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E-Procurement and effectiveness of government goods and services procurement: case study in Singkawang, the province of west Kalimantan, Indonesia

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ABSTRACT

Singkawang City is one of the cities in The Province of West Kalimantan that has implemented E-Procurement as a system for goods and services procurement. The process of procuring goods and services in Singkawang City can be accessed through the integrated online official website. Potential problems still arise in the process of procuring goods and services starting from planning, preparation, selection of suppliers, and handover of goods / services. The purpose of this study was to investigate readiness from local government officials of the Singkawang City in carrying out the e-procurement process. Support from leaders is needed so this system can run smoothly. The research data are primary data derived from questionnaires survey. From all government institutions in Singkawang City, there are 35 Procurement Service Unit staffs and all of them are taken as respondents in this study. The data collected was processed by linear multiple regression. The results showed that the implementation of e-procurement had a significant positive effect on the effectiveness of the procurement of goods and services and leader support was proven to be a strengthened variable to the effect of the implementation of e-procurement on effectiveness of the goods and services procurement.



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Introduction

For organization or firms, e-procurement means the integration of technological tools into purchasing activities taking place within supply chains while performing their operations. In other words, e-procurement is a deriving benefit attained from technological enhancements rather than using traditional a paper-based method in procurement operations (Bhaukaurally & Ramesh, 2017).

Using data from the OECD National Accounts Statistics (2019), public procurement accounts for about 20% of government expenditure worldwide. The huge spending on public procurement makes public procurement is very vulnerable to corruption (Kartika, 2020). In many countries, based on the same data, one-quarter or more of this amount is estimated to be lost to corruption. But Indonesia and the People's Republic of China show approaches that countries in the Asia-Pacific region have adopted to reform their government procurement systems and to cope with the resulting challenges. According to the National Public Procurement Agency (NPPA), Indonesian government spends more than 50 percent of total government expenditure each year for public procurement and this amount is expected to increase gradually in the coming years (Indonesia

NPPA, 2018). Increasingly, public procurement is being used as a lever to drive economic growth, and achieve secondary / complementary policy objectives such as developing SMEs, unlocking innovation and delivering sustainable outcomes. Member countries have therefore indicated a strong interest in establishing metrics that clearly articulate the value proposition of public procurement and its role in driving economic performance (OECDilibrary, 2019).

Government spending allocated in the procurement of goods and services is quite large, even in OECD countries the allocation of government spending for these reached up to 13% of GDP (OECDilibrary, 2019). The high budget allocation for this purpose requires an effective and efficient management on the procurement process. The e-procurement implementation has implications for the procurement of goods and services through web-based applications. This system has been widely used because of its potential to rationalize spending, reduce administrative costs, and promote efficiency in its implementation (Gardenal, 2017; Damayanti, Astri & Hamzah, 2014; Wijaya, 2012). Public e-procurement is an important stage in e-government development, and economic stakes are probably considerable (Assar & Boughzala, 2008). In Indonesia, the E-Procurement System is known as Electronic Procurement Services using the Electronic Procurement System. From an economic perspective, public procurement is increasingly recognized as a lever for improving the efficiency and effectiveness of public spending. For this reason, increasing the 'productivity' of government spending has been seen as a worthwhile pursuit for governments (OECDilibrary, 2019). Evidence from the extant literature reveals important benefits of e-procurement implementation in the government sector. E-procurement is known to reduce transaction cost, leading to a better decision and better value in the procurement output. There are also evidences that E-procurement has benefited small business operators to reduce bureaucracy in dealing with the authorities, while also provides access to government electronic market places (Ojha & Palvia, 2012).

The e-procurement procedure allows government contracting authorities to procure goods and services from their suppliers electronically, by transforming the hitherto manual procurement procedure into an electronic, internet-based system (Sila, 2013). Suppliers, in turn, benefit from being able to present their products on the World Wide Web. The suppliers are able to receive, manage and process government purchase orders, and receive payment from government agencies online by using the e-procurement system in e-procurement System, suppliers benefit significantly from the opportunity to reach a broader base of buyers than ever before coupled with lower operating costs, shorter turnaround time, additional revenue and increased customer satisfaction (Nasrun et.al, 2017).

There are Expected advantages and disadvantages of public e-procurement (Assar & Boughzala, 2008). It has been highlighted that e-Procurement has to be evaluated in its complexity, which encompasses numerous goals: to rationalize expenditure, to reduce "administrative confusion" and costs, to foster operational efficiency, to strengthen organizations' network vision and technological collaboration with business partners, even to completely automate certain procurement activities (Greenemeier, 2000 and Murray, 2001). In order to achieve these goals, the implementation of e-Procurement has to be carried out alongside a complete revision of procurement processes, which would include an accurate selection of suppliers, strategic bargaining of contracts, monitoring of performance, both of buyers and suppliers (Assar & Boughzala, 2008).

Singkawang City is one of the cities in the Province of West Kalimantan that has implemented E-Procurement as a system for procuring goods and services. The process of procuring goods and services in Singkawang City can be accessed through the official website which has been integrated online, www.lpse.singkawangkota.go.id. Electronic Procurement Services of the Singkawang City was formed in 2010 with the issuance of Mayor Regulation No. 20/2010 concerning Guidelines for the Implementation of Electronic Procurement for Goods / Services in the Regional Government of Singkawang City. So far, the Government of Singkawang City has been very supportive in providing facilities for the process of procuring goods and services. There are two units that handle the e-procurement process in Singkawang City, namely EPS and PSU. In the procurement process, EPS only acts as a facilitator who does not participate in the procurement process, while the task of PSU is supervise all stages of the process of goods/services procurement activities and make a report if there are indications of irregularities and/or deviations in the implementation of goods/services procurement activities (Communication and Information Agency of Republic of Indonesia, 2022). In other words, the implementation of the procurement process is fully carried out by the procurement committee or the Procurement Service Unit (PSU).

Joffri (2015) state that the purpose of e-Procurement is to improve service levels to users and develop a more integrated procurement approach through the supply chain of companies that are directly involved in the procurement process and increase the effectiveness of using human resources in the procurement process. It is further stated that in general there are several objectives of implementing E-Procurement, namely (1) reducing the time for procurement, (2) increasing access to suppliers to ensure broader participation, (3) reducing

procurement costs through competitive bidding and reverse auctioning, (4) eliminating the cartel system from the supplier group, (5) increasing transparency in the procurement process, (6) almost eliminating paperwork to increase speed in efficiency functions. E-procurement is present in order to utilize the development of information technology in the procurement of goods / services and to realize the implementation of the procurement of goods / services that is efficient, effective, fair and transparent (Damayanti, 2012).

However, it does not mean that the process of procuring goods and services in Singkawang City is without any problems. Potential problems that arise in the process of procuring goods and services occur due to employee negligence during the procurement process of goods and services starting from planning, preparation, and selection to handover of goods / services. The implementation of E-Procurement as a system for procuring goods and services is expected to be able to solve almost all the problems that occur, especially since the Government of Singkawang City has established a consultation clinic for the procurement of goods and services.

Method

This research is a quantitative study. Data of the research are primary data with data collection methods carried out through questionnaires survey. All collected data were analyzed using a simple regression method. The research site is the EPS (Electronic Procurement Service) unit in the Government of Singkawang City as a unit that serves in the provision and management of e-Procurement systems and applications, and the Procurement Service Unit (PSU) as a unit that carries out technical procurement of goods / services.

The independent variables used in this study are the implementation of E-procurement and leaders' support. According to Croom and Jones' statement (2007) that the implementation of E-procurement uses an integrated data base system that covers a large area with an internet-based and networked communication system that is applied to part or all of the purchasing process. The measurement of the implementation of E-procurement variables in this study uses 10 (ten) question items with a Likert scale of 1 (one) to 5 (five) which contains a range of 1 (one) for Strongly Disagree to 5 (five) strongly Agree.

The research objects are EPS and PSU agency of The Singkawang City. All employees in these agencies, who were the parties in charge in providing and carrying out goods and services procurement activities in the Singkawang City, are taken as respondent for this research. The population size was 35 people consisting of: 20 EPS staffs and 15 PSU staffs. The dependent variable used in this study is the effectiveness of the procurement of goods and services. Measurement of the effectiveness of the procurement of goods and services using 5 (five) question items with a Likert scale of 1 (one) to 5 (five) which contains a range of 1 (one) for Strongly Disagree to 5 (five) strongly Agree. before being processed, the validity and reliability of the research data are tested. Table below presented result of the reliability test.

Table 1. Result of The Reliability Test

Variable	Cronbach Alpha Value	Remarks
E-procurement implementation	0.91	Reliable
The Procurement Effectiveness Staff performance	0.88	Reliable
Leader support	0.81	Reliable

Source: Primary Data, processed by SPSS

The Cronbach alpha value for E-procurement implementation variable is 0.91. This value is more than 0.6 as the cut off value, so all questions about E-procurement implementation are reliable. The Cronbach Alpha value for effectiveness of the procurement staff performance variable is 0.88. This value is more than 0.6 as the cutoff value, so all questions about effectiveness of the procurement staff performance are reliable. The Cronbach Alpha value for Leader Support variable is 0.81. This value is more than 0.6 as the cutoff value, so all questions about activeness of the leader support on e-procurement process are reliable.

The data homogeneity test (validity test) was carried out by utilize the Pearson correlation test. If the results are significant, the data is said to be valid, while the limit used to determine the significance of the Pearson correlation is the correlation value must be greater than 0.01. The results of the validity test can be seen in Table 3.

The E-procurement implementation variable has a correlation range between 0.694 to 0.868 and significant at the 0.01 level. It indicates that the question about measuring E-procurement implementation can be said to be valid. Likewise, the effectiveness in the e-procurement of goods and services by staff is in the correlation range value from 0.743 to 0.903 and significant at the 0.01 level.

Table 2. Result of The Validity Test

Variable	Correlation Range	Significance Level	Remarks
E-procurement procumerent	0.694**-0.868**	0.01	Valid
Effectiveness E-procurement process	0.743**-0.903**	0.01	Valid
Leader support	0.730**-0.906**	0.01	Valid

Source: Primary Data, processed by SPSS

It indicates that each indicator of the question of the effectiveness of e-procurement good and services by staffs is valid. For the leader support variable, it has a theoretical range between 0.730 - 0.906 and is significant at the 0.01 level. It indicates that each question as representation indicator of the leader support is valid.

Results and Discussions

E-procurement is considered necessary to be implemented in the public or government sector in order to realize the values of good governance, such as transparency, accountability, and integrity in the procurement of goods and services (Suliantoro & Ririh, 2019). But there are the perceived benefits and risks associated with e-Procurement system and it depend on e-Procurement system adoption at employees as well as the organizational level (Innocent & Kalaskar, 2016). The key factors for successfully implementing e-procurement are management commitment to financial and technological support (Gunasekaran and Ngai (2008).

Giri et al. (2009) stated that the successful for implementation of E-Procurement is also determined by the following factors: 1) E-leadership, that E-Procurement Implementation requires commitment and full support from the leadership. Support from the leadership needs to be manifested in concrete forms and actions and not just a discourse; 2) The transformation of mindset and action patterns, that the Implementation of E-Procurement requires a change in behavior and mentality of all related parties; 3) The number and quality of human resources is appropriate, that technology will not be possible by itself without a party who manages it. E-Procurement implementation requires a number of adequate human resources, not only in terms of numbers but also in terms of their competencies; 4) Availability of infrastructure, that the infrastructure here referred many things needed in procurement process starting from hardware, software, communication networks, and other physical facilities. Adequate infrastructure will encourage high productivity in the procurement process.

Leader's support is needed to e-procurement implementation (Masudin et.al., 2021). E-procurement is believed to be able to increase accountability (Kumaralaita et.al, 2014). Based on the Sutedi (2012), to build the success implementation of E-Procurement, there are several factors need to be considered, namely: the readiness of human resources (HR), ICT infrastructure as well as the attention of the parties directly involved, from the highest leadership to operational level employees. Some studies also demonstrated e-procurement adoption as a complimentary procedure to e-government systems in many countries (Schedler, 2007).

The characteristics of the the subject of this study are presented as follows. More briefly, it can be seen in the following Table 1.

Table 3. The Characteristics of Socio demography's Respondents

Respondents' Characteristics	Population	Percentase (%)
Gender		
1. Male	22	62,9
2. Female	13	37,1
Age		
1. ≤ 40 years old	17	48,6
2. > 40 years old	18	51,4
Education		
1. Master Degree	8	22,8
2. Bachelor Degree	15	43
3. Vocational Degree	12	34,2

Source: Primary Data, processed by SPSS

Table 1 shows that all respondents contain data about their demographic characteristics. There are 62.9% of respondents who are male and the rest (37.1%) are female. Based on age, it can be described as follows: there are 17 respondents (48.6%) aged ≤ 40 years old, while the rest, namely respondents with an age > 40 years, are 18 respondents (51.4%). Based on education level, there were 8 respondents (22.8%) with a Masters

level education, 15 people (43%) with an undergraduate education level, and 12 respondents (34.2%) with a vocational education level. Usually, the level of education correlates with the level of mastery of knowledge and technology.

To test quality of the data, tests were carried out which included reliability and validity tests. The reliability test was carried out by using the Cronbach Alpha test using the SPSS statistic 24 program. A construct is said to be reliable if it provides a Cronbach alpha value > 0.60. The following is a recapitulation of the reliability test results presented in Table 2.

Prior to data analysis using linear regression method, the data obtained were first tested for normality. This research utilizes Kolmogorov Smirnov test to test the data normality. Based on result of this test, it is known that all variables are normally distributed, with a significance value greater than 0.05. The purpose of the multicollinearity test is to investigate whether there is correlation between independent variables. Identification of the presence of this multicollinearity can be performed by comparing tolerance values and Variance Inflation Factor (VIF). If the VIF value is > 10 and the tolerance value is < 0.10, it can be said that there is no multicollinearity between the independent variables (Ghozali, 2006: 92). The following are the results of the multicollinearity test. Referring to Table 4 below, it can be seen that the VIF value for each variable is less than 10, so that all variables are free from multicollinearity.

Table 4. Result of The Multicollinearity Test

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	14.955	5.183		2.885	.007		
	TOTAL_EP	.020	.102	.035	.198	.844	0.500	1.000
	TOTAL_DA	.136	.162	.147	.840	.407	0.032	1.000

a. Dependent Variable : TOTAL_SDM

Source: Primary Data, processed by SPSS

Investigating the existing autocorrelation performed by utilize Durbin-Watson test (DW test) was used. The following shows the results of the autocorrelation test.

Table 5. Result of The Autocorrelation Test

Model	R	R Square	Adjusted R Square	Std. Error of Estimation	Durbin-Watson
1	.151 ^a	.023	-.038	4.18064	2.364
Remarks: a. Predictors: (Constant), TOTAL_DA, TOTAL_EP					
b. Dependent Variable: TOTAL_SDM					

Source: Primary Data, processed by SPSS

Based on the test results in Table 5, the Durbin-Watson value is 2.364. This is evidence that there is the absence of positive or negative auto correlation because the Durbin Watson test value is between dU and 4 - dU.

Investigating the effect of the e-procurement implementation variable on the effectiveness of the procurement of goods and services by staffs utilize a simple regression analysis method. Following are the results from regression analysis.

Referring to Table 6, a simple regression equation can be made as follows:

$$Y_i = 17.773 + 0.022X_{ii} + \varepsilon_i$$

From this equation, several things can be explained as follows: The constant value is 17,773 which means that if the implementation of e-procurement is equal to zero, then the effectiveness of human resources (HR) in the procurement of goods and services is 17,773.

Table 6. The Regression Result for Total_SDM

Variable	Coefficient	t-stat	P Value
Constanta	17.773	4.519	0.0000
Total_EP	0.022	2.143	0.0456

R squared 0.6033
F Statistic 74.831
Prob (F Stat) 0.0000

Source: Primary Data, processed by SPSS

The Total_EP coefficient is 0.022, it means that the e-procurement implementation variable has a positive relationship with the employee effectiveness (HR) variable in the procurement of goods and services, this indicates that an increase in the e-procurement implementation variable will increase the effectiveness of the human resource (HR) variable in the procurement of goods and services. If there is an increase in the e-procurement implementation variable by one percent, it will increase the effectiveness for the procurement of goods and services by 2.2 percent, all else equal, at $\alpha = 0.05$.

Based on the R-squared value, it can be stated that the variable variation in the effectiveness of e-procurement can be explained by 60.339 percent by variations in the variables of effectiveness of human resource. Whereas based on the F-statistic Prob (0.00000), it can be said that all regressor variables have a significant effect on effectiveness of e-procurement in The Singkawang City.

To see the element of interaction between variables, it is carried out through Moderated Regression Analysis (MRA). The following are the results of a simple regression analysis.

Table 7. Result of The Moderated Regression Analysis (MRA)

Variable	Coefficient	t-stat	P Value
Constanta	17.773	4.519	0.0000
Total_EP	-0.022	-2.143	0.0456
Leader's support	0.175	2.759	0.0000

R squared 0.6233
F Statistic 97.627
Prob (F Stat) 0.0000

Source: Primary Data, processed by SPSS

In Table 7, it can be seen clearly that the interaction among variable gives a coefficient of 0.175 and is significant at $\alpha = 0.000$, which means that the leader supports variable is purely a moderator or a moderating variable. Based on the results of the second hypothesis test using Moderated Regression Analysis (MRA), the results show that leader support is proven as a variable that strengthens the effect of e-procurement implementation on the effectiveness the procurement of goods and services by staffs. The results of this study indicate that support from leaders to employees who are directly related to the electronic procurement process through various appropriate skills coaching and training can increase the effectiveness of the electronic procurement process. It can be said that the leader has to show strong leadership to encourage and enforce the culture of accountability through e-procurement processes.

Conclusions

Based on the results of research and discussion, regarding the implementation of e-procurement on effectiveness of the procurement of goods and services by procurement staff taking into account the factors that influence the acceptance of the new system implementation, namely leader support, it can be concluded that: the implementation of e-procurement has a significant positive effect on the effectiveness of the procurement of goods and services by the procurement staff. It means that the first hypothesis accepted. It was found that the value of e-procurement implementation variable was 0.714 and the significance level was 0.003. Leader support is proven as a variable strengthens the effect of e-procurement implementation on the effectiveness of the procurement of goods and services by procurement staff with the result that the interaction variable gives a coefficient of 0.003. This has implications for the need to unify perceptions between leaders and staff on the benefits of e-procurement. when there has been a common perception, there will be an increase in effectiveness in the process of procuring government goods and services.

Limitations of the research are cross section data. The research object at the EPS office and employees of the Procurement Service Unit (PSU) of Singkawang City, so the results cannot be generalized. It is hoped that

further research can expand the scope of the research sample; This study only uses the E-Procurement Implementation variable to see the effectiveness of human resources (HR) in the procurement of goods and services and to make leaders' support an intervening variable so that the results of this study are far from perfect. It is hoped that in the future, this research can be carried out again by adding other variables such as service quality, information quality, system quality, E-Procurement participant satisfaction, and so on

References

- Assar, S. and Boughzala, I. (2008). Empirical evaluation of public e-procurement platforms in France. *Int. J. Value Chain Management*, Vol. 2, No. 1, 90–108. <https://dx.doi.org/10.1504/IJVC.2008.016120>
- Agung, J. (1982). *Manajemen Modern*. Jakarta: PT. Elex Media Komputindo.
- Bahtiar, A. & Muchlis, I. (2002). *Akuntansi Pemerintahan*. Jakarta. Salemba
- Bhaukarally, N. & Ramesh, V. (2017). The Challenges and Benefits of Adopting E-Procurement – Reference to Mauritian Economy. *International Journal of Management and Applied Science*, Volume-3, Issue-5, May, 92–96. <http://IJMAS-IRAJ-DOIONLINE-8225>
- Communication and Information Agency of Republic Indonesia. (2022). Layanan Pengadaan secara elektronik. Retrieved from <http://www.diskominfo.go.id>
- Croom, S., & Brandon-Jones, A. (2007). Impact of E-Procurement: Experiences From Implementation in the UK Public Sector. *Journal of Purchasing and Supply Management*, Vol 13, Issue 4, 294–303. <https://doi.org/10.1016/j.pursup.2007.09.015>
- Damayanti, A.I. (2012). Penerapan e-Procurement Dalam Proses Pengadaan Barang/Jasa di Kabupaten Malang. Malang: *Unpublished Thesis*. Universitas Brawijaya.
- Gardenal, F. (2013). A model to measure e-Procurement impacts on organizational performance. *Journal of Public Procurement*, Vol 13, No. 2, 215, 2013
- Ghozali, I. (2005). *Aplikasi Analisis Multivariate Dengan Program SPSS*. Cetakan Keempat. Semarang: Badan Penerbit Universitas Diponegoro
- Giri, S. & Yudho, G. (2009). Inovasi Layanan Publik melalui E- Procurement. *Makalah Pembekalan Layanan Pengadaan Barang Secara Elektronik*. Bappenas. Jakarta: LKPP
- Greenemeier, L. (2000). Buying power. *Information Week*, Vol 80, No.3, 67–68.
- Gunasekaran, A.; Ngai, E.W.T. (2008). Adoption of e-procurement in Hong Kong: An empirical research. *Int. J. Prod. Econ*, 113, 159–175
- Hair J.F. (1995). *Multivariate Data Analysis with Reading*. Fourth Edition. Prentice Hall. New Jersey.
- Innocent, R & Kalaskar, P.B. (2016). The Adoption of e-Procurement and its impact on the Procurement Performance of Selected Telecommunication Companies in Rwanda. *European Journal of Business and Management*, Vol.8, No.15, 125–133.
- Joffri, H. (2015). Akuntabilitas Publik dalam Pengadaan Barang/Jasa Pemerintah Secara Elektronik (E-Procurement) di Kabupaten Toraja Utara. *Unpublished Thesis*. Universitas Hassanudin Makassar.
- Kumaralita, L., Anggunia, D.S., & Hidayanto, A. N. (2014). The Impact Of E-Procurement To Accountability Using Theoretical Frameworks On A Case Study. Paper Conference at Technology Innovation and Industrial Management (TIIM), 1–28.
- Kartika, D. (2020). The Impact of E-Procurement Implementation On Public Procurement's Corruption Cases – Evidences From Indonesia And India. *Jurnal Kajian Wilayah*, Vol. 11 No.2, 193–212.
- Masudin, I., Aprilia, G.D., Nugraha, A., & Restuputri, D.P. (2021). Impact of E-Procurement Adoption on Company Performance: Evidence from Indonesian Manufacturing Industry. *Logistics* 1, 5, 1–16. <https://doi.org/10.3390/logistics5010016>
- Murray, M. (2001). This little company went to e-market. *CMA Management*, Free Library (June). [https://www.thefreelibrary.com/This Little Company Went to the E-Market-a075476550](https://www.thefreelibrary.com/This+Little+Company+Went+to+the+E-Market-a075476550)
- Mulyadi. (2008). *Sistem Akuntansi*. Salemba Empat. Jakarta.
- Indonesia NPPA. (2018). Government procurement profile. Monev NG LKPP. <https://monev.inaproc.id/>
- Novitaningrum, B.D. (2014). Akuntabilitas dan Transparansi Pengadaan Barang dan Jasa Pemerintah Melalui Electronic Procurement (Best Practice di Pemerintah Kota Surabaya. *Kebijakan dan Manajemen Publik*, Volume 2, No. 1, 1–10.
- OECDilibrary. (2019). *Government at a Glance - 2019 Edition: Public Procurement*. Retrieved from https://www.oecd-ilibrary.org/sites/8ccf5c38-en/1/3/3/index.html?itemId=/content/publication/8ccf5c38-en&_csp_
- Ojha, A. and Palvia, S. (2012). E-Government and the Fight against Corruption: Conceptual Model and Five Case Studies from India. *Journal of Information Technology Case and Application Research*, Vol. 14, Issue 4, 11–29. <https://doi.org/10.1080/15228053.2012.10845710>

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- Schedler, K. (2007). Unleashing change; A study of organizational Renewal in government - Edited by Steven Kelman. *Public Administration*, Vol. 85, No. 1, 246-248
- Sila, I. (2013). Factors affecting the adoption of B2B e-commerce technologies. *Electronic Commerce Research*, Vol. 13, No. 2, 199-236. <http://dx.doi.org/10.1007/s10660-013-9110-7>
- Suliantoro, H. & Ririh, K.R. (2019). Enhancing Usage Behavior of E-procurement Through Organizational Value. *Jurnal Teknik Industri*, Vol.18 (1), 8-16.
- Sugiyono. (2010). *Metode Penelitian Kuantitatif Kualitatif Dan R&D*. Penerbit Alfabeta. Bandung.
- Sutedi, A. (2012). *Good Corporate Governance*. Jakarta Sinar Grafika
- Wijaya, W.H. (2012). *Penerapan E-procurement Pada Proses Pengadaan Di Pemerintahan*. Surabaya: ITS Sukolilo.