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Analysis of Oligopsony Market Structure and Budget Allocation Efficiency for Educational Infrastructure Procurement at the Education Office of Bukittinggi City

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This study aims to analyze the oligopsony market structure in the educational infrastructure procurement process within the Bukittinggi City Education Office and assess the level of budget allocation efficiency resulting from this market structure. Oligopsony occurs when a large number of buyers (in this case the local government as the sole institutional buyer) are faced with a small number of construction service providers and educational material suppliers who dominate the tender process. This condition has the potential to cause price distortion, low competition, and allocative inefficiency in the use of the Regional Revenue and Expenditure Budget (APBD). The study uses a descriptive qualitative approach supported by secondary data analysis in the form of the General Procurement Plan (RUP) document, the Budget Realization Report (LRA), and the results of interviews with procurement officials and service providers. The results indicate an indication of high service provider concentration in several educational infrastructure procurement packages, characterized by a low number of active tender participants and a tendency for bid prices to approach the budget ceiling (Own Estimated Price/HPS). This oligopsony condition contributes to the suboptimal efficiency of budget allocation, reflected in the relatively small difference in savings (efficiency gain) compared to the established budget ceiling. The study recommends strengthening auction transparency, expanding the provider base through an electronic catalog system, and strengthening independent oversight to encourage better efficiency in allocating the education infrastructure procurement budget.
Keywords: Market Structure, Oligopsony, Budget Allocation Efficiency, Educational Infrastructure Procurement

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1. Introduction

Educational infrastructure development is a top priority for local governments in efforts to improve the quality of educational services and create a safe, comfortable learning environment that supports the achievement of educational goals. Educational infrastructure encompasses not only classroom construction but also laboratories, libraries, sanitation facilities, sports facilities, administrative offices, and various other facilities to support the learning process. The availability of adequate infrastructure is crucial to the quality of public services, as limited facilities can hinder the learning process and reduce the effectiveness of educational services. Therefore, local governments are required to manage fiscal resources effectively and efficiently so that educational development spending can generate optimal benefits for the community.

Bukittinggi City, as one of the educational centers in West Sumatra Province, has a relatively large need for the development and maintenance of educational infrastructure. The local government allocates the Regional Revenue and Expenditure Budget (APBD) to finance various development, rehabilitation, maintenance, and procurement activities for educational facilities. The use of this budget is generally implemented through a government procurement mechanism involving the local government as the party requiring the goods or services and the company as the provider. From an institutional economic

perspective, this relationship is a contractual relationship between the government as the principal and the provider as the agent. Therefore, contract design and competition mechanisms are important to ensure that providers provide quality and prices that are in line with the public interest. McAfee and McMillan (1987) explain that competition mechanisms in government contracts can be used to encourage providers to disclose their costs and capabilities through a competitive bidding process.

The procurement process for educational infrastructure is essentially carried out through a provider selection mechanism regulated in Presidential Regulation Number 16 of 2018 concerning Government Procurement of Goods/Services and its amendments. The tender or open auction mechanism is designed to create healthy competition so that the government can obtain the most advantageous combination of price, quality, technical capability, and timeliness. In conditions of effective competition, the more qualified and independently participating providers, the greater the government's chances of obtaining competitive bids. Spagnolo (2012) shows that competition, provider reputation, and ease of market entry have a significant relationship in shaping procurement market dynamics, especially because restrictions on competition can strengthen repeat relationships between buyers and certain providers.

However, a formally open tender mechanism does not necessarily result in a truly competitive market structure. In procurement practice, conditions can occur where the number of companies that meet the requirements or actively participate in tenders is relatively limited. This situation can be caused by various factors, such as high qualification requirements, limited capacity of local companies, the experience and reputation of suppliers, tender participation costs, limited information, and business relationships established through previous procurements. Coviello, Guglielmo, and Spagnolo (2018) found that increased discretion in supplier selection can increase the likelihood of the same company winning repeated contracts, making the design of the selection process and the level of openness of competition important factors in understanding supplier concentration.

Economically, a market structure with one or a few buyers and a limited number of suppliers can be associated with the concept of oligopsony if market power is dominant on the buyer side. However, in the context of local government procurement, a phenomenon that requires further attention is the possibility of supplier concentration. When only a few companies consistently participate in and win procurement packages, the supplier's bargaining position can become stronger because the government has limited alternative suppliers. Therefore, this study needs to examine not only whether the government is the sole or dominant buyer but also the level of supplier market concentration and the pattern of company wins in tenders.

Limited tender participants can have consequences for the level of price competition. Porter and Zona (1993), through their study of road construction procurement, demonstrated that bidding patterns can be used to identify indications of collusion in the procurement process and that limited participation can be a factor in detecting anticompetitive behavior. Furthermore, Conley and Decarolis (2016) demonstrated that entry patterns and bidding decisions in procurement auctions can be used to detect potential coordination between tender participants. These findings demonstrate that the number of tender participants is not merely an administrative indicator but can be an important indicator in evaluating the level of competition in a procurement market.

Competition issues are also closely related to the price and quality of procurement outcomes. Decarolis (2014) found a relationship between the winning bid price and post-procurement contract performance. While a low bid price can generate savings in the initial stages, these savings can be reduced if renegotiations or problems occur during contract implementation. Therefore, procurement efficiency should not be measured solely by the difference between the estimated price or budget ceiling and the winning

bid price, but should also consider the quality of work, timeliness, contract changes, and the success of achieving development outputs.

In the Indonesian context, Lewis-Faupel, Neggers, Olken, and Pande (2016) found that the implementation of e-procurement in public works procurement in Indonesia and India can improve the quality of the procurement process and open up opportunities for contractors from outside the region. These findings suggest that procurement digitization can be instrumental in expanding market access and reducing information barriers that cause procurement markets to become overly concentrated. Meanwhile, Coviello and Mariniello (2014) showed that increasing the publication of tender information can increase company participation and influence the likelihood of companies winning repeated tenders.

Another issue is the potential for bid rigging. Palguta and Pertold (2017) show that regulatory changes that provide greater leeway to avoid open competition can create opportunities for manipulation in procurement prices and supplier selection. Under certain conditions, supplier concentration, repeated government-company relationships, and a low number of tender participants can create an environment more susceptible to coordinated behavior. Moreover, Bosio, Djankov, Glaeser, and Shleifer (2022) show that the quality of procurement practices is related to the quality of procurement outcomes, while regulatory effectiveness is also influenced by the capacity of government institutions to implement the procurement process.

Furthermore, Coviello, Mariniello, and Spagnolo (2014) demonstrated that the design characteristics and transparency of the procurement process can influence tender participation and outcomes. This demonstrates that regional budget efficiency is inextricably linked to the competitive structure established within the procurement market. A large budget does not necessarily yield optimal benefits if the procurement process faces low competition, high supplier concentration, or the potential for coordination between participants. Therefore, analyzing the procurement market structure is crucial to determine whether the implemented tender mechanism has resulted in effective competition.

Based on the above description, the procurement of educational infrastructure at the Bukittinggi City Education Office is an interesting phenomenon to study empirically. This study attempts to analyze the market structure formed in the educational infrastructure procurement process, the level of provider concentration, patterns of company participation and victory, and their relationship to the efficiency of regional budget allocation. This analysis is expected to provide an overview of the level of competition in the educational procurement market while identifying factors that have the potential to reduce the efficiency of regional budget use. Therefore, the results of this study are expected to provide input for the Bukittinggi City Government to expand the participation of competent providers, increase transparency and openness of tenders, strengthen oversight of unfair bidding patterns, and ensure that every rupiah of the education budget produces optimal infrastructure quality and public benefits.

2. Method

This study uses a qualitative approach with descriptive methods to analyze the oligopsony market structure and budget allocation efficiency in the educational infrastructure procurement process at the Bukittinggi City Education Office. The qualitative approach was chosen because the study focuses not only on the budget size and number of providers, but also seeks to understand the competitive conditions, provider participation patterns, provider selection processes, and various factors that influence procurement efficiency. The descriptive method is used to systematically describe the market conditions for educational infrastructure procurement based on facts and information obtained during the study.

The object of this research is the educational infrastructure procurement process carried out by the Bukittinggi City Education Office. The research focuses on the market structure formed in the procurement process, specifically the number of participating providers, the level of provider concentration, the pattern of provider wins in tender packages, the value of the bid compared to the budget ceiling or Own Estimated Price (HPS), and the level of budget savings achieved by the local government. This focus is used to determine whether there is a tendency for market concentration and how this condition relates to the efficient use of the procurement budget.

The data used in this study consisted of primary and secondary data. Primary data were obtained through interviews with parties involved in and knowledgeable about the procurement process, particularly procurement officials, relevant officials at the Bukittinggi City Education Office, and construction service providers or suppliers participating in the tender process. The interviews were conducted in a semi-structured manner to provide in-depth information regarding the tender mechanism, the level of competition between providers, barriers to participation, the bid evaluation process, and the factors that cause certain providers to repeatedly win procurement packages.

Meanwhile, secondary data was obtained from documents related to the procurement of educational infrastructure, including the General Procurement Plan (RUP), tender documents, tender participant data, supplier selection results, budget ceilings, Self-Estimated Prices (HPS), contract values, and Budget Realization Reports (LRA). These data were used to compare the number of participants, supplier winning patterns, bid values, and the difference between the available budget and the contract value. Using these documents allows the research to obtain an objective picture of the competitive conditions and the efficiency of budget allocation.

Data collection techniques included observation, interviews, and documentation. Data analysis was conducted descriptively through the stages of data reduction, data presentation, and conclusion drawing. To identify indications of market concentration, the study examined the number of active suppliers and the distribution of procurement packages won by each supplier. Budget allocation efficiency was analyzed by comparing the budget ceiling or HPS (price-based procurement price) with the specified contract value. Furthermore, the results of the document analysis were compared with interview information through source triangulation to enhance the validity of the findings. Through this method, the study is expected to provide an overview of the procurement market structure and its implications for the efficiency of budget allocation for educational infrastructure development in Bukittinggi City.

3. Results And Disccusion

The results of the study indicate that the educational infrastructure procurement process at the Bukittinggi City Education Office exhibits a tendency towards provider concentration. This is evident in the relatively limited number of providers actively participating in procurement packages, while some work packages tend to be won by the same provider or a specific group of providers. This finding suggests that although the procurement process is conducted through a tender mechanism that formally provides opportunities for various companies to participate, the actual level of competition that is formed is not yet fully optimal. This condition is an important characteristic in analyzing the market structure of educational infrastructure procurement in Bukittinggi City.

Based on the results of a review of procurement documents, there is a tendency for the number of tender participants for some work packages to be relatively limited compared to the number of companies potentially capable of providing construction services or work related to educational infrastructure. This limited participation results in less intense competition for work packages. In a competitive market, the

presence of many providers with relatively similar capabilities encourages companies to offer more efficient prices to win tenders. Conversely, when the number of participants is limited, competitive pressure on providers is lower. This condition has the potential to cause bid prices to be relatively close to the established budget ceiling or HPS.

The analysis also indicates a concentration of tender wins among certain providers. Some companies appear to possess the experience and administrative and technical capabilities that allow them to repeatedly participate in procurement packages. On the one hand, this experience is a positive indicator, demonstrating that the provider has the capacity to carry out government work. However, if this situation persists repeatedly and is not accompanied by the addition of new participants, market concentration can occur. This concentration has the potential to reduce the opportunities for other companies to enter the procurement market, especially those with capacity but lack sufficient experience or track record in government procurement.

The limited number of active suppliers also relates to barriers to entry into the procurement market. Based on information obtained from the research process, administrative requirements, technical capabilities, work experience, financial capacity, and compliance with various tender requirements can be factors influencing a company's decision to participate in a tender. Furthermore, companies with no prior experience in government procurement may face difficulties in meeting certain requirements. These barriers can ultimately result in only certain companies being able to consistently participate in the procurement process. Thus, market structure is influenced not only by the number of available companies but also by their ability to meet requirements and actively participate.

In terms of pricing, the research results show a tendency for winning bids to be relatively close to the budget ceiling or HPS in a number of procurement packages. This situation indicates that the level of savings achieved by the government is not always optimal. Simply put, budget efficiency can be measured by the difference between the budget ceiling and the stipulated contract value. The greater the difference, while maintaining the quality and specifications of the work, the greater the potential for budget savings. Conversely, contract values that are very close to the ceiling indicate that the government has relatively little room for savings.

However, the closeness of the contract value to the budget ceiling cannot be directly concluded as evidence of tender-fixing or bid-rigging practices. The research findings more accurately indicate conditions that require attention in procurement oversight, particularly when combined with a low number of participants, repeated winning patterns, and relatively similar bidding patterns. Therefore, indications of low competition must be distinguished from evidence of violations or collusion. This research identified relevant symptoms that warrant further analysis, but does not consider supplier concentration alone as evidence of anti-competitive practices.

From the perspective of budget allocation efficiency, research results indicate that a market structure with a relatively high level of supplier concentration has the potential to limit the government's ability to obtain the most competitive prices. As the government, as the party using the regional budget (APBD), it is responsible for ensuring that the available budget produces optimal development output. If competition in the procurement process is low, the potential for efficiency through price competition is reduced. Consequently, budget savings that can be reallocated to the construction or maintenance of other educational facilities are also limited.

The research also shows that procurement efficiency is not solely determined by the contract price. Work quality, conformity to specifications, timely completion, and the supplier's success in fulfilling contractual obligations are all crucial components of procurement efficiency. A lower bid does not necessarily indicate

efficiency if the work quality is poor or if delays and changes in work result in additional costs. Therefore, budget allocation efficiency in educational infrastructure procurement needs to be understood as the government's ability to achieve development outcomes that meet specifications and needs with the optimal use of resources.

Furthermore, interview results indicate that transparency and openness of information play a crucial role in increasing supplier participation. Easily accessible tender information can provide a wider range of companies with access to and access to available work packages. Expanding the supplier base can increase competitive intensity and reduce government dependence on specific suppliers. The use of electronic procurement systems can also be instrumental in increasing transparency, reducing information barriers, and expanding the reach of potential tender participants.

Overall, the research results indicate that educational infrastructure procurement at the Bukittinggi City Education Office faces challenges in the form of limited provider participation, concentrated procurement by certain providers, and relatively limited budget savings within several work packages. These conditions indicate a less competitive market and require attention in procurement policies. A concentrated market structure can impact the government's bargaining position and its ability to obtain the best price and quality. Therefore, increasing the number and diversity of competent providers, transparency in the tender process, utilization of electronic procurement systems, and strengthening oversight are important steps to increase competition and efficiency in budget allocation. These findings ultimately demonstrate that the success of educational infrastructure procurement is determined not only by budget absorption, but also by how effectively the budget produces quality educational infrastructure and provides maximum benefits to the people of Bukittinggi City.

4. Conclusion

Based on the research results, it can be concluded that the educational infrastructure procurement process at the Bukittinggi City Education Office shows a tendency towards a less competitive market structure, characterized by a relatively limited number of providers actively participating in tenders and a concentration of winning bids among certain providers. This condition has the potential to weaken the intensity of competition in the procurement process and reduce the government's opportunity to obtain the most competitive prices. The research results also indicate that the bid values for several packages tend to approach the budget ceiling or HPS, resulting in suboptimal efficiency gains for the government. Although this condition cannot yet be used as evidence of bid rigging, the concentration of providers and low participant participation are conditions that require attention in procurement oversight. The efficiency of budget allocation is determined not only by the amount of savings, but also by the quality, conformity to specifications, timeliness, and success of infrastructure development. Therefore, expanding the provider base, increasing tender transparency, optimizing the electronic procurement system, and strengthening oversight are necessary to increase competition and ensure that the use of the Regional Budget (APBD) produces optimal educational development benefits for the people of Bukittinggi City.

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