**International Research Journal of Engineering, IT & Scientific Research**
Available online at https://sloap.org/journals/index.php/irjeis/
Vol. 9 No. 3, May 2023, pages: 76-81
ISSN: 2454-2261
https://doi.org/10.21744/irjeis.v9n3.2300

# Analysis of Contractor Capacity Level in Following E-Tender in Gianyar District

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***Article history:***

Submitted: 09 January 2023
Revised: 18 February 2023
Accepted: 27 March 2023

**Keywords:**

*ability level;*
*contractor;*
*conventional auctions;*
*E-tender;*
*government procurement goods;*

**Abstract**

The implementation of government procurement of goods/services in the Gianyar Regency is carried out electronically by E-Tendering. In practice, the participation and bid value of bidders tends to decrease both during conventional auctions and electronic auctions. This study aims to determine the level of contractors' ability to participate in e-tenders, factors that affect participation or contracts not to participate in e-tenders, and what deficiencies exist in the implementation of e-tenders in Gianyar Regency. The sample used in this study were 73 contractor companies in this Regency in the analysis of the contractor's ability level, and 43 companies in the factor and deficiency analysis where this number used the sampling method using simple random sampling technique with purposive sampling and data collection using observation from GAPENSI Gianyar Regency and questionnaires. Data analysis was carried out by descriptive analysis. From the results of the analysis of contractors, the dominant qualification is K1. Therefore, the contractor's ability to participate in e-tenders is the most dominant in projects valued at Rp.0 - Rp. 1 Billion. And for the category e-tender highest in the B2 qualification with the contractor's ability level, they can participate in projects worth Rp.0 - Rp. 50 billion. The factors that affect the level of contractors' ability to participate in e-tenders from the results of the payment system factor analysis show a (significant) effect.



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## 1 Introduction

The goods/services procurement system can now be carried out electronically via the internet (E-Tender) because currently, there are many weaknesses in conventional auctions such as corruption, collusion, and nepotism (KKN) and the lack of transparency in the procurement process which makes the public, especially the government, increasingly aggressive to overcome them (Respawan et al., 2017). In the regulations of the Ministry of Finance of the Republic of Indonesia, characteristics in determining the efficiency of government procurement of goods and services can be measured by a needs assessment, assessment of procurement methods, price surveys, and application of basic principles (Lubis, 2014). The principle of the procurement of goods and services must be effective in accordance with the needs that have been determined and can provide the maximum benefit in accordance with the targets set. Presidential Regulation No. 54 the year 2010, the intended measure of effectiveness in the procurement of government goods and services is that it must be in accordance with the needs and targets that have been set and provide maximum results (McAfee & McMillan, 1989; Dalpé, 1994; Holt, 1998).

E-Procurement can improve efficiency and effectiveness in the public procurement of goods and services, reduce costs, and increase competition, to ensure equal opportunity and treatment. In general, the aim is to ensure integrity, public trust, and transparency in public goods/services procurement procedures (Hardiyansyah, 2018). From the perspective of construction service providers, success in participating in the auction system is one of the determining factors for a company's survival. However, in Indonesia, only a few contractors are willing and able to carry out e-procurement. One of the reasons is due to the limited resource capabilities and the availability of technology from each of these contractors (Chabert & Jaulin, 2009; Mohamed et al., 2011; Doloi et al., 2011). Based on the description above, the objectives to be achieved in this study are to determine the level of ability of contractors, what factors influence contractors to participate in e-tender, and the deficiencies in the implementation of e-tenders in Gianyar Regency.

## 2 Materials and Methods

This research was conducted with a type of qualitative descriptive analysis research. The population in this study is every contactor company registered at GAPENSI, Gianyar Regency. Sampling was carried out using a simple random sampling method and leaving 43 samples. This study uses primary data in the form of factors that influence e-tender activities and deficiencies faced by contractors in implementing e-tenders. The data is collected using a questionnaire. Meanwhile, secondary data is in the form of information about contractor companies registered at GAPENSI and their qualifications, which are collected using observation techniques (Sikka & Lehman, 2015; Suacana & Suaib, 2016; Putri & Sujana, 2018; Sugiyono, 2013).

Dependent variables in this study are factors that influence contractors' participation in an e-tender and deficiencies in e-tender implementation. The questions as factors that influence contractors' participation in an e-tender variable are the value of the project (owner estimates), implementation of the project period, project construction difficulty level, payment system, requirements for personnel, certificate of expertise and certificate of skills, availability of initial capital, availability of staff with a certificate, similar project experience, the estimated number of competitors and simultaneous similar auction announcement (Sumanjeet, 2009). The questions as deficiencies in e-tender implementation variable are lack of understanding of presidential regulation No. 12/2021, regulations change frequently, frequent interruptions in the SPSE system, differences in tender document requirements between working groups, time limitation in sub-mission of bid documents, limited facilities, staff capability in information technology, computer, and internet, upload document depending on the quality of internet connection, understanding of electronic auction rules, and e-tender training and outreach. The independent variable in this study is the level of ability in implementing e-tenders. Both data were processed using descriptive statistical analysis with the IBM SPSS Statistics 25 application. The results of the data analysis are the level of ability, factors that influence e-tender activities, and deficiencies that affect contractors' participation in e-tenders (Varnäs et al., 2009; Love et al., 1998; Evenett & Hoekman, 2005).

A validity test is used to measure whether a questionnaire is valid or not. A questionnaire is said to be valid if the questions in the questionnaire can reveal something that is measured by the questionnaire (Ghozali, 2011). The validity test was carried out by comparing the r-count value with the r-table value which was the result of the

Pearson correlation analysis. If the r-count value is greater than the r-table with n = 43 then the question is said to be valid. The results of validity testing can be seen in Table 1 below.

Table 1
Validity test results

| Variable | Questionnaire Items | r - Count | r - Table | Note |
|---|---|---|---|---|
| Factor | Item 1 | 0,468 | 0,3008 | Valid |
| | Item 2 | 0,907 | 0,3008 | Valid |
| | Item 3 | 0,795 | 0,3008 | Valid |
| | Item 4 | 0,612 | 0,3008 | Valid |
| | Item 5 | 0,468 | 0,3008 | Valid |
| | Item 6 | 0,907 | 0,3008 | Valid |
| | Item 7 | 0,412 | 0,3008 | Valid |
| | Item 8 | 0,795 | 0,3008 | Valid |
| | Item 9 | 0,907 | 0,3008 | Valid |
| | Item 10 | 0,907 | 0,3008 | Valid |
| Weakness | Item 1 | 0,911 | 0,3008 | Valid |
| | Item 2 | 0,911 | 0,3008 | Valid |
| | Item 3 | 0,862 | 0,3008 | Valid |
| | Item 4 | 0,825 | 0,3008 | Valid |
| | Item 5 | 0,911 | 0,3008 | Valid |
| | Item 6 | 0,887 | 0,3008 | Valid |
| | Item 7 | 0,754 | 0,3008 | Valid |
| | Item 8 | 0,887 | 0,3008 | Valid |
| | Item 9 | 0,940 | 0,3008 | Valid |
| | Item 10 | 0,559 | 0,3008 | Valid |

Based on observations in rTable the value of the sample (N) = 43 is 0.3008. So the results of the validity test showed that all instruments starting from the Ftotal variable consisting of F1, F2, F3, F4, F5, F6, F7, F8, F9, F10 all produce values of rCount > than rTable. In addition, the Ktotal variable consisting of K1, K2, K3, K4, K5, K6, K7, K8, K9, K10 all produces rCount values > than rTable. So it can be concluded that all instruments in this study are said to be valid.

A reliability test is a tool for measuring a questionnaire which is an indicator of a variable. A questionnaire is said to be reliable or reliable if one's answers to statements are consistent or stable from time to time (Ghozali, 2011). The level of reliability of a research variable can be seen from the statistical results of Cronbach Alpha (α). A variable is said to be reliable if it gives a Cronbach alpha value > 0.60. The results of reliability calculations by SPSS can be seen in table 2 below:

Table 2
Reliability test results

| Variable | Item | Cronbach's Alpha | Note |
|---|---|---|---|
| Factor | 10 | 0,893 | Reliable |
| Weakness | 10 | 0,957 | Reliable |

From the results of the reliability test, the value obtained from the results of the Factors and Weaknesses variable resulted in a Cronbach alpha value of > 0.6. So it can be concluded that all the instruments in this study were reliable.

## 3 Results and Discussions

*Contractor capability level analysis*

The bar chart below presents qualification data of Construction Companies in Gianyar Regency based on data from GAPENSI for 2020/2021. There are 36 Construction Companies (49%) for Small qualification 1, 3 Construction Companies (4%) a small qualification 2, 24 construction companies (33%) are small qualification 3, 9 construction companies (12%) are medium qualification 1, 1 construction company (1%) is a medium qualification 2, and for the large qualification 1 and large qualification, 2 are none (0%). From the results of the data above, it is explained that the contractor's ability level in Gianyar Regency is based on the qualifications of each company, it is concluded that contractors are dominant with Small qualification 1, therefore, the contractor's ability level in participating in e-tenders is most dominant in projects worth IDR 0 – IDR 1 billion.

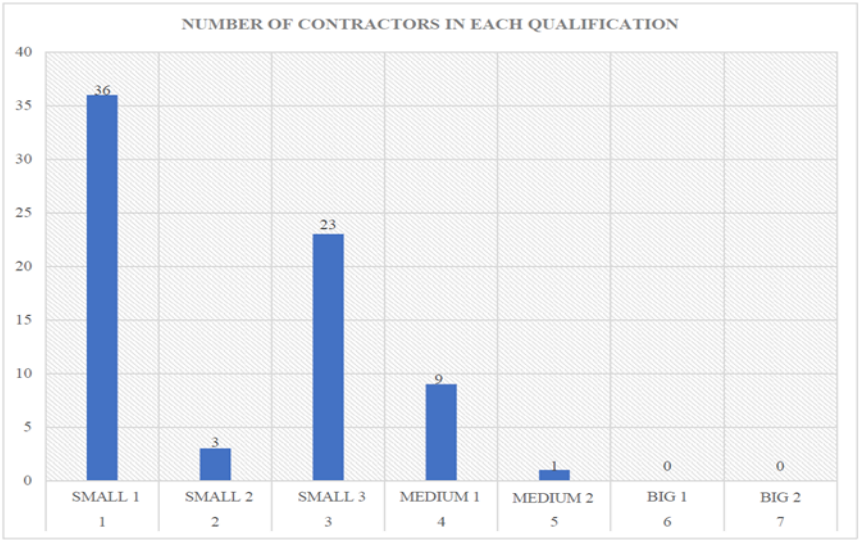
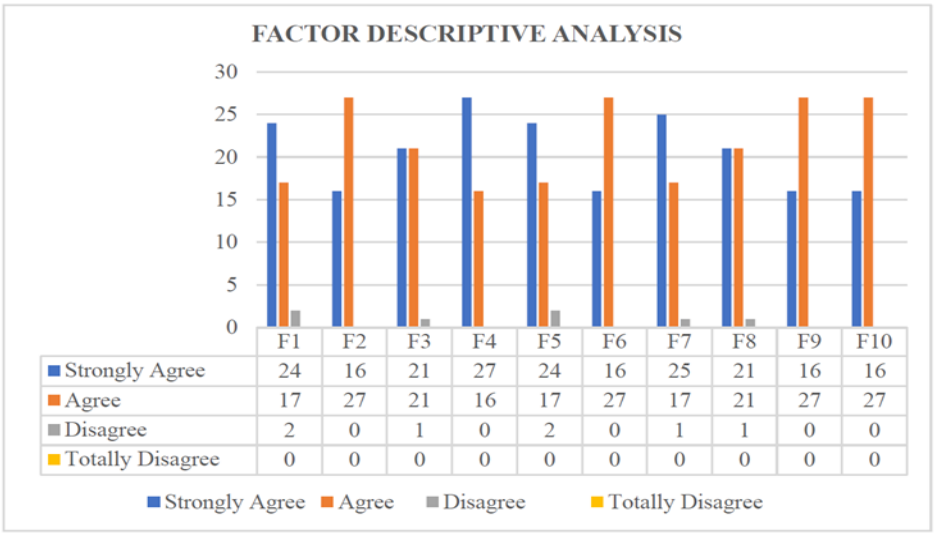



Figure 1. Number of contractors in each qualification

*Contractor factors participating in the Gianyar Regency E-Tender*



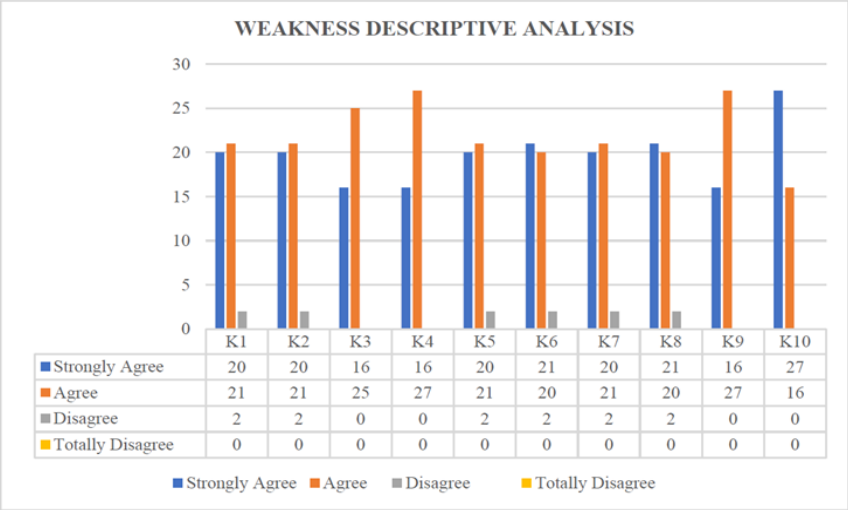

| | F1 | F2 | F3 | F4 | F5 | F6 | F7 | F8 | F9 | F10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Strongly Agree | 24 | 16 | 21 | 27 | 24 | 16 | 25 | 21 | 16 | 16 |
| Agree | 17 | 27 | 21 | 16 | 17 | 27 | 17 | 21 | 27 | 27 |
| Disagree | 2 | 0 | 1 | 0 | 2 | 0 | 1 | 1 | 0 | 0 |
| Totally Disagree | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Figure 2. Factor descriptive analysis result graph

From the graph of the descriptive analysis result above, it can be concluded that the dominant respondents strongly agreed with the factors that made contactors participate in the e-tender implementation in Gianyar Regency. Among the factors above, the one with the highest frequency is the payment system factor, where as many as 27 respondents answered "strongly agree" out of a total of 43 respondents.

*Weaknesses in E-Tender implementation in Gianyar Regency*

From the graph of the descriptive analysis result below, we can conclude that the dominant respondents strongly agree with the weaknesses of the Gianyar Regency e-tender implementation. From the weaknesses above, the one with the highest frequency was the lack of training and socialization of electronic auctions, for which as many as 27 respondents answered "strongly agree" out of a total of 43 respondents.




| | K1 | K2 | K3 | K4 | K5 | K6 | K7 | K8 | K9 | K10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Strongly Agree | 20 | 20 | 16 | 16 | 20 | 21 | 20 | 21 | 16 | 27 |
| Agree | 21 | 21 | 25 | 27 | 21 | 20 | 21 | 20 | 27 | 16 |
| Disagree | 2 | 2 | 0 | 0 | 2 | 2 | 2 | 2 | 0 | 0 |
| Totally Disagree | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Figure 3. Weakness descriptive analysis result graph

## 4 Conclusion

Based on the results of the Analysis of Contractor Capability Levels in Gianyar Regency, From the results of the analysis, it can be concluded that contractors are dominant with K1 qualifications. And for the e-tender category, the highest qualification is B2 with a contractor's level of ability to participate in projects worth Rp.0 – Rp. 50 billion. Factors that affect the level of ability of contractors to participate in e-tender from the results of the payment system factor analysis show an influence (significant). From the results of the descriptive analysis, the deficiencies are the lack of Electronic Auction Training and Outreach. Therefore, the conclusion that we get is that there are still many contractors who have not received training or socialization, which means that contractors still do not understand the regulations and system of the e-tender.

*Conflict of interest statement*
The authors declared that they have no competing interests.

*Statement of authorship*
The authors have a responsibility for the conception and design of the study. The authors have approved the final article.

*Acknowledgments*
We are grateful to two anonymous reviewers for their valuable comments on the earlier version of this paper.

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