

# Evaluating the Effectiveness of Procurement Policy for Electronic Identity (e-ID) cards and its Effect on Citizen Trust in Indonesia

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In the past two years, the delaying of e-identity cards (e-ID) for recording purposes has demonstrated the failure in the implementation of e-ID created by the government. For this reason, the government issued a new procurement policy. Unfortunately, it does not guarantee success for solving its issue. Thus, this study aims to evaluate the effectiveness of the procurement policy for an electronic identity card and its impact on citizen trust in Indonesia. This study is designed using quantitative through exploratory research. The data is collected by utilizing simple random sampling and determined by using the Yamane Formula and then analysed with Structural Equation Modelling (Partial Least Square) by assisting the statistical software, namely, XLSTAT. The results of the analysis show that the procurement policy and effectiveness for electronic identity cards have a significant positive effect on citizen trust. Also, the effectiveness of policy implementation intervenes in the relationship between policy implementation and citizen trust partially. In conclusion, we identified that the effectiveness of policy implementation has a significant effect on citizen trust, but it is not considered more important than the procurement of raw materials for electronic identity cards (e-ID). The procurement policy for a blank identity card is a crucial factor and should be prioritized.

**Key words:** *Citizen Trust, Effectiveness, policy implementation, Structural equation modelling with partial least square (SEM - PLS).*



## Introduction

Projects issued by the ruling government are frequently not understood by nearby networks. One of the triggers of the event of such issues is the execution of projects that are not running legitimately. The expense and time are not practically identical to the outcomes accomplished (Aritonang, 2018). One case of an e-government program now being actualized by the Ministry of the Republic of Indonesia is the Electronic Identity Card program (e-ID). It is the most recent populace framework that has been supported by the Government. Indicated by Law no. 23 of 2006 concerning population administration, the electronic identity card is a living arrangement archive containing security framework/control from both sides, i.e. individual and organisational (Kurniati, 2015; Kurniati et al., 2015).

An electronic identity card is an incredible method to be taken by the Government by setting up a national populace database to give a character to the network by utilizing the biometric framework. Therefore, each qualified ID card proprietor can interface with a national database or need one ID card. The number on the Identity Card (NIC) is the individual character of each inhabitant and is substantial forever (Akib, 2010). The NIC in the electronic ID card will be utilized as the reason for the issuance of a visa, driver's license, taxpayer identification number (NPWP), protection arrangement, declaration of land rights and issuance of other character reports (Papanthymou and Darra, 2018). With the presence of the electronic ID card, the general population can strengthen the enhancement of the security of the nation through the possibility of twofold ID card or phoney ID card. It misrepresents character not distinguished by the experts (Borah, 2013; Setyaningrum et al., 2014). The expansive number of Phony ID cards can be ascertained by utilizing the administration manual ID card regularly, encountering an absence of authority over the utilization of manual ID. In light of this fact, the manual ID can be made effectively anywhere, particularly on the off chance that you have an inside officer in a sub-district organization. For this reason, individuals who are not capable can be allowed to submit misrepresentation and abnormalities utilizing a manual ID card (Otieno and Omwenga, 2016).

One of the issues that emerged in the electronic ID card program is the accessibility of electronic ID cards that do circulate, bringing about the postponement in accepting electronic ID card by the network. This is because the dissemination framework is organised to print an electronic ID card for the populace, however, has not contracted the ID card and for ordinary administration (Akib, 2010; Soemartono, 2013). Changes in the system of division of stamps in a quantifiable and structured way to evade the aggregation of structures in the districts can total the need for printing targets. With numerous issues identified with electronic ID card program, the Minister of Home Affairs issued an approach through letter-number 471/1768/SJ/2016 on the speed of electronic ID card recording (Aritonang, 2018). The purpose of the report's administration in increasing speed due to electronic ID card recording to date

had just achieved 86%. The nearby Government will screen the acceleration of the electronic ID card recording program, at the dimension of checking zones led by the Department of Population and Civil Registration up to the area. The aftereffects of observing and the execution of neighbourhood government issues is filed. The Report of Accountability Statement of Regional Devices Office of Population and Recording Civil, is made at the completion of each of the programs or toward the finish of the spending time frame. Population service and Civil Registration (Disdukcapil) present the report to the officials, the City Hall leader and the Representative (Kurniati et al., 2015; El-Gayed, 2013).

The Government of Bandung has been in its ideal exertion by teaching the administration of electronic ID cards. Considering the present report, it is determined that a total of 151 thousand subjects of Bandung City do not have electronic ID card information recording. Only 20%, or around 28 thousand natives have the e-ID recording. To seek the objective of electronic ID card recording, the different endeavours made by the Government of Bandung City (such as chopping down the tangled systems to in-wrinkle the long stretches of activity benefit. According to the record, upwards of 120 thousand subjects of Bandung have not undertaken electronic ID card recording. To streamline administrations for occupants who have not yet undertaken electronic ID card recording, exclusively submitted to the region. In any case, even though speeding up program of electronic ID card recording has been listed, however, it is dependent on the realities in the field rather than the perception of the scientist. Through this understanding, it is realized that the usage of increasing the speed of electronic ID card information recording in Bandung, particularly in District X (North Bandung), isn't yet ideal. Many negative perceptions arise from citizen or public to government performance, especially in Disdukcapil who responsible for the record and printing of the E-ID of an Indonesian citizen. This happens based on the actualities in the field that the accomplishment of the objective information recording is not satisfactory following the real-time indicated (Helen et al., 2017; Pujiawati, 2018). For more subtleties, the scientist shows in the information Table 1, underneath:

**Table 1:** Planning and Realization of Achievements for Mandatory electronic ID card in Bandung for the period of 2017

Year	The target of Mandatory Recipient of electronic ID card	Realisation	Percentage (%)
2017	110,806 inhabitants	78,223 inhabitants	70.59%

Source: Recording Data of Bandung City, 2018

Based on data Table 1, above, shows that the Implementation of the Program of Electronic ID card Recording Data at District X Bandung has not been effective yet. Where the population

who recorded electronic ID card ownership only reached 70.59% or reached 78,223 mandatory ID card that did electronic ID card recording of 110,806 residents of the central government's minimum target of 95%. Whereas, the Government's expectation for implementing e-government systems is to realize a democratic, transparent, clean, fair, accountable, responsible, responsive, effective and efficient government. E-government takes advantage of communication and information progress in various aspects of life, as well as for enhancing competitiveness with other countries. As stated in Law no. 11 of 2008 on information and electronic transactions, E-government implements an electronic-based government system in order to provide comfort, improve transparency, and increase interaction with communities, and increase public participation. Other indications of the ineffectiveness of electronic ID card recording implementation in Bandung include are (i) Time of completion of the electronic ID card is not following the provisions. (ii) The unfulfilled number of targets according to concrete goals. (iii) Public understanding of socialization media is lacking. (iv) the number of people during the socialization process is not been comparable with the number of people during the implementation of electronic ID card recording, and (v) the infrastructure facilities for electronic ID card recording are still lacking.

By using the previously discussed issues, we seek to evaluate the implementation of the electronic ID card procurement program in Bandung city. It is hypothesised that it is not following what is applied in the policy rules as in the case of availability blank ID card and other raw material. This study focuses on the public policy implementation and effectiveness and public trust (Joshi and Islam, 2018). State policy will be effective if implemented and will have a positive impact on the members of the community. In other words, the actions of human beings as members of the community correspond to what the government or the state wants. The issue of policy does not only limit the manifestation of the policy, but the consequences impact citizen trust.

## **Literature Review**

The implementation is an activity which refers to the completion of a job with tools to obtain the outcomes. Papanthymou and Darra (2018) define the term implementation as to carry out, accomplish, fulfil, produce, and complete some job. Using the definition by Papanthymou and Darra (2018), implementation is a dynamic process, where the executor of the policy conducts the activities so that eventually will get an outcome following the goal or policy target. In their opinion, the implementation is lead to events, actions, or the existence of a system mechanism. It not just an activity, but a planned action for achieving the objectives of the activity based on reference norms and policy. Therefore, it does not make a standalone, but is influenced by the next object. The elements of the policy contained the real action, whereas the government achieved the goals that have previously planned. The policy has legitimated legal force and



decisions that must be implemented. It is useful when the government implements it properly, as it strives to realize a policy or seeks to generate results (outcomes) that can be enjoyed primarily by target groups. According to Nkwe (2012), the government is an organisation that producing and distributing to fulfil the needs of the people in the form of public and civil services.

Government involvement is a public service provider intended to protect and fulfil the public interest. Strong expectations and realities are achieved when the process of socialization occurs as a giver of information to the community that can be measured by the dimensions that surround it. To increase service delivery to the community, the government also functioned for fostering the active role of the community, especially quality control, efficiency and effectiveness of community development. For fulfilling the needs of the community, the government should control the provision of socialization such as the discipline of population administration regarding electronic identity card recording (Setyowati, 2017; Singh and Scholar, 2018). Procurement implementation policy is an essential criterion. Akib (2010) stated that four factors could be put forward as indicators for the success of the implementation process, i.e. communication, resources, bureaucratic or implementing attitude and organizational structure, including bureaucratic workflow. Other experts opinions focus on 3 (three) indicators of effectiveness measurement that include the achievement of objectives, integration, and adaptation (Abubakar, 2016). This study considers the most appropriate indicators proposed by Akib (2010) and Abubakar (2016) in the implementation of the effectiveness of electronic identity card recording in Bandung city, Indonesia. Three indicators, namely achieving the goal, integration, consensus development and communication with the community. Integration concerns procedures and socialization process and adaptation.

Citizen trust refers to the theory of consumer trust. The position of citizens in electronic ID recording is as consumers, and the government acts as a service provider. Trust is defined as the belief that someone will find what is desired in exchange partners. It involves someone's willingness to behave in a certain way because of the belief that the partner will give what they expected (Mahmood, 2016). Several important elements from trust are (i) a development of experience and action in the past. (ii) the character is as trustworthy and reliable. (iii) willing to put oneself in the risk. (iv) feeling safe and confident in partners. Kotler and Amstrong (2012), define trust as a descriptive idea what someone adheres about something. Trust is possible based on knowledge and opinion. Trust is a level of consumer certainty when their thoughts are clarified by repeatedly remembering from market participants and friends. Trust can encourage the intention to buy or use the product by eliminating doubts. Wallang (2018) explained that trust reflects two-component, namely (i) credibility, which is based on the amount of trust partnership with other organizations and requires expertise to produce effectiveness and reliability of work. (ii) benevolence, which is based on the number of trust partnerships that have goals and motivations that become advantages for other organizations

in new conditions arises. According to Flavian and Giunaliu (2007), trust is formed from three things, namely (i) honesty is to believe in the words of others, believe that they will keep their promises and be sincere to us. (ii) benevolence Virtue is an action that prioritizes the public interest rather than personal interests and (iii) competence is the perception of knowledge, the ability to solve problems, and the ability to meet the needs of other parties owned by a party. From the various explanations above, we concluded that trust is a sense of security in its interaction with something desired and expected so that it will give positive results for consumers. Based on the limitations of the concept mentioned above, the researcher put forward the flow of thought in the form of a research framework as follows:

**Figure 1.** Research Framework

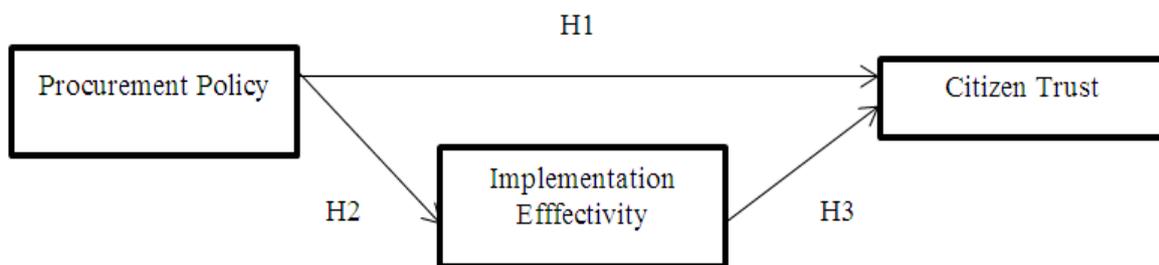


Figure 1 shows the research framework for this study. By using the above figure, we can identify that procurement policy is exogenous variable and citizen trust is an endogenous variable. Further, the effectiveness of policy implementation is the intervening variable. It expects role and intervenes in the relationship between procurement policy and citizen trust. Also, to clarify the formulation of the hypothesis, we need to formulate its operational definition for relevant variables. It can be seen in Table 2 below:

**Table 2:** The summary of definition of operational variable(s)

Variable	Dimension	Indicator
<b>Policy Implementation (X)</b>  Akib (2010)	Communication	1. Clarity of information delivery process
		2. Clarity of information
		3. Consistency of information submitted.
	Resources	1. Adequate staff (quantity and quality),
		2. Information needed for decision making,
		3. Authority sufficient to carry out duties or responsibilities
		4. Facilities needed in the implementation
	Disposition	1. Commitment to the program
		2. Delegation of "TUPOKSI"
3. The existence of SOP electronic ID card		

	Bureaucratic Structure	1. Availability of standard operational procedures 2. Availability of the workflow system 3. Availability of policy implementers.
<b>Effectiveness of Implementation (Y)</b>  Abubakar et al. (2016), and Sufriyadi et al. (2015)	Goal Achievement	1. Time of completion of an electronic ID card as required
		2. The number of objectives is met and is a concrete target
		3. The process of accelerating the recording of electronic ID card data by the rules
	Integration	1. Community understanding of socialization media
		2. Comparison of the number of communities during the process of socialization and implementation of electronic ID card recording
		3. Availability of photo equipment printing machine
Adaptation	1. Increased public knowledge, motivation to follow electronic ID card recording	
	2. Availability of electronic ID card,	
	3. Availability of photo equipment printing machine	
<b>Citizen Trust (Z)</b>  Flavian and Giunaliu (2007)	Honesty	1. Believe in the words of others
		2. Believe that it will keep the promises
		3. Believe other sincere to us
	Benevolence	1. Prioritizes the public interest rather than personal interests
		2. Willingness to share information
		3. Focus to target
	Competence	1. Perception of knowledge
		2. Ability to solve problems
		3. Ability to meet the needs of other parties owned by a party

## Methodology

The design of this study is the quantitative analysis with exploratory research used to predict the effect of exogenous variables on the endogenous variable. This cross-sectional study has several populations including 110,569 officers who worked in the department of population and civil registry. The number of the sample determined using the formula was developed by Krejcie and Morgan (1960) (refer the equation 1). The technique for data collection is using simple random sampling without considering the level of strata in the population (Bacon-Shone, 2013), namely:

$$n = \frac{N}{(Nd^2 + 1)} \quad (1)$$

Whereas n is the sample size, N is the total population, d is the per cent laxity inaccuracy due to sampling errors (tolerance is 0.10).

$$n = \frac{110,569}{(110,569(0.10)^2 + 1)}$$

$$n = \frac{110,569}{(110,569(0.01) + 1)}$$

$$n = \frac{110,569}{1,106.69}$$

$$n = 99,9096 \approx 100$$

Thus, using that formula, this study found that there 100 respondents needed to ensure the number of samples is sufficient for conducting further analysis. Therefore, this study uses the structural equation model (SEM) through the method of partial least square (PLS). The data analysed using PLS-SEM and assisted by statistical software, namely XLSTAT.

## Results and Discussion

There are two types of the model that should be reported. This includes the measurement and structural model. In the first section, we present the result of testing for measurement model. The result consists of (i) outer model measurement (cross-loading), validity (discriminant - AVE) and reliability (Cronbach's Alpha) and (i) inner model, including Goodness of Fit Model.

**Table 3.** Cross-loadings (Monofactorial manifest variables/1)

	<b>Policy Implementation</b>	<b>Citizen Trust</b>	<b>Effectiveness of Implementation</b>
Communication	<b>0.9508</b>	0.777	0.8019
Resources	<b>0.9369</b>	0.7282	0.7795
Disposition	<b>0.9411</b>	0.7197	0.6982
Bureaucratic Structure	<b>0.9437</b>	0.6985	0.7184
Honesty	0.6908	<b>0.8858</b>	0.7398
Benevolence	0.6213	<b>0.8308</b>	0.6542
Competence	0.7087	<b>0.8914</b>	0.7949

Goal Achievement	0.7696	0.7778	<b>0.9117</b>
Integration	0.7267	0.7708	<b>0.9375</b>
Adaptation	0.7080	0.7830	<b>0.9199</b>

Table 3 shows the result of cross-loading by monofactorial manifest variable/1. The table indicates that the value of factor loading for that construct is higher than other constructs, namely citizen trust and effectiveness of policy implementation. The construct of communication, resources, disposition, and bureaucratic structure reflected by policy implementation. The variable of citizen trust measured by honesty, benevolence and competence and the variable of the effectiveness of policy implementation reflected by goal achievement, integration and adaptation. Thus, this study has produced three variables from ten constructs, namely communication, resources, disposition, bureaucratic structure, honesty, benevolence, competence, goal achievement, integration and adaptation. Further, using XLSTAT software, we test the convergent validity for every variable has produced. The result of convergence validity testing, as seen in Table 4 below:

**Table 4:** Discriminant validity (Squared correlations < AVE) (Dimension 1)

	<b>Policy Implementation</b>	<b>Effectiveness of Implementation</b>	<b>Citizen Trust</b>	<b>Mean Communalities (AVE)</b>
Policy Implementation	<b>1.000</b>	0.6346	0.6024	0.8895
Effectiveness of Implementation	0.6346	<b>1.000</b>	0.7091	0.8521
Citizen Trust	0.6024	0.7091	<b>1.000</b>	0.7565
Mean Communalities (AVE)	0.8895	0.8521	0.7565	<b>0.000</b>

Table 4 shows that the value of Average Variance Extracted (AVE) for the variable, namely policy implementation (X), effectiveness implementation (Y), and citizen trust (Z) is higher than 0.50. Also, the Square Root of AVE for that variable higher than the value of Square Root of AVE other variables. It means that the variables used in this study is do not present the issue multidimensionality from unidimensionality and respectively. Also, this study conducted the reliability testing for measurement scale; the result can be seen in Table 5:

**Table 5:** Reliability for measurement scale

Latent variable	Dimensions	Cronbach's alpha	D.G. rho (PCA)
Policy Implementation	4	0.9586	0.9699
Effectiveness of Implementation	3	0.9132	0.9453
Citizen Trust	3	0.8389	0.9031

Table 5 displays the results of reliability testing. The above table shows that the latent variable policy implementation has 4 dimensions with the value of Cronbach's alpha is 0.9586 and D.G. rho (PCA) is 0.9699. Next, the latent variable effectiveness of policy implementation has 3 dimensions, and the value of Cronbach's alpha is 0.9132 and D.G. rho (PCA) is 0.9453. Lastly, the latent variable citizen trust has 3 dimensions, and the value of Cronbach's alpha is 0.8389 and D.G. rho (PCA) is 0.9031. All the variables have the value of Cronbach's alpha higher than 0.70. Thus, we can conclude that the latent variable in this study is reliable.

As mentioned in the previous section, this study would be testing the structural model through Good of Fitness model or known as inner model measurement. The result can be seen in Table as below:

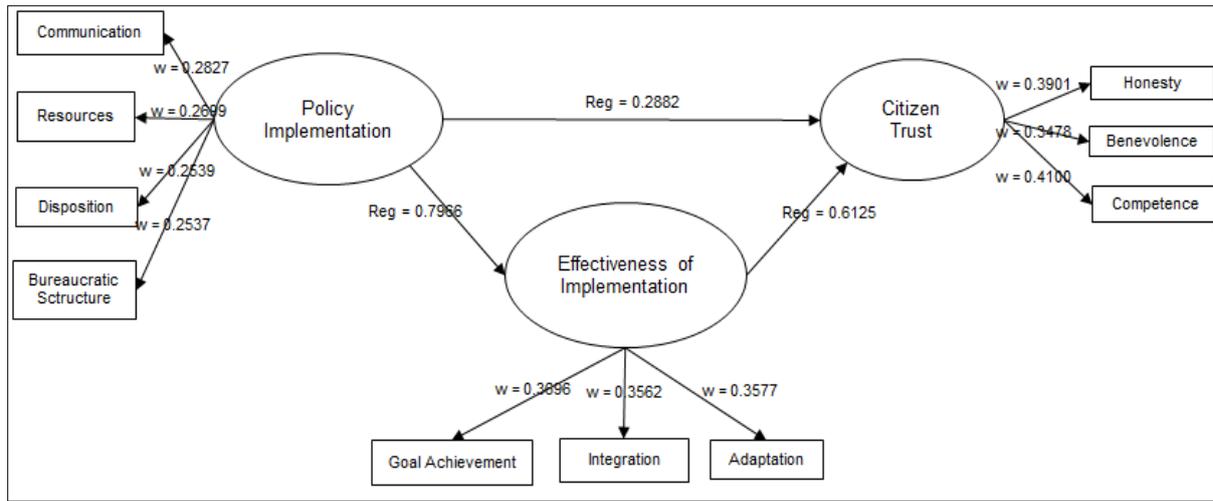
### *Inner Model Measurement*

**Table 6:** Goodness of Fit Model

	GoF	GoF (Bootstrap)	Standard error	Critical ratio (CR)
Absolute	0.7589	0.7466	0.0952	7.9735
Relative	0.9726	0.9472	0.0766	12.6994
Outer model	0.995	0.9821	0.0719	13.8317
Inner model	0.9775	<b>0.9639</b>	0.0135	72.4569

Table 6 captures the result of evaluating the goodness of the model that has proposed. Using the value of Good of Fit (GoF), the result of analysis obtained as much as 0.9639 or 96.39 per cent. This means that the diversity of data explained by the model is 0.9639 or the information contained in the data is 96.39% explained by the model while the remaining 3.61% is explained by other variables outside the model used in this study.

**Figure 2.** Result of hypothesis testing using PLS-SEM by assisting the XLSTAT



After evaluating the good of fitness model, in this final part, we report and elaborate on the results of hypotheses testing. The hypotheses testing result can be seen in Table 7 below:

### *Hypothesis Testing*

**Table 7:** Results of hypotheses testing (direct effect)

Hypothesis	Path analysis	Predicted Coefficients	t-test	Conclusion
H1	Policy Implementation → Citizen Trust	0.2882	3.379	Supported
H2	Policy Implementation → Effectiveness of Policy Implementation	0.7966	9.342	Supported
H3	Effectiveness Implementation → Citizen Trust	0.6125	7.182	Supported

For examining the effectiveness of procurement policy for electronic identity (e-ID) card and its effect on citizen trust in Indonesia, this study uses XLSTAT to analyse the data. The results of analysis (Table 7) shows that the policy implementation has a significant positive effect on citizen trust. The value of the predicted coefficient is 0.2882 or 28.82 per cent with t stat is 3.379 or higher than t-table 1.96. In other words, by assuming the variable policy implementation increase 1 per cent, then the citizen trust will go up 28.82 per cent. Further, the effectiveness of procurement policy implementation has a significant positive effect on citizen trust. The value of the predicted coefficient is 0.6125 or 61.25 per cent with t stat is 7.182 or

higher than t-table 1.96. It means that, by assuming the variable effectiveness increase 1 per cent, then the citizen trust will go up 61.25 per cent. In addition, this study also tests the effectiveness of implementation as an intervening variable. The result of the analysis for the indirect test, as seen in Table 8:

**Table 8:** Results of testing for an indirect effect

Hypothesis	Exogenous	Endogenous	Intervening	Effect	
				Direct	Indirect
H4	Policy Implementation	Citizen Trust	Effectiveness Implementation	0.2882	0.7966* 0.6125 = <b>0.4879</b>

Table 8 indicates that the effectiveness of policy implementation plays as an intervening variable in the relationship between policy implementation and citizen trust. The predicted coefficient of direct effect is 0.4879. For ensuring the role of intervening variable, we use the value of Variance Accounted Factor (VAF). Hair et al., (1998) stated that when the value of VAF less than 20, it means that there is no intervening. Also, more than 20 and less than categorized as partial and more than 80, it classified as a full intervening variable. Thus, using the result of the analysis, we concluded that the effectiveness of policy implementation plays a role as intervening in the relationship between policy implementation and citizen trust.

### Conclusion

In conclusion, we identified that the effectiveness of policy implementation has a significant effect on citizen trust, but it does not consider more important than the procurement of raw materials for electronic identity cards (e-ID). The procurement policy for a blank identity card is a crucial factor and should be prioritized. Further, the implementation of recording program policies e-ID card data will optimally run when referring to communication factors, attitudes and bureaucracy structure. Lastly, the program recording e-ID card data will run effectiveness when applying the dimensions of goal achievement, integration and adaptation. The effectiveness of policy implementation plays a role as intervenes variable in the relationship between policy implementation and citizen trust.

### Acknowledgements

The author would like to thank for Universitas Informatika dan Bisnis Indonesia (UNIBI) and Universiti Malaysia Terengganu (UMT) that supporting this research and publication.



## REFERENCES

- Abubakar, A., Saidin, S.Z., and Ahmi, A. 2016. Performance Management Antecedents and Public Sector Organizational Performance: Empirical Evidence from Nigeria. *International Journal of Economics and Financial Issues*, 2016, 6(S7), pp. 232-239.
- Akib, H. 2010. Policy Implementation: What, Why, and How (*Implementasi Kebijakan: Apa, Mengapa, dan Bagaimana*). *Jurnal Administrasi Publik*, Volume 1 No. 1 Thn. 2010, pp. 1-11.
- Aritonang, D.M. 2018. The Impact of E-Government System on Public Service Quality in Indonesia. *European Scientific Journal*, December 2017 edition, Vol.13, No.35; pp. 99-111.
- Bacon-Shone, JH. 2013. *Introduction to Quantitative Research Methods*. Hong Kong: Graduate School, The University of HongKong.
- Borah, S.K. 2013. Implementation of Citizen-Centric e-Governance Projects in Assam. *IOSR Journal Of Humanities And Social Science (IOSR-JHSS)*, Volume 7, Issue 2 (Jan. - Feb. 2013), pp. 27-34.
- EL-Gayed, Y. 2013. The influencing Factors of Public Procurement Policy Development; The Case of Libya. *Ph.D. Thesis*. Salford Business School, The University of Salford, UK.
- Flavian dan Giunaliu. 2007. Measure on Web Usability Website. *Journal of Computer Information Systems*, 48 (No.1), pp. 17-23.
- Helen, J.B., K. Shaul, S. Kalliopi, P. Merle, G. Arnold and R. Saskia, 2017. Preliminary findings from an international study of subjective wellbeing in tertiary students. *International Journal of Innovation, Creativity and Change*, 3(3): pp.26-42.
- Joshi, P.R. and Islam, S. 2018. E-Government Maturity Model for Sustainable E-Government Services from the Perspective of Developing Countries. *Sustainability*, 2018, 10, 1882; 1-28.
- Kotler, P. and Amstrong, G. 2012. *Principles of Marketing*. New York: Pearson Prentice Hall.
- Kurniati, P.S. 2015. Policy Implementation of Electronic Identity Card (e-ID) in Cimahi City, West Java Province, Indonesia. *International Journal of Science and Research (IJSR)*, Volume 4 Issue 2, February 2015, pp. 31-41.
- Kurniati, P.S., Rusli, B., Muhtar, E.A., and Sintaningrum. 2015. Effectiveness of Evaluation of Electronic Identity Card (e-ID) Policy in Cimahi City, West Java Province, Indonesia.



*Global Journal of Political Science and Administration*, Vol.3, No.5, pp.21-31, September 2015, pp. 21-31.

Mahmood, M. 2016. Enhancing Citizens' Trust and Confidence in Government through Digital Transformation. *International Journal of Electronic Government Research*, Volume 12 • Issue 1 • January-March 2016, pp. 99-104.

Niranjan, I., Seetharaman, A., Jadhav, V., and Banerjee, A. 2016. The Impact of Electronic Signatures on Internal Control Systems. *International Journal of Academic Research*, Vol. 4. Issue 4. & pp.216-238 , 2016, pp. 2016-238.

Nkwe, N. 2012. E-Government: Challenges and Opportunities in Botswana. *International Journal of Humanities and Social Science*, Vol. 2 No. 17; September 2012, pp. 39-48.

Otieno, I. and Omwenga, E. 2016. Citizen-Centric Critical Success Factors for the Implementation of E-Government: A Case Study of Kenya Huduma Centres. *Journal of Emerging Trends in Computing and Information Sciences*, Vol. 7, No. 2, February 2016, pp. 102-109.

Papanthymou, A. and Darra, M. 2018. The Implementation of Total Quality Management in Greek Higher. *International Education Studies*, Vol. 11, No. 7; 2018, pp. 26-42.

Pujiawati, L. 2018. Bandung Municipality in Figures (*Kota Bandung Dalam Angka*). Published by: © BPS Kota Bandung/Statistics of Bandung Municipality, ISSN: 0215.2320.

Setyaningrum, W., Wijaya, A.F., and Suryadi. 2014. An Evaluation of Electronic ID Card Program to Improve Public Service Quality at Department of Population and Civil Registration Kediri City. *New Media and Mass Communication*, Vol.24, 2014, pp. 35-42.

Setyowati, K. 2017. Quality of Electronic Identity Card Service by Demographic and Civil Registration Service in Indonesia. *ICoSaPS Conference Proceedings*, The 3rd International Conference on Social and Political Science "The Impact of Information Technology on Social and Political Dynamics", Volume 2017, pp. 284-290.

Soemartono, T. 2013. The Dynamic of e-KTP Evaluation Program in DKI Jakarta. *International Journal of Administrative Science & Organization*, Volume 20, Number 2, May 2013, pp. 90-97.

Sufriyadi, R., Marnis, and Fathoni, A.F. 2015. Effect Of Reward And Ability To Performance By Intrinsic Motivation As An Intervening Variable Prince Hotel In Pekanbaru. *Jom Fekon*, Vol. 2 No. 1 Februari 2015, pp. 1-15.



- Singh, P.K. and Scholar, R. 2018. Smart Card ID: An Evolving and Viable Technology. (IJACSA) *International Journal of Advanced Computer Science and Applications*, Vol. 9, No. 3, 2018, pp. 115-124.
- Trabels, Z. and Shuaib, K. 2011. Implementation of an Effective and Secure Biometrics-Based Student Attendance System. *International Journal of Computers and Applications*, Vol. 33, No. 2, 2011, pp. 144-153.
- Wallang, M. 2018. Determinants that Influence Citizen's Usage of Different E-Government Services: A Malaysian Case Study. *Ph.D. Thesis*, School of Social Science, The University of Queensland in 2018.