Analysis of Electronic Procurement of Goods and Services in Central Mamuju Regency Government

Muhammad Aswar, Ansar and Hendra Gunawan
Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Indonesia
ansar.akkas@gmail.com, ansar@stieamkop.ac.id, hendramanajemen@gmail.com

Lina Marlina
Politeknik Triguna, Tasikmalaya, Indonesia
marlinatsm@gmail.com

Chairun Nasirin
College of Health Sciences (STIKES), Mataram, Indonesia
chairun.nasirin@stikes-mataram.ac.id

Andries Lionardo
University of Sriwijaya, Palembang, Indonesia
andrieslionardo@fisip.unsri.ac.id

Muhamad Chairul Basrun Umanailo
Universitas Iqra Buru
chairulbasrun@gmail.com

Abstract

This study aims to (1) analyze the influence of transparency and accountability factors on Effectiveness in the Government of Central Mamuju Regency; (2) to analyze the influence of transparency and accountability factors on the procurement of goods and services electronically in the District Government of Central Mamuju; (3) analyze the effect of effectiveness on the procurement of goods and services electronically in the Government of Central Mamuju Regency; (4) to analyze the influence of transparency and accountability factors on the procurement of goods and services electronically through effectiveness in the Government of Central Mamuju Regency. This research was conducted at the Government of Central Mamuju Regency. The sample used the purposive sampling method, which was 100 respondents in the District Government of Central Mamuju. The data collection method used is direct interviews with the parties involved with the problem being discussed and questionnaires to employees related to the procurement of goods and services electronically following the research conducted. Data analysis was performed using descriptive analysis and path analysis. The results of the study show that (1) transparency and accountability factors influence effectiveness in the Government of Central Mamuju Regency; (2) transparency and accountability factors affect the procurement of goods and services electronically in the District Government of Central Mamuju; (3) effectiveness in influencing the procurement of goods and services electronically in the Government of Central Mamuju Regency; (4) transparency and accountability factors affect the procurement of goods and services electronically through effectiveness in the Government of Central Mamuju Regency.

Keywords
Transparency Factor, Accountability Factor, Effectiveness and Electronic Procurement of Goods and Services

1. Introduction

Reforms in the field of procurement of goods/services aim to create good governance and clean government. Excellent and clean command in all aspects is related to the control and supervision of the power owned by the government in

© IEOM Society International
Procurement of goods and services electronically or e-procurement can be interpreted as an application for implementing auctions on the procurement of goods and services electronically by utilizing internet-based information technology. In this e-procurement application, the entire auction process is raised starting from the announcement, bidding, selection until the announcement of the winner of the auction online. The final mission of implementing e-procurement is the procurement of goods and services in government and how to utilize information technology so as not to waste a lot of time and costs (Ilyas et al. 2021).

E-procurement has the primary function of guaranteeing the procurement process of government goods/services according to applicable procedures and regulations. E-procurement is the procurement of goods/services carried out using information technology and electronic transactions by the provisions of the legislation. E-procurement is done in 2 (two) ways, namely electronic tendering (e-tendering) and electronic purchasing (e-purchasing). E-tendering or electronic bidding is the procedure of selecting a provider of goods/services conducted openly and can be followed by all Providers of goods/services registered in the procurement system electronically by submitting 1 (one) offer within a predetermined time. E-purchasing or electronic purchasing is the procedure for purchasing goods/services through an electronic catalog system.

Theoretically, the procurement of goods/services electronically more advantages than manually both by users and providers of goods/services. However, often theoretically sound instruments, in their implementation are not so. E-procurement still has weaknesses and obstacles in its implementation, such as lack of financial support. Some agencies and service providers are more comfortable with conventional systems, lack of support from top management, lack of skills and knowledge about e-procurement, and security guarantees of the system.

This is in line with several studies related to implementing electronic procurement of goods and services (e-procurement) in some areas, among others. Mashuri (2018), in the results of the study, shows that there are still less transparent services such as access to detailed data on the evaluation of offers and detailed reasons in determining the selection of winners and human resource factors shown by the lack of character or mental attitude of service personnel (Mashuri 2018; Nath et al. 2021; Suharyanto et al. 2021). Then research from Wijayanti and Subowo (2016) that the inhibitory factor of e-procurement policy in realizing good governance is the quantity and quality of employees in LPSE (Wijayanti and Subowo 2016). It is still limited, a very high level of negligence in passwords and other confidentiality keys by users mainly by the Provider of Goods / Services. Furthermore, e-procurement is running less effectively because one's goal has not been achieved. It is, namely, increased healthy business competition, where there are still indications of opportunities to flirt with the provider. These indications are one of the factors that reduce the effectiveness of e-procurement implementation. Then research from Sawidar et al. (2018) concludes the influence of procurement of government goods / services on e-procurement of budget absorption in ulp Sabang City, which influences transparency and accountability and information access factors (Sawidar et al. 2018).

Based on the background of the problem and identification of the problem, then it can be formulated issues in this study: transparency factor and accountability factor affect the procurement of goods and services electronically through effectiveness in the Central Mamuju Regency Government?

2. Literature Review

Transparency is a matter of openness to procedures to carry out an activity or the organization's primary function. This transparency has a transparent element of the order of work and uniformity in handling repetitive organizational transactions. Sutarto in that one of the effectiveness factors is an internal factor that there are essential principles in internal factors, one of which is flexibility. In this situation, the organizational structure is easily changed to suit the demands and needs that come from the corporate environment. Thus, it can be said that there is an influence between transparency factors to effectiveness (Yusuf et al.; Djibu et al.; Apriyanto and Umanailo). Research conducted by Dinar also supports the conceptual framework on the impact of transparency factors on effectiveness. The study's findings show a positive influence between transparency on the procurement of goods and services. Then research
conducted by, from the study results, can be concluded that transparency has a significant impact on effectiveness. Furthermore, research conducted by Ras (2015) from the study results, can be concluded that there is a significant favorable influence between transparency and effectiveness (Ras 2015).

Accountability is a degree that shows the magnitude of the responsibility of the apparatus for the policies and processes of public services implemented by the government bureaucracy. Accountability concerns obligation and the ability to explain something. In this context, if the subject is transparent, then it needs to be adequately accounted for so that clarity is obtained and not doubted. Accountability relates to performance and action. Performance is the overall results, benefits, and impacts of an input processing process to achieve the desired goals. At the same time, the step is an active activity of a person / legal entity / collective leadership to do or not do something. Performance and actions performed concerning the rights and authorities given to a person / legal entity / collective leadership. Research conducted by Ras also supports the conceptual framework on the influence of accountability factors on effectiveness. The findings of the study show that there is a significant favorable influence between accountability to point. Then the research undertaken by Dinar (2020), from the research results, concludes that there is a positive influence between accountability to the effectiveness of procurement of goods and services (Dinar 2020). Further, from the study results, can be concluded that accountability has a significant influence on effectiveness.

Bahagia (2006), in principle, procurement is an activity to obtain goods or services in a transparent, effective, and efficient manner according to the needs and desires of its users (Bahagia). Transparency means that all provisions and information on the procurement of goods/services are transparent and widely known by interested providers of goods/services and by the public in general. A transparent process at every stage of procurement of goods/services will create an effective public surveillance system to the process and performance of procurement implementers to minimize the emergence of suspicions from the public that the procurement implementation process is carried out in a manipulative manner. Through transparent procurement, principles are expected to encourage healthy and competitive competition in selecting providers of goods/services. The preferred providers of goods/services are the most qualified to carry out the work. The goods here include equipment and buildings, both for the public and private interests. The conceptual framework on the influence of transparency factors on the procurement of goods and services electronically is also supported by research. The study's findings showed that transparency in the procurement of goods and services by government agencies had been successfully realized. Then the research conducted by Waruwu (2017), from the research results, concludes that the implementation of the policy of procurement of goods and services electronically (e-procurement) has been realized in transparency (Waruwu). Furthermore, research conducted by Mashuri (2018), from the research results, can be concluded that in general has shown the service of procurement of goods and services electronically quite transparent according to the system (Mashuri 2018).

The advantages of using the procurement of goods and services electronically or e-procurement are transparency, accountability, open and efficiency because anyone can access it. Accountability means it must comply with the rules and regulations related to the procurement of goods/services to be accounted for. Accountability is the accountability of the procurement of goods/services to the relevant parties and the public based on ethics, norms, and regulations. According to Kumorotomo (2007), accountability is a measure that shows whether public bureaucratic activities or services carried out by the government follow the norms and values embraced and whether the public service can accommodate the needs of the real people (Kumorotomo 2007). The conceptual framework on the influence of accountability factors on the procurement of goods and services electronically is also supported by research. The study's findings show that the achievement of public accountability in the application of e-procurement in government agencies, in general, is running well. Then the research conducted by Novitaningrum (2014), from the research results, concluded that transparency in the procurement of goods and services by government agencies had been successfully realized (Novitaningrum). Furthermore, research conducted by Waruwu (2017), from the research results, can be concluded that the implementation of electronic procurement policies(e-procurement) has been implemented in accountability (Waruwu 2017; Mu’adi et al. 2020).

The implementation of e-procurement is expected to realize the efficiency and effectiveness of the procurement process. This will be achieved if the procurement process of goods/services occurs transparently and follows by many procurement participants and put forward a healthy competition process (Mayang, 2014). The conceptual framework on the effect of procurement effectiveness of goods and services electronically is also supported by research. The study's findings show that the point of procurement of goods and services electronically (e-procurement) gives positive results to realizing a healthy procurement process of goods/services. Then the research conducted by Susilawati (2020), from the research results, concludes that the implementation of an e-procurement system in Electronic
Procurement Services (LPSE) can be said to be quite effective (Susilawati). Furthermore, Untari's (2019) research, from the research results, can be concluded that, in general, the implementation of e-procurement in Electronic Procurement Services (LPSE) runs effectively (Untari 2019).

According to Presidential Regulation No.54 of 2010, the procurement of government goods/services electronically (e-procurement) has a principle that one of them is transparency, a transparent process at each stage of procurement of goods/services (Rahmat et al. 2019; Muharlissiani et al.2019; Rumaolat et al 2019; Hallatu et al. 2019). It will create an effective public surveillance system for procurement executives' processes and performances to minimize the emergence of suspicions from the public that the procurement implementation process is carried out manipulatively. Thus, the transparency factor accompanied by effectiveness will increase the procurement of goods and services electronically.

The advantages of using the procurement of goods and services electronically or e-procurement are transparency, accountability, open and efficiency because anyone can access it. Responsibility means it must comply with the rules and regulations related to the procurement of goods/services to be accounted for. Accountability is a degree that shows the magnitude of the responsibility of the apparatus for the policies and processes of public services implemented by the government bureaucracy. Accountability concerns obligation and the ability to explain something. Thus, the accountability factor accompanied by effectiveness will increase the procurement of goods and services electronically.

3. Methods

The design in this study uses the quantitative research method because the research data in the form of figures and analysis using static and focus on hypothesis testing (Sugiyono, 2016). The quantitative approach aims to measure data and apply statistical analysis to analyze data. Another characteristic of quantitative methods is a large number of samples, and the way structured data is retrieved. The population in this study is all employees related to the procurement of goods and services electronically in the Central Mamuju Regency Government, with a total research population of 100 people. The entire population is sampled by 100 respondents who will be distributed questionnaires as a data collection tool that is then processed with SPSS software.

3.1 Variable Measurement

Regarding the measurement scale in the preparation of questionnaires, researchers used the Likert scale, which is a closed question that measures attitudes from negative to positive levels. With the Likert Scale, the variable to be measured is described as a variable indicator. Then the indicator is used as a starting point to compile instrument items that can be in the form of statements or questions (Sugiyono, 2016). In this study, a 5 (five) level Likert scale was used, where 5 (five) alternative answers were given the following weights: 1. Score 5 for a Strongly Agreeable answer; 2). Score 4 for answer Agree; 3). Score 3 for Neutral answer; 4). Score 2 for the answer Disagree; and 5). Score 1 for the answer strongly disagrees.

The transparency factor is defined as all provisions and information on the procurement of goods/services that are clear and widely known by interested providers of goods/services and the public. According to Presidential Regulation No.54 of 2010, indicators of transparency factors are: (1) the same information; (2) location; (3) legislation; (4) the committee may be contacted and (5) contract details.

Accountability factors are defined as factors that must be by the rules and regulations related to the procurement of goods/services to be accounted for. According to Presidential Regulation No.54 of 2010, indicators of accountability factors are: (1) available in the system; (2) open on the application; (3) simple; (4) encryption/encoding and (5) by the regulations.

Effectiveness is defined as a measure that states how far the target has been achieved by employees whose mark has been predetermined. According to Siagian (2010), effectiveness indicators are (1) clarity of objectives to be achieved; (2) careful planning; (3) proper preparation of the program; (4) the availability of work facilities and infrastructure and (5) effective and efficient implementation.

Procurement of goods and services electronically is defined as the efforts of the government to obtain the desired goods/services using methods, processes by the provisions to reach an agreement on the price, time, and quality of
goods/services. According to Presidential Regulation No.54 of 2010, indicators of electronic procurement of goods and services are: (1) transparent; (2) accountable; (3) open; (4) compete and (5) fair/non-discriminatory.

4. Results
4.1. Equation Results of Path Analysis and Hypothesis Test
Test results with the method of path analysis through the help of the SPSS program, then obtained the equation of analysis of each path as follows (Table 1).

<table>
<thead>
<tr>
<th>Table 1. Result of Path Analysis Sub-structure 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Coefficients</strong>a</td>
</tr>
<tr>
<td><strong>Model</strong></td>
</tr>
<tr>
<td>(Constant)</td>
</tr>
<tr>
<td>Transparency Factor (X1)</td>
</tr>
<tr>
<td>Accountability Factor (X2)</td>
</tr>
<tr>
<td>a. Dependent Variable: Effectivity (Y1)</td>
</tr>
</tbody>
</table>

Based on table 1, it can be notified structural equations of line 1, namely: \( Y_1 = 4.306 + 0.238 \times X_1 + 0.549 \times X_2 + 0.770 \). The value of the Beta coefficient (Standardized Coefficient Beta column) influence of the representative transparency factor on effectiveness \((X1→Y1)\) is 0.238, indicating that if the value of the transparency factor increases by 1 point, then the effectiveness value increases will increase by 0.238. The value of the Beta coefficient (Standardized Coefficient Beta column) influence of representative accountability factors on effectiveness \((X2→Y1)\) is 0.549, indicating that if the value of accountability factor increases by 1, then the effectiveness value will increase 0.549 (Table 2).

<table>
<thead>
<tr>
<th>Table 2. Result of Path Analysis Sub-structure 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Coefficients</strong>a</td>
</tr>
<tr>
<td><strong>Model</strong></td>
</tr>
<tr>
<td>(Constant)</td>
</tr>
<tr>
<td>Transparency Factor (X1)</td>
</tr>
<tr>
<td>Accountability Factor (X2)</td>
</tr>
<tr>
<td>Effectivity (Y1)</td>
</tr>
<tr>
<td>a. Dependent Variable: Procurement of Goods and Services Electronically (Y2)</td>
</tr>
</tbody>
</table>

Based on Table 2, it can be notified structural equations of line 2, namely: \( Y_2 = 5.222 + 0.342 \times X_1 + 0.286 \times X_2 + 0.381 \times Y_1 + 0.521 \). The value of the Beta coefficient (Standardized Coefficient Beta column) influences the representative transparency factor on the procurement of goods and services electronically \((X1→Y2)\) is 0.342, which indicates that if the value of the transparency factor increases by 1 point, then the value of procurement of goods and services electronically will increase by 0.342. The value of the Beta coefficient (Standardized Coefficient Beta column) influences representative accountability factors on the procurement of goods and services electronically \((X2→Y2)\) is 0.286, which indicates that if the value of accountability factors increases by 1, then the value of procurement of goods and services electronically will increase by 0.286. The value of the Beta coefficient (Standardized Coefficient Beta column) of the effect of representative effectiveness on the procurement of goods and services electronically...
(Y1→Y2) is 0.381, which indicates that if the effectiveness value increases by 1, then the value of procurement of goods and services electronically will increase by 0.381.

Furthermore, to test the influence of the work environment on employee performance through job satisfaction and work motivation in the Office of PU and Spatial Planning Bantaeng, the results of path analysis testing can be seen in the following Figure 1:

Figure 1. Path Analysis Results

The hypothetical test results using the path analysis in Figure 1 to show the direct effect and indirect effect, then the coefficient value is displayed in the Table 3 as follows:

<table>
<thead>
<tr>
<th>Variable Effect</th>
<th>Path coefficient</th>
<th>Coefficient Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct effect of the transparency factor (X1) on effectiveness (Y1)</td>
<td>X1→ Y1</td>
<td>0.238</td>
</tr>
<tr>
<td>Direct effect of accountability factor (X2) on effectiveness (Y1)</td>
<td>X2→ Y1</td>
<td>0.549</td>
</tr>
<tr>
<td>Direct effect of the transparency factor (X1) on the procurement of goods and services by electronics (Y2)</td>
<td>X1 &gt; Y1</td>
<td>0.342</td>
</tr>
<tr>
<td>Direct influence of the accountability factor (X2) on the procurement of goods and services electronically (Y2)</td>
<td>X2→ Y2</td>
<td>0.286</td>
</tr>
<tr>
<td>Direct effect of effectiveness (Y1) on electronic procurement of goods and services (Y2)</td>
<td>Y1-Y2</td>
<td>0.381</td>
</tr>
<tr>
<td>Indirect effect of transparency factor (X1) on procurement of goods and services electronically (Y2) through effectiveness (Y1)</td>
<td>X1-Y1-Y2</td>
<td>0.433</td>
</tr>
<tr>
<td>Indirect effect of accountability factor (X2) towards the procurement of electronic goods and services (Y2) through effectiveness (Y1)</td>
<td>X2-Y1-Y2</td>
<td>0.495</td>
</tr>
<tr>
<td>Effect of the total transparency factor (X1) on procurement of goods and services electronically (Y2)</td>
<td>X1→ Y2</td>
<td>0.342+0.433=0.775</td>
</tr>
<tr>
<td>Effect of total accountability factor (X2) on procurement of goods and services electronically (Y2)</td>
<td>X2→ Y2</td>
<td>0.286+0.495=0.781</td>
</tr>
<tr>
<td>Effect of total effectiveness (Y1) on procurement of goods and services electronically (Y2)</td>
<td>Y1→ Y2</td>
<td>0.381</td>
</tr>
<tr>
<td>e1</td>
<td>0.770</td>
<td></td>
</tr>
<tr>
<td>e2</td>
<td>0.521</td>
<td></td>
</tr>
</tbody>
</table>

Source: Appendix Computing Results, 2021
Based on Table 3, the hypothesis testing in this study is described as follows: The beta coefficient of influence of transparency factor (X1) on effectiveness (Y1) of 0.238 is with a significance value of 0.004 or below 0.05. Beta coefficients also show that the transparency factor (X1) effect on effectiveness (Y1) is positive. This means that the transparency factor (X1) positively and significantly impacts effectiveness (Y1). Thus hypothesis 1, which affirms the transparency factor affects effectiveness in the Central Mamuju Regency Government, is accepted.

The beta coefficient of the effect of accountability factor (X2) on effectiveness (Y1) of 0.549 is a significance value of 0.000 or below 0.05. Beta coefficients also showed the impact of the accountability factor (X2) on effectiveness (Y1) was positive. This means that the accountability factor (X2) positively and significantly affects effectiveness (Y1). Thus hypothesis 2, which states that accountability factors positively affect effectiveness in the Central Mamuju Regency Government, is accepted.

The beta coefficient of influence of transparency factor (X1) on electronic procurement of goods and services (Y2) amounted to 0.342 with a significance value of 0.000 or below 0.05. Beta coefficients also show that the influence of the transparency factor (X1) on the procurement of goods and services electronically (Y2) is positive. This means that the transparency factor (X1) has a positive and significant effect on the electronic procurement of goods and services (Y2). Thus, hypothesis 3 affirms the transparency factor affecting the procurement of goods and services electronically in the Central Mamuju Regency Government.

The beta coefficient of accountability factor (X2) on electronic procurement of goods and services (Y2) amounted to 0.286 with a significance value of 0.001 or below 0.05. Beta coefficients also show the influence of accountability factors (X2) on the procurement of goods and services electronically (Y2) of positive value. This means that the accountability factor (X2) has a positive and significant effect on the electronic procurement of goods and services (Y2). Thus hypothesis 4, which affirms the accountability factor affects the procurement of goods and services electronically in the Central Mamuju Regency Government, accepted.

The beta coefficient of effectiveness (Y1) on the procurement (Y2) is amounted to 0.381 with a significance value of 0.000 or below 0.05. Beta coefficients also show the effect of effectiveness (Y1) on the procurement of goods and services electronically (Y2) is positive. This means that the effectiveness (Y1) positively affects the procurement of goods and services electronically (Y2). Thus hypothesis 5, which states the effectiveness of positively impacting the procurement of goods and services electronically in the Central Mamuju Regency Government, is accepted.

If the t value of this calculation is compared to the t-table value, if the t value count is greater than the t-table value, then it can be concluded that there is an influence mediation. Based on the Sobel test, the calculated t value of the indirect effect accountability factor (X2) to the procurement of goods and services electronically (Y2) through effectiveness (Y1) is 5,603, and greater than t table = 1,660.

The significant value of the indirect influence of accountability factor (X2) on the procurement of goods and services electronically (Y2) through effectiveness (Y1) is by the multiplication of the beta value of the coefficient of accountability factor (X2) on energy (Y1). It is 0.549 with the value of the beta coefficient of effectiveness (Y1) on the procurement of goods and services electronically (Y2), namely 0.381, plus / summed with the beta value of the coefficient of accountability factor (X2) to the procurement of goods and services electronically (Y2) namely 0.286, formulated mathematically, namely (0.549 X 0.381) + 0.286 = 0.495. Thus, the immense value of indirect accountability factor (X2) to the procurement of goods and services electronically (Y2) through effectiveness (Y1) is 0.495. Thus, hypothesis 7 states that accountability factors positively affect the procurement of goods and services electronically through effectiveness in the Central Mamuju Regency Government.

5. Conclusion
Based on the research results and discussion in the previous chapter related to the influence of transparency factors, accountability factors, and effectiveness on the procurement of goods and services electronically. It can be concluded that the transparency factor and accountability factors positively affect the procurement of goods and services electronically through effectiveness in the Central Mamuju Regency Government. Thus, to improve the transparency and accountability of electronic procurement of goods and services in the Central Mamuju Regency Government, transparency factors are needed. It can provide all provisions and information on the procurement of goods/services is clear and widely known by interested providers of goods/services and by the public in general. In addition to the
transparency factor, increased transparency, and accountability of the procurement of goods and services electronically in the Central Mamuju Regency Government are also influenced by accountability factors. With accountability factors, the elements must be by the rules and regulations related to the procurement of goods/services to be accounted for. Then the importance of effectiveness to improve the procurement of goods and services electronically in the Central Mamuju Regency Government because effectiveness is a measure that states how far employees have achieved the target. The target has been determined in advance.

References


Dinar, Rusdian. *Pengaruh Transparansi Dan Akuntabilitas Terhadap Efektivitas Pengadaan Barang Dan Jasa*. 2020


Suharyanto, Agung, et al. *Marginalization Socio Farm Laborers Due to Conversion of Agriculture Land*. 2021


Biographies

Muhammad Aswar is a student at Magister Program of Economic Science of STIE AMKOP, Indonesia. His areas of interest and research include social science and economic. He has published some articles in national journals.

Ansar is a lecturer at Economics Department of STIE AMKOP, Indonesia. His areas of interest and research include economic, management, management human resource. He has published some books and many articles in national and international journals.

Hendra Gunawan is a lecturer at Economics Department of STIE AMKOP, Indonesia. His areas of interest and research include economic, management, management human resource. He has published some books and many articles in national and international journals.

Lina Marlina is a lectuer of Politeknik Triguna, Tasikmalaya, Indonesia. Her areas of interest and research include social science, economic, accounting, and management. She has published some articles in national and international journals.

Chairun Nasirin is a lecturer and researcher at STIKES Mataram, College of Health Sciences, Indonesia. Some of his research is related to health administration and health policy. His research interests include health administration, community nursing, empowerment, health policy, and public health.

Andries Lionardo is a lecturer and researcher at the faculty of social and political studies, University of Sriwijaya, Palembang, Indonesia. Some of his research is related to public administration and public policy. His research interests include good government, public service quality, local government accountability, and public budgeting.