

# Why Adopt E-voting? Study on Village Leader Elections in Musi Rawas, South Sumatera

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## ABSTRAK

Artikel ini mengelaborasi praktik adopsi e-voting dalam Pilkades di Kabupaten Musi Rawas, Sumatera Selatan, dari 2013 sampai awal 2015. Artikel ini mencoba menjawab pertanyaan: mengapa Pemerintah Musi Rawas mengadopsi e-voting dalam Pilkades? Lebih spesifik, apa motif dari kebijakan adopsi e-voting di Pilkades di Musi Rawas? Artikel ini ditulis berdasarkan penelitian lapangan yang dilakukan antara Februari sampai Maret 2015. Penelitian ini menggunakan pendekatan kualitatif. Metode pengumpulan data utama dari riset ini adalah wawancara mendalam, observasi, dan pengumpulan data berita dari media massa. Wawancara mendalam dilakukan terhadap Bupati Musi Rawas dan informan-informan lain yang mengetahui permasalahan yang diteliti. Selain itu, penelitian ini juga melakukan observasi di tiga desa yang melaksanakan Pilkades dengan e-voting, yaitu: Desa Wonokerto, Desa Pelawe, dan Desa BTS Ulu. Observasi dilakukan untuk membandingkan informasi hasil wawancara dengan praktik pelaksanaan e-voting di lapangan. Penelitian ini menemukan bahwa motif pertama dari adopsi e-voting dalam Pilkades adalah untuk mengurangi kecurangan-kecurangan. Motivasi kedua adalah untuk membuat pemilihan kepala desa lebih efisien dalam hal waktu dan uang dan membuat pemilih lebih mudah untuk memilih. Hanya saja, Pemerintah Musi Rawas perlu memperhatikan aspek teknis pelaksanaan agar tetap membuat Pilkades berjalan sesuai prinsip pemilu yang ideal.

Kata kunci: e-voting, Musi Rawas, Pilkades, adopsi kebijakan

## ABSTRACT

This article elaborates the e-voting adoption in village leader elections held in Musi Rawas Regency, South Sumatera, during the period of 2013 to early 2015. This paper aims at answering the question of why the government of Musi Rawas has adopted e-voting in the village leader elections. More specifically, this paper aims at identifying the motives underlying the policy to adopt e-voting in village leader elections in Musi Rawas. This article is based on the field research held between February and March, 2015. The research employs the qualitative approach. Data is collected through in-depth interview,

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observation, and news collected from mass media. Interviews were conducted with Mayors of Musi Rawas and the other informants that know the problems. Besides that, the research also conducted observation in three villages which held village leader elections with e-voting: Wonokerto Village, Pelawe Village, and BTS Ulu Village. Observation is the mechanism to compare between the information from interview with the empirical practice of e-voting. This article finds out that the first motive of the adoption of e-voting in the village leader election is to reduce violations of procedure. The second motive is to make the elections more efficient in term of time and money and to make the voters easier to vote. Nevertheless, the Government of Musi Rawas needs to pay attention to the technical aspect in order to make the village leader election is conducted in line with the ideal principle of election.

Keywords: e-voting, Musi Rawas, Village Leader Election, policy adoption

## INTRODUCTION

E-voting (electronic voting) is the mechanism to vote that has been used more widely in many countries in the world (Esteve, Goldsmith, Turner 2012, 2). E-voting has been implemented in many countries, including countries in South America and Asia (Goldsmith and Ruthrauff 2013, 31). Two countries in Asia that have implemented e-voting in the national level are the Philippines and India (Phillips and Soudriette 2012, 160; Achieng and Ruhode 2013, 1).

Indonesia, the neighbor country of the Philippines, has also implemented e-voting, but not at national level (Darmawan, Nurhandjati, and Kartini 2014a, 58). Based on other countries experience, one of the reasons why e-voting has not been implemented at national level in a country is because e-voting is not legally binding (Benoit 2004, 313). This is also the case of Indonesia as there were small number of pilot projects of e-voting as in the Regent Election of Bantaeng (South Sulawesi) in 2013 (bppt.go.id 2013). There is also another example of e-voting simulation in Pekalongan. However, in different level, e-voting has been applied in the village leader elections in six regions in Indonesia: Jembrana, Boyolali, Musi Rawas, Empat Lawang, Boalemo, and Banyuasin (see Table 1).

Table 1  
Adoption of E-voting in Regencies/Cities in Indonesia until 2015

Regency/City	Province	Scope of Election
Jembrana	Bali	Sub-Village Leader Election and Village Leader Election

Regency/City	Province	Scope of Election
Boyolali	Central Java	Village Leader Election
Musi Rawas	South Sumatera	Village Leader Election
Empat Lawang	South Sumatera	Village Leader Election
Boalemo	Gorontalo	Village Leader Election
Banyuasin	South Sumatera	Village Leader Election
Bantaeng	South Sulawesi	Trial in Mayor's Election
Pekalongan	Central Java	Simulation

Source: Elaborated from many sources.

E-voting can be adopted and implemented in many areas in Indonesia based on the Constitutional Court Decision Number 146/PUU-VII/2009. The Decision, which was released in March 30th, 2010, allows the adoption of e-voting in the election in Indonesia, including in the village leader election. After that decision, Jembrana adopted e-voting for the first time in 2010. At that time, the adoption was just in the scope of sub-village leader election or *Dusun* in Indonesian. Although it was implemented at the sub-village level, the e-voting in Jembrana was seen as a successful one. For example, according to Anistiawati (2014), the implementation of e-voting has succeeded in achieving the principles of accountability, participation, transparency, effectiveness, and efficiency. Due to its promising success, it has attracted many stakeholders in Indonesia to transfer the achievement either to other region or different electoral level. One of them was to scale up at higher level of village leader election.

In Boyolali, e-voting was employed in village leader elections in 2013. Village leader elections in Boyolali were conducted in only eight villages out of total 260 villages (Darmawan 2014b). Other regions that implemented to the same policy are Empat Lawang and Boalemo. E-voting in Empat Lawang was held in 2015. In that area, e-voting was implemented in about 101 villages. The implementation of those village leader elections was divided into five periods in 2015 (bppt.go.id 2015). Meanwhile, e-voting in Boalemo was also held in 2015. However, in this regency, the e-voting method was only implemented in about six villages (bppt.go.id 2015). Still at the same year with Boalemo, e-voting in Banyuasin was held in about 161 villages. Nevertheless, e-voting in

Banyuasin is rather different compare to others in term of its accuracy of the citizen's data (Tabloid Desa 2015).

The implementation of e-voting starting from Jembrana followed by others as mentioned above is seen as the new outlook of elections in Indonesia. It is unique and promising as it may hinder some of the serious problems that almost certainly hamper elections in Indonesia, which is the inaccuracy of voters' list. Therefore, it is not surprising that the main motive of the adoption of e-voting in many countries is to increase the quality of election ensuring the demand of the public heard (Norris 2004). The way e-voting developed through digitalization of voters and their votes has reduced the possibility of electoral fraud as well as its effectivity, cheapness, and promptness. Therefore, it is certainly a rational one if policy makers turn their attention to e-voting in order to achieve certain objectives. To some extent, this rational objective may be seen as rarity as local politics in Indonesia are sometimes marked with rent-seeking involving either politicians and bureaucrats (Fitriani, Hoffman, & Kaiser 2005).

Therefore, it is interesting to find out the motive of the implementation of e-voting at the village level, especially in Musi Rawas Regency, South Sumatera. This inquiry has become the preliminary step to look at the process of adoption of e-voting in a particular region. Musi Rawas Regency is chosen to explore this further as its policy to choose e-voting for village leader elections was not free from problems, especially in term of legal. From the initial research, it is found that the legal basis for e-voting was not produced by the Local Parliament (DPRD) as Local Regulation and the Regent as Regent Regulation until one month prior to the election. In this case, e-voting in Musi Rawas has not passed at least one of three minimum standards as argued by Remmet (2004, 17). According to him, e-voting has to meet three bases which are legal standards, operational standards, and core technical requirements.

This condition drives the researchers to look at the way the Government of Musi Rawas comes up with the decision to adopt e-voting. To meet the inquiry, this paper aims to answer the main question of why the government of Musi Rawas adopt e-voting in the village leader

elections. More specifically, this paper aims at identifying the motive on the policy of adoption of e-voting in village leader elections in Musi Rawas. Apart from that, this article also looks at the implementation in empirical practice in order to compare the information from the interview with the empirical implementation of e-voting. Therefore, observation at the ballot box is applied alongside depth-interview to get initial picture whether the government's intention is achievable.

Other than the legal problems in the policy process at governmental level, Musi Rawas is significantly important to be explored for two reasons. Firstly, e-voting in Musi Rawas is the first case in the Sumatera Island. Having been adopted in Musi Rawas since 2013, another area in Sumatera, Empat Lawang Regency and Banyuasin Regency, follow what Musi Rawas has experienced. Therefore, its success and failure may influence interest from other regions to adopt similar policy. Secondly, e-voting in Musi Rawas covered approximately 102 villages. The figure is significantly higher than other regions, such as Jembrana and Boyolali where which cover only less than 100 villages.

There is no doubt that there are at least some differences between nation and village scope of election in terms of adoption of e-voting method, such as the amount of the voters, the complexity of the voters and counting process, and technical and political risks. However, because the existing condition that e-voting has not been adopted yet in national election, any research on e-voting in village leader elections is becoming more important. Due to the fact that research on e-voting is barely conducted, this paper may contribute to the study. In practical level, it is surely significant for the improvement of election and voting in Indonesia in general. Particularly, the findings may provide recommendations for all liable authorities such as the government, the election commission, and legislative body as well as political parties in regards of the possible implementation of e-voting in the future.

## LITERATURE STUDIES

Lack of attention to the study of e-voting in Indonesia can be seen from relatively minimal research that has been conducted so far. There are

a number of researches, though, to see this topic is getting more attention. One of them is the research conducted by the author and some colleagues from Universitas Indonesia in 2010. The research describes e-voting implementation in Jembrana and the possibility of adopting e-voting in local election (Pilkada). Another research was conducted by Sumarno (2014). His research focus was the implementation of e-voting in order to embody good governance principles in Boyolali village leader election in 2013. Besides that, there was also research of Anistiawati (2014). Her research focus was the success of implementation of e-voting in achieving the principles of accountability, participation, transparency, effectiveness, and efficiency. Others have brought their research to a wider audience in international forums such as papers written by Hapsara (2013) offering a possible e-voting model for presidential election and Hartami and Handayani (2012) exploring the case of Jembrana. It seems that the researches mentioned above are looking at the aspects of implementation of e-voting, especially its success stories and its benefits. Other topic is on the model of e-voting that has the best possible performance for national election.

It can be said that those research reflect the general trend of research on e-voting. Largely, the study of implementation of e-voting in an election has gained popularity in recent decades due to its promised benefits. The changing method from manual to electronic voting in the electoral system is believed to be a rational decision due to its advantages (Benoist, Anrig, and Jacquet-Chiffelle 2007, 29). For example, Norris (2004) stated that the use of technology like e-voting can be potential to strengthen the public sphere. Another argument stated that the use of e-voting can make an election cheaper, quicker, and more efficient (Oostveen and van den Besselaar 2004, 73). On the contrary, according to some scholars, despite of benefits it may offer, e-voting has also potential risks that could jeopardize the quality of election. E-voting is based on digital data and rely on internet to process the votes and it poses great risks on security and accuracy (Lauer 2004; Smith 2001; Bishop and Wagner 2007).

However, there is also another factor behind the policy of e-voting adoption that is also important to consider which is the particular circumstance occurs in every country (Kersting and Haldersheim 2004, 276). Considering the context with other aspects, then, is important in order to make the design of e-voting system guarantee the general, free, equal, and secret characteristic of elections (Mitrou, Gritzalis, Katsikas 2002, 1). Also, by considering those aspects plus the organizational context of the implementation that can influence the success and failure of e-voting implementation can reduce the possibility of failure in making decision of e-voting adoption (van den Besselaar, *et.al.* 2003, 179). Steve Schwarzer and Cornelia Wallner (2009, 1) in their paper stated that successful implementation of e-voting arrogates to: (1) *a bottom-up principle*, (2) *powerful early-stage adapters*, and (3) *trust in technologies*. Meanwhile, Blanc (2007, 11) considered some issues before the decision to adopt e-voting method is made: public and political support; appropriate technologies; operations and logistics, and consideration or alternatives. The two arguments basically underline the needed circumstances before the adoption of e-voting that should be considered in the analysis of the policy.

This argument is also resembled in the development of standards for the implementation of e-voting that should be included in a policy. NDI, a non-profit organization working at the strengthening effort of democracy worldwide, develops certain standards to make sure that e-voting works on the ground satisfactorily which are transparency, public confidence, usability, system certification, system testing, system security, auditability and recount, verifiability, mandatory audit of the results, secrecy of the ballot, accountability in vendor relations, and incremental implementation ([ndi.org](http://ndi.org)). Thus, the involvement of public in the adoption of e-voting is also important in order to justify whether e-voting in a country or region is legally, substantially and practically ready to implement. This research has no intention to check all standards but those related to the motive of the e-voting itself. At this initial stage, observation at ballot box may be able to get a glimpse picture of the public confidence, secrecy, usability, and probably the incremen-

tality of electronic voting. However, the more precise arguments on the motive of e-voting adoption is provided by other scholars. Mirau, Ovejero, and Pomares (2012, 218) mention that there is at least three most common motivations and goals of adopting e-voting which are to increase the confidence on the voting system, to increase the speed of the vote count, and to give the voters possibility to easily vote. The first motivation seems quite general covering broad aspects of electoral process. However, it is likely that it is related to the effort to minimize fraud as data is digitalized and in return may increase the turnout rate. Nevertheless, despite the high hope of increasing voters' turnout, scholars only indicate that it will affect the interest of young voters with more experience on similar technology. In fact, the main motivation for the e-voting adoption is financial issues (Oostveen and van den Besselaar 2004) and in the case of Jembrana, Bali, the cost was reduced by 60%. Therefore, it is more useful to underline the link between what the government is intended with what the voters can experience, especially by looking at the speed and ease of voting activity at ballot box as well as the secrecy in contrast to the rational motives of the government.

## RESEARCH METHOD

This research employs the qualitative approach and applies case study analysis. It is because this research wants to explore a unique phenomenon at a particular case. To gather data to reveal the motive of e-voting adoption and its link with what the voters experience interviews were conducted to the Regent of Musi Rawas as well as the officials who were in charge of the e-voting. Also, this research will try to scrutinize the way the authority provides legal framework, prepares its technicalities, and then implement e-voting in the village leader elections as the important part of developing public confidence. It is also important to get more views from candidates individually as well as the voters who participate in the elections. Secondary data are gathered from the documents about local regulations related to the adoption of e-voting, and news from mass media.



In addition to interview, the researchers also observed the implementation of e-voting in three villages in Musi Rawas: Wonokerto, Pelawe, and BTS Ulu. Those three villages represent three characteristics differentiated by their geographical location that makes the dwellers quite distinctive and more importantly may have different experience dealing with technology. Wonokerto is located near Lubuklinggau, the capital of Musi Rawas. This village also represents a particular characteristic as most citizens are farmers but have already influenced by urban society of the capital. In contrast to Wonokerto, Pelawe is quite far from Lubuklinggau. It represents the characteristics of a society that has less contact with urban lifestyle which may influence the acceptability of the technology of e-voting. The third village, BTS Ulu, represents a village that is located even further and coincidentally only has one candidate to vote. These observation and limited conversation with some voters are conducted to relate what actually occurred at the election as well as what the voters experienced in different context.

#### E-VOTING IN MUSI RAWAS AND ITS ADOPTION

Before discussing the motive of e-voting adoption, it is worth to Musi Rawas is one of the areas (regencies or cities) in South Sumatera Province. The width of the area of Musi Rawas is about 12.358, 65 km<sup>2</sup> with the approximate population of 594.716 in 2011. It consists of 21 districts and 277 villages. E-voting was adopted in Musi Rawas in the late 2013. The first village that held e-voting in Musi Rawas is Tabarena Village, Selangit District. The village leader election was held in December 5th, 2013 (bppt.go.id).

There are two regulations related to the adoption of e-voting in Musi Rawas. The policies are Local Regulation Number 4/2013 and Regent Regulation Number 33/2013. Local Regulation Number 4/2013 is the second revision of Local Regulation Number 2/2007. The Regulation regulates the mechanism to vote in the village leader elections by using e-voting method. The consideration of issuing this Regulation is due to the development of information and technology that makes some

levels of transformation in human activities. In short, the change has endorsed the establishment of new regulation.

Local Regulation Number 4/2014 just consists of six new articles. One of the most important articles is the Article 1 Number 20 that mentions the definition of e-voting. The second important article is the Article 28. This article gives general information that regulates the option of e-voting method in village leader election in Musi Rawas. Detail regulation about e-voting in village leader election itself is written in the Regent Regulation Number 33/2013.

As it is intended to regulate more specific matters, Regent Regulation Number 33/2013 regulates more specifically about the committees, voter's registration, the candidacy, campaign, vote casting, and vote recapitulation. This Regulation consists of 46 articles and the most important point in this Regulation is that the budget for village leader election with e-voting method can be obtained from Village Budget (APBDes), Local Budget (APBD Musi Rawas), and other source that is not binding. The second important point is that the winner of village leader election is the candidate who is able to gain the highest votes. However, the winner must also achieve at least  $\frac{2}{3}$  of all votes in the polling center.



Fig. 1. The staff of Village Election guards the audit box and voting box in Pelawe Village

How about the equipment for e-voting? The place for vote casting with e-voting model is generally the same as the place with the manual one (see Figure 1). The differences are on the three parts: the machine that allows the voters to vote, the computer screen for casting the vote, and the paper trail as the evidence that the voters have voted.

E-voting does not need any ballot paper to cast the vote. The picture of the candidates is on the computer screen inside the voting box (see Figure 2).



Fig. 2. Computer Screen with Candidate's Photographs in Wonokerto Village

To cast the vote, the voters just need to touch the picture of any preferred candidate in the computer screen. After that, the voters will be given an option to confirm their votes and by pressing the confirmation the vote has been officially casted. The process continues through the machine that prints the paper trail that should be taken by the voters. The last step is putting the paper trail into the audit box and the voters can leave the ballot box (see Figure 3). After the ballot box is closed, counting process can be started and the process itself is relatively quick. The officials who are in charge at the polling center then ask the candidates and their witnesses to come to every computer to count the votes. The number of computer available depends on the number of candidates and every candidate has a computer dedicated to count

the votes for each candidate. From the observation, it is clear that the counting process just takes about one to two minutes per voting box. Then, the final result of vote counting is displayed on the screen that can be seen by everyone in the polling center (see Figure 4).

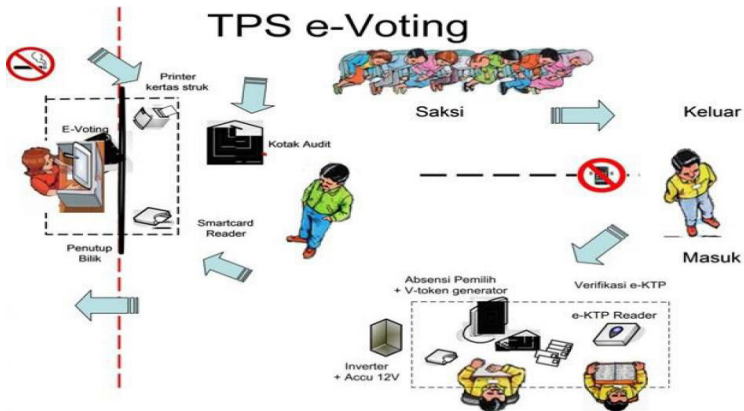


Fig. 3. Scheme in the E-voting Place

NO	NAMA CALON KEPALA DESA	HASIL PEMUNGUTAN					JUMLAH
		BILIK 1	BILIK 2	BILIK 3	BILIK 4	BILIK 5	
1	WANCIK	398	372	326	302	275	1673
2	KOTAK KOSONG	9	13	9	2	5	38
-	SUARA KOSONG	0	1	0	0	0	1
TOTAL SUARA		407	386	335	304	280	1712

Fig. 4. The Recap of Results of E-voting in BTS Ulu Village, Musi Rawas

In the case of Musi Rawas, the technology of e-voting was provided by Badan Pengkajian dan Penerapan Teknologi (BPPT) or Agency for the Assessment and Application of Technology (bppt.go.id 2013). The Agency was also provided similar equipment and system to the e-voting

at Boyolali and Jembrana. Based on its experience, the Government of Musi Rawas has a deal with BPPT to use and deploy the system in about 102 village leader elections that have been conducted between 2013 and 2015. This span of period is due to the availability of the equipment itself which are only 10 sets. Therefore, the local government developed a schedule to arrange 10 elections every week and the computers distributed to different villages every week. In the villages which had no sufficient electricity supply, the government provided portable battery that could work up to 12 hours.

What are the motives of e-voting adoption in village leader elections in Musi Rawas? The first motive of the adoption of e-voting is to reduce violations. According to the former Head of Body of Village Society and Government Empowerment of Musi Rawas, Rudi Irawan Ishak, the manual election has many weaknesses, especially in the accuracy of data both for voters and votes. According to him, the end result of the voting may be different with the actual votes as counting process may not be perfectly sterile. E-voting was adopted to reduce the violations in the manual election because data will be processed digitally, according to the current Head of the Body (interview with Dian Chandra, 4 March 2015). Besides that, the manual method has another weakness which is the relatively high number of damage and unused ballot papers. Because of those factors, the defeated candidate(s) may quite hesitate to accept the result and question the independency of the election committees.

This argument can be confirmed during observation quite obviously. E-voting election in three villages shows that any form of violations is relatively absent. The committees of village leader election are not able to manipulate the result because the counting process uses machine or computer. It is surely that digital process has guaranteed the security of the vote casting and counting as long as the system is secured. To secure the process, the committees with the assistant of BPPT have conducted two stages of internal audit to make sure that technology works well and securely. In the first step, there is an internal audit to the computers set up in the village leader election. The audit is then completed by the second audit after the voting process.

However, the minimal or even absent of violations at the ballot box is not exclusively due to the application of electronic voting. It has to be underlined that e-voting in Musi Rawas was conducted at village leader elections which only require one polling center and the result is definite at the center. Beyond that there is no further process to accumulate the votes from a number of polling centers and then the result is accumulated to the higher level as taking place at legislative and presidential elections. This process is equal with the process at ballot box in every manual election. As long as the officials follow the procedure violations are unlikely to occur (Hidayat 2015). Violations of the votes allegedly occur not at the ballot box rather at the district or regency/city levels. At this level, candidates for legislative bodies may try to manipulate the distribution of votes. However, the application of e-voting has given more assurance to the minimal breach of procedure at ballot box which is advantageous to develop public confident. This confident can be even greater if the technology can provide security of the votes not only at ballot box but also the result to the national level at legislative and presidential elections, something that needs further investigation.

The second motive of e-voting adoption is to make the elections more efficient in term of time and money and make the voters easier to vote. This motivation is a contrast to the manual method that has its apparent weakness when it comes to counting the result. At manual election it needs about two to four hours for counting the results depending on the number of the ballots. According to the observation in three villages, the process to vote for every person on the electoral roll takes significantly short time. In average, every voter just needs about one minute in the polling center. Moreover, the time needs for counting the result is also relatively short. In average, every computer in a polling center just needs two minutes to count and in total it just needs about 10 to 15 minutes to get the final result.

This figure confirms the rationale behind the implementation of e-voting as intended by the local government. In general, the ease of using the e-voting is provided by the Head of BPPT, Marzan Iskandar,

who says that the benefits of using e-voting are as follows: the e-voting 1) does not have to print the ballot papers; 2) is easy to be used; 3) accommodates the people with special needs; and 4) is cheaper and faster. In short, it supports the democratic process that requires direct, public, free, and secret election (bppt.go.id, December 6th, 2013). It is a clear indication of the easiness and the less time needed to process the count.

Meanwhile, Ridwan Mukti, the Regent of Musi Rawas, explains that the government intention is to please the votes by simplifying the electoral process. He believes that technology is the answer to the problems that usually occur at manual elections. Although there was a great concern on the success of e-voting, his bold decision to continue with the plan pays off. He says that:

*“Initially, we thought that it would be hard to introduce the technology. Nevertheless, we managed to solve the problem. We also arranged workshop and socialization. The introduction of the method of e-voting included the workshop for the committees. We also learned from Jembrana and Boyolali. We also wanted to maximize the data in the electronic identity card. But, I agree that we need to train the human resources frequently. Besides, the socialization must be massive and administer well in order to minimize any bias (interview with KOMPAS TV).”*

The confidence of the local government toward the technology was actually based on its assessment of the residents of the regency. The Government of Musi Rawas believes that the majority of the people of Musi Rawas have known technology well by looking at their level of education that is at the middle or even high level. This has played a crucial role at the day of election as people express their pleasant reaction toward the technology. According to Rudi Irawan Ishak again, the people who live in villages prove that although they do not use the technology frequently, they are able to use e-voting easily at the ballot box. It proves that the people themselves are familiar with technology or at least able to learn how to do it in relatively short time (Tribun News Palembang, February, 5th, 2014). In addition, e-voting is not externally

connected, so that it is free from any possible hacks (Koran-jakarta.com).

Mukti also stated that the people of Musi Rawas came to him to explain their experience. He mentions some of them saying that the electronic method is easier and more convenient than the conventional one (Koran Sindo, November 20th, 2014). According to him:

*“They said that e-voting is easier than using ATM machines. There are no useless and broken papers. The budget is cheaper. It costs approximately 12 million rupiah per village. The level of participation is high, more than 90 percent. Also, the candidates prefer e-voting because the process is conducted by machine, not human.” (rakyatmerdekaonline, November 19th, 2014).*

It is not difficult to confirm his statement, especially at the aspect that relates to the voters directly. During the observation, the researchers had a chance to have some conversation with those who have casted their votes, including the candidates of the village election. One of the candidates in one of the village leader election in 2015 expressed his appreciation to the electronic method which is better than the manual. According to him, the e-voting is faster, easier, and more practical. Some of the voters also expressed their approval by saying that the process is easy and quick which is what the local government wants to achieve.

Unfortunately, the research was unable to confirm the data about the cost of the election in every village. If the information given by one of the officials is correct, the total cost for conducting elections at village level in Musi Rawas will not exceed the amount of 3 billion rupiahs which is much less compare to the budget for previous legislative and presidential elections. However, the costs for conducting legislative and presidential elections at regency level surely cover more than just the process at ballot box. The fact that e-voting is nearly paperless will reduce the cost to print the ballot materials which consume the high proportion of the election commission.



Nevertheless, beside the aforementioned positive arguments on the benefits of e-voting methods in village leader elections, e-voting itself is not immune from problem that may hinder its wider acceptance. One of the obvious problems occur at the ballot box especially when older voters came into the polling center but not too familiar with the electronic machine. They looked afraid of making false action at the ballot box. Their anxious expression can be seen clearly from outside the polling as they stop and hesitate to do anything. In order to ease and help the situation, sometimes the officials approach the ballot box and stand closer to the voters to explain what they need to do next. Although there is no obvious intervention on the voters preference, the voters' cast are potentially seen by the officials.

## DISCUSSION

Based on the explanation above, this paper argues that in the case of Musi Rawas between 2013 and 2015, the adoption of e-voting can make electoral process quicker by increasing the speed of the votes counting. It is also potentially more efficient, and gives the voters possibility to vote easily. These findings find their relevance to the arguments of Oostveen and van den Besselaar (2004) who stated that the use of e-voting can make an election cheaper, quicker, and more efficient. There is also strong relation to the argument of Mirau, Ovejero, and Pomares (2012) who stated that one of the motivations and goals of adopting e-voting is to increase the speed of the vote count. It is no doubt that e-voting still has its profound advantages compare to the manual election which potentially attract more decision to apply it. It can be said that the motive of the Government of Musi Rawas is rational which is also generally found in other cases.

Apart from the strengths of the e-voting, there are also some problems related to e-voting in the village leader election in Musi Rawas. The first problem is the question in relation to the minimum standards required. From three minimum standards that must be passed before adopting e-voting, two standards (legal and operational standard) need more attention than the other. The legal standard is the existence of a

set of law which allows the implementation of e-voting. As stated above, there are Local Regulation Number 4/2013 and Mayor Regulation Number 33/2013. Unfortunately, the Local Regulation Number 4/2013 established later than Mayor Regulation Number 33/2013. The Local Regulation was released on December 2<sup>nd</sup>, 2013. On the other side, Mayor Regulation was released on November 28<sup>th</sup>, 2013. According to the hierarchy of the regulation in Indonesian state administration, Local Regulation is higher than Mayor Regulation. Consequently, based on the hierarchy, the Local Regulation should be released earlier than the Mayor Regulation. This situation is worsen judging by the fact that the range of time available between the announcements of the two regulations and the actual implementation of the e-voting itself. Both were released in just more or less one month before the implementation. One month is certainly only a short time for the preparation of high technology method like e-voting in the various areas in Musi Rawas.

The legal problems certainly reflect the general situation that may occur in other regions in Indonesia which is the promptness the availability of legal basis to prepare and conduct e-voting. The absent of legal framework at national level leaving only the Decision of Constitutional Court. This legal basis only creates another problem that has to be faced by local governments which is to provide their own legal basis at the local level. In the situation local politics dominated by rent-seeking politicians, there is no guarantee that the process to start the preparation of e-voting is conducted in the absent of legal basis at national level to make sure that it is conducted appropriately and correctly. For example, the time frame for the preparation after the availability of local regulations can be standardized to one year. This national standard can be produced by the central government to reduce the possible rushed preparation and implementation. The fact that this research found some moments where older voters looked confused and anxious proves that relatively short time period to socialize the electronic machine is still inadequate. Therefore, more time is needed and local governments can be forced to have a better preparation by more guidance from the central.

This relatively belatedly legal basis provided for e-voting at Musi Rawas may reflect the fact that local politics is sometimes driven by the boldness of the local leader. From the interview with the Head of Body of Village Society and Government Empowerment it is clear the government's motivation is firstly due to the willingness of the Regent himself who wants to have better election in the regency. In the meeting with BPPT to encourage local leaders to adopt e-voting after Jembrana, there was only two local leaders who expressed their eagerness, Boyolali and Musi Rawas (interview with Ridwan Mukti, 4 March 2015). This circumstance could explain why the Regent Regulation was issued first ahead of the local parliament's Local Regulation, which is not in correct order. It reflects the eagerness of the Regent to push the process in time although it breaches the state administration procedure.

The second problem is the operational standard. It relates to the ability of some voters to deal with the new method, such as the old people and the people who cannot operate the technology well. Occasionally, we saw official who acts as operator helps the voters inside of the ballot box (see Figure 5). Those situations surely have violated one of the principles in a good election: confidentiality in voting. According to one of the officials, it is a dilemma for them. If they do not approach to the box, the voters are unable to solve their problems. On the other hand, if they enter the box, it will reduce the quality of the election.



Fig. 5. A situation in a Polling Center (TPS) in Musi Rawas

Unfortunately, based on the fact in some ballot boxes that officials tend to get closer to assist voters, the decision to adopt e-voting did not fully consider the aspect of confidentiality in election in reference to the arguments of Mitrou, Gritzalis and Katsikas (2002). According to them, "It is important in order to make the design of e-voting system guarantee the general, free, equal, and secret characteristic of elections". In the future, the government of Musi Rawas needs to give serious attention to this particular problem. The government should conduct serious socialization program to some areas that potentially has technical problems due to the inability of some voters to familiarize with such technologies.

## CONCLUSION

From the field research it is revealed that the implementation of e-voting at Musi Rawas for the village leader elections was entirely driven by the Regent's will. This circumstance plays a significant role to push the local government officials to prepare the technology and organizational infrastructures to meet the deadline. It is also seen from the series of regulations, both as Local and Regent Regulations, which were issued only one month prior to the elections and most importantly the Regent Regulation was issued ahead of the other. With the the Regent's boldness, the Government of Musi Rawas were able to adopt and implement e-voting in their 102 village leader elections during the period of 2013 - 2015.

The motives of the adoption itself tend to be rational if not pragmatic. E-voting is preferred by the local government because of the inherent problems with manual elections, especially the inaccuracy of data to the list of approved voters as well as the ballot itself. In order to reduce such violations, e-voting is chosen due to its ability to develop flawless list of voters as well as other benefits such as user-friendly, faster, and cheaper. These benefits seem to be fairly successful as many of the voters express their admiration to pleasant experience in using the technology. More importantly, the candidates also articulate similar tone of acceptance underlining the accuracy of the vote counting.

Nevertheless, the Government of Musi Rawas needs to pay attention to the technical aspect that can reduce the quality of the election. One particular aspect is to socialize the method for less technological savvy of voters in order to reduce the potential breach of electoral principles as officials need to intervene the voting process at the ballot box. Stricter and clearer procedures for officials at the ballot box to deal with the situation are also needed.

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