

Dealing with Voters' Privacy Preferences and Readiness in Electronic Voting

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ABSTRACT

Various countries have been encouraged to adopt electronic voting because it can reduce operational cost and time spent for tabulation process. In the current research, it has been mentioned several problem arised in term of technical aspects, voters' trust, machine vulnerabilities and privacy right in which experts argued the election system have been compromised. In short term, the certain faction will try to exploit the system weaknesses for their own benefit, while in the long term, it can create public distrust to the government, which decrease the voters turn out, break the participation willingness and downgrade the quality of voting. Thus, the government should deal with previous issues in the election before adopting electronic approach while at the same time align with voters' expectation to provide better election in serve citizen through comprehensive analysis. This study provide initial step to analyse the readiness of electronic voting from the social perspective in response to how Indonesia view the initiative to adopt new tech in voting system.

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1. INTRODUCTION

Electronic voting became the trendsetter in global scale to solve several issues in election especially in relation to speed and quick tabulation. Thus, many countries have adopted it in their system, which has primary objective to create better procedure and mechanis in term of privacy protection and reducing the high possibilities of electoral fraud, result manipulation, deceptive practice, ballot stuffing, voter suppression and vote trading [1]. Like different kind of everyday technology advancement, the system in electronic voting could strengthen the capability and capacity of the machine in term of storage, authentication, authorization, calculation and tabulation. Therefore, in order to provide higher engagement and social acceptance compare to the previous election, the respected committee should present the idea and the concept, which is based on pilot study and trial in various locations to show its appropriateness and reliability. On the other hand, some concern in term of technological and educational gaps between urban village and metropolitan city in Indonesia have been given differential access to the technology lead to digital divide. The lack of equality, readability and opportunity among individual as the social inclusion can become serious threat to the success of adoption. The issues can become worsen and more complicated if there is no standard and agreement in providing technical guidance and administrative aspect in legislation. Actually, voting is fundamental right of citizenship in democratic sphere to express the freedom of opinion that are guaranteed by constitutional. But, its working mechanism always becomes the highlight in various mass media, either pros or cons, which somehow shape the public opinion and tendency to support or neglect some initiative from government to

conduct state of administration through the adoption of technology. Of course the process cannot be simple and easy, certain barriers can end up discouraging people from voting. The related institution should accept the challenges that often based on certain context and culture of the nation. At certain situation, the technology utilization might be overlapped with individual responsibility and interest that bring disaster and conflict such as in term of privacy. For example, photo capture or video recording in polling place due to security reason. Some argue that the privacy concept should be clear defined by constitution to prevent confusing among the election committee and eligible voters in understanding and interpreting the limitation. Some barriers to human resources can also undermine the technical aspects, such as the lack of well-trained staff to solve problem, lack of understanding of the important to serve voters and lack of commitment to improve skill and capabilities. In fact, sound laws and regulations are the basis of law enforcement and criminal justice systems [1]. Another important factors for emergence of fraud frequently in the election related to the financial crisis in a particular area or region [2].

The physical, logistic and security issues of electoral machines and related communications networks are critical to preserve voters' integrity. Therefore, developers, suppliers and administrators must take comprehensive measures to protect personal data through electoral mechanisms or access control procedures [3]. It is also important to understand the current trend on how user confidentiality requirements change over time and the intensity of data usage increases, in which older data users reveal information less than younger people with a refusal to disclose information have increased over time [7]. The lack of a coherent and concrete privacy concept may also become obstacle for the development of technology, legislation, public policies and practices that related to consumers, employees and citizens, both locally and globally [8]. Meanwhile, to develop the trust between government and citizen in adopting new technology, it better to prioritize the procedure for access and control against technical aspect to avoid digital divide in certain area [4]. Therefore, this study seeks to explore specific legal issues and requests for personal data protection to identify voters preference based on demographic data such as gender, age, occupation, membership, education, monthly income and legal literacy.

2. LITERATURE REVIEW

Some significant efforts has been made by Altman [20] to classify users, taking into account their privacy considerations, greatly contribute to the theory of privacy processes on social interaction. In turn, Staddon et al. [21] studied that concern, control and sharing relate to different behaviours and attributes in privacy context. In general, most people agreed on the notion of privacy as human rights but they had more different views on privacy boundaries and limitation, in which at certain circumstances can be clash with privacy norms [26]. However, even with the best efforts to protect privacy, many users will not be capable to determine their own privacy decisions for each scenario because of the complexity of the problem [23]. Indeed, the source of information and the intensity of communication between citizens and government can help to identify the meaning and purpose of e-voting to set standard for procedures and responses to handle the privacy issues [33-36]. Any privacy protection is the creation of a set of protocols that meet with the privacy requirements of the system without compromising the confidentiality of the individual data sets of participants [24]. Electoral assessments based on free and fair pattern could be indicated into a disparity when political interest on the continuum. Indeed, the approach to set the criteria has failed to contribute to electoral evaluation in order to make categorical and comprehensive judgments that ignore nuances and context [12]. By including an obligation in the privacy concept and definition, it can be predicted for segmentation of illegal activities based on the level of responsibility, in which senior election official will have more responsibility in his duties compare to the interim poll workers [13].

Analysis by Gerber et al. [25] found that voters in US elections have doubts about the secrecy of ballots and become more common among citizens who have never voted against those who have participated previously. This also shows that confidence in the secrecy and anonymity of the voting process has been influenced by political participation. The negligence on electoral fraud resulted certain voters have perception to accept reward to choose certain candidate such as donation, charity or gift. Although it is difficult to prove that a person pays a bribe, a paper trail left or number of transaction can be monitor and easier to detect [14]. However, by implementing strict fraud prevention measures will be much cheaper compare to the cost for detecting electoral frauds in system, then response to eliminate them. Preventive fraud does not require an army of people to do so; this only requires different mechanism, approach, focus and mentality from all stakeholders, especially from senior or top tier management. Therefore, since not all frauds can be prevented and all cannot be detected, a balanced approach is needed that includes prevention and detection [15]. Actually, a study suggest that many forms of cheating that can be observed through ecological information and return sheets [17]. From the point of view of socio demographic, young people who have higher levels of education, high income salary and who are first voters are concerned with the general elections compare the

others. Meanwhile older people who have vote more than once, whose education and income levels are relative low prefer local elections [27]. Thus, providing basic information about the secrecy of voting may affect the decision to participate at an important level, but does not seem to affect the behaviour of previously voted citizens while as the income salary decrease, there is an increase for the people who said I do not care about general and local election [17, 25].

In Great Britain, approximately 25,000 replacement card are issued annually of which half are provided to those registering to vote at schools for the first time to anticipate physical card issues [28]. Surprisingly, a notable number of people in Tanzania have already made it a necessary routine to pay bills on time while also subscribe over the Internet and mobile phones provider. Arguably, this has been considered as factor that provide opportunity for implementation of unsupervised remote e-voting [31]. Meanwhile, in Ghana, government has been discusses the potentiality to use electronic means for voting in respect to increase citizen participation, developing trust for electoral administration, preserve credibility to tabulation result, simplifying the electoral mechanism, enhancing the voting attribute and improving the overall efficiency of electoral process. The success result of Namibia e-voting as the first country in African continent delivered the hype to neighbourhood countries to try the same thing [32]. Based on the survey [16], the majority (67.3%) of voters consider the usability of voting machines as an important feature of e-voting, which can help to reduce election irregularities in the current process, while about 72.3% of voters have a very high confidence in feasibility of e-voting in certain areas despite the lack of infrastructure.

3. RESEARCH METHODOLOGY

The use of ordinal logistic regression is critical to extract the hidden fact among the citizen by how much the dependent variable changes as the independent variable changes [5]. In addition, the standard error measures how sensitive the estimate of the parameter is to changes in a few observations in the sample [6]. The scale that were used for this study consisted six pointers namely (1) strongly disagree/SRD, (2) disagree/D, (3) slightly disagree/SLD, (4) slightly agree/SA, (5) agree/A; and (6) strongly agree/SA. There are 10 items used in this survey to represent the use of electronic voting that is likely implicate various things in personal data protection, which are quick result (PDP1), accuracy (PDP2), convenience (PDP3), transparency (PDP4), budget savings (PDP5), security (PDP6), confidentiality (PDP7), credibility (PDP8), simplicity (PDP9) and national proud (PDP10). This study used people in Medan (336) and Jakarta (308) as the samples, while there are 102 samples from online contributor. The number of printed survey paper was decided beforehand to avoid snowball effect, resulted 86% paper return from 800 paper distributed offline and around 51% of 200 invitation online. It used to identify the strength of the effect of exogenous have on endogenous, to forecast impacts of changes in understanding how much will the DV change, when the IV change and to predict the trends and future values. Moreover, the effect of one or more covariates can be accounted for. Before running ordinal regression, those scales were changed to three pointers namely disagree, neutral and agree to have in depth analysis of the direction. The result interpretation refer to parameter estimate, which is used as standard interpretation of the ordered logit (log-odds) coefficient is that for a one unit increase in the predictor (IV), or the response (DV) level is expected to change by its respective regression coefficient in the ordered logit coefficient scale while the other constructs in the model are held constant. For one unit increase in the predictor estimate, the response construct level is expected to change by its respective regression coefficient in the order scale while the other in the model still constants. The remarks column describe the respective category that have nearly up to the threshold of sig. value and present the uniformity of category direction on parameter estimates.

4. RESULTS AND ANALYSIS

There are missing and invalid values in the PDP items namely PDP1 (5/0), PDP2 (7/0), PDP3 (4/0), PDP4 (6/0), PDP5 (5/1), PDP6 (8/1), PDP7 (10/1), PDP8 (8/0) PDP9 (7/0) and PDP10 (5/0). The voters who have age between 21-25 years and 36-40 showed sig. value with 0.005 and 0.011 respectively, which mean there is high relationship and strong effect between those range of age and quick tabulation. Being a person who has age between 21 and 25 years increases the ordered logit of being in the higher levels of the PDP1 category by a factor of 1.207 (or 1.2 times), while the increases of 2.7 times on his ordered logit for being a person by age 36 and 40 years when other constructs in model are held constant. It shows that person by those ranges of age more likely to have expectation for quick tabulation in national level by using e-voting. This result is really interesting because two kinds of generations that have age difference around 10-15 years have similar result, which could be due to the intense communication about politics issue among member of family. Media also have critical role to shape citizen mind when many broadcast news about 'quick count' as informal method to predict the winner in the election.

Actually, education is the predictor construct, which has high relationship and the strongest effect on the response construct among the others namely PDP1, PDP5, PDP6 and PDP10 (sig. value of 0.000). By having student background, voter's ordered logit of being in a higher PDP1 category would decrease by 17.563 while the other constructs held constant in the model. This is also happened to other constructs nearly that value, which show the likelihood of disagreement towards government initiative in the e-voting to have national quick tabulation, reducing operational cost of election, optimizing the use of e-KTP, international certification for e-voting and national campaign of changes based on e-voting initiative. This scepticism might be originated from previous failed attempt by government to conduct the fairness election. Meanwhile, there is no construct have significant relationship with PDP7. Perhaps, voter tends to look the data content encryption process as the separable attribute from voting machine and prefer the expert to determine the best solution for PDP. There is also low relationship but strong effect between the voters who has age of 36 and 40 with the view that e-voting will prevent data duplication (sig. value 0.009). Interestingly, similar relationship and effect occur between people who never participate in election, government officer and the one who has earnings under two million rupiahs with PDP2 category. This type of voter are more likely to disbelieve that e-voting can prevent voting list duplication. It is quite possible that these kinds of voter may want comprehensive strategy involving related aspect in election process such as commitment and skill. Similar condition also occurs in the expectation of the waiting session during election whereby age of 31-35 (0.048) and 36-40 (0.016) has low relationship but strong effect with PDP3 category. Although these categories are 128 small and tend to be ignored and neglected by group of people but they can be critical which give strong effect to PDP.

Table 1. Frequency Distribution of PDP Items

Items	SRD (1)	D (2)	SLD (3)	SLA (4)	A (5)	SRA (6)
PDP1	13 (1.7)	14 (1.8)	19 (2.4)	62 (8)	327 (42)	344 (44.2)
PDP2	14 (1.8)	22 (2.8)	47 (6)	108 (13.9)	353 (45.3)	235 (30.2)
PDP3	11 (1.4)	9 (1.2)	43 (5.5)	86 (11)	345 (44.3)	285 (36.6)
PDP4	10 (1.3)	16 (2.1)	30 (3.9)	93 (11.9)	368 (47.2)	262 (33.6)
PDP5	16 (2.1)	22 (2.8)	36 (4.6)	114 (14.6)	306 (39.3)	285 (36.6)
PDP6	19 (2.4)	13 (1.7)	52 (6.7)	102 (13.1)	339 (43.5)	254 (32.6)
PDP7	21 (2.7)	20 (2.6)	42 (5.4)	114 (14.6)	355 (45.6)	227 (29.1)
PDP8	10 (1.3)	7 (0.9)	31 (4)	99 (12.7)	332 (42.6)	300 (38.5)
PDP9	18 (2.3)	15 (1.9)	39 (5)	159 (20.4)	344 (44.2)	204 (26.2)
PDP10	14 (1.8)	7 (0.9)	23 (3)	61 (7.8)	282 (36.2)	392 (50.3)

Other demographic category namely age, number of election participation and occupation has positive parameter estimates and close to boundaries of significant value. The long queues, not well organized session, unfriendly reception, service discrimination and improper arrangement of polling station could make irritated and annoyed certain people and increase complaint report. It may lead to bad impact such as vulnerabilities and threats exploitation. The older people and who have participated more than three times, have tendency to prefer calmness and quietness during the election. Based on the sig. value of 0.059, it shows that entrepreneur is more likely to agree that the election process should be well balanced and managed. The age category has high relationship with PDP4 with sig. value below 0.05 namely age of 21-25 (0.026), 26-30 (0.036) and 36-40 (0.014). If a subject were to increase his age score by one point, his ordered logit of being in a higher PDP4 category would increase by 0.026 while the other constructs in the model are held constant. It shows that older people have active role in protecting personal data by trying to find out the mechanism to report the privacy infringement to authorized institution. The voters who have age between 21-25 years and 36-40 showed sig. value with 0.005 and 0.011 respectively, which mean there is high relationship and strong effect between those range of age and quick tabulation. Being a person who has age between 21 and 25 years increases the ordered logit of being in the higher levels of the PDP1 category by a factor of 1.207 (or 1.2 times), while the increases of 2.7 times on his ordered logit for being a person by age 36 and 40 years when other variables in model are held constant. It shows that person by those ranges of age more likely to have expectation for quick tabulation in national level by using e-voting. This result is really interesting because two kinds of generations that have age difference around 10-15 years have similar result, which could be due to the intense communication about politics issue among member of family. Media also have critical role to shape citizen mind when many broadcast news about 'quick count' as informal method to predict the winner in the election. Actually, education is the predictor construct, which has high relationship and the strongest effect on the response construct among the others namely PDP1, PDP5, PDP6 and PDP10 (sig. value of 0.000).

Table 2. Ordinal Regression of PDP Items

No	Threshold	Estimate	Std. Error	Wald	Sig.
PDP1	[PDP1R = 1.00]	-20.628	1.22	286.19	0.000
	[PDP1R = 2.00]	-19.640	1.21	262.00	0.000
	21-25	1.207	0.43	7.87	0.005
	36-40	2.673	1.05	6.53	0.011
	Diploma	-17.563	1.05	277.82	0.000
	Undergraduate	-18.246	1.05	304.10	0.000
PDP2	Postgraduate	-18.496	1.03	322.98	0.000
	[PDP2R = 1.00]	-1.336	1.26	1.12	0.290
	[PDP2R = 2.00]	-0.297	1.26	0.06	0.814
	36-40	1.259	0.49	6.74	0.009
	Never elected	-0.835	0.40	4.34	0.037
	Government	1.000	0.46	4.84	0.028
PDP3	Under 2 millions	-1.015	0.51	3.93	0.047
	[PDP3R = 1.00]	-1.257	1.39	0.82	0.364
	[PDP3R = 2.00]	-0.204	1.38	0.02	0.883
	30-34	0.788	0.40	3.92	0.048
	35-40	1.271	0.53	5.83	0.016
	3-6X elected	1.081	0.33	10.51	0.001
PDP4	[PDP4R = 1.00]	-0.915	1.37	0.45	0.505
	[PDP4R = 2.00]	0.235	1.37	0.03	0.864
	21-25	0.828	0.37	4.99	0.026
	26-30	0.740	0.35	4.40	0.036
	36-40	1.308	0.53	6.04	0.014
	[PDP5R = 1.00]	-18.575	0.67	773.18	0.000
PDP5	[PDP5R = 2.00]	-17.426	0.66	691.41	0.000
	Less 3X elected	0.868	0.33	6.84	0.009
	Diploma	-16.546	0.52	1012.73	0.000
	Undergraduate	-17.225	0.51	1136.25	0.000
	Postgraduate	-17.509	0.49	1297.78	0.000
	[PDP6R = 1.00]	-17.660	0.61	836.31	0.000
PDP6	[PDP6R = 2.00]	-16.668	0.61	753.10	0.000
	Less 3X elected	0.652	0.33	3.93	0.048
	3-6X elected	0.773	0.31	6.19	0.013
	Diploma	-16.047	0.44	1312.35	0.000
	Undergraduate	-16.349	0.44	1385.20	0.000
	Postgraduate	-16.698	0.41	1684.28	0.000
PDP7	Government	1.009	0.49	4.19	0.041
	[PDP7R = 1.00]	-2.087	1.37	2.31	0.128
	[PDP7R = 2.00]	-1.026	1.37	0.56	0.454
	-	-	-	-	-
	[PDP8R = 1.00]	-19.533	0.75	681.26	0.000
	PDP8	[PDP8R = 2.00]	-18.247	0.74	609.90
Diploma		-16.829	0.56	911.44	0.000
Undergraduate		-17.011	0.55	944.94	0.000
Postgraduate		-17.273	0.53	1078.27	0.000
[PDP9R = 1.00]		-2.367	1.36	3.05	0.081
PDP9		[PDP9R = 2.00]	-0.896	1.35	0.44
	21-25	0.661	0.32	4.26	0.039
	31-35	0.713	0.33	4.74	0.029
	36-40	1.151	0.42	7.50	0.006
	[PDP10R = 1.00]	-18.480	0.83	502.15	0.000
	PDP10	[PDP10R = 2.00]	-17.492	0.82	457.47
Less 3X elected		0.828	0.42	3.89	0.049
Diploma		-16.954	0.70	589.26	0.000
Undergraduate		-17.079	0.70	601.34	0.000
Postgraduate		-17.408	0.65	696.99	0.000

5. VOTERS' PREFERENCES BASED ON DEMOGRAPHIC DATA

A demographic change among industrialized countries leads to a baseline shift in society and economies where older people prefer mechanism that have high degree of secrecy, anonymity and intimacy, while female want to have higher safety standards for the use of electronic in health sector compare to male, which put more emphasis on access control of personal data [18]. Likewise, males feel less considerate on their personal data in social networking sites while less educated people are likely to ignore current privacy policies, also do not feel need to use privacy protection measures [19]. Meanwhile, a US study presented that more than half of mobile device users have removed or kept away certain applications due to the worries that personal data to be exposed in certain way, especially males, aged 30-49 years, family income between 50,000 and 74,999 dollars and college graduates [22]. The fundamental changes in IS and a high reliance on

computers have significantly increased the fraud risk, although, there is no new allegations of fraud are expected, the adoption of electronic means potentially increase the variation that will be difficult to investigate [9]. Someone commit fraud if four things have been proved beyond a reasonable doubt, which are *Actus reus* (guilty mind), *Mens rea* (crime intention), *Causation* (resulting effect) and *Concurrence* (simultaneous occurrence) [10]. In addition, there are some serious issues that should be covered by regulation before conducting electronic voting such as cybercrime, digital evidence, intellectual property, standardization, legal synchronization, privacy protection, electronic service and jurisdiction [11]. This can give low level of confidence from voters, miserable effect on voters' turnout and other civic action [29].

Table 3. Demographic Influence towards Personal Data Protection

Demographic	Remarks
Gender	Male and female have more likely equal standings in term of privacy concern and perceived benefit in election but male have interested in the sense of legal, candidate aspect and future term like assurance and risk rather than female
Age	Older people more likely have privacy concern than younger people about their personal data in election and more attached to participate based on trend or environment such as huge population or technology advancement
Election Participation	Less experience voters in election have more awareness in term of technical issues than legal and managerial issues while they ask the commissioner to be more transparent and open in order to prevent illegal access to the election system
Education	The higher education background of voters have tendency to perceived benefit from <i>e</i> -voting rather than lower education background because they have more knowledge about election mechanism but in contrast, they have lower concern on the privacy protection
Occupation	More work involvement to the government side might create more exposure to the current problem in data collection from election, which lead to either having more privacy concern or having perceived benefit more than other occupation while entrepreneur having tendency to be more focused in privacy principle
Earning/Month	People who have less earnings under 2 million per month tend to behave based on benefit acquired to themselves, their family or their societies compared to the one that have higher earnings while people who have earnings between 2-5 million per month felt burden towards detailed or continuous personal data collection by different government or independent institution
Computer Literacy	People who have illiteracy in computer more likely to have worriedness that illegal access will occur against existing system to alter or manipulate personal data so they ask more rigid and sophisticated system for authorization and authentication
Legal Literacy	People who have illiteracy in legal more likely to evaluate the current regulation to be complex and difficult to understand while they also ask more improvement and consideration in term of procedure such as verification process through learning with other countries' success regulation

From the demographic data of previous election in Indonesia showed many eligible voters prefer to not participate in the voting process, which certain place also reach 50 percent absentee of population. In national level, the total percentage of them is quite huge with estimation of 29.8% (56.7 million) people out of 190.3 million of the voters list. There is no doubt that public distrust have been arising in the society because several reasons such as bad image portrayed by political party and its member, have been felt betrayed by false promises in the previous election, not accommodated aspiration from various segment of society and poor performance of government in solving sensitive issues. Thus, a trustworthy voting system is very substantial for its implementation, which can be shown by majority consent of citizen. From this study, the total earnings per month can be used to predict on how citizen behave as participant in *e*-voting, which they simply prioritize benefit more than concern. The voter who has fewer earnings tends to accept promises, gift, reward, service and present more than the voter who has bigger earnings. This characteristic can be exploited through black campaign or vote transaction, which might reduce the election integrity and damage the privacy protection. The relationship between factors in personal data protection as shown in Figure 1.

The illiteracy in legal and computer also become another important aspect, which shape citizen characteristic in viewing the election and its privacy protection measures. Citizen who has lack of skills in computer have tendency to be afraid of hacker's attack over *e*-voting system and exploit personal data for illegal use. On the other hand, citizen who has lack of skills in legal have inclination to assume and treat regulation in the form complex procedure, which is difficult to understand. More involvement of government and election commissioner in engaging citizen from various place increases the motivation level to participate in *e*-voting and having a mind-set to contribute for the sake of successes of implementation either action-based or suggestion-based. To accommodate numerous types of voter's preferences in casting the votes, it could be by delivering multilingual user interface, which can serve multilingual electorate better than ballot paper. Meanwhile, older people are more careful than younger generation in revealing their personal data. They also want to ensure that the PDP has been taken place or not. Furthermore, the level of education can determine on how much frequent the citizen in expressing and criticizing government policies related to the scale and strategy in *e*-voting initiative. The number of electoral participation in national and district level

also influences the degree of awareness on the possibility of privacy infringement in every phase of electoral process. More involvement of government and election commissioner in engaging citizen from various place increases the motivation level to participate in *e*-voting and having a mind-set to contribute for the sake of successes of implementation either action-based or suggestion-based. To accommodate numerous types of voter's preferences in casting the votes, it could be by delivering multilingual user interface, which can serve multilingual electorate better than ballot paper. Naturally, older people are more careful than younger generation in revealing their personal data. They also want to ensure that the PDP has been taken place or not. Furthermore, the level of education can determine on how much frequent the citizen in expressing and criticizing government policies related to the scale and strategy in *e*-voting initiative. The number of electoral participation in national and district level also influences the degree of awareness on the possibility of privacy infringement in every phase of electoral process. Interestingly, studies in the American elections showed that voters have doubts about the secrecy of ballot papers and these doubts are more common among citizens who have never voted than those who have previously attended [25].

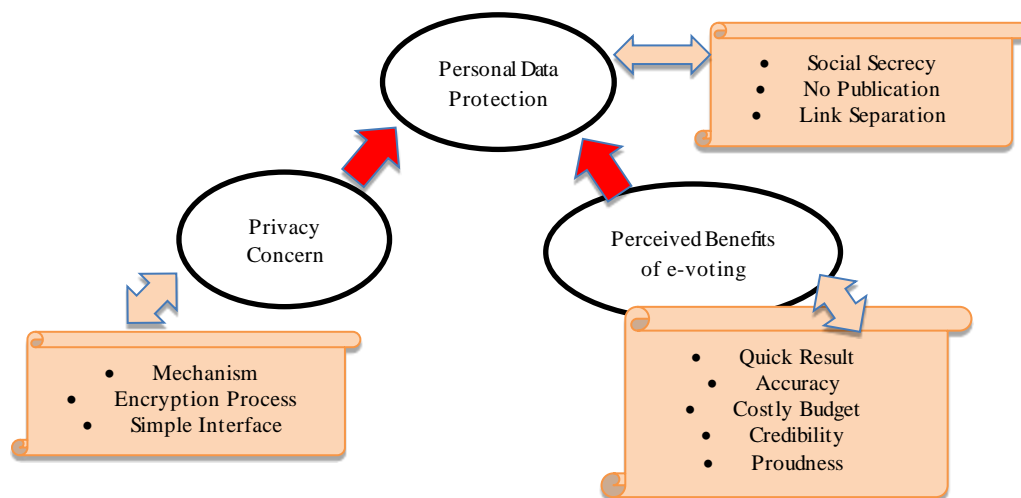


Figure 1. The relationship between factors in personal data protection

Public has realistic expectation for electronic implementation such as voters want privacy to outweigh other value, by allowing limited access for the information but at same time restricted the access for unnecessary purpose. In their eyes, government has more concern in preserving privacy of voters according public expectation and law by creating reliable regulation and procedure to protect personal data of voters through anonymity principle. It provides opportunities to be an advanced nation by ready to face the challenge in setting a benchmark and learning through experience. It also raises motivation to vote by offering better mechanism and more secured system than previous election. In the end, electronic voting potentially long-term cost savings through reduction of budget for the production and distribution of ballot papers then decrease time allocation for poll workers in election process. Furthermore, faster vote count and quick tabulation in national level while its efficiency of handling complicated electoral systems can satisfy the curiosity of voters for the electoral result as soon as possible. Thus, there is no legitimate excuse to reject the benefit offered if the voters consider the chance to casting vote not just as use their right but also their duty. Emotions are reactions to accounted actions and are associated with an individual concerns, demands or goals, in which become main problem in designing usable product that is appealing to user visually [40]. Interestingly, social media has significant effect to the user preferences such as to the cultural homecoming tradition [41], which certain attribute such as individual, institutional and environmental antecedents [42].

Good promotion and advertisement to the world as the reliable and capable country to use electronic election depends on the election quality that can increase country image through research activities and article news. Meanwhile, the citizen and government must have synergy in avoiding misunderstanding of technology use concept and limitation in effective and efficient way that can ensure the good achievement of purpose. It expands the attempt to fulfil political empowerment of the citizen by using sophisticated approach that can reduce risk of privacy violation. It also provides the real practice evidence on how to handle electronic device in catering promise or engaging the pitfalls in protecting personal data. At last, it enables the quick and reliable process verification and validation in case of grave doubt and controversies of the tabulation result in the constitutional court. There are various type of election fraud such as vote trading,

disenfranchisement, data manipulation, voter suppression, ballot tracking, ballot stuffing and deceptive practice that should be anticipated by different methods and techniques based on frequent number of occurred from previous election and political structure in the country [33-36]. The objective of adopting electronic in voting system is to increase the public service quality to be more transparent and effective in eliminating various electoral fraud, in which behavioural intentions, business performance, citizen expectations, trust, social influence, facilitation of conditions and quality of information become critical factor to deal with citizens' preference [39]. Lack of understanding of the technological aspect and status to deploy certain technologies makes it difficult to handle the utilization of new adoption systems in terms of dynamicity, scaling, and low cost [29].

People try to fit within certain parameter in their environment to be accepted in the society, when they go out with different characteristics out of common, the other will label them or even isolate them. In the Indonesian context, this social norm is also recognized by the constitution as long as it does not conflict with the written rule of regulation. With the concern of the voters to the privacy, it would push and encourage the KPU to extend their efforts to provide trust, accuracy, security and good policy. The major concern from the voters in the e-voting related to the mechanism, encryption process and simplicity of the interface of voting machine. Some article verses have indirect influence for PDP based on privacy concern in section 9 and 48 of UU ITE as well the section 14, 15 and 16 of UU KIP. Other verses offer benefit to the administration process in section 61 and 68 of UU AK, section 1, 42, 73, 111 and 112 of UU PP. Government policy and legal regulation have been changed periodically might confuse certain citizens. The continuous program also difficult to be maintained and applied as many election constitutions have been formed for specific purposes, which might be replaced by the latest one namely Election Act No. 7/1953, Act No. 15/1969, Act No. 4/1975, Act No. 2/1980, Act No. 3/1999, Act No. 12/2003, Act No. 22/2007, Act No. 15/2011, Act No. UU 22/2014, and the last one is Act No. 8/2015. To support the implementation, other regulation have been enacted such as Act No. 18/2001, Act No. 21/2001, Act No. 12/2003, Act No. 23/2003, Act No. 32/2004, Act No. 29/2007, Act No. 42/2008, Act No. 2/2008, Act No. 4/2009, Act No. 27/2009, Act No. 8/2012 and many more. It provides the fundamental approach that personal data must be processed on the basis of the consent of the person concerned, which reinforces the importance of the principle of lawfulness and the need for an adequate legal basis in the election process. On the other hand, it fulfils all relevant conditions to make the obligation valid and binding or comply with other related law, including the requirement of necessity, proportionality and purpose limitation. The satisfaction should be based on recognition, discrepancy and unity principle [37], which the process of transforming the user implicit knowledge has two primary problems related to organizational structure and the misrepresentational [38].

6. CONCLUSION

In the context of election, based on the user perspective through survey, the legal framework was perceived to be insufficient to effectively regulate the election process in using the voting machines, in term of security safeguards, the certification mechanism and the software for tabulating vote content. At certain extent, people also viewed that the current regulation is really difficult to understand, which led to multiple interpretation that add the length of the debate. Majority respondents state that the reasons relate to the lack of accessibility, education and awareness, as the evidence of the lack of effort from the electoral committee to explain to the public their election initiative. It can cause the misconception and misunderstanding among people to underestimate the electronic voting purposes. Thus, the relevant party should engage society in deciding the direction based on their legal demands. To assure the protection of privacy at sufficient level, the enforcement become extremely important and critical. It has to be capable of extracting relevant security needs from social requirements and determining an acceptable level of residual risk to the community. It also needs to maintain documentation, which provides evidence of the decision maker's due diligence and demonstrates informed risk based decision-making. Thus parliaments and governments should acknowledge individual right in privacy by regulate PDP act involving several essential principles such as access control and corrections for data subject, responsibility of data provider to collect, use or disclose personal data for legitimate and reasonable purposes. Due to those reason, the readiness of user will be based on how the demographic factor shift and change on the certain circumstances.

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