BAB VI

KESIMPULAN DAN SARAN

6.1 Kesimpulan

Dalam penelitian ini disimpulkan bahwa adanya perencanaan ulang aktivitas pekerjaan menggunakan *precedence* diagram (Jaringan Pekerjaan), fungsi dari *precedence* diagram untuk menemukan jalur kritis, serta diusulkan *crashing* (percepatan waktu proyek) untuk mereduksi waktu penyelesaian proyek yang berada pada jalur kritis dengan menambahkan sumber daya tenaga kerja untuk mempersingkat waktu, perlakuan *crashing* dapat menimbulkan peningkatan biaya sebesar Rp 8.581.380 pada aktivitas pekerjaan D3 (Pemasangan Pipa *Fire Detector*) dengan total pekerja 4 orang, awal durasi 5 hari dengan total pekerja 2 orang dan biaya yang dikeluarkan sebesar RP 6.781.380.

6.2 Saran

Saran yang dapat penulis berikan untuk pihak perusahaan yang mengalami *time schedule* yang tidak sesuai lagi dengan pekerjaan dilapangan, disarankan untuk mempertimbangkan penyusunan *time schedule* ulang dengan menggunakan *precedence* diagram, solusi yang dilakukan yaitu melakukan *crashing* pada aktivitas kegiatan tertentu yang telah dilakukan perhitungan terlebih dahulu kepada lama durasi pekerjaan seperti yang dilakukan oleh penelitian ini.

DAFTAR PUSTAKA

Ammar, M. A. (2011). “Optimization of project time-cost trade-off problem with discounted cash flows.” Journal of Construction Engineering and Management, Vol. 137, No. 1, 65-71, DOI: 10.1061/(ASCE)CO.1943-7862.0000256.

Amin Mahmoudi, Mohammad Reza Feylizadeh, (2018) "A grey mathematical model for crashing of projects by considering time, cost, quality, risk and law of diminishing returns", Grey Systems: Theory and Application, https://doi.org/10.1108/GS-12-2017-0042

Firat Dogu Akin, Gul Polat, Harun Turkoglu & Atilla Damci (2021): A crashing based time-cost trade-off model considering quality cost and contract clauses, International Journal of Construction Management, DOI: 10.1080/15623599.2021.1946899

Harun Turkoglu, Gul Polat & Firat Dogu Akin (2021): Crashing construction projects considering schedule flexibility: an illustrative example, International Journal of Construction Management, DOI: 10.1080/15623599.2021.1901559

J. Xu, H. Zheng, Z. Zeng, S. Wu, and M. Shen, ‘‘Discrete time–cost–environment trade-off problem for large-scale construction systems with multiple modes under fuzzy uncertainty and its application to Jinping-II hydroelectric project,’’ Int. J. Project Manage., vol. 30, no. 8, pp. 950–966, Nov. 2012.

M Bagherpour1, M R Feylizadeh2, and D F Cioffi3 *. (2012), “Time, cost, and quality trade-offs in material requirements planning using fuzzy multi-objective programming”, Proceedings of the Institution of

Mechanical Engineers, Part B: Journal of Engineering Manufacture, Vol. 226 No. 3, pp. 560-564.

Monghasemi, S., Nikoo, M. R., Fasaee, M. A. K., and Adamowski, J. (2015). "A novel multi criteria decision making model for optimizing time–cost–quality trade-off problems in construction projects." Expert Systems with Applications, Vol. 42, No. 6, pp. 3089-3104, DOI: 0.1016/j.eswa.2014.11.032.

M. Tomczak, "Modeling of the harmonization method for executing a multi-unit construction project," Open Eng., vol. 9, no. 1, pp. 282–291, 2019. https://doi.org/10.1515/eng-2019-0036

Michał Tomczak1 and Piotr Jaśkowski2, (2020) "Accelerating the Execution of Construction Projects by Relocating Resources", Proceedings of the Creative Construction e-Conference (2020) 041, https://doi.org/10.3311/CCC2020-041

MICHAŁ TOMCZAK AND PIOTR JAŚKOWSKI, (2020) "Crashing Construction Project Schedules by Relocating Resources", Digital Object Identifier 10.1109/ACCESS.2020.3044645

Schmidt and Nakajima. (2013). "Material Flow Cost Accounting as an Approach to Improve Resource Efficiency in Manufacturing Companies." International Resources Journal.

S Sharma1, N Bedi2, dan VK Sukhwani3. "Optimization of Time and Cost for a Research Project by Project Crashing Method" IOP Conf. Series: Materials Science and Engineering 998 (2020) 012057. doi:10.1088/1757-899X/998/1/012057.