THE PUBLIC PROCUREMENT AND GOVERNMENT SPENDING AS IMPLEMENTATION OF NEW PUBLIC MANAGEMENT

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Abstract

This study examines the effect of competition in the public procurement of goods and services on government spending. Using the competitive bidding model, this study examines the impact of competition on the number of participants, the bidder's net assets (financial ability), distance, and project size on government spending. The research sample used purposive sampling. Hypothesis testing using multiple linear regression analysis. The results of this study prove that the variables of the number of bidders, net assets, and project size affects government spending. However, the distance variable does not affect government spending. This study also proves that these variables simultaneously affect government spending.

Keywords: Competitive bidding; Government spending, Public procurement.

Abstrak

Penelitian ini bertujuan untuk menguji pengaruh persaingan dalam pengadaan barang dan jasa publik terhadap belanja pemerintah. Dengan menggunakan model penawaran kompetitif, penelitian ini mengkaji dampak persaingan terhadap jumlah peserta, aset bersih penawar (kemampuan finansial), jarak, dan ukuran proyek terhadap belanja pemerintah. Sampel penelitian menggunakan *purposive sampling*. Pengujian hipotesis menggunakan analisis regresi linier berganda. Hasil penelitian ini membuktikan bahwa variabel jumlah penawar, aset bersih, dan ukuran proyek berpengaruh terhadap belanja pemerintah. Namun, variabel jarak tidak mempengaruhi pengeluaran pemerintah. Penelitian ini juga membuktikan bahwa variabel-variabel tersebut secara simultan mempengaruhi pengeluaran pemerintah.

Kata Kunci: Belanja pemerintah; Penawaran kompetitif; Pengadaan publik.

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INTRODUCTION

The success of the implementation of the New Public Management (NPM) doctrine in developed countries in the management of the public sector, especially in the government sector, has relatively spread to developing countries (Jones & Pendlebury, 2010). One resulted in continuously promoting the NPM doctrine in developing countries, including Indonesia (Mardiasmo, 2012). The NPM doctrine in the form of privatisation and debureaucratization is believed to have advantages in terms of good governance, namely improving services and performance compared to the classical public sector management administration doctrine (Jones & Pendlebury, 2010; Mardiasmo, 2012). The New Public Management principle is essential in public sector reform. The idea of NPM is also related to the problems of public sector performance management because performance measurement is one of the main principles of NPM (Jones & Pendlebury, 2010). One of the characteristics of NPM is that it seeks to create competition in the public sector. This is indicated by a competitive contract and tender mechanism to save spending in the public sector, especially the government sector (Osborne & Gaebler, 1992; Andrisani et al., 2002; Haryanto et al., 2007; Mardiasmo, 2012).

Over the past few years, public demand for efficiency in government spending has increased significantly (Phillips et al., 2007; Jones & Pendlebury, 2010; Pircher, 2020). This demand is not only a national issue but also a global issue that arises because of the large amount of money used for government spending and the fact that the money comes from the people (Hui et al., 2011; Flynn & Davis, 2016; Flynn, 2018a; Flynn, 2018b; Pircher, 2020; Becker et al., 2019; Flynn & Harris, 2022). A common effect of the control of public money of the separation between providing services and paying for them has been encouraging governments to buy cheaply – even the cheapest – in the markets, regardless of how wealthy the country is (Jones & Pendlebury, 2010). The most enduring manifestation of this is in rules requiring the lowest tenders from contractors to be accepted. More concrete examples are austere public offices occupied by public officials on low salaries, alongside plush private offices and managers with wages to match. Public money has often signalled parsimony, regardless of the effects on the services provided (Jones & Pendlebury, 2010; Mardiasmo, 2012).

Procurement of goods and services is a matter that is considered sensitive because it comes directly from the state treasury (APBN/APBD). Of course, a sound system is needed to support the realisation of good government governance (Good Government Governance). Moreover, the public will always consider the procurement of goods and services. Therefore a transparent process is needed as a component of Good Governance (Septiawan, 2018).

The public demands that the government improve efficiency because they think the level of leakage of state finances that occurs through government spending is very high. One of the main reasons for the high level of leakage of state finances is uncompetitive public procurement practices. Uncompetitive public procurement practices can discourage employers from participating in tenders and provide opportunities for government employees to collude with participating employers. This can result in substantial losses to the government budget as the government may pay too high a price and award contracts to underperforming companies (Ohashi, 2009; Maciejewski, 2017; Flynn, 2018a; Flynn, 2018b; Pircher, 2020; Flynn & Harris, 2022). In response to the above problems, governments in many countries are pushing for competition in organisations that provide public services and, more broadly, in public procurement (Armstrong & Sappington, 2006; Kidalov & Snider, 2011). The development of competitive tenders worldwide illustrates this problem well (Phillips et al., 2007; Amaral et al.,

2011; Diaz, 2017; Becker et al., 2019). Many countries have developed and implemented public procurement procedures and practices that can increase competition, including Indonesia (Semple, 2015; Weishaar, 2016). Over the last few years, the government, through the Government Goods/Services Procurement Policy Institute (LKPP), has begun to develop and implement an electronic procurement system (e-procurement) (Wimmer & Tambouris, 2002; LKPP, 2022; LPSE Kota Semarang, 2022).

Although the implementation of e-procurement is believed to increase competition in public procurement and ultimately increase the efficiency of government spending, empirical testing of the effect of competition in public procurement still needs to be done. The lack of research on this may be due to the difficulty of obtaining data on public procurement (Weishaar, 2016; PwC, 2018a; PwC, 2018b). Nevertheless, several studies have been conducted previously, including Flynn & Harris (2022), Mwelu et al. (2020), Amaral et al. (2011), Ohashi (2009), Bajari & Ye (2003), and Kamins et al. (2004), and the lack of research on this issue, especially in Indonesia, has created a research gap that prompted the author to carry out this research.

This study uses data on 50 tenders for construction work conducted through the e-tendering facility at the Electronic Procurement Service Center (LPSE) of the local government of Semarang City. This research then tries to develop a competitive bidding model adapted from the model that previous researchers have developed. This model looks at the public procurement competition from four different sides, namely in terms of the number, distance, and net assets of the bidders (financial reporting) and the value of the work (project size) tendered. Meanwhile, government spending will be identified using the expenditure reflected in the winning bid's value. Furthermore, the model is applied to the data to determine the effect of bidders' number, distance, and net assets and the importance of work on government spending. The impact of the number of bidders on government spending is the main focus of this study because the number of bidders represents the competition in the tender. To understand one of the essences of the New Public Management, consider a common way for the government to manage a capital project or government spending. The public Procurement (tender) providing services and paying for them has been encouraging governments to buy cheaply – even the cheapest – in the markets, regardless of how wealthy the government is. The most enduring specific manifestation of this is in rules requiring the lowest tenders from contractors to be accepted. This research provides evidence that the public procurement mechanism is valid in delivering value for money for the government in carrying out its mandate (Jones & Pendlebury, 2010; Mardiasmo, 2012).

LITERATURE REVIEW

From the perspective of competition theory and auction theory, bidding by bidders will be determined by personal preferences, the preferences of others, and the intrinsic quality of the object being auctioned (Milgrom & Weber, 1982). In an auction, increased competition results in more aggressive bidding because each potential participant will try to win the match over their opponent (Athias & Nunez, 2007; Allain, 2014). Bajari & Ye (2003) states that participants in a tender can be asymmetrical, meaning that the spending between bidders can differ. Spending differences between bidders are expected in a procurement process. They can be caused by the company's location, capability limitations, or level of knowledge (familiarity) with local regulations (Bajari & Ye, 2003). Kamins et al. (2004) found that tenders with high uncertainty (no price signal) lead to higher final prices.

From the perspective of public accountability theory, government actions related to budget allocation is the subject of accountability. Accountability refers to control and the ability to account (Vries & Sobis, 2010). From a political perspective, accountability means that those with power must be accountable for their actions to the public, either directly or indirectly (Therkildsen, 2001; Kauppi & Erik, 2015; Meulenbelt, 2016). From a financial perspective, accountability is an economic doctrine that has received attention and emphasis in the accounting and public finance literature in the modern era because the absence of accountability can open up the faucet of corruption, irregularities, and mismanagement of public resources (Haryanto et al., 2007; Mardiasmo, 2012). Accountability will only occur in a public or private organisation with adequate accounting records and internal control systems. In other words, the absence of accounting methods and techniques means a lack of accountability.

Legitimacy theory states that organisations are responsible for disclosing what they do to stakeholders, especially the public, and justifying their existence in society (Wilmshursts & Frost, 2000; Lenz & Viola, 2017). Legitimacy is a condition or status that occurs when the value system of an entity is aligned with the value system of the more extensive social system of which the entity is a part (Lindblom & Woodhouse, 1993; Lenz & Viola, 2017). The doctrine of legitimacy theory implies a social contract between the government and the public, where the contract can be broken. In the context of public procurement, several things can destroy public legitimacy, for example, if public procurement is not transparent and competitive or if government spending is inefficient (Bovis, 2016; Lenz & Viola, 2017; Fazekas et al., 2021). To understand one of the essences of New Public Management, consider a common way for the government to manage a capital project or budget capital. Services to the public or the community depend heavily on the allocation of capital expenditure or fixed assets allocated by the local government to serve the community (Prasetya, 2021). The public Procurement (tender) providing services and paying for them has been encouraging governments to buy cheaply – even the cheapest – in the markets, regardless of how wealthy the government is. The most enduring specific manifestation of this is in rules requiring the lowest tenders from contractors to be accepted (Jones & Pendlebury, 2010).

Number of Tender Participants and Government Spending

Several tender participants The negative effect of an increase in the number of bidders on government spending implies that any increase in bidders will decrease government spending. On the other hand, any decline in the number of bidders will increase government spending (Rhode, 2019; Maciejewski et al., 2020).

The implication for efforts to increase the efficiency of government spending is the importance of developing public procurement practices that encourage increased public participation, both in business entities and individuals (Grega dan Nemec 2015). The first hypothesis is the main focus of this study because the number of bidders directly represents the public procurement competition (Meulenbelt, 2016).

Hence, its effect on government spending illustrates the effect of public procurement competition on government spending. When construction works are tendered in a competitive tendering process, increasing the number of participants will result in more aggressive bidding (Rhode, 2019). When the number of competitors increases, competition increases, and each participant will increase their efforts to win the tender by lowering their bid. Athias & Nunez

(2007) state that growing bidders will encourage more aggressive bidding. To a certain extent, when the number of bidders is large enough, the auction approaches an efficient result. In other words, increasing the number of participants will reduce the winning bids, reducing government spending. Therefore, the authors formulate the first hypothesis as follows:
H1: The number of bidders affects government spending.

Tenderer Distance and Government Spending

The competition factor that can be taken into consideration by a procurement official/ Procurement Service Unit (ULP) is the number of participants to avoid the risk of a lack of participants, and if the participants fall short of the specified requirements, the tender will fail, and a re-tender must be made. Therefore, in regulating the procurement of goods and services, the government opens up opportunities for bidders far from the tender's location. The distance between the participants participating in the tender can cause the bid price to be too high. Considering the transportation costs and other supporting costs, the value of the work to be tendered must be by the fixed market price, and it is hoped that the participants will be able to lower their bid price (Kutlina & Lakatos, 2016; Rhode, 2019).

There is a spending (costs) asymmetry between bidders in a tender competition. These differences, among others, arise due to the location of the bidders (Bajari & Ye, 2003; Kutlina & Lakatos, 2016; Rhode, 2019). Participants further away from the project site will increase their bid value, assuming they need equipment storage areas nearby. They will have to incur more spending to transport equipment to the site. Therefore, the second hypothesis of this study is formulated as follows:
H2: The distance of bidders has a positive effect on government spending.

Tenderer's Net Assets and Government Spending

Apart from the location factor, the difference in spending between bidders can also be caused by the financial capability constraint of the bidders (Rhode, 2019; Maciejewski et al., 2020). Bidders with small net assets may use short-term financing from outside parties, such as banks, to fund projects (data in financial reporting). Because third-party financing increases the spending of capital to be borne, the bidders will submit more bids to cover it. Meanwhile, participants with significant net assets may be able to use their funds so that they will submit lower proposals because they do not have to bear additional capital spending like bidders with small net assets/small capital.

The larger the net assets of the bidders, the lower the spending on public construction because the bid value will be lower. On the other hand, the smaller the net assets of the bidders, the higher the spending on public construction as the bid value increases (Maciejewski et al., 2020). The number of net assets or the financial capability of the bidder will affect its bid in the competition for the procurement of goods and services organised by the government. From this point of view, the involvement of large companies in tendering for construction works positively impacts the efficiency of government spending (Grega & Nemec, 2015). Therefore, the third hypothesis is formulated as follows:
H3: Net assets of bidders affect government spending.

Work Value and Government Spending

In projects of small value, bidders may expect a higher margin level because the projected nominal is small. On the other hand, in larger projects, bidders may be satisfied with a lower profit rate because the minor is higher. Say, a bidder might prefer to get 8% of 1 billion than 10% of 100 million.

In addition, the value of the work can act as a price signal to potential bidders. This signal makes information about the importance of a project more certain so that bidders have more spending information relevant to the desired task. Previous research has shown that when the value of an item is uncertain, the final offer value will be higher than if the value is more specific (Kamins et al., 2004; Rhode, 2019). The greater the value of the work being tendered, the lower the spending on public construction because the bid's value will be lower. On the other hand, the smaller the value of the work being tendered, the higher the spending on public construction and the increase in the bid value. From this point of view, it is more efficient for the government to undertake construction work of more excellent value (Grega & Nemec, 2015; Rhode, 2019). So, the fourth hypothesis is formulated as follows:
H4: The value of the work being tendered affects government spending.

RESEARCH METHOD

Research Variable

This study uses five variables, namely the variable spending of government (construction spending), the number of bidders, the distance of the bidders, the net assets of the bidders, and the value of the work (Athias & Nunez, 2007; Grega & Nemec, 2015; Rhode, 2019; Maciejewski et al., 2020). The government spending variable is the dependent variable, while the others are independent (Kamins et al., 2004; Rhode, 2019; Maciejewski et al., 2020). Government spendings represent government spending in the context of construction works. This variable is measured by the ratio of the winning bid value to the Self Estimated Price (HPS). The number of bidders represents the public procurement competition in the context of a tender. The value of this variable is determined based on the number of bids entered in a tender process. The variables of distance and net assets of bidders represent differences between participants in a tender competition. The distance between the bidders shows the difference in location, while the net assets of the bidders show the difference in a financial capacity.

The reach of the bidders is determined based on the average length of all participants to the location of the work being tendered. The net asset value of each bidder is determined based on the net asset value listed in the Business Entity Certificate (SBU) issued by the Construction Services Development Agency (LPJK). The variable value of work represents the difference between one tender and another in terms of the size of the work being tendered. This variable is measured using the Own Estimated Price (HPS) or Owner Estimate (OE). HPS/OE estimates the value of construction work by a procurement official/Procurement Service Unit (ULP).

Population and Sample

The population of this study was 156 construction jobs that were tendered electronically through the e-tendering facility of the Semarang City Electronic Procurement Service Center (LPSE) in 2021. The sample selected from the total population in this study was 50 construction jobs. The sample selection was not made randomly, but the model was chosen by considering the suitability of the research objectives (purposive sampling). The sample selection used several criteria, including procurement using a public auction, the qualification method with post-qualification, and the evaluation method with a knockout system.

Data collection using these criteria (purposive sampling) was conducted for several reasons. First, the procurement, qualification, and evaluation methods used in the public procurement process have unique characteristics. In general and straightforward auctions, for example, the decision on who participates in the auction differs in the two procurement methods. In contrast, in a simple auction, the participants who participate have been determined in advance and included in the announcement/invitation. Therefore, the results of this study are felt to be stronger if only carried out on similar auctions. Second, tenders for construction works that meet these criteria are the most frequently conducted tender processes. So, tenders with these criteria constitute the majority of the population.

Analysis Method

Partial analysis was performed using linear regression analysis to determine the partial effect of each independent variable (number, distance, and net assets of bidders) on the dependent variable (construction spending). Analysis of Variance (ANOVA) was used to analyse the simultaneous effect of all independent variables on the dependent variable. Regression analysis was performed using the following model:

$$Spending = a + b1Part + b2LgDist + b3LgAsset + b4WorkValue + e$$

Where:
Spending   : Government spending
Part   : Number of bidders
LgDist   : Distance of bidders
LgAsset   : Net assets of tender participants
WorkValue   : Value of tendered work
e   : Error

RESULTS AND DISCUSSION

Description of Research Sample

The sample of this research is 50 construction work tenders that were carried out through the e-tendering facility of the Semarang City Government Electronic Procurement Service Center (LPSE) in 2021. Table 1 describes the composition of the tendered construction works based on the agency carrying out the work. Table 1 shows that as many as 42 (84%) of construction work was done by work units within the Public Works Service. The spending incurred by the Public Works Service is proportional to 82.76% of the total construction spending of IDR97,888.000.000. A disproportionate picture is seen in construction work at Environmental Services, where the amount is only 2%, but spending is 9.41%. This means that the construction work done at Environmental Services has a relatively large value. The opposite is seen in the Education Authorities, where with a total of 4% of work, the spending is only 0.69%.

Table 1 Description of Sample by Institution

Institution	Total Tenders	Proportion (%)	Construction Spending (millions IDR)	Proportion (%)
Public Works Service	42	84,00	81.015	82,76
Public Health Office	3	6,00	4.967	5,07
Environmental Services	1	2,00	9.207	9,41
Education Authorities	2	4,00	672	0,69
Department of Transportation	1	2,00	1.227	1,25
Department of Culture and Tourism	1	2,00	800	0,82
Total	50	100%	97.888	100%

Source: Secondary data processing, 2022.

Table 2 describes the sample based on the type of work being tendered. From the table, we can see that most of the construction works tendered were office building renovations. This work covers 21 (42%) of the total positions with proportional construction spending, which is 41.70%. Meanwhile, a disproportionate picture can be seen in the construction of dormitories which spent 16% of the total construction spending to carry out 4 (8%) works. The opposite is seen in the official housing rehabilitation work, which only spends 3.35% to do 6 (12%) jobs.

Table 2. Description of Samples

Type of Work	Total Tenders	Proportion (%)	Construction spending (millions IDR)	Proportion (%)
Building Renovation	21	42,00	40.817	41,70
Construction of Office Building	8	16,00	19.427	19,85
Rehabilitation of Official Houses	6	12,00	3.280	3,35
Dormitory Construction	4	8,00	16.378	16,73
Office Facility Renovation	4	8,00	9.328	9,53
Land Maturation	3	6,00	6.254	6,39
Office Facilities Construction	3	6,00	1.982	2,02
Dormitory Renovation	1	2,00	422	0,43
Total	50	100,00	97.888	100,00

Source: Secondary data processed, 2022.

Table 3. llustrates The Statistical Description of The Variables Used In This Study

Variable	Sample	Minimum	Maximum	Mean
Construction spending (billion IDR)	50	0,68	0,98	0,86
Number of bidders	50	3	11	5,72
Distance (km)	50	3,45	664,34	9,89
Net Assets (billion IDR)	50	0,31	26,17	3,59
Value of work (billion IDR)	50	0,28	11,75	2,24

Source: SPSS output, 2022

From the table above, it is known that the lowest construction spending is 0.68. This means that the lowest construction spending the government has to pay is 68% of the Own Estimated Price (HPS) or Owner Estimate (OE). Meanwhile, the government must pay the highest construction spending of 0.98 or 98% of HPS/OE. Construction spending is at most 100%, although this is possible. This is because although bids above the HPS value are allowed as long as they stay within the ceiling, they will be defeated by other lower requests.

Meanwhile, the average construction spending was 0.86 or 86%. This means the average government construction work spending is only 86% of the estimated cost. The lowest number of bidders is 3 participants in one tender. This is the minimum amount determined for a tender process to proceed under the provisions of the current public procurement regulations. The maximum number of tender participants in one tender process is 11 tender participants.

Meanwhile, the average number of bidders participating in one tender process is 5.72. This figure is quite encouraging, considering the reputation of public procurement so far, which tends to be collusive. Based on experience, the average number of bidders who participated in one tender before using e-procurement was around 4-5 participants. However, the number of 5.72 participants in one tender in this study shows that the participation rate of bidders still needs improvement. Compared to the results of Ohashi's (2009) research in Japan, for example, the number of bidders stood at 13.69 participants in one tender.

One tender process at the Semarang City LPSE centre involved bidders, with the closest average distance being 3.45 km and the furthest at 664.34 km. Meanwhile, the average length of bidders to the job site is 9.89 km. This means that bidders from the same area only attend the middle construction work tender in this study as the work location. This certainly shows the low participation of bidders from outside the region.

The lowest average net asset value of the bidders who participated in one tender was 0.31 or IDR310,000,000, and the highest was IDR26,170,000,000 and an average of IDR3,900,000,000. This means that, on average, tenders conducted at LPSE centres involve small and medium-sized entrepreneurs. Provisions for public procurement regulate the involvement of small and medium entrepreneurs in public procurement. Procurement packages with up to IDR1 billion are intended for small and medium-sized entrepreneurs. This is part of the government's efforts to protect and prioritise procurement for small and medium enterprises.

Based on this sample, the lowest value of construction work tendered through the e-tendering facility is 0.28 or IDR280,000,000. This figure is almost the same as the stipulation limit for the value of construction work that must be tendered through a public auction above IDR200,000,000. No work with a value of IDR200,000,000 or less was tendered through a public auction based on this research. This is because public auctions are considered to have several more difficult procedures than simple auctions or direct appointments. Hence, even though this is possible, procurement officers refrain from paying public tenders for construction works with a value of up to IDR200,000,000. Meanwhile, the highest value of construction work tendered through the e-tendering facility was IDR11,750,000,000, while the average value was IDR2,240,000,000.

Partial hypothesis testing in this study was carried out using linear regression analysis. Table 4 shows the regression results of all independent variables on the dependent variable used.

Table 4 Linear Regression Analysis Results

Variable	Coefficient	Sig (α=5%)
Number of participants	-0,013	0,012
Participant distance	0,023	0,307
Net Assets	-0,074	0,018
Project value	-0,052	0,001

Source: SPSS Output, 2022.

The results of testing the first hypothesis show a coefficient of -0.013 and a significance value of 0.012. Because the significance value is below 0.05, it can be concluded that the first hypothesis is accepted. These results indicate that the number of bidders affects government construction spending. The negative direction of the relationship between the number of bidders and construction spending shows that public procurement tenders through e-tender facilities are competitive and flexible. This result means increasing the number of bidders (competitors) will decrease construction spending. This is consistent with the theory of competition, where there is a decrease in supply due to increased competition (competition effect). These results are also compatible with previous research conducted by Amaral et al. (2011) but different from the results of Ohashi's (2009) research. This result also shows that public procurement competition affects government spending.

The results of testing the second hypothesis show a coefficient of 0.023 and a significance value of 0.307. Because the significance value is above 0.05, it can be concluded that the second hypothesis is rejected. These results indicate that the distance between the bidders does not affect construction spending. This result means that the construction spending does not differ (varies) between tenders that are participated by distant or close participants. This result certainly does not follow the theory, which states that if the distance of a company to the work location is further, then the company must bear more significant spending than other companies because the company must move its equipment from the warehouse to the work location. If the expenditure is more important, the company will increase the value of its offer to cover the spending. This results that the farther the bidder is from the project site, the higher the spending on public construction because the bid value will be higher. On the other hand, the closer the bidders are to the project site, the lower the spending on public construction as the bid value decreases. From this point of view, efforts to attract participants from outside the region to participate in tender processes in other areas will increase government spending (Grega & Nemec, 2015).

This study's results differ from Ohashi's research, which shows that distance affects government construction spending. This result is also different from research by Bajari & Ye (2003), which shows that space is one of the causes of the asymmetry of bidders, which means that the company's location affects construction spending. This lack of influence is partly due to differences in operational efficiency between bidders. Usually, the companies participating in tenders outside their domicile areas are large companies operating on a wide scale. Companies like this are usually more efficient in their business operations, so they can compete with companies close by because they have an efficiency advantage. In addition, these results can also be used as an indicator of slack in budget preparation, in this case, the trial of the HPS.

The existence of space in the practice of HPS allows the company to earn profits even though the bids submitted are very low.

The results of testing the third hypothesis show a coefficient of -0.074 and a significance value of 0.018. Because the significance value is below 0.05, it can be concluded that the third hypothesis is accepted. These results indicate that the net assets of the bidders affect government construction spending. This result means that the larger the business size of the companies participating in the tender, the smaller the government's construction spending must bear. The results of this study are different from Ohashi's research. The study revealed that the company's financial capacity, Ohashi, using a measure of the utilisation level, did not affect construction spending. This result also shows the efficiency advantages of large companies compared to small companies in terms of process and funding efficiency.

The results of testing the fourth hypothesis show a coefficient of -0.052 and a significance value of 0.001. Because the significance value is below 0.05, it can be concluded that the fourth hypothesis is accepted. These results indicate that the value of the work being tendered affects government construction spending. This result means that the greater the value of the work being tendered, the lower the expenditure. For jobs of significant value, bidders may be satisfied with a lower profit level because the nominal is large. On the other hand, participants may expect a higher rate of return for employment of a small value because the minor is small.

The fifth hypothesis testing was carried out by analysis of variance (ANOVA), the results of which can be seen in Table 5 below:

Table 5. Analysis of Variance (ANOVA)

Model	F	Sig (α=5%)
Regression	5,134	0,001

Source: SPSS Output, 2022.

Table 5 shows the f value of 5.134 with a significance value of 0.001. Because the significance value is below 0.05, it can be concluded that the fifth hypothesis is accepted. These results indicate that the number, distance, and net assets of bidders and the value of the work being tendered simultaneously affect construction spending. This result means that at least one of the four independent variables involves construction spending. This result is supported by the partial test (t-test), which shows that three of the four independent variables significantly affect the dependent variable, and only one independent variable has no significant impact. The number and net assets of bidders and the value of the work are three variables that affect construction spending. Meanwhile, the distance between bidders is OK with construction spending. This result means that the f-test is consistent with the t-test.

These results are also consistent with Ohashi's (2009) research on construction work in Japan regarding the simultaneous effect of all independent variables on the dependent variable. However, the results differ in words of which independent variables have an impact. Ohashi's research reports that the marks where the variable number and distance of tender participants significantly impact the 5% significance level. Meanwhile, in this study, the distance between bidders had no effect. Meanwhile, in Ohashi's survey of the variable utilisation rate (in this study using the net asset variable), the maximum price variable (in this study using the job value variable) was concluded to have no significant effect.

CONCLUSIONS

The results of this study prove that the number and net assets of bidders and the value of the work affect government construction spending. Meanwhile, the distance between bidders is OK with government construction spending. This study also proves that the number, space, and net assets of bidders and the value of the work simultaneously affect construction spending. This result means that the increase in competition, namely the rise in bidders, affects government spending. The asymmetry strengthens this influence between participants regarding financial capacity (net assets) and between tenders regarding the value of the work being tendered, which also has a negative effect.

This research has several implications for efforts to increase the efficiency of government spending. First, to reduce government spending, in other words, to increase spending efficiency, it is important to encourage participation in public procurement tender competitions. However, there is no need to promote the involvement of participants far away from the region. Second, construction work must be organised into work packages of great value to increase spending efficiency. In other words, do not break up sweat into smaller work packages. Third, public procurement must involve large companies to be more efficient. The third one is against the government's policy to protect small and medium enterprises. However, this does not have to happen if small entrepreneurs can increase their efficiency. Therefore, efforts to prioritise small and medium enterprises in public procurement should be balanced with the efforts of small and medium enterprises to increase efficiency.

This study has two main limitations. First, by not accepting the hypothesis about the effect of the distance between bidders on government construction spending, this research model becomes less than perfect from the perspective of its goodness of fit. Regression analysis shows an adjusted R square of 0.25 which means that variations in the number and net assets of bidders and the value of work can only explain variations in construction spending by 25%—second, related to the sampling method using purposive sampling. Purposive sampling limits this study's power of significance because it does not fully meet the assumptions of linear regression. That means this study is not representative of the population and, therefore, cannot be used to generalise the study's results to the people. In other words, this research can only explain construction work tenders using the public auction method, qualification with post-qualification, and bid evaluation with a knockout system.

In connection with the first limitation, the authors suggest the inclusion of 2 new variables. First, the period of completion of the work (contract length) is the time required to complete the construction work. Second, past wins are the experience of tender participants submitting bids and winning tenders. As for the sampling method, the author suggests using random sampling in further research.

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