

ABSTRACT

PT Pindad is one of the companies engaged in the manufacturing industry in Indonesia. One of the products of PT Pindad which can be used commercially is Excavator with brand of Excava 200. Excava 200 production only run for two years starting in July 2016. In two years of production of Excava 200 which started in mid 2016 until now, PT Pindad several times to replace suppliers who provide part Excava 200. One of the assembly parts that several times change the supplier is Cover LH Assy. Replacement of suppliers that quite often occur because there is no proper supplier to work together in the long term with PT Pindad. The purpose of this research is to designing decision support systems that can assist the difficult of suppliers selection by considering various criteria. The criteria used are classified into qualitative criteria and quantitative criteria. Calculation of qualitative criteria is using AHP method. While the value of quantitative criteria obtained from PT Pindad. The criteria value is used as a reference in evaluating the efficiency of each supplier supplier by using the Basic DEA method (CCR Model). For ranking determination, each alternative supplier is completed using the Super-efficiency DEA method. From the results of the efficiency evaluation calculations that have been done using Basic DEA, there are only two alternative suppliers that are declared relatively efficient compared to other alternative suppliers, namely PT DLM and PT MCC with a value of 1. While to determine the ranking of each alternative supplier by using the Super-efficiency DEA method, the biggest alternative supplier weight is PT DLM with 2,381. Decision support systems are designed using VBA Macros in Excel.

Keywords: decision support system, data envelopment analysis, analytic hierarchy process, visual basis for application, macro, supplier