

Risk and Control of Electronic Procurement System (Phenomenological Studies in Palu City)

Ayutriana Ashari, Femilia Zahra^(⊠), and Ridwan

Tadulako University, Palu, Central Sulawesi, Indonesia femilia.zahra@untad.ac.id

Abstract. This study aims to determine the risks and control of the electronic procurement system in the Palu city government. This research applies qualitative methods through a phenomenological study to figure out the risks of the electronic procurement system. Two young procurement professional and a staf of electronic procurement system in Palu city government were interviewed. This study found that the risks of an electronic procurement system in the Palu city government as follows: server often go down, system functions are not in accordance with the wishes expected by users, difficulty to use and understand the application of electronic procurement. Practitioner will learn what are the risks of electronic procurement system in the regional government of Palu City. This paper investigates the risks of applying the electronic procurement system in the Palu city government.

Keywords: risk · control · e-procurement · phenomenology

1 Introduction

Most of the public expenditure in the public sector at any level is spent on construction and procurement of goods and services. Procurement of public goods and services is the essence of the mandate of public sector organizations. Weak management of procurement of goods and services will affect the quality of project implementation and the functioning of the public sector organization concerned. In addition, these impacts can be realized in the form of delays in activities or the distribution of funds, thereby delaying the expected benefits of the program to the community. It also requires the involvement of private sector performance. Therefore, the work of public procurement of goods and services requires greater attention from various suppliers of related goods and services, the responsible public sector, the heads of organizations, auditors and legislators [1–3].

Despite the advantages and conveniences of e-procurement but does not rule out the possibility that in the activities of its activities do not encounter risks and challenges that may arise and can hinder the procurement process of goods and services. The phenomenon that occurs with the implementation of e-procurement in the city of Palu itself tends to occur in the process of activities carried out on the system in the form of corrupted (damaged) file documents, document uploads that fail due to unstable

networks, server downs that occur in the system, and limited *bandwidth* causing frequent process failures in e-procurement applications.

This study aims to determine the risks and control of the procurement system electronically in the application of e-procurement in the Palu City Regional Government so that researchers use qualitative methods.

According to Zahra [4] the procurement of goods and services in public sector organizations is the procurement of goods and services for all parts of public sector organizations. Procurement of goods and services in a broad sense includes strategic issues of procurement of goods and services, storage, distribution, supervision of contracts, and management of service providers. This process is similar to the supply chain management process of public sector organizations in general. The procurement phase of the procurement cycle will involve selected suppliers, negotiations, and contracts for goods and services.

LPSE or Electronic Procurement Service is the organizer of the electronic system of procurement of government goods and services. LPSE which operates the e-procurement system is the Electronic Procurement System (SPSE) developed by LKPP at the Directorate of Electronic Procurement System Development which is often referred to as the e-procurement system.

E-procurement according to Adrian [5] is an auction system in the procurement of goods and services using internet-based information and communication technology. With e-procurement, the auction process can be realized effectively, efficiently, transparently, competitively, openly, fairly or non-discriminatory and accountable which reflects transparency. This is in line with the explanation from Indrajit quoted by Adrianto [6] that e-procurement is explained as a process of digitizing auctions/tenders for government procurement of goods and services with the help of the internet.

The main function of e-procurement is to ensure that the process of procurement of public goods and services is in accordance with applicable procedures and regulations. In addition, e-procurement also guarantees transparency, standardization and accountability of the procurement process and is jointly controlled by the community. What is important is that e-procurement in particular or the procurement of government goods and services in general must encourage the improvement of the quality of public services, good governance and the welfare of the people, this is seen in the concept of good governance [7].

2 Research Method

The method used in this study is a phenomenological study to acknowledge the reality of the risks perception of the electronic procurement system. This method was chosen to explore and understand the information obtained from research informants. The unit analysis of this study is the Palu City LPSE Office regarding the electronic procurement system in the Palu City Regional Government. The informants involved in this study include two young procurement experts and a helpdesk staff of electronic procurement system in the Palu city government.

3 Results

3.1 Frequent Servers Down

E-procurement as a web or internet-based application system certainly requires an internet network in the process of its implementation, this server that often goes down is related to problems from the network or slow internet connection access is the finding of the results of direct interviews of researchers to informants. The risks of this problem most often arises and can hinder the procurement process that takes place. The implementation of e-procurement itself in Palu City has been started since 2010, based on the expression of the informant. Regarding this risk, starting from Mr. Alamsyah, he is part of the Functional Young Expert for Procurement of Goods and Services at LPSE Palu City who has joined the procurement of goods and services since 2017. The risk of a server that often goes down related to network problems or slow Internet access becomes risky when procurement is ongoing as an expression of Mr. Alamsyah when explaining the risks that occur, as follows:

"usually the system service is well, as long as what I get is only those who often risk its network problems anyway, that's why in LPSE who controls the system so that users are comfortable doing it, sometimes they don't want to bother us as a server security, because we are the one who is responsible for the service. If there is no other risk, only if suddenly the server goes down, we have to quickly fix it, because if the server goes down, it is from the device, well, including electricity."

This server down is a failure of a system, where the server fails, which causes the server to be inaccessible, such as errors in the system described by Pak Alamsyah, as follows:

"Errors are common, because for this system service is centralized in LKPP, we are here only to prepare devices for procurement, even if there is an error, usually they in LKPP have a fast response to this and serve the whole of Indonesia"

The phrase from the second informant explains the risks of the system used are often risky related to the network. Informant one also claimed that network problems and server downs are also one of the risks that usually occur, which is obtained from his expression as follows:

"The obstacles are like that for technical obstacles well including the finger as well, sometimes at the time of this upgrade, the problem is that there are those who can't enter in his user and it can hinder anyway while the selection process but he can't enter the user automatically he dies anyway indirectly he died because he couldn't open his account. For the most frequent obstacles that occur, it's just the network, especially if we are temporarily inputting shopping at SIRUP, sometimes the network is applied, usually back to the beginning, you have to enter the account again, this technical obstacle is what often happens, if it's for the personal, it's not" The explanation from the first informan emphasized that this technical risk related to the network can temporarily hamper the selection process in the procurement that takes place so that providers can be affected so that they can be indirectly eliminated from the selection of providers. The expression related to network risk was also presented by the third informan as the helpdesk of LPSE Palu City who has joined the procurement of goods and services since 2019, as follows:

"Well for the first one to start procurement for parties who are directly involved in the process for e-procurement, it is electronic-based and requires a network in the process, here we carry out the process of providing tender information through e-procurement, for the risk itself sometimes the data uploaded in the system is incomplete due to system down or network problems, both technical specifications, KAK, and HPS are incomplete so that the provider receives unclear information"

This explanation from the thirf informant supports that the importance of the network in this procurement process so that the sever runs well, sometimes this network problem the data uploaded in this system is incomplete which causes the provider to receive unclear information from the procurement implementation process. For other risks related to inaccessible systems, Mr. Alhadam also added, as follows:

"It's been only a few hours but not very often either, usually if that's the schedule is changed, the schedule is recreated before the winner's signature, because it's a technical error, right"

The author found that the use of e-procurement is often constrained by slow networks and internet access so that it risks servers that often go down which results in the process of procurement activities that take place can hinder the procurement process from being completed on time.

3.2 The Function of the System is not in Line with the Users' Expectation

Risk is an uncertain condition and contains an element of danger with all possible adverse consequences. The use of the system certainly expects something to be more effective, efficient and so on, with all the advantages of using the system certainly not spared from the weaknesses that will arise such as the function of the system is not in accordance with the wishes of the user. This is a risk that has an impact on electronic procurement activities. This finding was preceded by the expression of the third informant, who said that:

"It is also common for documents such as technical specifications, KAK, and HPS that cannot be opened by the provider due to corrupted or damaged files. Because this through the system does not meet directly the risks, usually the provider provides incomplete company data or agrees to the implementation of work that is not in accordance with the company's KBLI and SBU, the other risks of the provider providing affordable prices but not adjusting to the required quality are also part of the risk of using electronic systems."

Informant three explained that it is common for documents that cannot be opened by the provider because the file is corrupted or damaged, the uploaded data is incomplete, the required quality does not match the meaning behind the expression directs the researcher's thinking that the function of using this system is sometimes not as expected by users who are directly involved in the matching process. The third informant also added that the system in his application for providers who cannot access invitations from procurement officials, as follows:

"if what happened recently yesterday in this application is because of that the provider cannot access the invitation sent by the procurement official, so this procurement process is hampered"

The function of using this inappropriate system is a risk finding in e-procurement activities that attracted the author to develop this discussion, so the author tried to explore further into other informants of the informant one related to risks related the system, as follows:

"The risk is that if the data given at the time of proof is not appropriate later it can be aborted by the provider, he submits his experience. For example, his experience there are 10 it turns out that there are only 5 that can be proven, it can be killed, the risk is that if for example at the time of uploading not all can be uploaded, especially since we just upgraded from 4.4 to 4.5 yesterday there was a problem when one of the providers wanted to upload the experience that could be uploaded only partly, it can't show up all so automatically later it can be less valuation anyway, related risks also occur such as the provider not receiving notifications of requests for goods from the system."

The risks described by the first informant relate to providers who want to upload their experiences and that can be uploaded only as a result of which the file is only partially read, the assessment to be selected as this provider is reduced and sometimes the provider also does not receive notification of requests for goods from its system. Improper functioning of this system may be detrimental to the parties involved. The first informant expression related to the change of the system from version 4.4 to version 4.5 was also discussed by the second informant.

The process of procurement of goods or services with the e-procurement system is expected to be able to bring benefits to its users such as the realization of transparency and better procurement efficiency, but in its implementation it certainly does not have perfection. Based on the results and explanation of the interview text above, the author found that the risks in implementing e-procurement can also occur due to the functioning of the system not in accordance with the wishes of users, this is obtained from the informant's expression related to improper uploading of the system which can harm the parties involved in procurement.

3.3 Difficulty to Use and Understand Electronic Procurement Applications

This risk relates to the ability of the committee and providers related to the system being run. The committee or buyers are the agencies that organize the implementation of eprocurement. Vendors or providers of goods/services, this party will later be selected by the provider and determined who passes to follow the tender process and establish a contract with the government.

The implementation of the e-procurement system in all local governments in terms of handling the procurement of goods and services is based on internet technology, however, the application of this system to all local governments has considered the readiness factor of local governments to be able to develop and use this system to the fullest. One of the things that is very important to see the success or failure of a system applied to agencies (local governments) is the readiness of resources that will manage and run the system. Regarding this matter, the author tries to dig up information about the readiness of the procurement committee for goods and services related to the implementation of this e-procurement system, the second informant also explained as follows:

"The maximum is not well, because this is the case, this system always has updates from 2010 version 3.4 continued to be updated until now the SPSE is already in version 4.5, the city of Palu is the first to implement the latest version 4.5 compared to other regions still the maximum version 4.4 well in Central Sulawesi, so if you haven't, only the perpetrators who use this entry e-procurement we already know all, there are only a few new actors that we educate, meaning that for us users, well understand the process."

The explanation from the second informant emphasized that the procurement committee of goods and services has understood the process but has not understood it optimally because there are always updates to the system. The system changes from version 4.4 to version 4.5 makes it difficult for users to use this application, including providers so that it can be risky in the implementation of the procurement of goods and services, as explained by informant one as follow:

"One of them is that there is a feature that has changed, for example, I said earlier that there are consultants who cannot upload all their experiences after we check there is a way to make it all uploaded, so the way it appears that all the experience pages were first in one form directly saved, if in the past it was still version 4.4 moved to another page whose previous experience could still be saved if this latest version was not, the experience is that if you have moved the page of the previous experience that was not saved, the last experience will be saved. For example, 4 pages then that last page can only be saved, that's why he has to bring up all his pages in one form."

This system update from version 4.4 to version 4.5 certainly undergoes changes and updates to the system which results in difficulty for users to understand the intentions of the latest system. From Pak Wawan's explanation, there are consultants or providers who cannot upload their documents because they do not understand how the system works from this latest version, the error of uploading experiences from this provider can result in their experience documents not being stored completely. Based on the results and explanation of the interview text above so that the author finds that the risks in the use of e-procurement can also occur due to parties involved in electronic procurement of goods, this is difficulty in using and understanding electronic procurement applications, this is obtained from informants' expressions related to system updates which of course have differences from the previous version.

3.4 Control Regarding Server Down

Control is a process whose purpose is to strive for activities to run in accordance with the planning and directed at the set goals and avoid deviations from the goal plan or plan. The risk of problems that most often arise and can hinder the procurement process that takes place, one of which is the server down. Server down is the failure of a system where the server fails which results in the server being inaccessible, this server down is also related to network problems. This kind of risk certainly requires actions or efforts to control or reduce the occurrence of obstacles or risks related to the procurement of goods and services.

The information obtained regarding the server down problem has been explained that planning has been carried out in purchasing devices, this is also supported by the spending budget and costs for internet service activities from local governments. If it is related to the use of local networks, the government has collaborated with qualified providers who can respond quickly to problems that occur so that the obstructed procurement process can be handled immediately. This provider is a company engaged in providing internet connection services or other interconnected services. Furthermore, researchers are trying to dig up information related to this investigation effort that has been supported by local governments themselves regarding the risks of their systems regarding what kind of anticipation is being carried out. The second informant gave a response related to this, namely:

"In anticipation of bad things happening, we already have a planning process, then the selection of the device has a planning process, where it is placed, the room, what must be needed so that the device is durable, we have prepared everything, it is to minimize the risk of device damage well, that we already have for the server room is here, well the maximum is not yet but it is standard according to what is requested by the user related to this. LKPP will regulate all of this anyway, there is an SOP"

The anticipatory efforts made by the government are also from the planning process, selecting the device, placing it, what is needed so that the device can be durable to minimize the risk of device damage. The expression from Mr. Alamsyah is also almost the same as informan one expression related to efforts to control risks or forge down or network servers, as follows:

"For example, for internet connection problems, we communicate with parties, we have a partner's bandwidth, right, right for that, if for example there is a problem or a problem, we directly contact the technician team to check if for example there is such a problem, the technical team who immediately comes down here to check" The information obtained regarding control efforts related to this risk also confirms that there is a partner or team of technicians who can check immediately what kind of obstacles occur related to internet interference or problems. This control effort was also emphasized by the third informant related to electricity which resulted in a server down, as follows:

"For servers that often go down ourselves, we have a fairly large UPS, there are 3 units for backup electricity for approximately 6 h because we are also in this office, there is its own generator so for the process it is when the lights turn off directly in the backup by the UPS. Meanwhile, if for the network we directly contact the technical team if there are obstacles, usually it is a disturbance also if for example the network down cannot be accessed the application it can affect the process of procurement of goods and services as well, so if possible the response should not be long because it also interferes with the schedule for the implementation of the procurement of goods and services, especially in tenders."

The existence of a generator provided to back up electrical problems if the procurement is ongoing and the electricity goes out, it can be backed up directly by the UPS so that it does not interfere with the implementation of the procurement of goods and services. For the network itself, the technician team must provide a quick response because otherwise it can interfere with the schedule for the implementation of the procurement of goods and services, especially in tenders.

3.5 Control Regarding the Functioning of the System is not in Accordance with the Wishes of the User

Services using this web or electronic base have advantages such as effectiveness, efficiency, lower waste rate and relative to other distribution technologies, using this system can build transparent and open. The application of e-procurement certainly requires technology to support the implementation of the e-procurement system to the fullest. Needs a computer as the main tool in running the system and good internet network quality, because all procurement-related data must be uploaded on the LPSE website. Regarding the risks that usually occur regarding the functioning of the system not in accordance with the wishes expected of users regarding providers who experience problems such as systems that cannot upload data, corrupted files and so as to make the author interested in knowing how to control efforts related to this risk.

The information obtained is that if there is a risk or obstacle from the provider or PPK, the procurement committee can contact the LPSE helpdesk to find a solution, if there are difficulties, the LPSE makes a submission to the LKPP for further action regarding the risks or obstacles that occur. This is an effort to control so that the procurement process can run as it should. If the procurement process is ongoing and there are risks and obstacles in the process, the initial electronic procurement is transferred to the manual, this control effort is carried out so that the process is not hampered and continues to run as it should while the provider also submits an application for the repair of inaccessible accounts.

The information obtained from this informant is very supportive regarding efforts to control the risks that occur in the field. LPSE provides a helpdesk to get a solution to the

system functions not in accordance with the wishes of the user. This is a challenge for the government, both the central government as a policy maker and regulator in using the e-procurement system and local governments as implementers and managers of the successful implementation of this e-procurement system to the maximum.

The system update from version 4.4 to version 4.5 has certainly undergone a slight change and the addition of the latest features, one of which is the security feature for provider accounts that can connect to the SPSE authenticator application, this is an effort by the government to overcome and avoid other risky things. The central government must continue to pay attention to and control the capacity of the system that has been required for all local government agencies to use the e-procurement system in order for the procurement of goods and services to run as expected.

3.6 Control for the Risk of Difficulties in Using and Understanding E-Procurement

The change in the procurement system of goods and services from the old way to the electronic procurement system to all local governments must certainly consider the readiness of local governments themselves to be able to use and develop the eprocurement system to the fullest. This is very important because it is to determine the success or failure of a new system applied to agencies (especially local government agencies), one of which is the readiness of resources that will run and manage the system. The risks associated with these resources are very important and need special attention from the government. Therefore, it is necessary to hold training to increase understanding and competence in supporting the application of e-procurement related to the procurement system of goods and services involved in it.

The second informant expression is a form of complex explanation from previous interviews, the informant explained about the system updates carried out to increase the use of e-procurement in Palu city to be a risk for the actors who use it and explained about the efforts of the government in anticipating these related risks with training from the central government through existing portals and accessible to the public, however, from the LKPP itself, there has been no direct training because it is constrained by the pandemic.

An affirmation by the second informant from the previous expression, related to the government's efforts to educate actors involved in the process of procurement of goods and services electronically through LKPP portals which are distributed through his you tube channel which can be accessed by the public so for the method of implementation in the media there is already live application in one's own area. Information obtained from the second informant regarding the existence of technical guidance that has been carried out regarding increasing the capacity of the procurement apparatus for goods and services that are more directed to PPK (Commitment Making Officer) and has planned to hold technical guidance for providers related to provider procedures for participating in the procurement of goods and services electronically.

The information system consists of five main sources: people, hardware, software, data and networks. There are two types of human resources that interact in e-procurement, namely procurement committees/working groups and service providers. Information obtained from informants that the importance of conducting socialization and training

on e-procurement for service providers and human resources involved in the implementation of e-procurement, in addition, the government has gradually planned to hold technical guidance and assistance in the implementation of e-procurement as well as carry out socialization about the procurement of goods or services and LPSE in its services conducts e-procurement training. The competencies of government officials related to the e-procurement system is the key to success in implementing e-procurement.

3.7 The Risk in E-Procurement

Risk is defined as the impact of uncertainty that results in vulnerability to losses, objectives and measurable uncertainty to an outcome, be it a positive or negative impact, where it is expressed in likelihood. An event is not considered a risk to the procurement process in a context unless it impacts the purpose of the procurement. Ensure that procurement objectives are aligned with broader e-procurement goals. Planning to deal with or modify risks to achieve an acceptable level of risk and implement them. Track, monitor, and assess risks to ensure the risk level is within acceptable limits. The risk of an Electronic Procurement System (SPSE) is something that can interfere with the implementation of ongoing procurement, this risk can threaten file damage, uploading failed documents and process failures in e-procurement applications.

The results of the meaning of several findings from research on meaning are related to the risks of electronic procurement systems. The application of e-procurement in the Palu city government provides an illustration that the meaning of implementing this electronic procurement system is still often obstacles, causing server risks that often go down, system functions are not in accordance with the wishes expected by users, difficulty to use and understand electronic procurement applications.

The purpose of implementing e-procurement in the Palu city government certainly expects smoothness in the process and is made to be more efficient in the procurement process. A good system must certainly be supported by maximum technological facilities so that a system can run well. In any application of an electronic system to any process it must have a certain impact. Server down is a common problem that can occur considering that the use of technology does not escape from system problems both related to the network to problems such as power outages.

The next risk related to the functioning of the system is not in accordance with the wishes expected by the user, the use of the system certainly expects something to be more effective, efficient and so on, with all the advantages of using the system certainly not spared from the weaknesses that will arise. The e-procurement application system certainly has an important role in the procurement of goods and services. This activity also really requires the full readiness of information technology and the devices that support it. As stated by Ramli [7] and Jogiiyanto [8] that what is known along with this information is important for management in making decisions from information systems (*information systems*) can be obtained information or in other words *processing systems* or *information generating systems* or *information processing systems*. The electronic procurement system is a risk if it does not run well, especially in the Palu City LPSE because basically this system has a role in overcoming problems in a program as stated by Adrianto [6], Jogiiyanto [8], and Mokoginta, *et al.* [9] that an application is a program that is created or made to solve certain problems.

The ability of resources to be able to maximize their ability to manage and maintain the e-procurement system is very important considering that system updates continue to be carried out. The difficulty of using and understanding electronic procurement applications is one of the risks of implementing e-procurement, the lack of knowledge for those directly involved with the electronic procurement process can hinder the ongoing procurement process. A good resource without being followed by advanced and as needed technology will also not be maximized. Vice versa, advanced technology without resources capable of running and managing technology will also not be optimal in achieving its goals.

3.8 The Meaning of Control Over Risk in the Application of E-Procurement

Control aims to plan and reduce the impact of problems arising from risks. Risk management is a shared responsibility and procurement managers have a very important role in overcoming the occurrence of risks (control). Risk management should not be an expectation that something inappropriate will happen, but rather to prepare for the possibility of something inappropriate to happen. Identify risks by recognizing, discovering, and describing risks that could potentially hinder the achievement of procurement, employment or organizational objectives. Identify instruments and techniques that can help identify from risk assessment, clearly describe risks in terms of their degree of likelihood and impact in procurement decision making, participate in risk management discussions.

The results of the meaning of some findings from research on meaning related to controlling the risks of electronic procurement systems (SPSE) in the application of e-procurement will be described as the synthesis. The results of several findings derived from the opinions of officials of the electronic procurement agency (LPSE) related to the risk control of the electronic procurement system (SPSE) in the application of e-procurement in the Palu city government provide an illustration that the meaning of control is an effort to minimize the occurrence of risks in the procurement of goods and services electronically, control is created because there is something that needs to be controlled. It needs to be controlled because there is something uncertain and causes not to be sure something is going according to expectations. The government (LPSE) interprets procurement simply as a control tool against risks in the procurement process sourced from the procurement system electronically.

Actions or efforts of the government (LPSE) in controlling or reducing the occurrence of server downs by planning the purchase of devices, collaborating with a team of technicians or providers engaged in internet connection services that can respond quickly to problems related to obstructed procurement. For electrical problems itself, LPSE provides a generator even though the efforts made only last up to 6 h which can back up if there is a power outage so that it does not interfere with the procurement process that takes place.

The risks regarding the functioning of the system are not in accordance with the wishes expected by the user, in this context the control carried out by the LPSE by making a submission to the LKPP for further action regarding the obstacles faced until there is a solution given no earlier than 2–3 days and no later than 1 week. For risks related to the provider regarding this system, the LPSE provides a helpdesk that functions to

serve and handle complaints or problems from the provider's system, if indeed the LPSE cannot solve the problem, it can apply to the LKPP. Another solution if the procurement process is ongoing and there are risks and obstacles in the process, then initially from electronic procurement is transferred to the manual of control efforts so that the process is not hampered and continues to run as it should.

Risks related to difficulties in using and understanding e-procurement applications, risks related to these resources are very important and need special attention from the government in this case the government's control and efforts are to conduct training for parties directly involved in the procurement process. The spse update from version 4.4 to version 4.5 makes it difficult for the procurement apparatus to operate this latest system. Training from the central government is distributed through existing portals that can be accessed by the public, educating the actors involved through LKPP portals which are distributed through its YouTube channel, technical guidance that has been carried out related to increasing the capacity of the procurement apparatus for goods and services to PPK (Commitment Making Officers), further efforts have been planned for SPSE technical guidance for providers, operators in OPD (regional device organizations), and KDP related to the procedures for providers to participate in the procurement of goods and services electronically, especially the latest SPSE version 4.4.

A good system must certainly also be followed by maximum technological facilities and can support the running of the system properly. This training aims to enable those who will act in this procurement to understand the procurement implementation system through the latest SPSE version 4.5 and play a more active role more specifically regarding contract control which is part of mitigating the risks of implementing electronic procurement of goods and services. Basically, these two things between resources and technology are a whole that is interrelated.

4 Conclusion

The information obtained from informants interprets risk as an obstacle that can hinder the procurement process and its emergence is unexpected, the meaning of risk is also as an evaluation material to be able to learn how attitudes and efforts in controlling existing risks so that in the future this system can be improved even better.

Control is carried out to minimize the occurrence of risks to the procurement of goods and services electronically. The government (LPSE) interprets procurement simply as a control tool against risks in the procurement process sourced from the procurement system electronically.

References

- 1. I. Bastian, Akuntansi Sektor Publik: Suatu Pengantar, Jakarta: Erlangga, 2010.
- F. Zahra, M. I. Abdullah, A. Kahar, M. Din and N. Nurfallah, "Preventing procurement fraud in e-purchashing for indonesian local governments," *The journal of Asian Finance, Economics, and Business*, vol. 8, no. 2, p. 505_511, 2021.
- F. Zahra, A. Rohman, A. Chariri and F. & Karim, "Does E-procurement Solve Indonesia Local Governement Budgetary Slack Through IT Adaptive Culture?.," *International Journal* of Civil Engineering and Technology, vol. 8, no. 8, pp. 1001–1010, 2017.

- F. Zahra, et al, "The role of e-purchasing in government procurement fraud detection through expanding market access," *International Journal of Data and Network Science*, vol. 6, no. 1, pp. 179–184, 2022.
- S. Adrian, Aspek Hukum Pengadaan dan berbagai permasalahannya, Jakarta: Sinar Grafika, 2016.
- 6. N. Adrianto, Transparansi Dan Akuntabilitas Publik Melalui e-Government., Malang: Banyumedia Publishing, 2007.
- S. Ramli, Bacaan Wajib Para Praktisi Pengadaan Barang/Jasa Pemerintah., Jakarta: Visimedia, 2013.
- 8. H. Jogiiyanto, Sistem Teknologi Informasi: Pendekatan Terintegrasi: Konsep Dasar, Teknologi, Aplikasi, Pengembangan Dan Pengelolaan., Yogyakarta: Andi Offset, 2005.
- 9. R. Mokoginta, K. Herman and M. Hendrik, "Analysis of the Implementation of E-Procurement Policies in the Procurement of Goods/Services at Kotamobagu City Government.," *Jurnal riset akuntansi dan auditing "goodwill"*, vol. 8, no. 2, pp. 343–354, 2017.
- E. Napitupulu, "PENERAPAN E-PROCUREMENT DALAM LAYANAN PENGADAAN BARANG DAN JASA (Studi : Kantor Layanan Pengadaan Secara Elektronik (LPSE) KAB. TOBA SAMOSIR), jakarta, 2017, pp. 1–80.

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (http://creativecommons.org/licenses/by-nc/4.0/), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

