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Selection Criteria for Named Subcontractors: Case Study of a Building Project

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Abstrak. Pelaksanaan pekerjaan konstruksi melibatkan banyak pihak, salah satunya subkontraktor. Secara umum, subkontraktor dapat dibedakan menjadi tiga jenis yaitu *domestic subcontractor*, *nominated subcontractor*, dan *named subcontractor*. Berbagai penelitian telah banyak dilakukan terkait dua jenis subkontraktor yang disebutkan pertama, namun sedikit sekali penelitian yang mengkaji tentang *named subcontractor*. Berbeda dengan *nominated subcontractor*, *named subcontractor* dipilih oleh kontraktor utama berdasarkan daftar nama subkontraktor yang diberikan oleh pemilik proyek. Penelitian ini bertujuan untuk mengidentifikasi kriteria seleksi dalam pemilihan *named subcontractors* oleh kontraktor utama. Penelitian ini menerapkan metode kualitatif dengan teknik *integrative literature review* dan wawancara. Hasil penelitian menunjukkan pengalaman Perusahaan, kemampuan finansial, kemampuan teknis, faktor sumber daya, dan faktor harga penawaran sebagai kriteria seleksi penting. Penelitian ini berkontribusi mengingat kajian terhadap *named subcontractor* masih sedikit terutama terkait kriteria penyeleksiannya oleh kontraktor utama.

Kata kunci : konstruksi; kriteria; *named subcontractor*; seleksi.

Abstract. *The execution of construction projects involves many parties, one of which is subcontractors. In general, subcontractors can be divided into three types, namely domestic subcontractors, nominated subcontractors, and named subcontractors. Many studies have been carried out regarding the first two types of subcontractors, but studies related to named subcontractors are scarce. In contrast to nominated subcontractors, named subcontractors are selected by the main contractor based on a list of subcontractor names provided by the employer. This research aims to identify the criteria in selecting named subcontractors by the main contractor. This research applies a qualitative method approach with integrative literature review and interview techniques. The results show the company's experience, financial capabilities, technical capabilities, resource factors, and offer price factors as important selection criteria. This research contributes to the body of knowledge considering that there are still few studies on named subcontractors, especially regarding its selection criteria by the main contractor.*

Keywords **:** *construction; criteria; named subcontractors; selection.*

INTRODUCTION

The ever-growing construction industry considers several important factors to achieve success, including cost, quality, and time efficiency. Contractors, on the other hand, frequently have difficulties in meeting big demands in a short period of time. To address this problem, contractors are advised to delegate some of their work to subcontractors with special expertise in specific domains. This strategy is beneficial in enhancing productivity and time efficiency of construction works (Tanuwijaya & Tamtana, 2018). Other advantages of using subcontractors include managing specific jobs or those that require specialized competencies (Putri & Nusraningrum, 2022). Access to in-depth knowledge of local resources such as supplies and equipment may able to lower costs while improving work quality (Henrico & Soekiman, 2013). As a result, teamwork with subcontractors is regarded as extremely beneficial in accomplishing project objectives.

However, managing subcontractors presents certain difficulties. Saputra et al. (2017) emphasized that problems can occur without proper supervision, affecting productivity and work quality. Selecting reputable and experienced subcontractors is therefore critical to the success of a construction project. The prequalification of subcontractors is crucial in selecting competent subcontractors (Asmoro, 2014). Subcontracting is a method in which part of the obligations and tasks in the main contract are delegated to a third party known as a subcontractor (Fridkin & Kordova, 2022). It is commonly used in complex projects such as construction and information technology

projects. In this context, the main contractor recruits subcontractors to perform certain tasks throughout the project and is responsible for the work performed by these subcontractors (Shtub & Cohen, 2017).

In the construction industry, collaboration between contractors and subcontractors helps in dealing with challenges at work sites to achieve project goals (Rostiyanti et al., 2020). This collaboration must benefit both parties, creating a win-win situation. The benefits that emerge include improving business relationships, sharing and reducing risks, reducing costs, and optimizing resources (Hansen et al., 2017). Based on data from the Central Statistics Agency/BPS (2022), there are around 203,403 construction companies in Indonesia consisting of 167,605 subcontractors, 34,048 medium contractors, and 1,750 large contractors. In general, these subcontractors are selected by the main contractor through a direct appointment or a competitive process based on selection criteria determined by the main contractor. However, there are also subcontractors who have been appointed directly by the employer to be able to contract with the main contractor.

In practice, there are three types of subcontractors in the construction industry, namely: domestic subcontractors, nominated subcontractors and named subcontractors (Cartlidge, 2012). Domestic subcontractors are entities selected by the main contractor based on the best price offer and reliable performance (Talukhaba & Mapatha, 2007). A nominated subcontractor is a party selected by the employer, usually because of their involvement in the design stage or because of an existing relationship with the employer. This could also be caused by the employer's desire to avoid delays in the supply of materials (Rodrigo & Perera, 2017). This subcontractor nomination can occur before or after the contract with the main contractor is agreed.

Meanwhile, named subcontractors are subcontractors selected by and contracting with the main contractor, but the selection process is recommended by the employer who provides a list of names of potential subcontractors to the main contractor. This happens because in some contractual conditions it is not permitted for the employer to appoint nominated subcontractors, but the employer still has the right to name suitable subcontractors for specialized works (Cartlidge, 2012). The main contractor has the right to reject the name provided by the employer if it does not meet the qualifications set by the contractor (Chappell, 2017). The results of the literature review have shown extensive research regarding subcontractor selection criteria set by the main contractor. For examples, a selection framework for domestic subcontractors (Talukhaba & Mapatha, 2007) and selection criteria for nominated subcontractors (Rodrigo & Perera, 2017; Ngigi, 2021). However, there has been no research that focuses on selection criteria for named subcontractors, especially in commercial building projects in Indonesia. Therefore, this paper aims to identify the selection criteria for named subcontractors by the main contractor using a case study approach for a building project in Indonesia.

METHODS

Research Design

This study focuses on the selection criteria for named subcontractors carried out by the main contractor. The method applied is qualitative with a case study approach. Qualitative research aims to find and understand key phenomena (Creswell, 2011). Central phenomena can be understood through qualitative techniques such as direct observation or in-depth interviews. The information collected is usually in text form, which is then analyzed descriptively. The results of this analysis can be in the form of descriptions, images, or patterns (Hansen, 2021).

Data Collection and Analysis

Data collection techniques involve an integrative literature review and interviews. Integrative literature review is a literature review technique used to review, criticize, and synthesize various related literature in an integrated way so that new perspectives can be generated (Torraco, 2005). In this research, an integrative literature review was carried out through a systematic process as adopted by prior studies (Le et al., 2014; Hansen, 2022) which consists of determining target literature, searching for publications based on keywords, selecting relevant publications, analyzing selected publications, and reporting findings. The results of the integrative literature review are the identification of general subcontractor selection criteria obtained from the literature. These findings were used as input in developing interview questions.

Meanwhile, semi-structured interviews are used to explore information and understanding of expert respondents regarding a research phenomenon. This is especially useful for research that is exploratory and new since there are not many studies related to the phenomenon being carried out. Likewise, in this research, the identification of named subcontractor selection criteria has not yet been specifically researched, so a qualitative study is necessary to understand the phenomenon in depth. The interviews took place from 12 - 14 February 2023 to five practitioners from the three main contractors involved in the Swancity Daisan Residential Phase 3 project with the criteria being that the respondents had at least ten years of experience and served as project manager/contract administrator.

RESULTS

Key Selection Criteria

Based on the analysis, thirteen key selection criteria for named subcontractors by the main contractor were obtained. Table 1 shows the percentage of agreement with these criteria according to the five experts interviewed. There are five criteria that received full approval (100%) as the most important criteria in selecting named subcontractors, namely subcontractor's experience, availability of equipment and supporting infrastructure, equipment condition and capacity, security performance, and dispute resolution mechanism. Meanwhile, the three lowest criteria with an agreement level of 60% are reasonableness of offer price, availability of resources, and subcontractor's financial capability. From these results, the main contractor's concern in selecting named subcontractors focuses on the subcontractor's technical abilities in carrying out work such as experience, availability of equipment, and performance security.

Tabel 1
Key selection criteria

Selection criteria	Result
Reasonableness of offer price	60%
Subcontractor's experience	100%
Minimum work experience on similar projects	1-5 years
License and insurance	80%
Skilled manpower	80%
Availability of equipment and supporting infrastructure	100%
Compliance to health and safety	80%
Work methods	80%
Availability of resources	60%
Equipment condition and capacity	100%
Financial capability	60%
Performance security	100%
Dispute resolution mechanism	100%

Source: Authors' analysis

This research found interesting findings where the reasonableness of the offer/bid price was not a key criterion. A study discussed factors in subcontractor selection found that bid price, although important, was not the most important factor. Other factors such as experience, quality of previous work, reputation, and ability to fulfill contract requirements actually play an important role in selecting subcontractors (Martiano, 2021). Similarly, research by Muhendra & Hasibuan (2018) revealed that in selecting subcontractors, competitive bid prices need to be balanced with other considerations such as technical capabilities, experience, reputation, quality, and financial sustainability of the subcontractor. This illustrates how important it is to consider various factors in the subcontractor selection process.

Martiano (2021) emphasized that the company's experience in similar projects is very important in selecting subcontractors, because it shows their abilities and skills in handling similar projects and adapting to changing situations that may occur during construction. Faridi and El-Sayegh (2007) in their research emphasize the importance of company experience in subcontractor selection. They point out that a company's experience is a key factor to consider to ensure the success of a construction project. However, there are differences of opinion between experts regarding the minimum duration of experience required, which ranges from one to five years. In brief, the required duration of experience largely depends on the type and complexity of the project.

Research by El-Khalek et al. (2019) supports the importance of licensing and insurance evidence in subcontractor selection. Licensing and insurance ensure that subcontractors have credibility, regulatory compliance, and the ability to assume risks during the project execution. Regarding skilled manpower, this research found an agreement rate of 80%. This finding is consistent with research by (El-Khalek et al., 2019; Putri & Nusraningrum, 2022), which shows that personnel skills and experience are important factors in subcontractor selection.

Furthermore, all experts agreed that having the right equipment, tools, and supporting facilities is an important criterion in selecting named subcontractors. Studies by (Muhendra & Hasibuan, 2018; El-Khalek et al., 2019) support this opinion, showing that the availability of equipment and facilities influences selection of subcontractors. Hence, good equipment condition and adequate equipment capacity are important considerations in assessing subcontractor capabilities. In addition, a study by Martiano (2021) showed that when selecting subcontractors by main contractors in Indonesia, the availability of performance guarantees is greatly considered which will influence the contractor's decision. Meanwhile, dispute resolution mechanisms such as claims and debt issues were also highlighted by El-Khalek et al. (2019). This is especially important in relation to maintaining reputation and business continuity, preventing conflicts and project delays.

CONCLUSION

Extensive research has been carried out to identify subcontractor selection criteria by the main contractor. However, there has not been any research that focuses on identifying named subcontractor selection criteria. A named subcontractor has different characteristics from domestic or nominated subcontractors. Therefore, it is important to know the selection criteria applied by the main contractor in selecting named subcontractors. By focusing on the selection of named subcontractors by three main contractors involved in a commercial building project, this research adds new insights regarding the selection criteria for named subcontractors in the context of development in Indonesia. As pilot research, the results of this research can be used as input for further studies that investigates in depth both qualitatively and quantitatively the criteria and selection procedures for named subcontractors in Indonesia. It is also recommended to conduct comparative studies regarding the selection criteria for named subcontractors for other types of projects such as transport and energy projects

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