

## **ABSTRACT**

*In large civil construction works, a quick solution is often needed. For this reason, it is necessary to use heavy equipment in accordance with the work condition. River Galur normalization activity in Kulonprogo Regency which is done by PT Adhikarya tbk is urgently require heavy equipment to facilitate and accelerate the implementation of work. The objective to be achieved in this Final Project is to look for factors that affect productivity, production results and operating costs for the use of excavator heavy equipment.*

*The object of research on the river normalization project Galur is a heavy equipment Komatsu PC 200-8 excavator type long arm with unit code KI 33 and KI 12. This research method uses quantitative method by observing directly the circulation time and effective working time on the excavator so that from the factor this can be obtained by the production capacity and total operation costs for the project..*

*Factors that influence the productivity of excavators in the project are work efficiency, circulation time, operator skill, bucket feel factor, weather factor and digging depth factor. The volume of soil excavation works is 52,039.63 m<sup>3</sup>. Production capacity for excavators with KI 12 unit code is 55.19 m<sup>3</sup>/hour, while for KI 33 unit code has a production capacity of 52.94 m<sup>3</sup>/hour. There is a difference in productivity of the two units which is not too significant at 2.25 m<sup>3</sup>/hour due to differences in operators that affect the circulation time and other correction factors. Based on the total productivity of the two tools that is equal to 843,414 m<sup>3</sup>/day, the project can be completed within 62 working days faster than 5 days compared to the planning by the company which is 67 working days. This can happen because the productivity calculated by the company is 776.10 m<sup>3</sup>/day taking into account the number of days and the volume of work. The costs that must be incurred by PT Adhikarya for the project amounted to Rp.494,211,424*

*Keywords: Productivity, Excavators, Costs*