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Research Article

Understanding the Voter Data Information System (SIDALIH): The Need for Sustainable Voter Data Accuracy (DPB) Ahead of the 2024 General Election

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Abstract.

This study discusses the integration of technology in the form of a voter data information system application (Sidalih) by the KPU, which focuses on continuous voter data accuracy (DPB). The use of the Sidalih application is considered sufficient to help the KPU in its work, but for the 2024 election, the Sidalih-DPB application is not certain to be used due to inadequate regulations. This study aims to understand the role of Sidalih in increasing the accuracy of sustainable voter data ahead of the 2024 General Election in Indonesia. Thesuccessful implementation theory of the Merilee S Grindle model with content parameters and policy context becomes an instrument in exploring the function of Sidalih. The research was conducted at KPU Riau with a case study approach since this application was used in the process of voter data accuracy. The results of the study indicate that Sidalih is an application that is very helpful for realizing voter data that is accurate and quite effective. Sidalih serves to verify continuous voter data before and during the stage of updating voter data. However, Sidalih needs to get political support from policymakers to be used sustainably.

Keywords: voter data information system, Sidalih, data update, KPU, election, Indonesia

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1. Introduction

Digital technology is increasingly being used in elections around the world [1]. The integration of technology in election administration allows for a quick "jump" to cleaner and more credible elections. Several election administrations, starting from the accuracy of voter data, campaigns and vote counting, have used digital technology [2]. This development was adopted by the election administration in Indonesia, namely the General Elections Commission (KPU) in supporting the process of determining the voter list. The problem of inaccurate voter data has implications for many things, starting from the availability of ballot papers and the loss of citizens' political rights in the poemilu [3] [4].

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This study discusses the effectiveness of using the voter data information system application and then abbreviated as (Sidalih) by the KPU in the aspect of improving the accuracy of the voter list. Sidalih is considered a breakthrough made by the KPU to improve the voter data system, from data accuracy to the development of sustainable voter data [5] [6]. Burdady et al. [7] is another study that showed that Sidalih is an application that really helps KPU officers in storing, processing, and updating voter data continuously.

The Sidalih application is divided into two, namely Sidalih in the election stage and Sidalih for the continuous voter list (DPB). The Sidalih application can be used during the election process and non-stages. But before 2021 it is not in the election stage. This application is not used. It is recommended that Sidalih-DPB be used at any time whenever it is not at the election stage. The Sidalih application referred to in this study is the Sidalih-DPB application. Until now, Sidalih is still used to periodically update voter data by the Regency/City KPU to the central KPU as mandated by Law No. 7 of 2017 concerning elections. Where the KPU was asked to carry out a continuous data accuracy process, this mandate also gave birth to Sidalih [8].

Sidalih is an online-based voter data information system that is used to support the work of election organizers in compiling, coordinating, announcing, maintaining voter data, and serving voters related to voter data [9]. Based on the KPU regulation article 1 point 46 states; "Voter data information system, hereinafter referred to as Sidalih, is an electronic system and information technology used to assist officers in compiling, coordinating, announcing and maintaining voter lists". The voter data information system is a computer technology-based information system used by the KPU to assist officers in the process of updating and compiling voter lists. PKPU Number 11 of 2018 concerning the Preparation of Domestic Voters List in the Implementation of General Elections.

On July 9, 2021, the KPU Riau Province held a Coordination Meeting regarding the continuous updating of voter data in 2021. Based on the provisions regarding the continuous updating of voter data Number 132/PL.02.SD/01/KPU/11/2021 that data has been obtained on a continuous voter list recapitulation before uploading and after uploading into Sidalih for the period in 2019 and June 2021, namely:

From the results of the data above is the result of the recapitulation of the Riau Province KPU DPB obtained from each regency/city's KPU. From 12 regencies/cities there was an increase in the number of voters from the DPT Election in 2019 to June 2021 in 10 regencies/cities and 1 city experienced a decrease and 2 regencies the continued number of voters is not yet known. This increase and decrease show that voter data is very dynamic data. The number of voters can change at any time and

TABLE 1: Voter list recapitulation.

No	Regency/City	DPT 2019 Election Numbers		DPB Voters/June 2021 Number	
		M	F	M	F
1	Bengkalis	185.713	177.458	197.747	189.584
2	Indragiri Hilir	227.313	213.209	240.039	225.330
3	Indragiri Hulu	137.777	134.842	0	0
4	Kampar	232.212	226.427	242.741	236.214
5	Kepulauan Meranti	71.249	66.904	72.305	67.717
6	Dumai City	90.347	87.189	104.604	101.307
7	Pekanbaru City	241.717	249.103	235.000	260.117
8	Kuantan Singingi	109.492	108.313	116.708	115.180
9	Pelalawan	102.745	98.131	113.866	109.310
10	Rokan Hilir	194.597	186.228	204.819	196.238
11	Rokan Hulu	157.758	153.413	0	0
12	Siak	138.570	130.857	138.543	132.714

Source: Riau Province KPU PPID 2021

cannot be predicted with certainty [10] [11]. Therefore, periodic screening is needed to know the development of voters accurately each period.

For this reason, it is important for DPB to detect changes in the voter list on a regular basis. However, the problem is that DPB cannot be used as the main raw material in the process of determining DPT. Law No. 7 of 2017 concerning Elections only mentions that the data sources in determining the DPT are the Population Data of Potential Election Voters (DP4) and the latest DPT. The law mandates that only these two data are the basic reference in the process of determining the DPT. Meanwhile, DPB is not a source of data in the process of determining DPT in the General Election and Regional Head Elections [12].

This becomes a problem when DPB is not included in the category of voter data sources. If the DPB is not a reference in the process of determining the DPT, the KPU will experience the same problem as the previous elections regarding the problems of determining the DPT. In the 2019 election, the DPT became a special concern for the people of Indonesia because it was considered full of political interests so that the rights of citizens to vote were at stake. For this reason, the KPU launched the DPB program in 2020 so that the problems that occurred in the 2019 elections did not recur. However, if this DPB does not become the basic material in determining the DPT, it is not impossible that this problem will repeat itself.

For this reason, this study focuses on studying the importance of SIDALIH-DPB to improve the accuracy of DPT ahead of the 2024 election. The purpose of this research

is to encourage the KPU to continue to improve the quality of DPB data while at the same time fighting for DPB to be part of the process of determining DPT in the 2024 General Election.

2. Theoretical Consideration

This study uses a policy approach as a reference in seeing the needs of DPB in the General Election. The focus of the policy review in question is the things that affect the implementation of a policy proposed by Grindle & Thomas [13] .This policy theory becomes a concept to analyze the implementation of Sidalih and DPB so that it is necessary to elaborate between the concept of policy implementation with Sidalih and DPB.

2.1. Policy Implementation

Grindle & Thomas [13] said that the success of the policy can be seen by and measured by the process of how to achieve it. This measurement can be seen by the way the process between policies includes, first the interests that influence it, what is meant here is the interests that influence the implementation of a policy whose implementation can involve many interests and the extent to which these interests influence. Second, benefits, explaining that this policy must be able to show the positive impact generated by the implementation of the described policy. Third, the changes to be achieved, it can be explained that the magnitude of the changes to be achieved through policy implementation has a fairly large scale. Fourth, the location of decision returns, in a policy, plays an important role in the implementation of a policy. Five, program implementers in carrying out a policy must be supported by a capable policy implementer for the success of a policy. Six, the resources used, the implementation of a policy must also be supported by supporting resources so that its implementation goes well. In the context of the Implementation Environment, it is divided into 3, namely: first, the power, interests and strategies of the actors involved in power, the interests of the actors involved will implement the program which will include participation at the central or local government level, whether bureaucrats or among the general public. All of these actors are intensively independent of the content of the program in which the policy is implemented. Second, the characteristics of the institution, the results of the political calculation of interests and competition between groups for limited resources, the response of officers and the actions of the political elite, will all be interrelated

in the context of their respective institutions. Third, the level of compliance and the response from the implementer. In an effort to achieve goals, bureaucrats are faced with 2 problems that arise from interactions in the program environment and program administration.

Grindle & Thomas [13] stated that the scale of measuring the success of policy implementation is seen from the process of implementing the policies that have been determined, and the policy objectives achieved are seen from 2 factors including the impact of the community, both individuals and groups, then seen from the level of changes that occur in the target group of these changes. This theory is relevant to the implementation of Sidalih by the KPU as an election organizer.

2.2. Sidalih and Continuous Voter List

Sidalih performs the CRUDE (create, read, update, and delete) function in the process of updating voter data. In addition, Sidalih publishes the voter list online on the pages of the provincial and regency/city KPU, which is no less important is that Sidalih has a monitoring feature that greatly assists the KPU in monitoring the process of preparing the voter list, providing information on the results of data analysis nationally, in the form of potential data. double and invalid voter data [14]. Sidalih is developed based on the internet (web) which is single and centralized on the KPU server. Each Provincial KPU and Regency/Municipal KPU is only given access to process and update data in their respective working areas during the voter data updating stage.

Continuous Voter Data (DPB) which is carried out in accordance with the mandate of Law number 7 of 2017 (Election Law), essentially keeps the data updated regularly. Assuming that the data becomes valid when used as a reference and accuracy of voter data, in the next election [15]. Voter data, which is often the subject of discussion and problems from election to election, is expected to eliminate the error rate with the DPB. The data, which is updated regularly, is coordinated with the Directorate General of Population and Civil Registration of the Ministry of Home Affairs (Dirjen Dukcapil Kemendagri), then in the next stage to the local Dukcapil [16].

The advantage of sidalih from the previous difference is that it is able to end most of the problematic disputes related to the stages of updating the voter list. With this pretext, the KPU was able to explain how many numbers the voter list numbers were. What has been uncertain has become more certain after using sidalih to clean up data from the results of updating the list of potential election residents (DP4) submitted by the Ministry of Home Affairs/Local Government (Central Government/Regency/City).

Second, with the issuance of the Election Law No. 8 of 2012 in Article 32 which states "In updating the DP4 to the provisional voter list (DPS), it is possible for the KPU to refer to the latest data on voters in the regional head and deputy regional head elections". Third, the operating system that is open (open source data) can be accessed online (online). This is a separate advantage that allows involvement to check, improve, and control the community. Fourth, the functionalization of sidalih from the consolidation of voter data. Fifth, the availability of a separate server as a giant database by utilizing advances in computer-based information and communication technology. If the data is cared for and maintained properly, population development that includes variables such as mortality, birth and migration rates will make it easier to produce accurate, comprehensive and up-to-date voter data [17].

3. Methods

This study uses a qualitative method with a case study approach related to the Sidalih system related to the sustainable voter list (DPB). The focus of his research is on the effectiveness of using the Sidalih application to support sustainable voter data. By using this method, it is possible to describe and discuss research more deeply so that the exploration of research findings can be revealed. This approach is useful for social research, especially in electoral cases and can develop theories, evaluate, and develop interventions because of its flexibility and thoroughness [18] [19] . The research was conducted at KPU Riau Province and interviews became a technique for obtaining research data. Research informants consisted of members of the KPU Riau Province in the field of data and information as well as staff who served as SIDALIH-DPB application operators. The research was conducted from January to July 2022. The data were analyzed using an ethical-emic approach, namely analyzing interview data and juxtaposing interview data with a literature review to obtain a comprehensive analysis.

4. Results and Discussion

4.1. Sidalih Implementation and Voter Data Accuracy

Sidalih is a system or application used by the KPU as the organizer of elections and elections in providing compiling, updating, analyzing, coordinating and maintaining voter data, provisional voter lists (DPS) and permanent voter lists (DPT). Based on the

KPU Regulation Article 1 point 46 states "sidalih is an electronic system and information technology used to assist officers in compiling, coordinating, announcing, and maintaining data".

In a sense, SIDALIH is an instrument used by the KPU to publish and manage voter data by integrating information technology. Initially, SIDALIH was only used during the election stage with the aim that voter data could be managed nationally and centrally automatically. After the election stage is complete, SIDALIH is no longer used. However, since 2021, when the DPB began to be run by the KPU SIDALIH, it was again used as a tool to store and periodically update voter data.

The purpose of the sidalih application is to provide convenience to election administrators for regional heads in processing voter data, assisting cooperation between provincial and district/city administrators in elections, assisting in the implementation of simultaneous elections and preparing updated and valid data for legislative elections (Kosmas & Mauritsius, 2009).

Based on the results of interviews with members of the Riau Province KPU in the data and information section, the Sidalih application is divided into 2, namely Sidalih for the election stage and Sidalih-DPB. For Sidalih, the election stages are only used during elections. Meanwhile, Sidalih-DPB is used at any time since 2021 until now.

Sidalih election stages have drawbacks that are limited by time and an inadequate network system. Coupled with the quality of the DP4 data provided by the Ministry of Home Affairs, there is invalid data so that there are many anomalous or unclear data. In PKPU Number 19 of 2019 Article 7 states that the Government submits a consolidated, verified and validated DP4 to the KPU no later than 6 (six) months before voting day and copied to Bawaslu (Sari et al., 2019). The KPU submits the results of the DP4 analysis and the results of the DP4 synchronization as consideration in updating the Voter Data.

In the 2019 Election, the Bawaslu of Riau Province found 32,556 anomalous voter data spread across several regencies/cities. This data was found by Bawaslu after synchronization between population data by the Ministry of Home Affairs and the last DPT of voters in Riau, namely the 2018 Governor Election. following:

1. More than one person has the exact same element data

2. More than one person has the same NIK

3. One person has more than one NIK

4. Dead people are registered as voters

The anomalous data above are the most common cases found by the KPU against the data obtained from the Disdukcapil. The KPU does not have the authority to delete the duplicate data because it is not the KPU's domain, but the one that has the authority is the Ministry of Home Affairs or its sub-organization, namely Disdukcapil. Therefore, the thing that can be done is to conduct field verification directly. The obstacle that occurred during verification was that voters who had duplicate data could not be found by the team. This causes the duplicate data cannot be validated by the KPU.

In the 2019 election, the Sidalih application became a very important instrument for identifying anomalous voter data. Based on interviews with data staff, Sidalih really helped the KPU in identifying anomalous voter data originating from the DP4 Ministry of Home Affairs. When compared to the election before the Sidalih application, the process of inputting and classifying voter data can be done more quickly and accurately. This is a positive trend for the accuracy of voter data where integrated management on a national scale can run more effectively.

However, Sidalih at this stage of the election has several shortcomings that must be corrected. Among the most basic shortcomings is that Sidalih has not been used as the main instrument in the process of determining the voter list. the point is that Sidalih is only used as a tool for synchronization between voter data originating from the DP4 and the last DPT. In fact, Sidalih could do bigger things to improve the accuracy of the voter list.

During the process of processing the sidalih data, initially the data will be entered into the system with a high data frequency. Sidalih will detect inaccurate data with a red color code. The inaccurate data consists of incorrect KK numbers or inappropriate addresses, as well as duplicate data or other obstacles. The more problematic DP4 data, the more 'red' the data becomes. This resulted in more and more data that had to be re-verified by the KPU before setting the DPT. For this reason, the KPU must have the ability to improve the quality of voter data and not only rely on DP4 data from the Ministry of Home Affairs [20].

The best thing that Sidalih can do is store and update voter data on an ongoing basis (continuous list). Sidalih could be the answer to the DPT problems that occur in almost all election administrations in Indonesia. Sidalih can be used as a basic reference for the voter list in the DPT determination stage. Realizing this, the KPU tried to use Sidalih to collect continuous voter data since 2020.

4.2. Sidalih and Continuous Voter List

In 2021 Sidalih has begun to be used actively outside the election stage. SIDALIH is used as a place to store and update voter data in the DPB program. Prior to the existence of the DPB, voter data was updated only every time an election was held, both general election and regional head elections. Now the voter list has been updated regularly by the KPU every 3 months. Every 3 months the KPU conducts a plenary session to determine the continuous voter list. This step was taken by the KPU to resolve the voter list problem that occurs every election.

The spearhead of the DPB is the Sidalih application as the main container for a sustainable voter list. DPB is a logical step to resolve problematic voter data. The KPU at the district/city level updates the voter list by collaborating with the local government such as the education office to recruit novice voters, then the Ministry of Religion to identify married wagras under the age of 17 years and even up to the village government level to identify the mobility of people moving.

This is done every 3 months by the Regency/City KPU which is then determined through plenary and reported to the Provincial KPU and forwarded to the Central KPU. All identification data is stored in Sidalih. Problematic data will be identified by SIDALIH automatically and KPU staff will quickly find out which data must be reviewed immediately.

In this way, changes in voter data can be identified by the KPU quickly and accurately. The process of updating data is no longer carried out only during the election stage which has proven to be lacking in many ways [21]. Since 2021 until now, the KPU has continued to strive to improve the quality of voter data and hopes that the shortcomings that occurred in the previous elections will not occur in the future. However, another problem that arises is that this Sidalih-DPB cannot be used as a basic reference in determining the DPT in the 2024 election. This is because the DPB has not been regulated in the election law. The data in Sidalih-DPB cannot explicitly be used as the "raw material" for the election list. The main reference in determining the DPT is the DP4 which is synchronized with the last DPT. There is no legal umbrella for the use of Sidalih-DPB in the DPT determination stage. If this Sidalih-DPB cannot be used as a reference in determining the DPT, the accuracy of the voter list will experience the same problems as the 2019 election.

4.3. Understanding the Scope of Sidalih-DPB as the Last DPT

From a formal legal perspective, the SIDALIH-DPB cannot be used by the KPU as the main ingredient for determining the DPT before it has a legal umbrella (stated in the Election Law). However, politically, SIDALIH-DP B can be interpreted as part of the last DPT. Essentially, policies are made to solve problems that occur in the administration of government. The problem of voter lists that continues to occur in every election is a phenomenon that must be solved. This DPB policy is the answer to the problems that have occurred so far.

The problem that has occurred so far is that the quality of the DP4 data from the Ministry of Home Affairs is full of deficiencies that cause the data to be invalid. The novelty of population data owned by the Ministry of Home Affairs is often a factor in the occurrence of DPT problems. For this reason, it is necessary to update voter data independently by the KPU so that technical errors in population data can be reduced. Conceptually, DPB is a tactical step to update voter data with a short period of time. However, DPB cannot be interpreted as part of DP4 because the instruments and agencies for data management are different. The Ministry of Home Affairs manages general population data with a high level of confidentiality. The interest of the Ministry of Home Affairs is to identify the population in general and not just for election purposes. Meanwhile, KPU is an election management body whose interests are only at the time of the election. For this reason, DPB is not understood as part of DP4 data.

However, DPB can be interpreted as the last DPT owned by the KPU. The purpose of synchronizing the DP4 data with the latest DPT is to compare the existing data (last DPT) with the condition of population data that has changed over a 5-year duration. This synchronization is needed to identify the increase and decrease of voters in an area. However, the problem is that the change in population data held by the Ministry of Home Affairs is not updated enough. This has been regulated in PKPU No. 11 of 2018 concerning the preparation of the voter list [22]. For this reason, not all residents report activities such as change of residence, birth, death and so on. So that anomalous data is still very much found at the time of determination of DPT. To minimize the anomalous data, it is necessary to carry out DPB periodically by the KPU. The main source of DPB data is the last DPT held by the KPU in the last election [23]. With this data, the KPU then periodically updates several government institutions related to changes in the population data of potential voters. The data resulting from this update is then determined in the plenary meeting as the voter list. This DPB data is the responsibility of the KPU in carrying out the mandate of the election law regarding updating voter

data. The data updating activity can be considered as a permanent voter list because it comes from the authority possessed by the KPU and is carried out in accordance with the stages of determining the DPT. Institutionally, the last DPT and DPB are independent data owned by the KPU in managing voter data. For this reason, DPB can be interpreted as the last DPT owned by the KPU. Thus, Sidalih-DPB will be used as material to be juxtaposed with the DP4 of the Ministry of Home Affairs in the implementation of the upcoming 2024 elections.

4.4. Sidalih: The Need for Accuracy of Voter Data for the 2024 Election

The implementation of the 2019 Simultaneous Elections is mainly related to data accuracy, the RI Bawaslu found as many as 1,013 multiple voter identities. This number is the result of Bawaslu's analysis of 285 regencies/cities out of 514 regencies/cities in Indonesia [24] The chaotic management of the voter list resulted in the postponement of the DPT determination up to three times. The revised DPT (DPTHP) has only been successfully ratified at the plenary meeting of 15 December 2018. A bad voter list will be a vehicle for election violations and crimes, and conversely a good voter list will be the basis for establishing electoral justice from the start [25]. For this reason, we need to take adequate inventory of the factors that affect the condition of the voter list, starting from the regulation on the formation of the voter list, who is in charge, on what basis the materials for the voter list are obtained, how the system and method of processing the voter list are, and how the voter list is presented. for all stakeholders and the wider community, so that the need to build public perception and trust is well implemented.

It is known that in 2019 there were about 5 million people in Indonesia who had not recorded in the population administration system, that number did not include those who were registered but had problems accessing their own population data, many reports of people not being able to print their ID cards, because there has been a change data without the knowledge of the person concerned, and this is not recorded in the population system [26]. According to the Ministry of Home Affairs, the problem of recording at the sisminduk is targeted to be completed by the end of 2019, so it should have been in the last 2020 simultaneous regional elections that the problem had been resolved, but in fact we are still being treated to the same thing even in the 2020 simultaneous elections, namely the issue of voter data that has not been resolved. The KPU in the book Election Innovations conveys about innovations in various electoral fields carried out by KPURI as an election management body, as regulated in Article 22

E of the 1945 Constitution. it is stated that since 2011, the KPU has established a voter list system (Sidalih) based on information technology (IT) [27]. It was stated that Sidalih was developed to answer the voter list problem that arose in the 2009 legislative and presidential elections, which were in the public spotlight at that time. The weakness of the voter list in the 2009 election stated that at that time the KPU did not have a centralized database. Because at that time there were around 80,000 working papers that were not integrated into a system. As a result, the unintegrated voter data becomes difficult for the KPU to manage and control. The purpose of the establishment of Sidalih was to integrate voter data, which at that time was decentralized to the KPU, regency, province and city in an integrated system, so as to form an accurate, comprehensive and up-to-date voter list.

4.5. Sidalih is a form of policy innovation with a digitalization approach

Voter data management can be carried out in a comprehensive and sustainable manner so that the KPU has independent and accurate voter data. This can be a solution to answer the problems of DPT every time the election and regional head elections are held. The integration in question is that the renewal of the voter list can be synchronized automatically with population data which is mutually beneficial. The KPU and the Ministry of Home Affairs work together to record and update data according to the needs of each institution. This effort requires considerable time and money, but this step must be taken to ensure the right of citizens to actively participate in the implementation of elections. Through the Sidalih application, which is connected to the Sisminduk application, accurate voter and population data will be created and errors in determining the DPT can be minimized in the upcoming 2024 election.

5. Conclusion

The main argument of this research is that the integration of Sidalih technology in the voter data verification process is an important instrument to improve the accuracy of the permanent voter list in the implementation of elections in Indonesia. The accuracy of voter data should be carried out continuously in Sidalih so that it has implications for public trust in election organizers. The need for data accuracy is a top priority to guarantee the constitutional rights of every Indonesian citizen to participate in general elections. It is time for voter data and population data to be synchronized and updated

more accurately. DPB can be interpreted as part of the last DPT owned by the KPU and can be used as data that is synchronized with DP4 in the stage of determining the DPT in the upcoming election. The KPU must be able to convince the government to make the DPB as part of the final DPT and at the same time include this interpretation in the PKPU which becomes a reference for election organizers at the regional level. The government and the KPU must demonstrate a commitment to continuously improve the accuracy of voter data.

Acknowledgements

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