Article 329-A which was inserted by the Constitution (39th Amendment) Act, 1975 was struck down on the ground that it violated free and fair election and destroyed the 'BASIC STRUCTURE' of the constitution in *Indira Nehru Gandhi vRaj Narayan*,¹As the literacy rate of India improved, the voting age was brought down from 21 to 18 in 1988. Eventually, to counter impersonation, voters' fingers were marked with the iconic indelible ink² Soon, one ballot box per contestant was replaced by a single ballot box. As technology made progress Electronic Voting Machines (EVMs) were introduced. VVPAT is being recently used for increasing transparency. The Economic Intelligence Unit while measuring our democracy index gave India's electoral progress a score of 9.17 on 10.

PRESENT ELECTION SYSTEM IN INDIA

India is a sovereign, socialist,secular, and democratic nation. The impression of democracy is picturized through the Parliament and state legislature election tack. The Supreme Court held that democracy is a form of government of the people, by the people and for the people. The parliament embodies the Prime ministers and other Ministers to frame the policy of the government and accordingly they rule the country, India is a coalition of states, it contains a freestanding state legislature for each state. State legislature embodies the Governor, the two houses - Legislative Council and Legislative Assembly. The country is prolonging with 543 parliamentary constituencies, the affiliated democratic republic India compasses with 36 constituent units. The entirety of 29 states and two of nine union territories own their assemblies - Vidhan Sabha, the thirty-one assemblies chalk up with 4120 constituencies.

¹ AIR (1975) SC 2299

²RakeshDubudu, *From Ballot Paper to EVM and NOTA*, a brief history of Lok sabha elections, Citizen Matters, available<https://citizenmatters.in/video-ballot-papers-to-evm-and-nota-a-brief-history-of-lok-sabha-elections-11052/>,last seen on 05/04/2020

CONDUCT OF ELECTIONS

The term election speaks out in modern India through the Indian Council Act of 1909 during the British regime. Democracy took an enormous breakthrough with the First General Election held in 1952 over a four-month. The Elections were held by means of Universal Adult Franchise, all the citizens who have attained twenty-one years of age having the right to vote. This Election was made possible under Article 324 which provided a path for the setup of an 'Independent Constitutional Authority - Election Commission committee, was therefore brought into force from November 26th, 1949, whereas most of the provisions were made effective from January 26th, 1950. Thus, the Election Commission was formally constituted on January 25th, 1950, each day before India became a Sovereign Democratic Republic.

The election process was conducted by using paper ballots. The most important challenge that the Election Commission faced was to ensure a 'Secret and Secure ballot to the overwhelming majority of illiterate voters. They thought that the marking system of the ballot was unsuited for the illiterate voters. Since the voters could not read the name of the ballot or political parties, it had been decided to allot easily identifiable symbols to each of them.

- 1) The commission decided that voters need not mark the Ballot.
- 2) A common Ballot would be issued to all or any voters, with a separate ballot box for straightforward identification.
- 3) The symbol of the candidate would be affixed to the ballot box for easy identification.
- 4) The voter would simply put the unmarked ballot into the ballot box of the candidate of his/her own choice.

The Primary Election commissioner in his First Election Report stated that 'A system had, therefore, to be devised which was suitable to Indian conditions, where illiterate voters could intelligently cast their votes secretly in favour of candidates of their choice. The simplest method seemed to be.

- (1) To assign a separate ballot box for every candidate and,
- (2) To place a special mark on each such box so that the quality of such mark might help the voter in distinguishing between the boxes of various candidates,

(3) Thus, in casting his vote, correctly by dropping his ballot paper inside the ballot box assigned to the candidate of his choice.

(4) The ballot paper being a mere token does not require any marking by the voter.’

As a result of this decision, the commission has got to procure a sizable amount of ballot boxes. The specifications were Ballot Boxes were made from 20-gauge steel. They were 8 inches high, 9 inches long and seven ½ inches wide. A slot about Two inches long and ⅛ inches wide was provided for the lid for inserting ballot paper. The boxes were considered ‘fraud-proof’ because it wasn’t ready to insert ballot papers within the box except from the slot made within the lid for this purpose. In all, 8, 16,545 tons of steel were consumed in manufacturing the ballot box. The ballot box was made in two different groups of colours.

- 1) Olive green, meadow green, pale green, and brunswick green - House of People.
- 2) Chocolate, mahogany, teak, dark tan, and bronze - Legislature of States.

Parliament passed the Primary Act on May 12th,1950 (Representation of People Act,1950) providing mainly for the representation of electoral rolls and Second Act on July 17th,1951 (Representation of people Act 1951) laying down the procedure for the conduct of elections of both the Houses of Parliament and Vidhan sabhas for every state.



Electoral Rolls for constituencies were published altogether by November 15th,1951. The entire number of voters was 17,32,13,635 consistent with the 1951 census. The first general elections to the Lok Sabha and Vidhan sabhas were held between October,1951 and March,1952. The first Lok sabha, consisting of 497 members, was constituted on April 2nd,1952. The first Rajya sabha, consisting of 216 members, was constituted on April 3rd,1952.

At the time of the First General Election in 1951-52³. There was a significant outbreak in supplies from Messrs. Bungo Steel Furniture Limited, Calcutta, which affected supplies to the

³S.K.Mendiratta,*Electoral Laws of India*, E-PAO, available at http://e-pao.net/epSubPageExtractor.asp?src=education.Human_Rights_Legal.Electoral_Laws_of_India_By_S_K_Mendiratta, last seen on 13/04/2020

State of Madras, Orissa and West Bengal. It had been found within the course of the election that counting of votes in four Parliamentary Constituencies in Madras was delayed due to re-polling. Since there was no time to urge a fresh supply of ballot boxes, rule 34C was added to the Representation of People Rule 1951, enabling Returning officers to line free a sufficient number of ballot boxes even before taking over the counting of votes.

Later, a report was published by the Election Commission, that there was some criticism about the “instability of a number of the ballot boxes”. However, all together in such cases it had been found on inquiry that the complaints were either unjustified or had arisen thanks to some Presiding Officers not properly following the instructions for the utilization of the boxes and had not sufficiently secured them after polling. ‘TAMPERING OF BALLOT BOXES’ was quoted during a few election petitions after the elections. However, in no cases it had been proved that there had been any Tampering with the Ballot Boxes.

The ballot boxes manufactured by.

- (i) Messrs, Godrej & Boyce Manufacturing Co.Ltd. Bombay, Messrs.
- (ii) Hyderabad Allwyn Metal Works Ltd. Hyderabad, and Messrs.
- (iii) Oriental Metal Pressing Work, Bombay. Required the utilization of paper seals for securing the boxes against tampering. Paper seals were printed certainly on water-marked papers. The words ELECTION COMMISSION INDIA were closely printed on the seals in pink to make the background on one face of the seal. The exceptional work done by Messrs. Godrej & Boyce Manufacturing Co.Ltd. Bombay, within the manufacture of ballot boxes, was praised in the *Bombay Chronicle* dated 15th December 1951.

Later, the system of unmarked ballot papers and separate ballot boxes ignited fears of ‘tampering, booth capturing and manipulation’. This led to the way of ‘Marking System of Voting’

From the 3rd General Election in 1962 onwards, Under this technique, a standard ballot paper containing the names and election symbols of all contesting candidates is printed on which the voter has got to put a mark with an arrow cross mark rubber stamp on or near the symbol of the candidate of his choice⁴. All the marked ballot papers are put into a standard ballot box. This technique continued till the 1999 Lok Sabha elections.

A legal framework for Electronic Voting Machines in India has evolved through a series of judicial pronouncements. Through an experimental basis EVM started in India in 1998, EVMs faced their first judicial test even before they were used for the first time in part of Paravur Assembly Constituency in Kerala in 1982, but the court refused to grant a stay and permitted the use of EVMs. Later from 2001 paper ballots were completely dislodged by Electronic Voting Machines throughout the country.

To ensure free and fair election the Supreme Court in a case held that the confidence of the voters in the EVMs can be achieved only with the introduction of the “paper trail”. Since India is steering to be a techno-democracy, EVMs with the VVPAT system ensure the accuracy of the voting system. With an intent to have fullest transparency in the system and to restore the confidence of the voters, it is necessary to set up EVMs with VVPAT system because the vote is nothing but an act of expression which has immense importance in democratic system⁵. That’s how the Electronic Voting Machine with Voter Verifiable Paper Audit Trail paved the way in the Indian Election.

LEGAL FOXES

“OUR MISSION YOUR SUCCESS”

ELECTRONIC VOTING MACHINE

The doctrine of 'one man one vote' and eradication of bogus voting was perked up by the stepping of the Electronic Voting Machine in India. Technical Experts Committee of the Election Commission of India invented the first electronic voting machine, collaboration with the Electronics Corporation of India Ltd. (ECIL) Hyderabad and Bharat Electronics Ltd. (BEL)

⁴ Sameer Kumar Atish, 'Evolution of Electoral System in India' SCRIBD, (2016), available at <https://www.scribd.com/document/294949381/Evolution-of-Electoral-System-of-India/>, Last seen on 22 April 2020

⁵ *Dr. Subramanian Swamy vs Election Commission of India* CIVIL APPEAL NO.9093 OF 2013 (Supreme Court, 8/10/ 2013)

Bangalore. EVM was first materialized in the year of 1982 in the north Paravur Assembly constituency of Kerala on a pilot basis, nevertheless, a defined provision of law doesn't exist, the Supreme Court held that it was not open to the election commission to override the Representation of the People Act and the Rules made thereunder and pass orders directing casting of a ballot by machines in some of the polling stations⁶. Eventually, in 1989, the Parliament amended the Representation of the People Act, 1951 to fill up a provision concerning the use of Electronic Voting Machines. The aforesaid statute enunciates that, Voting machines at elections. —Notwithstanding anything contained in this Act or the rules made thereunder, the giving and recording of votes by voting machines in such manner as may be prescribed, may be adopted in such constituencies or constituencies as the Election Commission may have regard to the circumstances of each case, specify⁷. After arriving at a consensus in 1998 EVM's were nearly used in 25 legislative assembly constituencies across the state of Madhya Pradesh, Rajasthan, and Delhi. As the days went on EVM was even used in the State Assembly elections of Tamil Nadu, Kerala, Pondicherry, and West Bengal. The 2004 Lok Sabha election was conducted by using more than one million Electronic Voting Machines in all the 543 constituencies.

WORKING PROCEDURE OF EVM

A technology contrived to make the elections process facile and faster is the Electronic Voting Machines. It is a device that is used to record votes which are brought in replace of traditional ballot papers and boxes. EVM has two main components: the control unit and the ballot unit; these two units are connected by a 5m long wire. The control unit is operated only by the polling officers and it is the main unit that controls the functioning of EVM and the place where the data is stored. while the Ballot unit is utilized by the voters to cast their votes. This unit comprises 16 buttons. A button is placed across each candidate and their respective symbols. When there are more than 16 candidates in a constituency an extra ballot can be connected to the port of the first ballot. Likewise, a chain of four ballots can be added to an utmost of 64 candidates. If any of the

⁶A. C. Jose vs Sivan Pillai & Ors AIR (1984) SC 921

⁷S. 61(A), Representation of the People Act 1951

buttons in the ballot is not in use; it is covered with a masking tab in the unit. The unit position is selected by the four-position slide situated under the ballot unit.

The control unit consists of a microchip that controls the functioning of EVM. Chip is made on a onetime programmable basis once the chip is burnt it cannot be read, copied, or altered. The data in the ballot unit are transmitted to the control unit which is safely encrypted by a dynamic security code. The Control unit consists of buttons, firstly the Ballot button which allows voting only once. It is operated by the staff at the polling station. Secondly, the Close button is switched on at the end of the polling by the presiding officer so that the EVM averts any more votes, and the EVM's are safely kept in the storage unit. On the day of counting the official's crack, the seal and the result button is released in front of the public. Once the button is released the results are displayed in the control unit. In this way, the total no. of votes is calculated and the candidate who gets the majority number of votes is declared as the winner.

As technology became advanced the people came to perceive more about the Electronic Voting Machine. This ultimately leads to the defects in EVM come to light due to which people started showing opposition towards the Electronic Voting Machine. Subsequently, the Election Commission of India introduced a newly well-advanced machine called the voter-verified paper audit trail (VVPAT). This machine helps the voters to verify their votes are cast as intended, by generating a slip that shows to whom they voted. VVPAT slips are kept sealed and it is also counted on the day of public counting with the monitoring of Returning Officers and observers. VVPAT was first used in the 2013 by-election in the state of Nagaland. Later from 2019 it was started using in Lok Sabha assembly elections.

The Electronic Voting Machine used in India is a very innovative and unique application. "EVMs in India are unique and quite different from EVMs employed in other nations like the United States. Rather than large, expensive, complex, and computer-like systems, the Indian machine is praised for its simplicity, inexpensiveness, and efficiency⁸. The main facet of the EVM's is the accuracy, votes once cast cannot be altered and the possibility of invalid votes is reduced. Democracy of India is maintained as EVM allows only eligible voters to vote and only

⁸M. Herstatt and C. Herstat, *India's Electronic Voting Machines (EVMs): Social construction of a "frugal" innovation*, TUHH working paper series, 86, working paper number TUHH/ WP/ 2014/ 04, Maastricht University; Hamburg University of Technology (2014)

one vote can be cast by a person. Another aspect of EVM is it is not time-consuming, as the counting process is easier, faster, and effortlessly verifiable. The EVM's can resume voting when any inconvenience is caused in the polling stations. Thus, EVM has many advantages still some drawbacks persisting in EVM makes it unsuitable for a democratic country like India.

PROBLEMS PREVAILING IN EVM

Voting is a civic sacrament; it is an opportunity for every citizen to select their representative to look after the welfare of the state and to fulfil the necessity of the people. To conduct the election our country uses the apparatus called the Electronic Voting Machine. EVM is studied with the ambit of the Information Technology Act which states that "electronic record" means data, record or data generated, image or sound stored, received or sent in an electronic form or microfilm or computer generated microfiche⁹This even covers the Electronic Voting Machine dealt in section 61A Representation of People Act. To cast votes we use the digital signature i.e., fingerprints from this it can be stated that "affixing [electronic signature]", with its grammatical variations and cognate expressions means the adoption of any methodology or procedure by a person for the purpose of authenticating an electronic record by means of [electronic signature]¹⁰. Thus, from the aforementioned facts, it can be concluded that EVM is an electronic document.

Every case as a loophole likewise every machine is prone to errors, no machine is made without an infallible correspondingly EVM's are also prone to hacking as it is referred to as a computer system. Hacking is either done by physical tampering or by remote attacks over the internet. Rigging and tampering of the voting machine at the time of polling or counting would constitute an offense. As Indian EVM's have many loopholes regarding security it is easy for the hackers to manipulate. Hacking is done in many ways; one of the methods used is the cracking of the source code of the chip in the Control unit and replaced with code of their choice through which they can gain access to the Electronic Voting Machine. Another method employed is the manipulation of programmable logic devices (PLD) present in the Ballot unit. It is done with a simple logic

⁹S. 2(t), Information Technology Act 2000

¹⁰S. 2(d), Information Technology Act 2000,

analyser when the candidates press the button, logic is sent by the PLD to the chip in the control unit which in turn writes in the two EEPROMs in the control unit. This logic can be easily cracked and to be replaced with a new logic that shapes the results¹¹. These two methods are performed before the elections. A plan used to manipulate the election results after the polling is by attacking the EEPROMs present in the control unit where the votes are recorded. As these EEPROMs are less secure and the program used is very popular it can be easily manipulated.

Election Commission of India says that EVMs are built with highly profiled software and the source code is maintained secretly, what if the microcontrollers manufactured are hijacked? There is a huge level of possibilities because firstly the microcontrollers are manufactured by the Foreign companies, the M/s Microchip, USA and Microchip, and Renesas, Japan, and they have been shared with the secret software because the source code can be blended permanently on a one time programmable- read-only memory(OTP-ROM)¹². From this, it is implied the Indian EVM manufacturers will not be able to check the software in the chip, only the working of EVM can be examined.

The probability may be zero but the probability of detecting malicious software in an EVM should not be zero because if a malignant software injected along with a chip it cannot be detected as it is based on the OTP-ROM. Due to which the whole election is switched. Election Commission of India does not examine the EVM; they order the Indian manufacturers to deliver the apparatus directly to the state. The Chief Electoral officer checks only the functioning of the EVM and certifies them.

Trojan horse is a program which when interpolated with the chip along with source code either manipulates the entire election results or part of the results is manipulated. The oneness of the Trojan is that it disappears once the task is completed. A strong security system is to be maintained to circumvent the problems of Trojan.

The EVM's are not only misused by the software it is even forged through the hardware that is by the way of using fake parts. One of the essential parts is the microcontrollers in which the

¹¹ G.V.L.N. Rao, *Democracy at Risk! Can we trust our Electronic Voting Machine?*, 174(1st ed., 2010)

¹²Ibid at 137,138

source code is embedded. Generic microcontrollers 8.0 are used in EVMs and it can be easily faked because it is commonly used in many appliances like a washing machine and many other appliances and these are easily available in the local markets for low prices. The same make once found the required software is fused and inserted to the EVM. Neither the chip only is forged, the motherboard, EEPROMs, and the whole machine are replaced with duplicate products and there is no chance of identifying it as the EVMs that work normally with forged ones.

Manipulation of EVM is not through external features alone; the insiders are also equally engaged. The insiders are members of the election commission, technicians of the manufacturing industry, and the other private and government agencies¹³. These people have permission to enter the polling stations and cannot be denied unless any allegation is present. How insiders are involved in fraud? What will they gain through tampering the votes? One of the major possibilities is through the human weak chain i.e. receiving personal benefits from a person of well-placed sources and helping them fixing the election. Another possibility is private professionals are engaged to check the working of EVM before elections in which some of these members are associated with political parties. The insiders can hack the EVM by using a jumper in the wire which passes between the ballot unit and the control unit.

India is a home for many religions, cultures, and languages. As there exist many languages, most of the languages are still unaware. Likewise, the technology is still not widespread in remote areas, so the people hesitate to cast their vote in the Electronic Voting Machine. Nirmal Ho a tribal from Palamau district has not voted in EVM as he is more scared of EVMs than Maoists. The elderly man said to the IANS, I am afraid of technology, I have never been to school nor his forefathers then how would I vote in an EVM?

¹³Dr. K.S. Lisam, *How can Electronic Voting Machines (EVM) be manipulated?*, Kangla Online, available at <http://kanglaonline.com/2012/03/how-can-electronic-voting-machines-evm-be-manipulated/> last seen on 21/04/2020

An essential element of voting is assurance. People should have an assurance whether they have voted for the candidate to whom they wished; however, it lacks in the case of EVM. The voters in Tamil Nadu have faced many problems with EVM one of the common query is when the voters cast the vote for one party while light flash on other party and another problem encountered is the no beep sound is heard after pressing the button or multiple beep sounds been heard which creates suspicions in the mind of people.

Mistakes are common in the same way it should have a way to rectify. Similarly, in election counting errors takes place but there is no possibility of recounting in EVM. This is a major drawback due to which the results of the election can be changed completely.

As there subsist many problems in EVM various allegations are made by the political parties and many countries like USA, Germany, etc. have encountered these problems and made a way to the use of paper ballot to overcome from the mistake. So, is it essential for our country to make use of an apparatus facing these many defects and allegations.?

‘A mistake isn’t a mistake unless it is can’t be put right’ so in order to rectify from that major fault it is essential for our country to find a way that is transparent, verifiable, and accountable method to conduct election. **LEGAL FOXES** “OUR MISSION YOUR SUCCESS”

ALLEGATIONS ON EVM BY POLITICAL LEADERS

Democratic questions arose when EVM stepped into India through The Election Commission. In 2009 after the electoral defeat of BJP a demand to abandon the use of EVM was set before. Later in the 2014 elections, these critics of EVM stipulated the paper ballot back into the electoral system.

Many questions were raised by the Delhi Chief Minister Mr. Arvind Kejriwal in his tweets on twitter."Why are these stories ascribed to 'sources'? How credible are they? Why hasn't EC issued any formal statement? Or is it just a plant? Has anyone actually seen any official statement from CEC? Am trying to get it since evening. Is this news correct?" he said in a series of tweets.¹⁴

BJP along with many political parties demanded that the system should revert to paper ballots. In 2017 after the results of the Assembly elections This issue made a comeback in five states. This patch the call for paper ballots came from the opposition side of the political spectrum, with the Congress and AAP leading the charge. In the Chhattisgarh and Madhya Pradesh Assembly elections, several allegations were faced. Experts revealed that saying EVMs are "absolutely tamper-proof will not be accurate.

In order to criticize the system several political parties, including the Bharatiya Janata Party (BJP) and the Indian National Congress (INC) have taken turns. Instead of EVMS, the reintroduction of ballot papers was suggested by senior BJP leader LK Advani. During the 2014 elections, Kejriwal's Aam Aadmi Party (AAP) was one of the political parties who cried foul over EVM tampering.

The Electronic Machine Voting existing in India is prone to several errors and has faced much opposition from the public as well as political leaders. Is it essential to have an EVM which affects the Democracy of the country?

COUNTRIES REFUSED THE USE OF EVM

A manifold of countries has suspended the use of Electronic Voting Machines because of the lack of transparency and verifiability. The USA is the world's largest democratic country, which

¹⁴*Electronic Voting Machine and its history with India: Controversy over EVMs malfunctioning, rigging allegations are not new*, Firstpost, available at <https://www.firstpost.com/india/electronic-voting-machine-and-its-history-with-india-controversy-over-evms-malfunctioning-rigging-allegations-are-not-new-5939961.html>, last seen on 28/04/2020

still adheres to paper ballots. Initially, in the early stages, Americans conducted the elections by calling their preferences in public. After the American revolutionary war, the country moved on to the use of the secret ballot. Still, now the Americans did not abandon the practice of paper ballots as they feel it is further secured and cost-efficient compared to the e-voting. US Election Assistance Commission Chairman Tom Hicks says that the primary reasons paper ballots are used in most states are security and voter preference. Voter Verified Paper Audit Trail (VVPAT) is currently used in some states of the USA.

GERMANY

Germany started the trial of Electronic Voting Machines in 1998, manufactured by the Dutch company NEPDAS. As the Electronic Voting Machine received much propitious feedback in the first trial, EVM was used in Presidential elections. In 2005 German elections nearly 2 million EVMs were utilized.

A petition was filed by two persons challenging the scrutiny of elections and the use of Electronic Voting Machines in elections as unconstitutional. The German Federal court held that use of Electronic Machines as unconstitutional. This decision was taken by considering the "principle of public nature of election". Every person must know the process behind the conduct of elections. The EVM was ruled out because the people are unaware of the fact where their votes are stored, and software used in the EVM. while in the paper ballot the working is transparent, and the votes are retractable.¹⁵

NETHERLANDS

The Netherlands adopted the Electronic Voting Machine in 1996. It was welcomed by the local authorities, as the EVM reduced the mistakes in the election process and lessened the working staff in polling stations, and the people also started accepting the EVM. As time flies the problems in EVM came to light. In 2006 in the Netherlands, a pressure group called "We Don't Trust Voting Computers" upheld the security flaws in voting machines¹⁶. The head of this

¹⁵ John Sebes, 'Electronic Voting Banned In Germany', Trust the Vote Project, available at <https://trustthevote.org/blog/2009/09/02/electronic-voting-banned-in-germany/> last seen on 27/04/ 2020

¹⁶ Ryan Paul, *Netherlands says "nee" to electronic voting*, Ars Technica, available at <https://arstechnica.com/2008/05/netherlands-says-nee-to-electronic-voting/>, last seen on 26/04/2020

organization Rop Gonggrijp a hacktivist conducted a live telecast, demonstrating the vulnerabilities present in the EVM¹⁷. From the preceding facts, the Dutch government decided not to adopt the Electronic Voting Machine and thereby to follow the traditional paper ballot system until a new alternative is invented. In the later period, the government said, ratifying new equipment is a huge investment compared to the pencil and ballot votes.

IRELAND

The Rise of Electronic Voting Machine started in Ireland in 1999 by Noel Dempsey, who commissioned a test to check the feasibility of e-voting. In 2002, general election EVM was introduced on a pilot basis in the constituencies of Dublin North, Dublin West, and Mea. From the victory of the 2002 election, Martin Cullen initiated a scheme to precede the EVM in all elections. A campaign was introduced against the use of EVMs as it is less secure and the absence of paper verification results. So, the Government established a commission to examine the Electronic Voting Machine. In 2006 the commission said that by updating the software the Electronic Voting Machine would be feasible. Defending the EVM President Bertie Ahern, expressed the view that with some modifications to protect the security of the system it could still be implemented. “Otherwise, this country will move into the 21st century being a laughing stock with our stupid old pencils¹⁸”. In succeeding years, the Ireland government scrapped the use of Electronic Voting Machines and decided to bring back the practice of paper ballots in 2007 elections. The primary reason for banning the EVM is a lack of trust, the electorates did not like a machine recording the votes and the other reason is the EVMs are high in investment.

Other countries which also prohibited the use of Electronic Voting Machine

- Kazakhstan relinquished the usage of EVM in 2011.
- Italy banned EVM usage in 2009,

¹⁷Supra 11, at 112

¹⁸ Stephen Collins, “Rise and fall of Irish e-voting: a brief but expensive history”, Irish Times(24/04/2009),available at <https://www.irishtimes.com/news/rise-and-fall-of-irish-e-voting-a-brief-but-expensive-history-1.751993>, last seen on 28/04/2020

- Romania trialed it for a limited period in 2003,
- From 2007 EVMs were used only for central counting of ballots in Scotland,
- Finland operated EVM for the first time in 2008 but, a review in 2016-2017 concluded against internet voting where the risks were overvalued, thus EVM was abolished.

LIST OF COUNTRIES THAT HAVE TRIED THE USAGE OF EVM

- Cuba
- Dominican Republic
- El Salvador
- Guatemala
- Honduras
- Jamaica
- Nicaragua
- Trinidad and USA
- Bolivia
- Guyana
- Paraguay
- Uruguay
- Algeria
- Angola
- Benin
- Botswana
- Burkina Faso
- Chad
- Côte D'Ivoire



LEGAL FOXES

"OUR MISSION YOUR SUCCESS"

- Ethiopia
- Ghana
- Guinea
- Kenya
- Lesotho
- Liberia
- Madagascar
- Malawi
- Mali
- Mauritania
- Mauritius
- Mozambique
- Niger
- Nigeria
- Rwanda
- Senegal
- Sierra Leone
- South Africa
- Tanzania
- Togo
- Tunisia



LEGAL FOXES

"OUR MISSION YOUR SUCCESS"

- Uganda
- Zambia

➤ ASIA

- Afghanistan
- Bahrain
- Cambodia
- Hong Kong
- Indonesia
- Israel
- Kyrgyzstan
- Malaysia
- Maldives
- Myanmar
- Nepal
- Pakistan
- Singapore
- South Korea
- Sri Lanka
- Taiwan



LEGAL FOXES

"OUR MISSION YOUR SUCCESS"

- Thailand
- Timor-Leste
- Turkey
- Vietnam
- Yemen

➤ **AUSTRALIA AND OCEANIA**

- New Zealand
- Papua
- New Guinea

➤ **EUROPE**

- Albania
- Austria
- Belarus
- Bosnia and Herzegovina
- Croatia
- Cyprus
- Czech Republic
- Denmark
- France
- Georgia
- Germany
- Greece
- Hungary



● **LEGAL FOXES** ●

"OUR MISSION YOUR SUCCESS"

- Ireland
- Latvia
- Lithuania
- Luxembourg
- Macedonia
- Moldova
- Netherlands
- Northern Ireland
- Norway
- Poland
- Portugal
- Romania
- Russia
- Scotland
- Slovakia
- Slovenia
- Spain
- Sweden
- Ukraine
- United Kingdom
- Wales



LEGAL FOXES

"OUR MISSION YOUR SUCCESS"

“Whether EVMs Fare Better Than Paper Ballots on Transparency, Verifiability, and Secrecy?” A civil society initiative called VeTA (Citizens for Verifiability, Transparency & Accountability in Elections)question still remains unanswered. Pervasive many countries (as mentioned above) follow the paper ballot system rather than EVM. The major security flaw made about EVM’s malfunctions and manipulation possibilities were simply answered by neglecting. Nearly 31 countries around the world utter the usage of EVM. The scamming of paper ballots is highly impassable. A free and fair election is fundamental for elections, anything infringes that should be evaded. Guile in elections is not the same as a fraud in the e-commerce

sector, if the voting system is not shielded, the entire nation will be in the clutch of an undeserved leader.

CONCLUSION

Method of voting is as historic as election, mainspring from 'show of hands' in 508 B.C. 'Kudulai' in 920 A.D, later on ' Manual marking of ballots', during the 1990s 'Electronic Voting Machines' enrolled itself in this election system. The challenge of conducting a free, fair, and smooth election in India is formidable. Nearly 834 million voters are present in India, it's a country with geographical diversity, socio-economic variability, the vast gaps in information, knowledge perception wherein the election officers and workers tackle a colossal goal. Electronic Voting Machines originated to overwhelm from the bogus voting and to make the counting process quicker and facile. But it ultimately leads to many problems in the electoral system of India. Electronic Voting Machines have deviated from the quintessence of elections. To get spick and span from this mistake our country needs to reintroduce the paper ballot system. Though this system was initially prohibited and replaced by EVM, it has many benefits. VeTA Claims that "paperless electronic voting will never be secure". The voting method most recommended for democratic elections by the nation's top cyber security is a paper ballot. Which is the simplest, most reliable, and most familiar way of voting, thus reduces the likelihood of errors or malfeasance that would undetectably comprise the accuracy of the election results. In the paper ballot system, people feel assured as there is transparency, accountability, verifiability while in EVM there is suspicion in the mind of people whether the vote has been credited to the right candidate. Paper ballots are evidence of voters choices that cannot be altered by compromised software or hardware, and it is a tangible physical record of the vote. The paper ballot system is comparatively more convenient, as technology is not ubiquitous in remote areas, and it is relatively easy to cast a vote, and to maintain secrecy. Technical hitches slow down the friction of polling to revive from the blemish, reintroduce of the paper ballot is indispensable. To ensure the integrity of the free and fair election the working behind the paper ballot system is made aware to the people, while in EVM the source code of the EVM is not open source. Speed of election results is an attraction for EVMs, but saving democracy is more crucial than saving elections cost or gains. Many countries had rectified the mistake from using of EVM in elections. Now it is a chance for our Indian government to make a headway to overcome from the

blemish.? ‘Old is gold’ similarly, the practice of the traditional paper ballot is the most accurate way to perpetuate the republic and democracy of our India.



• LEGAL FOXES •

"OUR MISSION YOUR SUCCESS"