

CHAPTER 2

LITERATURE REVIEW

Sari (2006) has done research in PT. Iprima Nusa Permata Dian Mas Klaten, about doormat production scheduling to meet due date with lot transfer based on maximal capacity of material handling.

Suprpto (2008) has done the research about Job Shop Scheduling Program with Theory of Constraint approach. It aimed to make a scheduling program based on Theory of Constraint approach to result minimum makespan value for certain cases in job shop scheduling problem. The scheduling program used in this research made by using software Quick Basic 4.5.

Putro (2005) has done the research in flow shop scheduling that uses parallel machines by using Aslan's Frequency algorithm. It aimed to develop Aslan's Frequency algorithm due to flow shop scheduling problems, and compare the performance of this algorithm with SBLS (Shifting Bottleneck - Local Search) method in minimization of makespan by using Legin software.

Carolina (2008) has done the research about the effect of lot size and product structure on makespan minimization in multilevel product scheduling that is product structure 3 levels type and maximum 3 parts in one level. It also aimed to find out the effect of product structure complexity due to optimum lot size. The number of item produced in this research is 32.

Sari (2008) also has done the research about the effect of lot size and product structure on makespan minimization in multilevel product scheduling. The

product structure used is 2 level product structure of maximum number of parts from 1 to 5 in each level. The number of item produced is 30.

Lestianingsih (2008) has done research aimed to find out the effect of product structure complexity due to optimum lot size. The product structures evaluated are 2 to 5 levels product structure of maximum number of parts is 1 in each level. The number of item produced is 24.

Sari (2008) has done the research similar to Carolina (2008), Sari (2008), and Lestianingsih (2008), that is aimed to find out the effect of product structure complexity due to optimum lot size. However the product structure evaluated are 2 to 5 levels product structure of maximum number of parts are 2 in each level. The number of item produced is 20.

Those researches are focusing in the same topic that is scheduling. One of them is aimed to meet due date, while the others are aimed to minimize makespan. The writer in this research also has the same purpose that is to minimize makespan.

The difference among this research with them is that there is no algorithm and certain software used in this research. Putro (2005) uses Aslan's Frequency algorithm and Legin software while Suprpto (2008) uses software Quick Basic 4.5 to build program that support Theory of Constraint approaches.

The writer of this research has the same purpose with Carolina's (2008), Sari (2008), and Lestianingsih (2008), and Sari (2008) those are to minimize makespan in multilevel product scheduling and find out the

effect of product structure complexity due to optimum lot size. The difference is in the product structure complexity and lot size. Writer uses 3 level of product structure with maximum number of parts are 4 in each level, and 30 as the number of item produced.

