

## **Consolidating Indonesia's Fragile Elections Through E-Voting: Lessons Learned from India and the Philippines**

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### **Abstract**

This research argues that implementing the electronic voting (e-voting) system in Indonesia is urged following the nation's first-ever 2019 simultaneous elections, which cost a deadly price of 527 election official lives of reported extreme fatigue during and after the event. Billed as "the world's most complex election", it has reached a consensus that the current manual election system, in which five different paper-based elections are voted at a time, has to be changed. Not to mention that the long-time gap between the voting day and the result announcement may create an opportunity for election fraud. This is evidenced by loads of electoral dispute lawsuits from the previous election brought to the Constitutional Court of Indonesia accused the others of cheating. This research stresses that despite the controversies of whether Indonesia, an archipelagic country with more than 17 thousand islands and 267 million people, is ready for e-voting. Whether the application of technology is an appropriate response to the election problems? E-voting is desired as a long-term solution and intends to solve many issues such as speeding the

counting of ballots, reducing the cost of elections, providing accessibility for disabled voters, and increasing overall voter turnout.

**Keywords:** e-voting; election fraud; Indonesian election system

### **1. Introduction**

News of the death of election officials in Indonesia has shocked the world. The 2019 general election was the first simultaneous election of both presidential and legislative elections. Previously, democratic presidential election was made every five years started from 2004. With 192,866,254 voters cast their vote in 809,500 polling stations and involved as many as 7,385,500 Election Commission personnel (of whom 5,672,303 were civilian workers), the recent April 17 vote was a vast logical exercise. It was billed as "the world's most complex election."<sup>1</sup> As a result of this big single-off election, 527 election officials reported to have died during and in the following days of the vote. The cause of the death was various, and generally due to extreme fatigue and stress-related illness as they worked non-stop for 24 hours during the voting day since the General Election Law 2017 requires the vote count at each

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<sup>1</sup> Report made by BBC Reality Check Team, 2019, *Indonesia Election 2019: Why Did So Many Officials Die?* BBC, retrieved from <https://www.bbc.com/news/world-asia-48281522>

polling station to be finished on the same day.<sup>2</sup> For the paycheck, they were paid very poorly. Each part-time election officials received IDR 500,000 (equals to around USD 36) before tax or IDR 75 (less than one US cent) per ballot paper that they counted.<sup>3</sup>

After the news of the death of polling station officials' spread out, Indonesian people drawn in grieve. Another problem arises because of the long-term decision on the results of presidential elections. This sparked a conflict between two presidential candidates' supporters, specifically the riots by some people during the votes for presidential and vice-presidential candidates by the General Election Commission (KPU). The incumbent candidate was accused for engaging in manipulation during the calculations of election ballot for winning the election. In fact, the Commission really won the candidate. This triggered public outcry and alleged to set up a riotous demonstration, leaving eight people dead, and several were seriously injured.<sup>4</sup> Similar to the 2019 general election, the 2014 general election took up 157 lives of election officials. This has set negative precedence among the democratic countries for which the Indonesian election system must be evaluated.

<sup>2</sup> Article 383 of the Law Number 7 of 2017 on General Election

Paragraph (1): Vote count at polling station is started after the vote cast finishes.

Paragraph (2): Vote count as mentioned at the Paragraph (1) has only to be done and finished at polling station on the same day as vote cast.

<sup>3</sup> Report made by Dina Manafe and Nur Yasmin, 2019, *What Kills Indonesian Election Officials?* Jakarta Globe, retrieved from <https://jakartaglobe.id/news/what-kills-indonesian-election-officials/>

<sup>4</sup> Report made by Sausan Atika, 2019, *Anies in Tough Spot in Wake of Jakarta Riot*, The Jakarta Post, retrieved from <https://www.thejakartapost.com/news/2019/05/24/anies-tough-spot-wake-jakarta-riot.html>

Historically, Indonesia's first direct election began in 2004, when Susilo Bambang Yudhoyono and Jusuf Kalla were elected as the President and Vice-President replacing Megawati Soekarno Putri.<sup>5</sup> Meanwhile, in the legislative branch, the members of the People's Consultative Assembly (MPR) consist of the People's Representative Council (DPR) and a new-established Regional Representative Council (DPD). The members are directly elected through the general election, similar to the presidential election. This was possible following the 1999 election reforms after the collapse of the New Order of Soeharto in 1998. This change for the President and Vice-President's direct election was a big step for Indonesia towards full democracy. The general election realizes a constitutional system with integrity and democracy and accommodates people's aspirations through general, freedom, secret, honest, and fair elections.<sup>6</sup>

Of four elections ever held between 2004 and 2019 in Indonesia, the disputes between cheating and manipulating candidates and the casualty it creates over election officials, seem never to stop. As a comparison, some other democratic states have already used electronic voting (e-voting), which minimizes the disadvantages. Learning from the previous election in Indonesia, the lack of public trust toward the running of the election is the issue as it results in political tension and social unrest. Therefore, a new system urges to be applied to re-reform the Indonesian election system following technology development. For this to ever be possible, e-voting seems the only

<sup>5</sup> Ismanto, I. & Legowo, T.A. (2005). *Pemilihan Presiden Secara Langsung 2004*. Jakarta: Kedeputan Dinamika Masyarakat Menristek, p. 9.

<sup>6</sup> Wanandi, J. (2004). The Indonesian General Elections 2004. *Asia-Pacific Review*, 11(2), p. 115-116.

answer.<sup>7</sup> Name the United States of America, Austria, and Switzerland who already use the e-voting machine election system (available on the voting place); Estonia and France use internet voting (election by the Internet and personal computer).<sup>8</sup> It is interesting to discuss the urgency of using an electronic voting mechanism like other democratic states in the Indonesian election. Considering this background, the problems addressed in this research are 1) the urgency of using electronic voting in Indonesian elections and its challenges.

## 2. Electoral Reform and Electoral Fraud in Indonesia

In the post-resignation of the first president of Indonesia, Soekarno, and marked the end of the Old Order rule in 1966, General Soeharto took a role replacing Soekarno as an acting president fill in the vacuum of power. Later in 1971, the first-ever election was held and won absolutely by the Functional Group Party (GOLKAR), legitimating Soeharto as the party's leader to be the second president of Indonesia and start the New Order. Two years after the election, the People's Consultative Assembly (MPR) issued a decree to emphasize the need for fusion between political parties with similarities. This way, only three political parties were recognized by law and allowed to contest in the Indonesian elections until the 1997 elections.<sup>9</sup> However, the fusion only brought the GOLKAR into a powerful situation. Soeharto could control the other two-party, the Unity Development Party (PPP) and the Indonesian Democratic Party

(PDI), through Social and Politics at the Indonesian National Army and the Ministry of Home Affairs.

For more than two decades under the rule of the New Order, the Indonesian elections were overwhelmed by rampant frauds, thanks to the powerful authorities of Soeharto. Manipulations in elections were massive and structured in 1977, 1982, 1987, 1992, and 1997 elections, such as using the closed-list proportional system in which voters could not know the candidates for legislative election they wish to vote, only the political parties. For years, it was guessable who will win the elections – the GOLKAR party. As a consequence, corrupt election officials might misuse their authority to elect candidates by request. Reminiscing the old presidential appointing system in Indonesia where the election was done in the MPR, Soeharto was re-elected for six terms as the MPR legislative members were mostly his people.

Since the fall of the New Order under Soeharto's military authoritarian regime in 1998, Indonesia has been radically transforming its country into more democratic.<sup>10</sup> It includes the electoral reform in which the elections from 1999 to 2014 are considered free and fair elections.<sup>11</sup> Not to

<sup>7</sup> Alomari, M.K. (2016). E-Voting Adoption in a Developing Country. *Transforming Government: People, Process and Policy*, 10(4), p.526-527

<sup>8</sup> Ellis, A., et. al. (2007). *Voting from Abroad: The International IDEA Handbook*, Mexico: Federal Electoral Institute of Mexico, p.218-220

<sup>9</sup> Ufen, A. (2008). *The Evolution of Cleavages in the Indonesian Party System*. Hamburg: German Institute for Global and Area Studies, p.12-13

<sup>10</sup> Indonesia's transition to more democratic in the electoral system was mostly dominated by movement activists. The activists and social reformers had the strongest role as for reasons tied to the barriers that military authoritarian regime of New Order under Soeharto left for protest. Indonesia then moved toward direct presidential elections in which political parties could only contest in the presidential election after the candidate win a substantial share of votes across provinces. This system dismantled the authority of MPR to elect president. See further at Vince Boudreau, "Elections, Repression and Authoritarian Survival in Post-Transition Indonesia and the Philippines", *The Pacific Review*, Volume 22 (2), 2009, p.241-244

<sup>11</sup> Suryani, D. (2015). *Defending Democracy: Citizen Participation in Election Monitoring in*

mention that the 2014 elections were considered remarkable as the country had constituted one of the most complex electoral practices in history with open, direct, and more democratic than ever. In that election, the President and Vice-President were elected by direct ballot for the first time. This demonstrating fundamental and historical reforms of people's sovereignty by choosing their government free of strict control and rampant manipulation that had characterized elections throughout the New Order regime under the Soeharto administration.<sup>12</sup> This way, the electorate was building up its power and independence without any external interference, bringing the voters to rebel against party elites bravely and to the cross-party line to vote for whom they wished, not for whom they were instructed to support.<sup>13</sup> In the end, Soesilo Bambang Yudhoyono (SBY), a retired army general, former cabinet minister, and the leader of Democratic Party (PD), teamed with GOLKAR Party's candidate of Jusuf Kalla as his vice-presidential running mate and won the election, defeating the incumbent president from Indonesia's Democratic Party of Struggle (PDI-P), Megawati Soekarno Putri, and her running mate Hasyim Muzadi from Indonesia's Islamic Organization of

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Post-Authoritarian Indonesia. *Journal of Government and Politics*, 6(1), p.1

<sup>12</sup> The electoral system in Indonesia after democratization changed in the direction of guaranteeing the political freedom and participation in elections of the heretofore oppressed Indonesian people and social and political groups. A consolidation of democracy is hoped to give positive effect in real terms through legal and institutional reforms following the fall of the New Order. See further at Dong-Yoon Lee and Sang Hwa Chung, "Democratic Consolidation and Electoral Reform in Southeast Asia: Philippines, Thailand, and Indonesia", *Global Economic Review*, Volume 33 (4), 2004, p.64-65

<sup>13</sup> Dagg, C.J. (2007). The 2004 Elections in Indonesia: Political Reform and Democratisation. *Asia Pacific Viewpoint*, 48(1), p.47

Nahdlatul Ulama by a vote of 61% to 39% in the second round.

In the next period, SBY dissolved his coalition with Jusuf Kalla and chose Boediono as his running mate in the 2009 presidential election. Successfully re-elected for the second time, the success of SBY is remarkable for several reasons. To mention one reason, it is his electoral promise of massive cash programs for the poor that rocketed SBY's electability from underdog to almost unassailable frontrunner. Reminiscing his concurrent cash program and fuel price reduction, these two brought SBY into popularity in low-income Indonesia's social segments.<sup>14</sup> Unlike GOLKAR, PD and surprisingly PDI-P were under pressure to identify the next candidates for a new dynastic succession in Indonesian politics. In 2014, PDI-P had successfully found a new figure to replace SBY after winning the 2014 election by defeating the former general of Indonesian special army forces, Prabowo Subianto. Among the observers, there was a tendency to view the presidential election as a contest between a "man of the people" committed to further democratic reform and an authoritarian-like man with a strong connection to the New Order.<sup>15</sup> This clearly illustrates a significant betterment in Indonesia's electoral democracy, with the people's own indisputable strong sovereignty to cast their vote.

No matter how significant the improvements are, the criticisms are still unavoidable regarding the electoral democracy in Indonesia. Despite being more consolidated in democracy in running the election after the collapse of Soeharto's New Order, corruption and money politics are

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<sup>14</sup> Mietzner, M. (2009). *Indonesia's 2009 Elections: Populism, Dynasties and the Consolidation of the Party System*, Sydney: Lowy Institute for International Policy, p.3-4

<sup>15</sup> Aspinall, E & Mietzner, M. (2014). Indonesian Politics in 2014: Democracy's Close Call. *Bulletin of Indonesian Economic Studies*, 50(3), p.347-369

endemic in Indonesia, including fraud, manipulations, and malpractices of the electoral process the elections.<sup>16</sup> These wrongdoings revolve around two main deeds, namely: the spread of bureaucracy mobilizations and the practice of money politics. Besides, intimidation over voters is also rampant in the election process where they find themselves being threatened to not vote or, on other occasions, pass the voting rights to others and choose or not to select a particular candidate or political party. This situation is possible due to poor management of the election from voters' registration process to the ballot's manipulation when these two are transmitted from regions to the headquarter in Jakarta's capital city.

The Election Watch Independent Committee argued that the 2004 legislative election was worse than in 1999. The election was arguably full of rampant fraudulent practices such as money politics, political intimidation, political terrors, bribery, misuse of state facilities for campaigns, constituents' data and vote counting manipulations, out-of-schedule campaign, and installment of political attributes in prohibited spots. These are examples of offenses done by the contested candidates and/or the political parties proposing them. Internally, the involvement of election officials to win a particular candidate also happened during the election. The officials might create an opportunity for the prepared people to cast their votes more than once, or the officials themselves corruptly cast the votes for certain names or parties.<sup>17</sup>

There were two rounds in the 2004 presidential elections. The first round was held on July 5, 2004, competing for five pairs of candidates. Of 153,320,544 registered

<sup>16</sup> See further at the Special Report made by The Carter Center, 2005, *The Carter Center 2004 Indonesian Election Report*, Atlanta: Carter Center, p.13-15

<sup>17</sup> Cahyono, H. (2004). Pelanggaran Pemilu Legislatif 2004. *Jurnal Penelitian Politik*, 1(1), p.9-10

voters, 122,293,844 voters cast their votes in the ballot boxes around the country. However, only 199,656,868 were officially valid under the guidance of Law Number 23 of 2003 on General Election for President and Vice-President. Due to no candidates had successfully received more than 50% of all votes,<sup>18</sup> the election was continued to the second round. Only two pairs of Susilo Bambang Yudhoyono - Jusuf Kalla and Megawati Soekarnoputri - Hasyim Muzadi competed in the second they won the first and the second in the first round. Held on September 20, 2004, the second round brought Susilo Bambang Yudhoyono - Jusuf Kalla to surprisingly win the election with more than half of the total votes.

Although the election was finished, candidate Wiranto - Salahuddin Wahid did not entirely accept the result and decided to file a lawsuit against the KPU to the Constitutional Court. The pair requested the Court to nullify the KPU Decision Letter Number 79 of 2004 on the Determination of the Result of the Presidential Election Vote Counting and to redo the vote count. The applicant accused of miscounting in 26 provinces which makes them to lost votes, amounted to 5,434,660. However, the Constitutional Court decided to reject the lawsuit after the evidentiary process in the Court took place and found that the applicants' accusations were unwarranted and had to be rejected.<sup>19</sup>

Similarly, there were many frauds and malpractices found in the running of the

<sup>18</sup> This regulation is constituted in the Article 6A paragraph (3) of the 1945 Constitution of the Republic of Indonesia. In the Article, it says "Candidates of President and Vice-President who gained more than 50% of all votes in the general election with at least 20% votes in the half of total provinces in Indonesia, would be elected as the President and Vice-President."

<sup>19</sup> The decision was stipulated under the Constitutional Court Decision Number 062/PHPU/BII/2004

2009 elections. The 2019 elections were argued as the worst management in Indonesia's post-authoritarian period.<sup>20</sup> Many of unregistered voters were able to cast their votes, case of people who have passed away but found their names in the voting list, active police and military members involved in the voting,<sup>21</sup> and many of those who were registered in the temporary voting list but not registered in the fixed list. SBY won 60.80% of the total votes in the election race with his new running mate Boediono, a former chairman of the Bank of Indonesia. Meanwhile, his rival Megawati Soekarnoputri and Prabowo Subianto only successfully collected 26.79%. The rest 12.41% votes went to the pair of SBY's former vice president Jusuf Kalla and a former army general Wiranto. Feeling unsatisfied, the SBY's competitors allegedly accused him of exercising the systematic, structured, and massive fraud practice in the election. As a result, the allegation was filed to the Constitutional Court under dispute over the presidential election results. After going through the steps of examination, in the end, the Court rejected the lawsuit as the applicants could not prove them wrong.<sup>22</sup>

### 3. Indonesia's Most Decisive Elections: The 2014 and 2019

Of many elections since 1955, the 2014 and 2019 elections were argued as the most

political upheaval following massive frauds, social unrests, and deaths of election officials. In the 2014 presidential election, only two candidates were eligible to contest in the 2014 presidential election, though there were 12 political parties competing in the balloting.<sup>23</sup> This is rooted in the presidential threshold policy of 20% enacted in 2009 for candidates proposed by political parties before the presidential election, while it was only 10% in 2004.<sup>24</sup> In the end, the pair, Joko "Jokowi" Widodo - Jusuf Kalla won the election against Prabowo Subianto - Hatta Radjasa with 53.15% (70,997,883 of 133,574,277 total votes collected). Prior to the official announcement of the 2014 presidential election result by KPU, Prabowo requested the KPU to postpone the announcement by two weeks to allow his team to investigate claimed frauds and manipulations of the voting process. However, the request was denied and led to the dissolution of his coalition. Prabowo then withdrew from the recapitulation process before the KPU announce its official tally, insisting on his victory above the claimed manipulations he accused. The attribution that Prabowo made on the withdrawal was "failing its duty to democracy" because of "massive cheating that is structured and systematic. Later, Prabowo and his team brought the accusation to the Constitutional Court for an electoral dispute lawsuit. However, the Court decided to reject all the claims in the lawsuit and therefore brought Jokowi to become the seventh

<sup>20</sup> Suryani, D., *Op.Cit.*, p.8.

<sup>21</sup> Indonesia forbids active police and military members to involve in the practical politics, including to cast their votes in the elections. The police and army have to be neutral in elections to uphold just and fair. These restrictions are regulated under the Article 39 (2) of the Law Number 34 of 2004 on Indonesian National Army, Law Number 2 of 2002 on Indonesian National Police, and Article 494 of the Law Number 7 of 2017 on General Election.

<sup>22</sup> The decision was stipulated under the Constitutional Court Decision Number 108-109/PHPU.B-VII/2009

<sup>23</sup> Trihartono, A. & Patriadi, H.B. (2015). The 2014 Indonesian General Election and Beyond: Melting 'Frozen' Cleavages. *Asian Journal of Comparative Politics*, 1(1), p.25-27

<sup>24</sup> Ghofar, A. (2018). Dispute on Presidential Threshold: Decisions of the Constitutional Court and Other Countries' Experiences. *Jurnal Konstitusi*, 13(3), p.481

president of the Republic of Indonesia with Jusuf Kalla as his Vice-President.<sup>25</sup>

President Jokowi, who was the favorite in the 2014 election, surprisingly won the election thanks to social media's mainstream in Indonesian elections' competitive nature. Both Jokowi and Prabowo incorporated Facebook and Twitter in their endeavors in presidential campaigns. With roughly 65 million Facebook users and 30 million Twitter users by mid-2014, made the campaigning situations were more online and thus created a simple method of delivering political messages concerning the election through digital access. This way, the supervision of elections could be done easier as the officials need to regularly check the security system and supervise the flow of information online.<sup>26</sup> However, the incapability and the inconsistency in transforming the electoral procedures into online are still become the primary hindrances. His administration is also argued to compromise with corrupt politicians, intolerant religious leaders, and former generals with little commitment to democratic principles. Moreover, human rights, the rule of law, and the protection of minorities have all weakened under his watch. This has been done due to the embedded system of a bitter form of religion-based identity politics.<sup>27</sup>

<sup>25</sup> The decision was stipulated under the Constitutional Court Decision Number 1/PHPU.PRES-XIII/2014

<sup>26</sup> Holmes, D. & Sulistyanto. (2016). Understanding the Indonesian Mediapolis: The Role of Social Media During the 2014 Indonesian Presidential Election. *Communication, Politics & Culture*, 49(2), p.64-73

<sup>27</sup> Bland, B. (2019). *Politics in Indonesia: Resilient Elections, Defective Democracy*, Lowy Institute, retrieved from <https://www.lowyinstitute.org/publications/politics-indonesia-resilient-elections-defective-democracy>

In 2019, the presidential election was held on the same day as the legislative elections for the first time. This concurrent election gave about 193 million Indonesians to cast their votes for the president, upper and lower houses of the national parliament, as well as provincial and sub-region legislatures in more than 800,000 polling stations. Just over 20 years after the fall of the New Order regime under Soeharto, free and fair elections have become the norm in Indonesia. The surprising winning of underdog Jokowi in the 2014 election had proven the workout of the norm, illustrating the genuinely competitive nature of the electoral system. He was bringing along a prominent Islamic clerk Ma'ruf Amin as his running mate had proven successful in competing against the former rival Prabowo Subianto and his running man Sandiaga Salahuddin Uni, an entrepreneurship prodigy. Ironically, however, the election had been rife with cheating and cost 527 lives of polling station officials. Moreover, law enforcement has become politicized under his administration, with government critics from oppositions arrested on questionable charges and rampant corruption by politicians were seemingly far from just punishment. The Jokowi's first presidential term administration had failed to understand that competing parties accept one another as legitimate rivals, leaving behind a democratic principle of political egalitarianism.<sup>28</sup>

In the history of the Indonesian election, the 2019 general election was doubted by many parties as the most unfortunate with hundreds of election officials died, and thousands of others were

<sup>28</sup> In American democracy, there are two basic norms have preserved America's checks and balances and saved the country from the Civil War, the Great Depression, the Cold War, and Watergate are mutual toleration and the acceptance in electoral rivalry. See further at Steven Levitsky and Daniel Ziblatt, 2018, *How Democracies Die*, New York: Crown, p.8

sick in the aftermath. This condition has set unpleasant precedence in the country's election system as every election always takes people's lives in the end. Aside from the death case, in a report made by the Election Supervisory Body (BAWASLU), they found massive practices of fraud during the election. The report records a number of 16,124 cases of administrative offenses, 373 cases of ethics, and 582 cases of criminal. BAWASLU also found 11 cases in total of involvement of the State Civil Apparatus (ASN), the Indonesian Armed Forces (TNI), and the National Police in the campaign to support one certain candidate. These three parties are legally prohibited to actively and publicly involved in the election as regulated under the General Election Law 2017 as they possess authority from the country that might overpower other candidates and turn the election to be unbalanced and unfair.<sup>29</sup> As a response to the rampant practices of fraud in the 2019 presidential election, a group of people was assembled in front of the BAWASLU headquarter in Jakarta to protest the result. This happens hours after the KPU announces the result on May 21 at midnight. The riot took eight protesters' lives dying of gun shooting by the Police.

Back years before, there is one corruption case that seemingly is connected to the frauds and manipulations in the 2014 and 2019 elections in Indonesia. A former Indonesian House of Representative speaker Setya Novanto was found guilty of an electronic identity (e-ID) graft corruption case and

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<sup>29</sup> Based on Sarah Birch, *Malpractice* can be divided into two parts. First, manipulation of voter choice aimed at changing or directing voter choice in a variety of manipulative ways. Second, manipulation of the voting process and counting of votes until the announcement of the election results, manipulation occurs starting from the voting process to the announcement of the election results. See further at Sarah Birch, 2011, *Electoral Malpractice*, Oxford: Oxford University Press, p.20

sentenced to 15 years in prison, which reportedly caused state losses for Rp2.3 trillion or equaled to US\$165.29 million. This case appeared to the public after being investigated in 2013 following the conviction of graft to the treasurer of the Democratic Party in 2013. Novel Baswedan, a senior Indonesian's Corruption Eradication Commission (KPK), was attacked by two unidentified assailants using dangerous acid following his investigation on the case. The e-ID graft was then massively amplified to be the basis of rampant cheating in the 2019 elections. The public found millions of e-ID blank forms dumped on the street in several spots at the end of the year 2018. In the 2019 elections, the public accused a trial of manipulation of voter's identity for the sake of certain candidates' political gains in the election.

#### **4. Electoral Breakthrough in India and the Philippines: E-Voting Introduction**

For decades, voting was blighted by the capture of polling stations and ballot boxes' stuffing by mobs hired by political parties. All this changed with the electronic voting introduction at the edge of the 20's century. In 1982, a small municipality on the southwest coast of India's Kerala state utilized Electronic Voting Machine (EVM) for the Paravoor constituency. Seven years later, the bill to amend the country's Election Law was passed following the electoral reform committee's recommendation, making the EVM legal to be practiced on a nationwide scale. This policy was gradually being introduced from state to state until 1998, making the EVM a necessity in India's elections in 2004 after the Lok Sabha's parliamentary election. The machine is produced by a government-owned company named Bharat Electronics Ltd (BEL). This BEL works under a partnership agreement



with the Election Commission of India (ECI).<sup>30</sup>

India's version of EVM consists of two main components: the ballot (voting machine) and the control unit, which connects the 5-meters cable to the machine. Prior to the election day, the candidates' profile and their party's symbol are marked on *the ballot*. Procurement-wise, the profiles and symbols are crucial considering India's illiteracy rate of 25.96%, especially in rural and tribal areas.<sup>31</sup> In practice, voters are directed to a voting booth where *the ballot* is installed. Next, the official polling station stores and accumulates votes using *the control unit*. In processing the votes, India designed a distinguish EVM's software like no other by operating an Erasable Programmable Read-Only Memory (EPROM).

Prior to the casting day, the BEL and ECI conduct a mock poll test collecting 1,000 votes on 5% of the total EVM needed. The political parties will randomly select the machine for the sake of fairness. After the test is complete, the EVM will be sealed by a signed paper and given a unique number attached. On distribution, the machine will randomly be distributed to assembly constituencies (regions or states). Upon starting, the EVM will show on screen the profiles and symbols of competing

candidates. The test will be done twice to ensure all things work well following the guidelines. The EVM is kept in a safe room until the day of the election. In the presence of candidates and observers of the election, officials' polling stations conduct the third test of at least 100 votes. In the end, the EVM will be resealed for safety purposes. If damage or error are found during the tests, a new EVM ought to be requested soon.

On the day of India's election, the polling station opens from 7 am to 7 pm, with one EVM available on the spot. Next, the official's polling station completes the identification process of the voters. This is done by checking the identity card upon the printed list, crossing out the voters' names, signing the list with names, and marking their index fingers with ink. After going through this identification process, officials will unlock the EVM using *the control unit* mounted on the engine separated from the main machine. Voters begin to enter *the ballot*, pressing the button that matches the name of the candidate of their choice, then an audible voice will respond, signaling the vote has been cast. When closing the polling station, the officials in charge shall press the "close" button on the EVM, preventing the machine from receiving votes again. This action is followed by officials pressing the "check" button to command *the control unit* to reject votes coming in. The EVM is put into a plastic box and is taken to a safe room, where it is kept under armed police surveillance until the day of vote counting. To reveal the votes, officials have to press the "result" button on the EVM. The output will be disclosed in order of the number of candidates, the total number of votes, and the number of votes received by each candidates—from the highest to the lowest. These results are recorded manually from each machine and are collected to determine the final results, usually within a few hours.

What points out India's e-voting is trusted by constituents is the high level of

<sup>30</sup> Avregou, C., et al. (2019). Trusting E-Voting Amid Experiences of Electoral Malpractice. *Journal of Information Technology*, 34(3), p.10

<sup>31</sup> India's Ministry of Home Affairs conducts a census every 10 years. According to the last Census in 2011, The average literacy rate in the country stands at 74.04%, males count for 82.14% while 65.46% is females' rate. By region, state of Kerala retains the top position with a 93.91% literacy rate, in contrast with state of Bihar with nearly a third of its populations are illiterate (63.82%). The Census considered persons aged seven and above whom have the ability to read and write as literate. Data is collected from Know India website, *Literacy*, knowindia.gov.in, retrieved from <https://knowindia.gov.in/profile/literacy.php>

confidence in the ECI's public survey, which outlines the visibility of e-voting. According to the Integrity Election Project, ECI stands out as the most trusted state organization among others in India. In 1947 when India gained independence, ECI has supervised 17 national and more than 370 state elections. It has also organized some of the remarkably biggest and longest elections. To name one, last 2019 parliamentary election had amazingly around 900 million eligible voters and was completed in nine phases over 39 days.<sup>32</sup> In relation to e-voting, discourse about integrity and hackability on media from the opposing group went nothing as ECI managed to overcome booth capturing and ballot stuffing, resulting in the speed-up of the results' announcement.<sup>33</sup>

Meanwhile, in the Philippines, e-voting was first held in 1996 for the election of the Autonomous Region in Muslim Mindanao (ARMM). The election was done as a trial to synchronize the national automation of election in the next two years (1998). The 1996 ARMM election used a counting machine of Optical Mark Reader (OMR) as the basis to mark and read the ballot papers. This method went successful in minimizing rampant practices of fraud and inefficiency.<sup>34</sup> As a result, the government of the Philippines adopted the system into the election and held the first national election using automation in 2010. The same system was applied in the 2013 and 2016 elections. Before 2010, the Philippines' voting model was still conventional, in which to determine

constituents' votes by writing down the candidates' names then calculate all the ballots manually on a one-by-one basis.

In the field, there is one standalone Precinct Count Optical Scanner (PCOS) and one ballot box at each polling station. The PCOS operates with a Compact Flash Card (CF Card) external memory unit, which is customized to each clustered precinct. Constituents vote for the candidates by shading oval their names on the ballot paper. This action sends an instruction that will be read by the PCOS and be stored in the ballot box. For the safety purpose, each ballot papers are printed with an ultraviolet (UV) mark so that the PCOS can automatically read the authenticity. The ballot paper's front side illustrates the profile of the candidates and their parties, while the other side has differed in respect to the city's unique policies. All PCOS machines are tested using ten ballots in public eyes between seven to three days before the election day. Ballots are counted manually, and the PCOS will be compared to ensure the wellness of the machine.

At the end of the polling, the PCOS will automatically count the votes in it. The result of the election will be printed in eight copies by default to counterfeit any outside threats. An encryption process will be taken to keep the data safe. Next, the data will be sent to the *Kapisanan ng Brodkaster ng Philippines* (KBP) or the Philippines Broadcaster Association. After being received by the KBP, the data will be reprinted in the number of copies according to the total of participating parties. This action is done to ensure the authenticity of the vote count.

The Philippines' e-voting during the 2010 and the 2013 elections was considered a success. It overcame the inefficiency in the voting process and had increased the accuracy, preventing large-scale fraud. The Pulse Asia and the Social Weather Stations conducted a study of election result satisfaction in the post-2010's Philippine

<sup>32</sup> Amit Ahuja and Susan Ostermann, 2021, *The Election Commission of India: Guardian of Democracy*. In a book edited by Arjen Boin, Lauren A. Fahy, and Paul 't Hart. *Guardians of Public Value: How Public Organisations Become and Remain Institutions*, p. 37

<sup>33</sup> Avregou, C., et. al., *Ibid*, p.12

<sup>34</sup> Masataka, K. (2015). Information and Communication Technology and Election Administration in the Philippines. *Philippines Political Science Journal*, 36(1), p.60

election. They found 84% to 86% of constituents were satisfied, and 94% of them perceived that the e-voting is effortless – another result shown that 91% of the voters want e-voting to be conducted in the upcoming election. In addition, a Philippines' non-governmental organization of LENTE (Legal Network for Truthful Elections) found a percentage of 99.99% match between the e-vote counting and the manual counting in their Randomized Manual Audit project.<sup>35</sup>

### 5. Implementation of E-Voting in Indonesia: An Alternative Solution?

Unlike India and the Philippines, e-voting is still a blueprint for Indonesia. A discourse to implement e-voting in Indonesia's electoral system has been discussed since 2009 when the Constitutional Court issued Decision Number 147/PUU-VII/2009. The decision was examined the Article 88 of Law Number 32 of 2004 on Regional Autonomy which allows the votes to be collected using the e-voting method for the regional government elections. As a result, there were 981 villages around Indonesia have already implemented e-voting in the election of the leaders, though it has yet been used for the nationwide election.<sup>36</sup> The experience was showing a positive impact as it cost around Rp60 million or US\$4,200 for all of the equipment needed. For 3,000 voters in a village, it takes only

eight hours to cast all the votes, and the result could be known on the spot right away.<sup>37</sup>

The Jembrana regency registered the Court decision in Bali province, and it has been pioneered the use of e-voting in the Indonesian's local elections race. Learning from past experiences where manipulation and public distrust were frequent and rampant in elections, the local government decided to implement e-voting. This was also done to cut off the high cost of conducting an election. Since 2009, there was 54 times election executed through e-voting methods. Finding a lack in a legal matter to umbrella the events, the regency brought the Constitutional Court issue for the constitutional review process, reviewing Law Number 32 of 2004 on Regional Autonomy. Its connection to electing local leaders, proposing to use the ICT in the run of the local election. The submission of the review was finally approved by the Constitutional Court, providing that the implementation of e-voting is allowed. The case of Jimbrana regency was based on the principles of the election. The Court added that the regency could conduct e-voting, namely the readiness in technological matters; financing; administration, human resources; and legality.<sup>38</sup> Later, other regions such as Batanghari and Bogor regencies followed Jimbrana to implement the local elections' e-voting method.<sup>39</sup>

<sup>35</sup> Report made by Smartmatic in 2019, *Filipino Voters Trust Election Results, Surveys Show*, Smartmatic.com, retrieved from <https://www.smartmatic.com/media/article/filipino-voters-trust-election-results-surveys-show/>

<sup>36</sup> Report made by Anwar Siswadi, 2019, *Saat Orang Kota Nyoblos Pakai Paku, 981 Desa Sudah e-Voting*, Tempo.co, retrieved from <https://tekno.tempo.co/read/1202782/saat-orang-kota-nyoblos-pakai-paku-981-desa-sudah-e-voting/full&view=ok>

<sup>37</sup> In the decision, Constitutional Court allows the e-voting method to be used for regional government election as long as it obeys two principles in election, namely: it respects the principles of direct, general, free, secret, honest, and fair; and readiness on the technology, financial, human resource, and the software.

<sup>38</sup> Anistiawati, M.L. (2014). Implementasi Kebijakan Penerapan Elektronik Voting (E-Voting) Dalam Pemilihan Kepala Desa. *Jurnal Citizen Charter*, 1(2), p.7

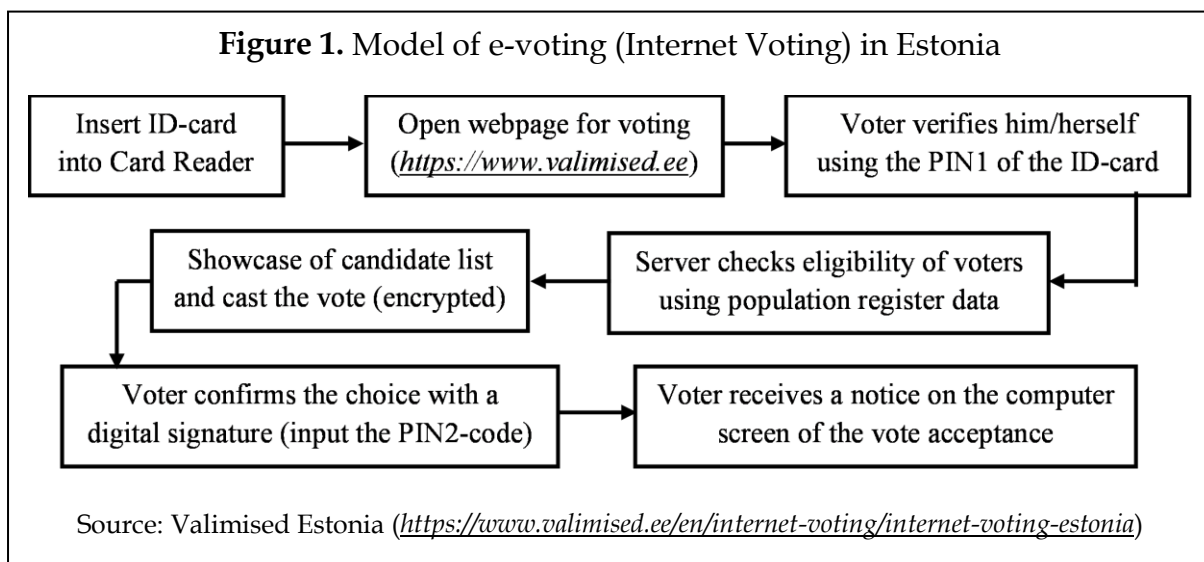
<sup>39</sup> Apriani, T., et. al. (2018). E-voting in the Village Head Election in Batanghari and Kabupaten Bogor Regencies. *Jurnal Bina Praja*, 10(2), p.4-5

E-voting can overcome the problems in the traditional election system. For an archipelagic country like Indonesia, it is suitable to reduce the time and budget to conduct elections.<sup>40</sup> E-voting depends much on secrecy and security, meaning that it would work at best if these two are well-managed. The implementation of e-voting would likely reduce abstain voters. Learning from the past experiences of Indonesian elections, many voters did not cast their votes due to accessibility issues and time constraints. They are not in favor of the candidate.

On the other hand, it is also an environmentally friendly system as it requires no papers for ballots in the running of the elections. The KPU just needs a small number of papers to provide information on the spot, or it may just go for online advertising on the official website of the election. Security-wise, e-voting can be manipulation and fraud-free. The successful story of e-voting implementation in the local elections may illustrate the readiness of some

regions in Indonesia to permanently migrate from the traditional election system to be more digital-based system. From the experiences, there are several indications that the use of e-voting is better than manual election:<sup>41</sup>

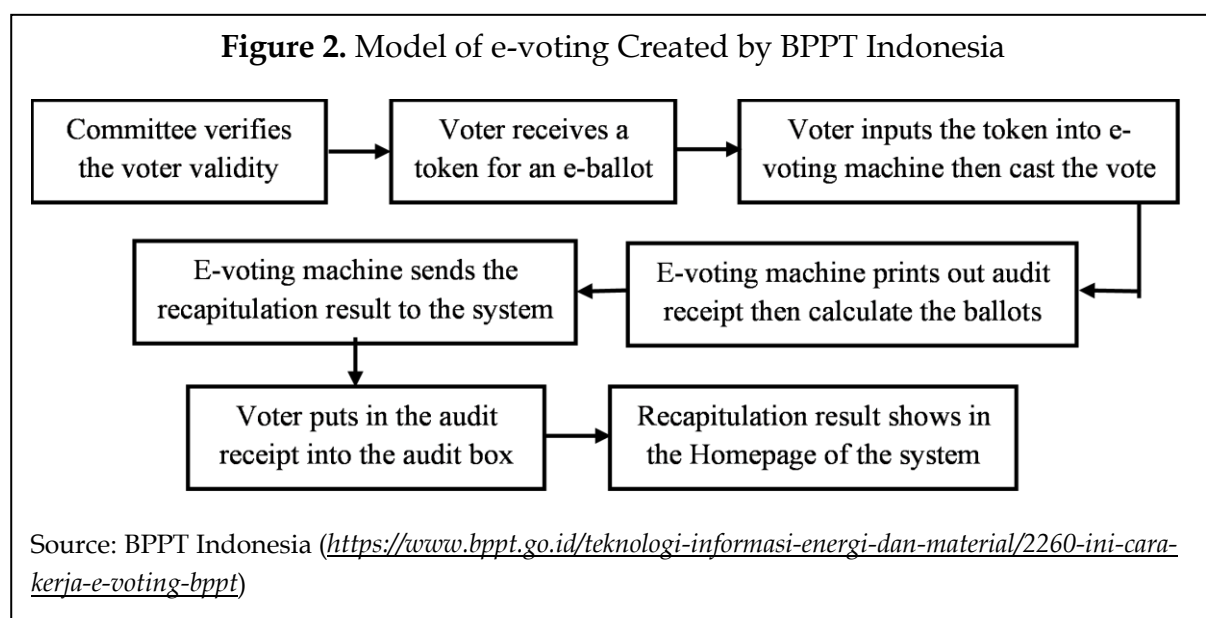
- 1) **Correct Result.** In the e-voting machine, only one image can be voted, thereby reducing the number of invalid votes, which is commonly found in the manual election either is damaged due to wrong marking or is deliberately damaged by the voting committee.
- 2) **Accuracy** is guaranteed more by using an e-voting machine instead of a manual election. In e-voting, the number of votes and the number of voters who attend the polling station can be monitored easily and lively. Voters can also verify each vote through audit receipt given by the committee. In the manual election, it is common to found unbalance numbers in the votes and the voters who attend the polling station. This way, no chance is given to cheating unused ballots.



<sup>40</sup> In comparison, the 2019 general elections in Indonesia which was prepared since 2017 cost IDR25.59 trillion (US\$1.738 billion). Laura Hardjaloka and Varida Megawati Simarmata, "E-Voting: Kebutuhan vs. Kesiapan (Menyongsong) E-Demokrasi", *Jurnal Konstitusi*, Volume 8 (4), 2011, p.583

3) **Time-saving.** E-voting takes only around 2 minutes for a voter to complete all the actions needed to cast a vote. Meanwhile,

<sup>41</sup> Zafar, C.N. & Pilkjaer, A. (2007). E-Voting in Pakistan, *Master Degree Thesis*, Lulea: Department of Business Administration and Social Sciences of Lulea University of Technology, p.11-15



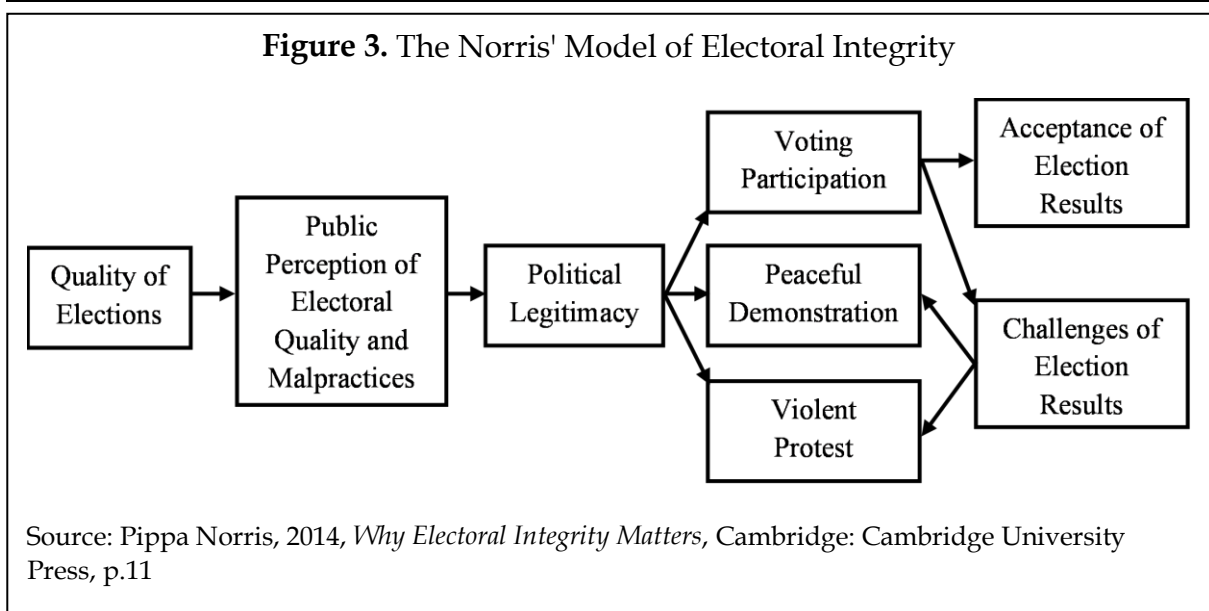
manual election requires a minimum of 5 minutes to complete the actions.

- 4) **Transparency.** When the polling station is closed, the vote count per booth with e-voting can be immediately known. In comparison, a long time is needed to complete the calculations in the manual election, which some even until midnight and allow the destruction of ballots to have happened.
- 5) **Low Budget.** The costs of e-voting can be reduced by up to 50% if voting equipment is used at least in the village election five times. Manual election requires printing ballots as much as DPT plus 2.5%.
- 6) **Solvable.** E-voting disputes can be solved by opening the audit box and telling the audit receipt, matching it with the number of voters and the results listed in the latest official results. Otherwise, the manual election takes a long time to compile all documents, and so does in Court.

Historically, the world's first nation to ever hold an e-voting in its election in Estonia. It was introduced in 2005 for local council elections to increase voters' participation by making voting easier. Different from Indonesia's local and BPPT-

created e-voting system, Estonian's allow registered voters to cast their votes from any Internet-connected device, anywhere in the world, without a need to visit a polling station. Voter just needs to prepare during a designated pre-voting period by logging onto the system using an ID card or mobile ID, then casting a vote. The identity then is removed from the ballot before it reaches the Estonian National Commission for Election for the counting process, thereby ensuring anonymity. The Estonian e-voting is primarily Internet-based voting (see **Figure 1.**) effective not to replace traditional voting methods but to supplement.<sup>42</sup> In 2019, of all registered voters of Estonian parliamentary elections, 43.8% or 247,232 people voted over the Internet. This concludes that Estonia gives voters the opportunity to vote from where they are about without the necessity of going to the polling station. Security-wise, Estonia takes seriously for Internet voting to be secured with a variety of technical, administrative, legal, and other measures.

<sup>42</sup> Tsahkna, A-G. (2013). E-Voting Lessons from Estonia, *European View*, 12, p.60-61



Thus, the system is as secure as ballot voting in terms of integrity.<sup>43</sup>

Indonesia is already developing a system for e-voting through a state body of technology assessment and application (BPPT) since 2012. Principally, the system still requires voters to come to the polling stations and cast their votes through an online system. BPPT invents the system to safeguard the integrity, guarantee transparency, security, and secrecy as elections in Indonesia commonly ended in dispute and demonstration. In practice, voters have to visit the regional election committee and verify their identifications using the system to read the identity number on the e-ID (e-Verification). This action purposes of preventing double voting and DPT manipulation. Later on, voters come to the polling station, insert the token given in the e-Verification step into the e-voting machine. After casting a vote by clicking the candidates' image, the machine would print out an audit receipt for auditing purposes. At the end of the process, voters put the audit receipt into the audit box, and then the recapitulation result would come soon for a public acknowledgement (see **Figure 2.**).

<sup>43</sup> Retrieved from <https://www.valimised.ee/en/internet-voting/internet-voting-estonia>

E-voting is one best alternative solutions to overcome electoral problems.<sup>44</sup> It could safeguard electoral integrity if it is prepared well under supervised officers, and therefore let the system does the collection and calculation job instead of humans. Although this action might disrupt the job vacancies for the used-to-be election officials, the integrity and health factors are worth considering more. If we go to the basic, Pippa Norris designed the electoral cycle, which refers to the activities that recur between an election and what would happen next. The process comprises several stages, namely: design and drafting of legislation; the recruitment and training of electoral staff, electoral planning, voter registration, the registration of political parties, the nomination of parties and candidates, the electoral campaign, polling, counting, the tabulation of results, the declaration of products, the resolution of electoral disputes, reporting, auditing, and achieving.<sup>45</sup>

<sup>44</sup> See further at Loura Hardjaloka and Varida Megawati Simarmata, *Op.Cit.*, p.596-601 and the Constitutional Court Decision Number 147/PUU-VII/2009

<sup>45</sup> Norris, P. (2013). The New Research Agenda Studying Electoral Integrity. *Electoral Studies*, 32 (4), p.567

The developed Pippa Norris' model of electoral integrity (**Figure 3.**) proffers the justification for integrating e-voting trustworthiness as an element of electoral integrity with public trust and acceptance of election results. This relationship is often expressed in negative terms of malpractices and their consequences. Malpractices in elections generate the impression that elections are fraudulent and undermine the public trust in electoral institutions or procedures, leading to demonstrations that question the legitimacy of election results. This implies that if voters view the elections as politically legitimate and accept voting, depending on whether they trust e-voting, they will endorse election results or protest in a peaceful or violent manner. Voter demonstrations, however, can be triggered by concerns about political legitimacy and dissatisfaction with certain elements of the electoral process, either prior to or after the election day.<sup>46</sup>

To implement the e-voting system in the nationwide election, it is necessary to address the factors that, from social and cultural perspectives, would influence the adoption. Indonesia is aware of the importance of Information, Computer, and Technology (ICT) involvement in the political and governance processes in moving toward e-democracy; however, the different levels of literacy technology are the key problem in the adoption process. This shifting of culture needs to be done swiftly from the traditional election process (a paper-based system in which voters cast their ballots in specially designed boxes in the voting spot) to a digital-based system. In this matter, trust is a fundamental prerequisite for the wide adoption of e-voting into the system. To ascertain the suitability of systems for use in the elections, KPU needs to conduct certification procedures before adoption. It starts from the definition of precise characteristics a system should exhibit and

<sup>46</sup> Avregou, C., et. al., *Ibid*, p.6

defines methods to measure the conformance of the system to the reference model.<sup>47</sup>

Recalling the death of 527 election officials in Indonesia's 2019 elections, there is an urgency to evaluate the system in which the security and integrity of the election are guaranteed and the officials' welfare. According to the Health Ministry of Indonesia report, most of the election officials were working non-stop for 24 hours on the election day since the law requests the vote count at each polling station has to be completed on the same day as the voting day. The ministry added 13 medical conditions of the deceased as they age ranged between 50 and 59 years old, among others are myocardial infarction; heart failure; hepatic coma; stroke; acute respiratory distress syndrome; hypertension emergencies; meningitis; sepsis; asthma; kidney failure; diabetes mellitus; tuberculosis; and multi-organ failure. The death toll illustrates the mismanagement done by the election committee to let their subordinates do overwork. This way, future elections have to be conducted under election officials who are tested in good health and work in improved management with enough breaks between shifts.

Different from Estonia, the United States of America (USA) was the first country to ever conduct an election in space. During the 1997 Texas election, David Wolf of NASA astronaut was working in the Russian space station Mir while he cast his rights to vote in space-away. The ballot was emailed from his local election office to the Johnson Space Center and to Russia's space agency before being forwarded to the space station.<sup>48</sup> These two examples are of the Internet voting system, while Indonesia's concept is the

<sup>47</sup> Prandini, M & Ramili, M. (2012). A Model for E-voting Systems Evaluation Based on International Standards: Definition and Experimental Validation. *e-Service Journal*, 8(3), p.43

<sup>48</sup> Lauer, T.W. (2004). The Risk of e-Voting. *Electronic Journal of e-Government*, 2(3), p.180

Direct Recording Electronic Voting system. If there is a question on which one is better, then the answer depends on the country's specific conditions. The e-voting system security vulnerability is considered from the hardware and software that make up the voting equipment; the system includes the election workers, voters and is deployed in a variety of physical environments. Election officials are mostly dominated by volunteers whose technology skills can vary widely. Similarly, the voter's level of technological literacy is potentially susceptible to error. Therefore, the government of Indonesia ought to improve the literacy in technology for Indonesians. Another challenge in implementing e-voting in Indonesia's electoral system is legal matters. The fact that Indonesia has no firm legal basis for the run of nationwide general elections is undeniable.

## 5. Conclusion

The principle of free and fair election seems still a shadow for the country to ever hold. Never in history since the political reformation period of 1998 that elections in Indonesia ended up in a peaceful way. On the contrary, violent demonstrations and election disputes were always haunting the supposed-to-be democratic event. Election frauds and manipulations are rampant by virtue of politicians and/or political parties who have always found opportunities to do so. Even worse, the death of 527 election officials in the 2019 Indonesia's concurrent elections left bad precedence in the country's election history. E-voting then came out as an alternative long-term solution to overcome all the issues. Surprisingly, the Internet-based system is already conducted in many local elections for more than a decade, showing an opportunity to expand the system for nationwide elections. E-voting proffers benefits that outward the disadvantages if it is implemented properly, among others, are: quick process to count the ballots; budget reduction; guarantee the integrity, security,

secrecy, and transparency of the voting process; and voters turnout shrinkage as well as prevent abstention for voters considering the accessibility is provided. Although technological literacy among voters is still far from enough, however, there are some benefits of an e-voting system implementation for democracy. This also needs to be supported by a strong umbrella policy and law through revision of Law Number 7 of 2017 on General Election to accommodate e-voting system regulations.

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