

Price Analysis of Tender For Printing And Delivery of High School Diploma

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Abstract. Based on observations, the tender price is below 80% of the HPS (Provisional Estimated Price). With the bid price being quite far from the HPS (Provisional Estimated Price), it raises questions about the credibility of the print calculation experts. This study uses a quantitative method, namely analyzing the price disparity of the HPS (Provisional Price Estimate) offering and the price disparity of each company's printing components to the average survey price of printed components. Based on the analysis results, the average supply disparity value is 30.17% and Company C (PT C) has the highest disparity value of 73.41%. A high bid price disparity indicates that the auction is relatively fair and there are no rules in determining bidder prices. The very high disparity in the value of molded components at Company C (PT C) indicates an alleged monopoly on the price of molded components.

Keywords: Government of Procurement of Goods and Services; Security Printing; Tender of Diploma

1 Introduction

Every student who attends education in the education unit, at the end of each level is entitled to a graduate predicate after meeting all the criteria according to the legislation. Diplomas are given to students as an acknowledgment of learning achievement and/or completion of a level of education after passing the examination in the education unit. A diploma is a state document that is valid both inside and outside the territory of the Republic of Indonesia. Therefore, the issuance of diplomas needs to be strictly regulated to avoid counterfeiting. The form and technical specifications of the diploma are regulated every school year with layered security printing. Procurement of goods and services is an effort to fulfill needs to achieve community welfare which must be accounted for. In the context of accountability for the procurement of goods and services, it is necessary to have regulations that can guarantee legal certainty so that the objectives of the implementation of the procurement of goods and services can be carried out properly [1]. The government has made various efforts to regulate and facilitate the implementation of the procurement of government-owned goods/services by issuing various regulations, and the last one is Presidential Regulation No. 12 of 2021 concerning Government Procurement of Goods/Services (PBJP), which is a change from Presidential Regulation Number 16 of 2018 concerning Government Procurement of Goods/Services. In general, electronic procurement can be done in two ways, that is e-tendering and e-purchasing. E-Tendering is the process of procuring goods/services which is followed by providers of goods/services electronically through one-time bidding, while e-purchasing is when users of goods/services simply choose the goods/services they want through an open and transparent electronic catalog [2]. The Government Goods/Services Procurement Policy Institute (LKPP) in the Goods and Services Procurement Audit, has audited 8 aspects: planning, finance, compliance with laws and regulations, fairness of price, the accuracy of quantity, the accuracy of quality, timeliness of implementation of activities, and utilization of results of the implementation of activities [3].

Before the auction, the technical team will calculate the HPS (Provisional Price Estimate) for printing diplomas as a reference or cost information in the Printing and Submission of High School Diploma Forms. From year to year, there is always a fairly high difference between the tender and the HPS (Provisional Price Estimate). Until now, the cause of the high discrepancy between tenders and HPS (Provisional Price Estimate) has not been resolved, which can cause losses to both the community and the state. Therefore this research is very important to do. Based on the causes of the problems that arose, it can be concluded that the SMA (Senior High School) Directorate has also never investigated existing problems. Therefore, this research is proposed to find out what Print Components can cause the difference in tender prices and high HPS (Provisional Price Estimate). Based on previous research on the case study of goods/services procurement within the Kampar Regency Government, specifically on road and bridge work packages, this research can provide information to development actors and stakeholders about the trends and characteristics of price offerings which can be used as an initial indication of irregularities. in the process of procurement of government goods/services [4].

In calculating the cost of printing production, some specialized experts are asked for help to calculate the cost of producing the print. Due to the lack of people who can calculate printing production costs, this research will produce application products for printing calculations and sending diploma forms which will make it easier to calculate printing tenders and send high school diploma blanks for ordinary people, especially for the SMA (Senior High School) Directorate. The results of calculations through this application can be a comparison of the calculation results of experts. It is hoped that this application can be used by interested parties in the process of calculating HPS (Provisional Price Estimate) from the tender for printing and sending high school diploma blanks in the following year.

2 Research Methods

This research was initiated by conducting a review of several literature that could support an analytical approach, including: a review of laws and regulations, regulations, procedures, and procedures for selecting government goods/services procurement, and a statistical study of tender prices. The average and variation bidding method, in which the winner is determined by comparing the bids submitted to their average, runs the risk of selecting an unrealistically low bid due to underestimating costs or the bidder's anticipation of winning more. a lot of money through claims and disputes [5].

2.1 Disparities

This study uses a quantitative method and is designed to be able to know and scientifically explain the characteristics of prices and the disparity of price offerings against HPS (Provisional Price Estimation). The method for analyzing price supply disparities uses a mathematical and statistical approach. In addition, this study was designed to be able to formally explain the order and procedure for carrying out this research. The development of the bidding model is intended to clarify the relationship between variables such as: Budget Ceiling (PA), Estimated Temporary Price/Self-Estimated Price (HPS), and Contractor Bid Price/Penawaran Harga Kontraktor (PHK).

The development of the price model and the relationship between variables is carried out using the following model:

$$\text{Budget Ceiling/Pagu Anggaran (PA): } PA \geq \text{HPS (Provisional Price Estimation)} \quad (1)$$

Contractor Bid Price/Penawaran Harga Kontraktor (PHK)

$$\begin{aligned} &\text{Percentage of Offers Against HPS (Provisional Price Estimation)} \\ &= \frac{\text{PHK}}{\text{HPS}} \times 100\% \end{aligned} \quad (2)$$

$$\begin{aligned} &\text{Disparities between Tenders and HPS (Provisional Price Estimation)} \\ &\frac{\text{HPS} - \text{PHK}}{\text{HPS}} \times 100\% \end{aligned} \quad (3)$$

2.2 Research Operational Variables

Operational research variables are carried out as follows:

- Identification of price variables: Budget Ceiling (PA), Self Estimated Price (HPS), Contractor Bid Price (PHK),
- Calculating the percentage of price quotes against HPS (Provisional Price Estimation),
- Calculating the price disparity of each bid price against HPS (Provisional Price Estimation),
- Calculating the disparity of the price of printed parts to the average price of print parts.

2.3 Document and Location Research

This research uses documents obtained from the Ministry of Education and Culture's LPSE (Electronic Procurement Services) website, namely contractor price offers (PHK) in the 2019 high school diploma printing and delivery tender. Other documents are the price of printed components obtained from the 2019 SMA Directorate survey results for contractors or companies participating in the tender. The data consists of 11 (eleven) printed components that will be used in calculating the production of printed diplomas.

3 Result and Discussion

The results of the evaluation of the price tender proposed by the company to determine the percentage of each bid to the Self Estimated Price (HPS). Based on these values, it can be seen that the price difference (%) for each print component in the offer. The processed data is shown in the table as follows:

Table 1. Percentage and Disparities of Tenders to HPS

Tender Participants In 2019	Contractor Bid Price (PHK)	HPS Price	Percentage of Tenders to HPS (%)	Disparities between tenders and HPS (%)
PT A	Rp. 1,601,312,642.71	Rp. 2,563,902,684.97	62.46 %	37.54 %
PT B	Rp. 1,653,580,383.00	Rp. 2,563,902,684.97	64.49 %	35.51 %
PT C	Rp. 1,578,137,112.27	Rp. 2,563,902,684.97	61.55 %	38.45 %
PT D	Rp. 2,328,255,368.25	Rp. 2,563,902,684.97	90.81 %	9.19 %
Average	Rp. 1,790,321,376.56	Rp. 2,563,902,684.97	69.83 %	30.17 %

Many types and each type consists of several form of potential internal deviation procurement of goods/services based on the process of procurement of goods/services from planning until utilization). One of the most crucial stages in determining the provider of government goods and services (auction) is the process of determining the company that will carry out the work. Based on Presidential Regulation (Perpres) Number 70 of 2012, the ULP Working Group (Procurement Service Unit) proposes the lowest responsive bidder as a potential winner. Given that there is no explanation of the purpose of the offer responsive, then these provisions can be interpreted differently according to the interests of the parties (users and providers of goods/services). As a result, contractors tend to submit bids much lower than the Self-Estimated Price (HPS). Although there are other provisions that bind the offer of a price that tends to be low with the obligation to provide a certain amount of performance guarantee [6].

Many jobs were found with low-price offers resulting in poor quality work, claims, delivery errors, printing errors in the contents/text of diplomas, and exceeding the deadline stipulated in the contract [7]. Effective procurement policies should be designed to procure goods and services at the lowest possible price. Strong competition among companies helps the government achieve this goal [8].

Table 2. Disparity Price of Printed Components Against the Average Price of Print Components in Each Company

Production Components	Average visitation in 2019	% Disparity of PT A component prices against average component prices	% Disparity of PT B Component Prices against the average component prices	% Disparity of PT C Component Prices Against average component prices	% Disparity of PT D component prices against average component prices
Double folio size plate per sheet	Rp 26.955	-141,15%	36,93%	99,98%	4,23%
Border and hidden image printing costs per sheet	Rp 82	-81,83%	-57,59%	93,94%	45,49%
Cost of printing the visible-invisible Garuda black to red logo per sheet	Rp 72	30,91%	-148,74%	72,36%	45,47%
The cost of printing the text of DIPLOMAS and PASS Infrared per sheet	Rp 124	-61,45%	-45,30%	87,89%	18,86%
Numbering Visible - Invisible black to red	Rp 69	71,03%	-160,70%	63,79%	25,87%
Tutwuri invisible blue printing costs per sheet	Rp 116	-72,98%	-55,68%	69,73%	58,93%
Printing costs The outline text of the year of publication is invisible yellow per sheet	Rp 108	-38,56%	-66,27%	44,58%	60,25%
Hot stamping hologram printing costs per sheet	Rp 305	18,09%	-8,12%	31,19%	-41,16%
Perforation numbering code fee and year of issue per sheet	Rp 99	-1,19%	39,29%	49,41%	-87,50%
The price is 1 (one) kilogram of Garuda watermark paper	Rp 26.286	-33,15%	-33,15%	96,90%	-30,59%
Packing per envelope @100 certificates	Rp 3.719	90,59%	63,70%	97,71%	-252,00%
Average		-19,97%	-39,60%	73,41%	-13,83%

The documents in Table 2 provide information that PT C has the highest average disparity value of printing components at 73.41%. The component with the highest disparity value was the printing plate component which was 99.98%, Packaging was 97.71%, the paper was 96.90% and border and imprint printing was 93.94%. Even though the printing plate has the highest percentage of disparity, the printing component that most influences the HPS calculation is the paper price component. The negative value of the disparity in the price of printed components to the average price of printed components is caused by the presence of companies that make component prices more expensive than the average price of existing print components. The best value or the most economically profitable tender model depends on the optimal combination of cost and lifetime quality to meet user requirements. This allows the client to consider criteria that reflect the qualitative, technical, and environmental aspects of the offering and its price. However, this involves more client effort in selecting a set of criteria and their relative importance to achieving the desired effect [9]. A large share of public procurements are found to rely on deficient selection mechanisms [10].

This research resulted in the application of the High School Diploma Print Calculation Information System application on the sikasi.polimedia.ac.id web. The specifications for the High School Diploma Print Calculation Information System application are Framework: Code

Igniter, Database: mysql, and Server: Ubuntu. By inputting component prices and high school diploma specifications, it is hoped that the calculation of the HPS value for this application can be immediately known.

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Fig. 1. High School Diploma Print Calculation Information System application

4. Conclusion

Based on the analysis of the supply disparity to HPS conducted on the Price Analysis of Tender For Printing And Delivery of Senior High School Certificate work, the following conclusions can be drawn The process of selecting providers of goods and services for Printing and Delivery of 2019 High School Certificate can be used as based to study the existence of a monopoly on the price of printing components. The indication can be seen from the average disparity of printing components of companies that have negative disparity values, that is -19.7%, -39.60%, -13.83% at PT A, PT B, and PT D

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