ABSTRACT

Construction activities play a vital role in driving economic growth, especially in Indonesia. However, during the implementation of Project A (building work) by PT XYZ in 2024, delays occurred due to the misalignment of partner performance. Problem identification revealed that the root cause was the Key Performance Indicators (KPIs) used, which were not optimal and could not define the project needs within the company. This study aims to design Key Performance Indicators (KPIs) as a performance measurement tool for partners using a Multi-Criteria Decision Making (MCDM) approach with the Analytical Hierarchy Process (AHP) method. The AHP method is used for its advantages in integrating qualitative and quantitative data. This method also provides objective and structured weighting. Data were collected through field observations, interviews, and literature studies, and then analyzed using AHP to determine the priority of criteria and sub-criteria. The results of the study produced KPIs consisting of 9 main criteria and 20 sub-criteria. The three most important criteria are delivery (19.44%), quality (13.60%), and financial capability (12.66%), with the main sub-criteria being the speed and suitability of delivery (19.44%) and quality standards (9.46%). Partners are categorized into 5 levels of eligibility, with a minimum score of 31,60% required to be included in the selected partner list. This study also highlights the differences between existing measurement tools and the tools developed in this research. This research can serve as a foundation for a more objective and measurable selection of partners for building projects at PT XYZ, by integrating the MCDM approach, particularly the AHP method, in partner evaluation. Additionally, this study contributes to the development of performance evaluation methodologies for partners in the construction industry, which can enhance project effectiveness and efficiency, as well as provide new insights into the application of the AHP method in the context of KPIs.

Keywords – ***Analytical Hierarchy Process, Key Performance Indicators (KPI), Construction, Project Procurement Management***