AN INTEGRATED OF FUZZY ANALYTIC NETWORK PROCESS AND GOAL PROGRAMMING FOR SUPPLIER SELECTION AND ORDER ALLOCATION (CASE STUDY: ITS PRESS SURABAYA)

Student Name: Prawatyaningrum Kusuma Hapsari
NRP: 2505.100.116
Major: Teknik Industri FTI - ITS
Supervisor: Prof. Ir. Suparno, MSIE, Ph.D

Abstract
Supplier selection is a multi-criteria problem which includes both tangible and intangible factors. In these problems if suppliers have a different constraint, two problem will exists: which suppliers are the best and how much should be purchased from each suppliers selected. In this paper an integrated of fuzzy-Analytic Network Process (fuzzy-ANP) and goal programming is proposed to choosing the best supplier for ITS Press and define the optimum quantities among slected suppliers to maximize value of purchasing, minimize the budget anf defect rate. Each suppliers are evaluated according to 15 criterias that are involved in benefit, opportunity, cost, risk (BOCR) subnet. And the results is get Wiranata as the best paper supplier and Nikki for the best ink supplier. And the proposed for order allocation is to minimize of deviation in each objective function.

Keywords: fuzzy-ANP, goal programming, supplier selection, order allocation.