

ABSTRAK

Proyek renovasi seringkali memiliki tantangan tersendiri akibat ketidakpastian dan keterbatasan pada kondisi eksisting. Penelitian ini menganalisis penyebab keterlambatan proyek renovasi Bank BTN KCP UGM serta mengevaluasi efektivitas metode *Critical Chain Project Management* (CCPM) sebagai alternatif penjadwalan. Menggunakan pendekatan *mixed methods* dalam studi kasus, data dikumpulkan melalui wawancara semi-terstruktur dan dokumen proyek. Penyebab keterlambatan diidentifikasi dengan pendekatan 5M pada diagram *fishbone*, sedangkan penjadwalan ulang disimulasikan menggunakan CCPM dengan Microsoft Excel dan Project. Temuan menunjukkan keterlambatan terutama dipicu oleh produktivitas tenaga kerja yang fluktuatif dan pekerjaan tambahan akibat kondisi eksisting tak terduga. Simulasi CCPM mampu mempercepat durasi proyek dari 97 hari menjadi 59 hari dengan *buffer* yang efektif menyerap variabilitas. CCPM terbukti lebih adaptif dibanding penjadwalan konvensional, terutama untuk proyek renovasi berdurasi ketat. Secara praktis, CCPM relevan diterapkan sebagai pendekatan standar bagi kontraktor, serta memberi kontribusi pada literatur implementasi CCPM di proyek renovasi skala menengah di Indonesia.

Kata Kunci: Proyek Renovasi, Penjadwalan Proyek, *Critical Chain Project Management* (CCPM), Rantai Kritis, *Buffer Management*

ABSTRACT

Renovation projects often face unique challenges due to uncertainties and constraints related to existing site conditions. This study analyzes the causes of delays in the renovation project of Bank BTN KCP UGM and evaluates the effectiveness of the Critical Chain Project Management (CCPM) method as an alternative scheduling approach. Using a mixed-methods case study design, data were collected through semi-structured interviews and project documentation. Delay factors were identified using a fishbone diagram based on the 5M approach, while the rescheduling simulation was conducted using CCPM with Microsoft Excel and Project. The findings indicate that delays were primarily caused by fluctuating labor productivity and additional work arising from unforeseen existing conditions. The CCPM simulation successfully reduced the project duration from 97 days to 59 days, with buffers effectively absorbing schedule variability. CCPM proved to be more adaptive than conventional scheduling methods, particularly for renovation projects with tight deadlines. Practically, CCPM is a relevant standard approach for contractors frequently handling similar projects and contributes to the growing literature on CCPM implementation in medium scale renovation projects in Indonesia.

Keywords: Renovation Project, Project Scheduling, Critical Chain Project Management (CCPM), Critical Chain, Buffer Management