SELECTION OF THIRD-PARTY LOGISTIC (3PL) AND OPTIMIZATION OF DELIVERY AREA BY AHP AND GOAL PROGRAMMING METHOD
CASE STUDY PT. PHAPROS, TBK

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ABSTRACT

Selection of 3PL (third party logistics) is a theme that is often discussed in a study because many companies have outsourced the logistics function to the 3PL, so companies can focus on their core competencies. The use of 3PL is also carried out by a pharmaceutical company to send their products from factory to its branches throughout Indonesia. This research will be assessed an appropriate alternative to the determination of 3PL area to be served by each 3PL. Tool which is used in this study is the Analytic Hierarchy Process and Goal Programming. AHP is used for weighting the criteria for selecting a 3PL and Goal Programming for determining the allocation of the delivery area of each transporter. The criteria used in selecting a 3PL is the cost, service quality, security of goods, services and capacity-speed modes. Weights of the criteria resulting from the AHP will be used in the formulation of Goal Programming. Two scenarios considered, the first is that each area only served by a 3PL, then the second is that each area can be served by two 3PL. The results of this study is each transporter have to deliver the product to the selected city that have an optimal result and obtained the conclusion that the condition of delivery to a city with one transporter is better than the condition of delivery to a city with two transporter.

Keywords: Selection of 3PL, Analytic Hierarchy Process, Goal Programming