

HYBRID WORK: EFFICIENCY OF DWI ELECTION SYSTEMS BASED ON E-VOTING AND CONVENTIONAL TO BOOST TRANSPARENCY IN 2024 ELECTIONS

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Abstract

The dynamics of digitalization lead us to information disclosure and better work efficiency. The democratic party feels very close, 2024 will be the pinnacle of the democratic party along with developments in technology and information, in line with that digital participation will bring the 2024 Election into a more transparent realm. However, in reality, Indonesia is still stuck with network infrastructure problems and areas that are not evenly distributed. With a population and area that is so wide, leveling network infrastructure takes more time. The application of the electoral system in a conventional way is considered less effective in accommodating estimated vote recapitulation, so another system is needed to support the deficiencies in conventional elections. Writing this scientific paper aims to find out how the efforts in implementing hybrid working and achieving solutions with the enactment of the concept of hybrid working with the application of e-voting and conventional systems. The type of research used is normative legal research with the Statute approach, Conceptual approach, and Comparative approach. The legal materials used are primary legal materials and secondary legal materials obtained from literature studies, the collected legal materials are then analyzed descriptively and qualitatively. The results of this study indicate that the implementation of elections with one system, namely the conventional system, still has many problems in several aspects, especially the aspect of transparency, so the application of e-voting is present to complement the shortcomings of the conventional electoral system. Seeing that the regional structure and network infrastructure are not evenly distributed, based on the analyzed results, applying the hybrid working concept in elections can balance the two systems with the hope that the 2024 election will become a more efficient, effective, and transparent democracy.

Keywords: *Conventional; E-voting; Elections 2024; Hybrid working.*



1. Introduction

The general election which is also the pinnacle of the democratic party will be held shortly. Seeing that elections in 2024 will be held in tandem with the rapid development of the digital era. The dynamics of digitalization that occur are a manifestation of efficiency in all aspects of human life. The embodiment of the development of the digital era is its use in the realm of general elections. The application of the concept of digitization in government exists to support efficient, effective, and transparent public services.¹

The 1945 Constitution of the Republic of Indonesia states explicitly that the State of Indonesia adheres to the ideology of democracy, which means that power or sovereignty is in the hands of the people. This is reflected in Article 1 paragraph (2) of the 1945 Constitution which states that sovereignty is in the hands of the people and implemented according to the Constitution. In line with this, general elections are one of the principal means of implementing people's sovereignty, as well as a necessity for the government to guarantee the holding of general elections by a predetermined constitutional schedule.

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Indonesia is a democratic country, of course, it is closely related to the implementation of the general election system. Democratic general elections have been carried out in Indonesia from 1955 to 2019.² In the election process, the voting system used was conventional, namely using ballot papers that contained the names of prospective candidates for office. The conventional voting system is considered ineffective because the estimation of vote recapitulation takes a lot of time, the accuracy of vote counting is often inappropriate, and the use of a large enough budget. In addition, the election in 2019 claimed many lives on the part of the organizers. This happened because of the dense stages of holding simultaneous elections in 2019, which poured a lot of energy and thought.³ The conventional electoral system is also prone to

¹Nurul Badrutnaman, "Akselerasi Transformasi Digital untuk Pelayanan Publik yang Optimal," Kementerian Agama Republik Indonesia, Accessed 30 September 2022, <https://kemenag.go.id/read/akselerasi-transformasi-digital-untuk-pelayanan-publik-yang-optimal-xkkae>.

²Anisa Rizki, "Sejarah Pemilu di Indonesia dari Masa ke Masa, Mulai 1955 hingga 2019," detikedu, Accessed 5 October 2022, <https://www.detik.com/edu/detikpedia/sejarah-pemilu-di-indonesia-dari-masa-ke-masa-mulai-1955-hingga-2019>.

³Ruslianto, "Penerapan E-Voting Dalam Penyelenggaraan Pemilu Di Indonesia: Gagasan, Permasalahan, dan Solusinya," Jaringan Dokumentasi Informasi Hukum, Accessed 1 March 2021, <https://jdih.kpu.go.id/penerapan-evotig-dalam-penyelenggaraan-pemilu-di-Indonesia:Gagasan-Permasalahan-dan-solusinya>.



double voting or damaged ballot papers, this hinders the vote recapitulation process. Seeing the problems that arise in conventional elections leads us to understand that the conventional system requires an e-voting system to support the success of the election.

Looking at the times, the voting system is now developing with the existence of an electronic voting system or often referred to as e-voting. The development of the e-voting system started with a device designed to present ballots, simulated to voters, to register their votes, and count them automatically.

The e-voting system itself has been implemented in Indonesia for a long time, but it is still at the village head election stage. E-voting was carried out for the first time in Indonesia and was successful, namely the implementation of the hamlet head election in Jembrana, Bali in 2009. The decision to implement e-voting in the 2024 election is still a discussion that has received quite a lot of consideration because it cannot yet be implemented in all regions of Indonesia. Especially in areas that do not have adequate network infrastructure as well as considerations regarding regulations related to the implementation of e-voting on a national scale.

The current implementation of e-voting has not been regulated in Election Law Number 7 of 2017. Currently, the regulations regarding e-voting are explained in the Pilkada Law at the election level for Governors, Regents, and Mayors. Regulations related to e-voting are contained in Article 85 of Republic of Indonesia Law Number 10 of 2016 concerning the Second Amendment to Law Number 1 of 2015 concerning the Implementation of Government Regulations instead of Law Number 1 of 2014 concerning the Election of Governors, Regents, and Mayors to Become Laws -Invite. Article 85 paragraph (1) Voting for election can be done by:

- a. Mark one time on the ballot; or
- b. Voting through electronic voting equipment

In the elucidation of Article 85, it can be concluded that even though the implementation of e-voting still needs a lot of consideration to be implemented on a national scale because of the legal basis and existing infrastructure, in principle Indonesia is ready to carry out e-voting. The e-voting election system offers many benefits that can make up for deficiencies in conventional systems such as faster estimation of vote recapitulation, minimizing damage to votes, and saving more on the budget.

So far, the e-voting system has been implemented in several countries, one of which is India. As of June 24, 2022, according to the latest United Nations (UN) data, India's population reached 1.41 billion, making India the second most populous country in the world.⁴ And this fact does not prevent India from implementing e-voting. In 2019, the implementation of e-voting in the Indian elections contributed to a voter turnout of

⁴Worldmeter, "Populasi India," Accessed 3 January 2023, <https://www.worldometers.info/world-population/india-population/>.



67 percent with nearly 900 million registered voters in 542 regions.⁵ Looking at the population structure in India and Indonesia, they are classified as the same, that is, they have a large population. The successful use of e-voting in India can be a good example to be applied in Indonesia as well.

Discussions regarding the e-voting-based election system in 2024 are still swirling around the same issue, namely the issue of resources, network infrastructure, and readiness. Talking about readiness, it feels like if you put a benchmark on the connotation of "readiness", you could say that Indonesia already has the potential to face the digitalization era by implementing e-voting. This is confirmed by the argument put forward by cyber security expert Doctor Pratama Prasadha that electronic voting (e-voting) in the 2024 simultaneous elections is very possible. This argument is strengthened by the fact that the Directorate General of Population and Civil Registration of the Ministry of Home Affairs has made use of digital population data. He also mentioned that the Agency for the Assessment and Application of Technology (BPPT) has e-voting technology which has been applied to 981 village head elections in Indonesia.⁶ In terms of human resources, according to the Central Statistics Agency (BPS) from the results of the Susenas survey data collection in 2021, 62.10 percent of Indonesia's population has accessed the internet.⁷ From this, it can be seen that the public's acceptance of digitalization has been very significant. Then there is the problem of network infrastructure in Indonesia, the fact that 12,584 villages do not yet have a 4G network and 70 percent of them are in Papua.⁸ From statistical data for 2021, 3,079 villages/sub-districts do not yet have a cell phone signal in Papua.⁹

⁵Shamika Ravi, "How electronic voting machines have improved India's democracy," Brookings, Accessed 12 September 2022, <https://www.brookings.edu/articles/how-electronic-voting-machines-have-improved-indias-democracy/>.

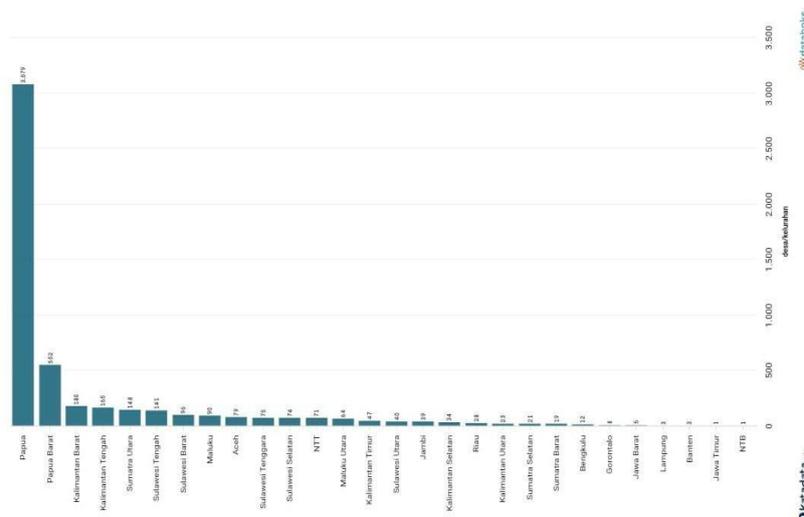
⁶D. DJ. Kliwantoro, "Pakar sebut "e-voting" pemilu sangat memungkinkan," Antaranews, Accessed 24 March 2022, <https://www.antaranews.com/berita/pakar-sebut-e-voting-pemilu-sangat-memungkinkan>.

⁷Badan Pusat Statistik, "Statistik Telekomunikasi Indonesia 2021," Accessed 12 September 2022, <https://www.bps.go.id/statistik-telekomikasi-Indonesia>.

⁸Rahmi Yati, "12.584 Desa Belum Ada Jaringan 4G 70 Persen di Indonesia Timur," Teknologi, Accessed 20 July 2022, <https://teknologi.bisnis-12584-desa-belum-ada-jaringan-4g-70-persen-di-indonesia-timur>.

⁹Viva Budy Kusnandar, "Jumlah Desa/Kelurahan yang Tidak Ada Sinyal Telepon Seluler menurut Provinsi (2021)," Databoks, Accessed 12 September 2022, <https://databoks.katadata.co.id/index.php/datapublish/2022/09/12/5-ribu-desa-belum-terjangkau-sinyal-telepon-seluler-pada-2021>.





Picture 1. Provincial Signal Distribution Data Statistics

Election problems with the e-voting system related to network and regional infrastructure can be handled by implementing hybrid working. The implementation of hybrid working with e-voting and conventional will further reduce budget waste when compared to the application of only one system, namely conventionally. It can be seen in the 2019 elections, the government through the Ministry of Finance disbursed a budget of Rp. 25.59 trillion, an increase of up to 61% compared to the 2014 election budget which was only Rp. 15.62 trillion.¹⁰

Hybrid working is a combination of two different ways of working. Hybrid working is a way of working for two systems that can be applied to e-voting and conventional-based elections. The e-voting system will be applied to areas with better network access while the conventional system will be applied to areas that are still not covered by the network. The application of hybrid working will be more efficient to implement in the 2024 elections when compared to implementing only one system. By implementing hybrid working and strengthening regulations related to the implementation of e-voting, it will realize democratic legitimacy through supervision and law enforcement. In the context of hybrid working, this legitimacy is strengthened by the application of conventional and e-voting systems which are supported by transparent mechanisms that can be accounted for. This is supported by involving independent institutions. In addition, by ensuring the legitimacy of elections through transparency, fairness, and public participation, we can strengthen public trust and produce accountable and democratic elections. By implementing hybrid working and strengthening regulations related to the implementation of e-voting, it will realize democratic legitimacy through supervision and law enforcement. In the context of hybrid working, this legitimacy is strengthened by the application of conventional and e-voting systems which are supported by transparent mechanisms that can be accounted

¹⁰Moh. Ibnu Fajar, Fauzin, “Sistem E-voting: Upaya mewujudkan pemilu yang jujur dan adil,” *Jurnal Simposium Hukum Indonesia* 1 no. 1 (2019): 595, <https://journal.trunojoyo.ac.id/shi/article/view/6388>.



for. This is supported by involving independent institutions. In addition, by ensuring the legitimacy of elections through transparency, fairness, and public participation, we can strengthen public trust and produce accountable and democratic elections.

The Ministry of Communication and Informatics also proposed implementing e-voting in the 2024 Election, this also received support from the Indonesian Internet Service Entrepreneurs Association (APJII) who considered that the implementation of e-voting in the Election would be far more transparent.¹¹ Hybrid working with the use of two voting systems in elections can complement one another. As we know that when one system is deemed inefficient in accommodating something, then we need another system to complete it. Therefore, the author offers a solution to dealing with transparency problems in the 2024 election by implementing "**Hybrid Working: Efficiency of Dwi Election Systems Based on E-Voting and Conventional to Boost Transparency in 2024 Elections.**"

2. Methods

2.1 Research Type

The type of research in this scientific paper is a type of normative legal research. Normative legal research is research on law and places law as a building system of norms, namely regarding principles, norms, rules of law, court decisions, agreements, and doctrines or teachings.¹² As is generally the case with normative legal research conducted using literature research, this research is carried out by examining literature (legal materials) related to the research being discussed. The legal materials are in the form of statutory regulations, court decisions, legal theories, legal principles, as well as the scientific work of scholars. The legal approach used by the author to obtain information related to the issues discussed is:¹³

1. Statue Approach, which examines all relevant laws and regulations by prioritizing legal materials in the form of statutory regulations as the initial basis for conducting research.
2. Conceptual Approach, which examines legal concepts and values , and norms underlying a case.
3. Comparative Approach, namely educational research that uses techniques to compare an object with another object. The object being compared in this paper is to compare a country, namely India, which has successfully carried out e-voting elections with Indonesia.

2.2 Legal Material Collection Techniques

¹¹Lenny Septiani, "Menilik Kesiapan *e-Voting* Pemilu 2024, Ini Kelebihan dan Tantangannya," Katadata.co.id, Accessed 25 October 2022, <https://katadata.co.id/tiakomalasari/digital/menilik-kesiapan-e-voting-pemilu-2024-ini-kelebihan-dan-tantangannya>.

¹²Mukti Fajar Nur Dewata dan Yulianto Achmad, *Dualisme Penelitian Hukum, Normatif dan Empiris* (Yogyakarta: Pustaka Pelajar, 2006), 34.

¹³Bambang Sunggono, *Metode Penelitian Hukum* (Jakarta: PT Raja Grafindo Persada, 2011), 112.



The legal material collection technique used is library research, namely by collecting legal literature obtained from various related research and by collecting data and information originating from important documents and applicable laws and regulations. The legal materials used in this study are:

2.2.1 Primary Legal Materials

This primary legal material consists of legislation, while the legal materials needed are:

- a) The Republic of Indonesia Election Law Number 7 of 2017.
- b) Law of the Republic of Indonesia Number 10 of 2016 concerning the Second Amendment to Law Number 1 of 2015 concerning the Implementation of Government Regulations instead of Law Number 1 of 2014 concerning the Election of Governors, Regents, and Mayors to Become Laws.

2.2.2 Secondary Legal Materials

The secondary legal materials used are publications regarding laws that are not official documents. As well as publications about the law including books, legal dictionaries, and legal journals, as well as comments on court decisions related to conventional elections and the implementation of e-voting.

2.3 Management of Legal Materials and Information

Processing of legal materials and information in this writing uses qualitative methods which include literature studies with various sources of legal materials, such as journals, books, articles, laws and regulations, and so on. Legal materials and information processing techniques are carried out using a qualitative approach through collecting, identifying, and analyzing data and information related to the formulation of the problems discussed. The results of the analysis are presented in a qualitative descriptive form.

2.4 Analysis of Legal Materials

The analysis used in this study is descriptive qualitative through discussion and analysis of legal materials presented in a descriptive form which is the subject of the research. Legal materials were analyzed using a qualitative descriptive method, which describes the state of the results of research on these events, adjusted to the laws and regulations related to the focus of writing. The process of data analysis, which then describes and interprets a set of data in such a way as to produce a general and comprehensive picture of the actual situation, after which a conclusion can be drawn.¹⁴

¹⁴*Ibid.*, 113.

2.5 Framework of Thinking

2.5.1 Theoretical Framework

a) Popular Sovereignty

According to John Locke, the state was formed based on *pactum unionis* which is an agreement between individuals to form a state. From this agreement, a *pactum subjection* was formed, which is an agreement between the people and the government. He also argued that so that the rulers do not have absolute rights or powers, it is necessary to hold a division of powers such as legislative, executive, and federative powers. In the sovereignty of the people, there are democratic principles in state power. Where the people function as holders of state sovereignty and the government as a tool determined by the people to manage the country for the benefit of the people.¹⁵

b) General Election Theory

Ibnu Tri Cahyono defines general elections from an abstract and philosophical point of view. Ibnu stated that elections are an instrument to realize people's sovereignty intended to form a legitimate government as well as a means of articulating the aspirations and interests of the people. Meanwhile, operationally, elections are a means for the community to participate in voting to elect representatives of the people and are evidence of efforts to realize democracy.¹⁶

3.5.2 Conceptual Framework

The conceptual framework is the relationship between concepts or a collection of theories that support research and can be applied as a basis for systematically compiling research. This conceptual framework is used as a basis for researchers to systematically describe the theory applied in research.

3. Analysis

3.1 The Concept of Implementing Hybrid Working in the 2024 General Election

So far, since the implementation of the 2019 election, discourse regarding the concept of implementing e-voting for the 2024 election has returned to being the subject of discussion and research topic. The discussion that took place reaped many considerations regarding the implementation of e-voting which seemed rushed while Indonesia was considered not ready in several aspects. This makes the discourse on the implementation of e-voting still spinning on the same axis, not moving even

¹⁵Bosque, "Pengertian Kedaulatan Rakyat Menurut Para Ahli," *Seputar Pengetahuan*, Accessed 1 December 2021, <https://www.seputarpengertian.co.id/2021/12/pengertian-kedaulatan-rakyat-menurut-para-ahli-lengkap.html>.

¹⁶Muhadam Lalobo, "Partai Politik dan Sistem Pemilihan Umum di Indonesia (Jakarta: PT Raja Grafindo Persada, 2015), 50.



though it has gone through lengthy research. Looking back at the implementation of conventional elections, in 2019, we can see that the facts on the ground experienced many deficiencies, in terms of budget and time estimates. Everything has its own positive and negative impacts. However, minimizing the negative impact is a necessity that can be cultivated. Therefore, it is necessary to apply a concept that can accommodate the 2024 election.

Starting from the problems that occurred in the application of the concept of hybrid working in elections with the use of two systems, namely e-voting and conventional, it is considered that they can complement one another. The application of the concept related to e-voting had previously been known in 1889, namely the use of an e-voting machine shaped like an Automated Teller Machine (ATM) with a screen that could display prospective candidates for office. The system was discovered in 1848 by a man named William Chamberlain, Jr. The first voting machine that was produced and used as a product from Rochester, was the result of the development of Chamberlain and Beranek's work, which was published in 1889 as a voting system with a voting machine.¹⁷

Along with the rapid development of technology and information, the development of the e-voting system underwent a major overhaul, no longer using the machine as it was originally developed. The concept of hybrid working is the use of two different systems in doing something. The use of these two systems can facilitate work with faster estimates.

The concept that can be applied through hybrid working is very simple, the use of the e-voting system can be maximized in areas with adequate network infrastructure and areas that can be accessed easily. While conventional systems can be maximized in areas that are still in the development stage related to network and regional infrastructure.

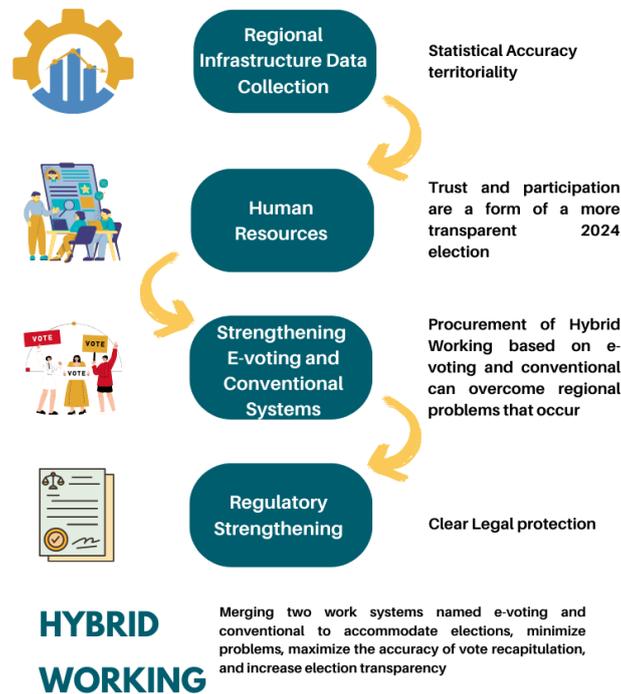
The application of hybrid working with the implementation of two conventional and e-voting systems aims to accommodate elections, minimize problems, maximize the accuracy of vote recapitulation, and most importantly increase transparency. Indonesia can adopt the e-voting system that has been implemented by India, namely using a blockchain-based e-voting system to support remote voting. Blockchain-based e-voting reduces the risk of interference because it has a level of security because voting is through a secure communication channel, minimizes the use of costs because it only uses the cost of an internet connection required to vote across all existing e-voting platforms, and sufficient accuracy and estimation of vote counting brief that can minimize fraud and increase transparency.¹⁸ The hybrid working concept that the author offers can be seen as follows:

¹⁷RocWiki, "Voting machine," Accessed 14 September 2022, https://rocwiki.org/voting_machine.

¹⁸Ruchika Gupta, "E-voting Via Blockchain: A Case Study," GeekyAnts, Accessed 11 Mei 2022, <https://techblog.geekyants.com/e-voting-via-blockchain-a-case-study>.



Concept Maps *Hybrid Working*



Picture 2. Concept Maps *Hybrid Working*

a. Regional Infrastructure Data Collection

Regional data collection is important to support the successful implementation of the hybrid working concept in the 2024 election. Careful regional data collection will provide regional statistical accuracy which can later determine which areas can implement e-voting and areas which can implement the conventional electoral system. The KPU cooperates with BPS in accommodating statistical data for Indonesia's territory. The BPS Strategic Plan explains that BPS is a "Provider of Quality Statistical Data for Developed Indonesia." In this vision and mission, BPS plays a role in providing national statistics with accurate truth.¹⁹

b. Human Resources

The General Election Commission (KPU) is conducting outreach to the public regarding the implementation of e-voting and the election convention system in collaboration with the Ministry of Communication and Information Technology (Kominfo) in gaining public trust and participation in the implementation of a more transparent 2024 election. Apart from that, in socialization, it is important to explain what things are needed so that the implementation of hybrid working can be carried out properly, such as the

¹⁹Badan Pusat Statistik, "Rencana Strategis BPS," Accessed 11 Mei 2022, <https://www.bps.go.id/menu/2/rencana-strategis-bps.html#masterMenuTab6>.



voting process, and the requirements, and efficiency provided by the implementation of hybrid working.

c. Strengthening E-voting and Conventional Systems

Seeing aspects of Indonesia's vast territory and the affordability between one region and another is quite difficult. Procurement of hybrid working based on conventional e-voting can overcome regional problems that occur. Strengthening e-voting and conventional systems is crucial, this needs to be the main focus, strengthening related to e-voting and conventional systems, the KPU can work with the BSSN and Bawaslu (the election supervisory board of Indonesia) to emphasize transparency.

d. Regulatory Strengthening

The realization of e-voting will not run smoothly if it does not have a clear legal umbrella. Regulations related to the implementation of e-voting have been stipulated in the regional head elections (Pilkada) Law. However, the application of e-voting has not been stipulated in the election law, this must be considered by the legislators so that the implementation of e-voting has a legal basis. So that the application of hybrid working can run well.

Conceptually, hybrid working is the first step in implementing e-voting in Indonesia while the government is equalizing network infrastructure.

3.2 The Effectiveness and Efficiency of Implementing Hybrid Working in the 2024 General Election in Increasing Transparency

Indonesia is a country that adheres to democracy, since independence Indonesia has held several general elections. However, various problems arose in the election activities that were held to degrade the meaning of democracy itself. Reflecting on the 2019 simultaneous elections, in which there were many problems in the process, such as the handling of election logistics. Nationally, there were 10,520 polling stations (TPS) that experienced a shortage of election logistics. There were also cases where the ballots received by the Voting Organizing Group (KPPS) were not sealed, which occurred in 6,474 TPS. Apart from that, there were also cases of ballot papers being exchanged between electoral districts or between polling stations. Based on Bawaslu data, this case occurred in 3,411 polling stations. Second, related to voter data handling.

The updating of the Fixed Voters List Results of Improvement Phase 3 (DPTThp 3) carried out by the KPU was only completed on April 8, 2019, which is nine days before Voting Day. This means a delay of 21 days from the schedule set by the General Election Commission of the Republic of Indonesia (KPU RI). Several parties stated that the main obstacle to the delay was that the KPU experienced difficulties in sorting the Voter Data comprehensively so that errors still occurred in the form of multiple 26 registrations, death registrations, and non-update of voters who moved domiciles. Bawaslu also stated that the KPU's Voter Data Information System often had errors, disrupting the process of uploading and downloading data.



The third is related to the KPPS workload. Data from the Ministry of Health as of May 16 2019 shows that 527 KPPS officers died and 11,239 fell ill. The large number of KPPS officers who died and fell ill was allegedly due to the heavy workload of holding the 2019 simultaneous elections and the fourth was an error in the recapitulation of the 2019 Simultaneous Election votes.

Several organizations noted that there were 708 cases of recapitulation, which were mainly related to data from Form Model C1-KWK (form C1) or records of voting implementation and vote counting at TPS that were mixed up and C1 data input errors into the KPU Calculation System.²⁰ so far this has been done conventionally, it takes a long time and requires a lot of manpower, while amid an election, many pollsters have also taken part in carrying out quick count calculations. This sometimes triggers polemics in the community, especially for people who are easily provoked, believing that the results they see are official. On the other hand, the manual recording process has several deficiencies, namely in terms of storing and searching data, so that when the audit process is carried out, officers still use manual or instant methods, resulting in a lot of missing recap data and requiring quite a long time in the audit process.²¹

In connection with the many problems that arise from the electoral system in Indonesia which still applies conventional methods, many new ideas and efforts have emerged to reform the electoral system in the future to simplify and speed up the process of voting and counting votes to avoid various kinds of problems and can support transparency, one of which is the e-voting-based election system.

Along with the rapid development of technology, it also has an impact on the development of the electoral system. The idea of voting conducted electronically is considered capable of overcoming the problems that occur when using conventional systems. Another fact that encourages the holding of elections through e-voting is the Constitutional Court's decision on March 30, 2010, which allows the use of touch screens or touchscreens or e-voting in post-conflict local elections, indirectly providing insight into the implementation of democratic parties at all levels, both level II, level I or the center, namely the legislative election and the presidential election. The application of e-voting will make democratic parties more efficient, and effective and the results can be known quickly in less than 24 hours. In addition, e-voting is also able to reduce budget costs. It can be seen that Jembrana Regency, which is located in Bali, is one of the areas whose government is technology-based (e-government). Jembrana Regency has held elections for Hamlet heads 54 times via e-voting. The development of the Jimbarwana Network or Jembrana Net in 2001, the Jembrana people voluntarily donated to provide computer equipment, internet access,

²⁰Aryojati Ardipandanto, "Permasalahan Penyelenggaraan Pemilu Serentak Tahun 2019," *INFO Singkat* 11 no. 12 (2019): 27. <https://sdip.dpr.go.id/search/detail/category/info%20Singkat/id/951>.

²¹Dio Lavarino dan Wyli Yustanti, "Rancang Bangun E-voting Berbasis Website di Universitas Negeri Surabaya," *Jurnal Manajemen Informatika* 6 no. 1 (2019): 73, <https://ejournal.unesa.ac.id/index.php/jurnal-manajemen-informatika/article/view/17937>.



and telecommunications, until a telecenter was formed. The application of e-voting in Jembrana Regency has proven to increase public trust and participation in the Jembrana Regency government, through available information disclosure²². Some of the benefits of e-voting are as follows:²³

- a. Speed up vote counting.
- b. Vote counting results are more accurate.
- c. Save printing materials for ballot papers.
- d. Save on ballot paper delivery costs.
- e. Provide better access for people with physical limitations (disabilities).
- f. Providing access for people who have limited time to go to the polling place (TPS).
- g. Ballot papers can be made into various language versions.
- h. Provide access to more information related to voting.
- i. Can control those who are not entitled to vote, for example, because they are underage or over the age of voters who have been regulated.

However, in terms of readiness, Indonesia is considered not yet qualified to carry out e-voting as a whole because of geographical constraints and the uneven availability of technology and information infrastructure, so conventional voting is still needed. To answer this problem, the authors offer a hybrid working concept, namely elections based on e-voting and conventional ones which will go hand in hand and complement each other.

Areas that have a difficult infrastructure, for example, Yalimo Regency, Papua Mountains Province, will continue to vote conventionally, then cities that are considered qualified in terms of the availability of technology and information infrastructure, such as Medan, Jakarta, and Makassar or other regions, can carry out e-voting. To realize the holding of elections that are democratic as well as effective and efficient. The government is encouraged to immediately utilize an electronic-based system to facilitate the holding of simultaneous elections in 2024 to minimize existing problems. This is driven by efforts to integrate e-voting and conventional systems, namely the concept of hybrid working, the aim is that regions that have not been able to elect by e-voting can still vote democratically by voting manually at TPS so that these regions can still be accommodated and can run general elections. well. Efforts to implement hybrid working based on e-voting and conventional are also expected to be able to overcome problems arising from elections that are held with only one system, namely conventional. The application of hybrid working with e-voting can complement the deficiencies that exist in conventional voting systems.

²²Made Leita Anistiawati, "Implementasi Kebijakan Penerapan Elektronik Voting (E-voting) Dalam Pemilihan Kepala Desa," Fakultas Ilmu Sosial dan Ilmu Politik Universitas Udayana, 2.

²³Nani Purwati, "Perancangan Sistem E-voting Untuk Pemilihan Kepala Daerah (Pilkada)," *Jurnal Bianglala Informatika* 3 no. 1 (2015): 19-20.
<https://ejournal.bsi.ac.id/ejournal/index.php/Bianglala/article/view/573>.



The combination of conventional systems and e-voting in hybrid working will be very efficient and effective in our opinion from various sectors starting from a short time, saving long-term budgets, encouraging election transparency, and minimizing damage to ballot papers. More specifically, the effectiveness and efficiency can be described as follows:

a. Short Time Estimate

So far, the electoral system in Indonesia uses a conventional system, which of course takes quite a lot of time. What's more, the preparations were very complex, starting from the transportation of election equipment/logistics (ballot boxes, punched paper, etc.) to the counting of votes, which of course was very tiring for the Voting Committee (PPS). Unlike the e-voting system which is not too complicated and quite efficient. The concept that is implemented in Indonesia, in this case, the conventional election, when combined with the e-voting system in a hybrid working, of course, will be very efficient with a shorter use of time than usual. One thing that needs to be considered in this hybrid system is the capacity of the committee in its implementation because no matter how good the system is if it is not accompanied by the operating capabilities of the committee, it will make it difficult to implement. Therefore, it is necessary to increase the capacity of the committee to welcome quality elections.

b. Save Long-term Budget

The simultaneous application of e-voting and conventional voting will affect the budget. In simple terms, the government needs more money to procure e-voting machines as well as maintenance. However, costs from pawnshop logistics such as ballot papers, procurement of ballot boxes, and so on will accommodate the procurement of the e-voting tool. Likewise for the next election, of course, there is no need to procure e-voting tools so in the long run it can be concluded that budgeting is more economical. To further save the budget, the government can utilize domestic resources to create its e-voting machine without importing from abroad. These human resources if managed properly by the government will greatly minimize the budget for general elections.

c. Election Transparency

In conventional elections, the focus is on active participation in monitoring the vote count which promotes transparency in the election itself. Not inferior to the e-voting concept that the author offers, the general public can also directly monitor the percentage of elections online so that everything is more transparent. Moreover, with e-voting, information related to recapitulation can be seen online to minimize fraud or vote play in elections. The two concepts in Hybrid working will complement each other in supporting quality and more democratic general elections. The problems that are feared in e-voting are crimes or cyber-attacks that can manipulate data in the system.



With that, it is necessary to update the system along with special safeguards from the cyber team as well to avoid these issues working spontaneously if there are suspicious signs. In this regard, it is necessary to collaborate with a team of state cyber institutions to optimize the implementation of hybrid working in elections.

d. Minimizing damage to the ballot paper

One of the problems that often occur in conventional elections is the existence of damaged or multiple votes on one ballot paper. As a result, votes are categorized as invalid or invalid. In contrast to the e-voting system, of course, there will be no canceled votes, voters can directly appoint the candidate of their choice so the voting will be maximized. If these two concepts are combined, sound damage or cancellation can be minimized. In addition, the concept of e-voting can also minimize double voting or fraud because each voter has a smart card to vote directly, and is only valid once after data verification.

4. Closing

4.1 Conclusion

Based on the discussion in the previous chapter, the writer can conclude two important things as follows:

- a. The concept of implementing hybrid working in the 2024 General Election is the use of a blockchain-based e-voting system. While conventional systems can be maximized in areas that are still in the development stage related to network and regional infrastructure. The use of this dual system aims to accommodate elections, minimize problems, maximize the accuracy of vote recapitulation, and most importantly increase transparency. The concept of implementing hybrid working that the authors offer is to start with data collection on regional infrastructure, and human resources, strengthening conventional and e-voting systems, and strengthening regulations. Conceptually, hybrid working is the first step in implementing e-voting in Indonesia while the government is equalizing network infrastructure.
- b. The effectiveness and efficiency of implementation in the 2024 general election in increasing transparency can be seen from various factors. First, a short estimate. Second, Saving the long-term budget, implementing e-voting and conventional simultaneously will certainly affect the budget used. In simple terms, even though the government still needs more costs to procure e-voting machines as well as maintenance. However, the costs of procuring logistics such as ballot papers, procuring ballot boxes, and so on will accommodate the procurement of the e-voting tool. Third, in election transparency, the general public can directly monitor the percentage of



elections online, thereby expanding transparency. Fourth, minimize damage to the ballot paper.

4.2 Suggestion

Based on the conclusions above, the authors recommend two important things as follows:

- a. The government should immediately equalize network infrastructure in all regions of Indonesia, in addition to accommodating e-voting-based digital elections, as well as for a better future for Indonesia in the affordability of technology and information. In its application, it is necessary to consider the rights of the majority and minorities. Although the e-voting system can provide benefits in terms of efficiency and transparency. It needs to be ensured that all community groups, including people who are not familiar with technology, can still participate easily in the election process.
- b. The participation of all elements, starting from the community and the government, works together in accommodating the implementation of hybrid working to create a more efficient, effective, and transparent democracy. In every step taken to accommodate the 2024 elections. An inclusive approach is needed to ensure that all community groups can participate properly. It is hoped that in the future elections will become more inclusive and reduce the accessibility gap in various regions.



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