

CHAPTER 1

INTRODUCTION

1.1 Background

Productivity is an important thing in an organization, especially for manufacturing sectors to gain more profit that lead to prosperity. Productivity may be defined as the effectiveness with which the resource inputs of personnel, materials, machinery, information in plant are translated into customer satisfaction, oriented production outputs and which today involve all the relevant marketing, engineering, production, and service activities of the plant and company rather than solely the activities of the factory workers, where traditional attention has been concentrated (Feigenbaum, 1983).

Work method is the method used by the worker or operator to finish their work. The efficient work method can also reduce the standard time. Work method can be improved by some techniques; one of them is time and motion study analysis. Time and motion study analysis is the systematic study of work systems with the purposes of developing the preffered system and method, standarizing this system and method, determining the time required by a qualified and properly trained person and asissting in training the worker in the preffered method (Barnes,1980). The efficient work method can be reached by eliminate

all unnecessary work, combine operation or element, change the sequence of operations and simplify the necessary operations(Barnes, 1980)

PT. Macanan is one of the printing companies in Klaten. There are some departments in this company such as pre printing, printing, and finishing department. The finishing department is started by combining some paper into one sequence of book based on their pages sequences. After making a sequences, the process continue to the binding process, cutting until inspection and packaging. Human is the most important element in this department. They work as operator in the manual process or work as the operator of the machines. Based on the observation, there are different output among the operators and high overtime hours in manual page sequencing process. This situation happened because PT.Macanan Jaya Cemerlang does not has standard work method and time. The overtime hours make the company spend more cost. To solve those problems, it is needed to developes the work method in manual page sequencing process and determine standard time of whole process in finishing department.

1.2 Problem Statement

Based on background above, the problem aroused is how to determine the better work method measured by time and motion study analysis in manual page sequencing division and the standard time in

finishing department, PT.Macanan Jaya Cemerlang, Klaten.

1.3 Research Objective

1. To determine the better work method based on time and motion study analysis in manual pages sequencing division, PT. Macanan Jaya Cemerlang, Klaten.
2. To determine the standard time in finishing department, PT.Macanan Jaya Cemerlang.

1.4 Scope of Research

1. This research uses time and motion study as the method.
2. The work method improvement is only done in manual page sequencing division because the different work performances showed by the output is happened in this division.
3. The research is only done for Detik-Detik books because of the repetitive product.
4. The sample of workers in manual page sequencing division are only taken from people who work normally, with age between 19th - 21st, and with work period from 2 until 5 year in case to stabilize the learning curve of the worker.
5. The evaluation of better work method is only shown from minimizing the standard time compared both current and recommended work methods.

6. This research uses time and motion study in improving and determining the work method.
7. The cycle time is only measured by stopwatch 0,001.
8. The research is done from 3rd January to 7th February 2011.
9. The standard time for binding and cutting division are only calculated by machine standard capacity without considering the breakdown or setup in machine.

1.5 Research Methodology

This research are supposed to know the work method in manual page sequencing process and standard time in finishing department.

There are some step which have done such as :

- a. Formulating the problem according to the current topic
- b. Learning the theory of time and motion study to analyze and solve the problem.
- c. Collecting data of cycle time, motion element, work layout, machine time standard, and transport time.
- d. Analyzing the data of cycle time in manual page sequencing process by time and motion study. The analysis is done
- e. Designing recommended work method by evaluating the current work methods.
- f. Analyzing the data of recommended work method with output of recommended work method and

standard time by the improvement of work method shown by minimization of the standard time.

- g. Calculating the standard time for whole process in finishing department.
- h. Summarize the recommended work method for manual page sequencing process and standard time of whole process in finishing department.

For detail, the flow chart of research methodology is shown in Figure 1.1.

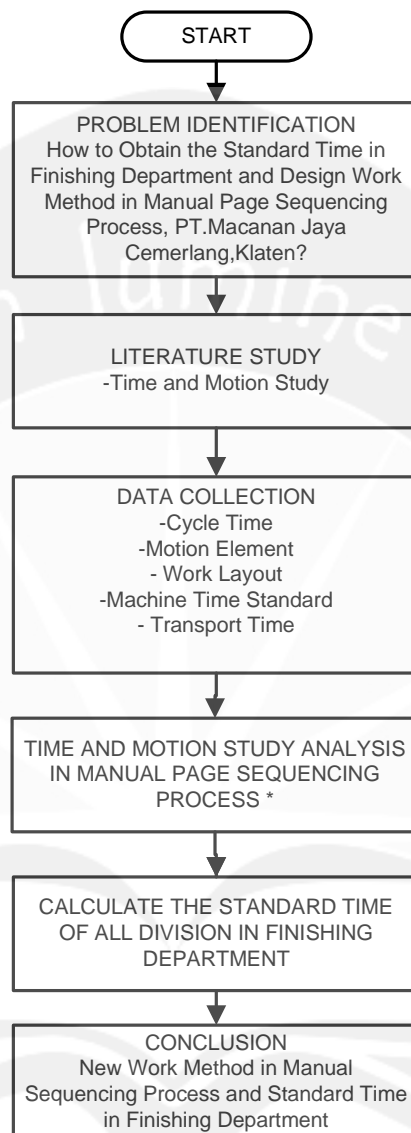


Figure 1.1. The Methodology Research Flow Chart

Notice:

*) The detail of the methodology is shown in figure 1.2.

For the detail of time and motion study analysis in manual page sequencing process is shown in Figure 1.2.

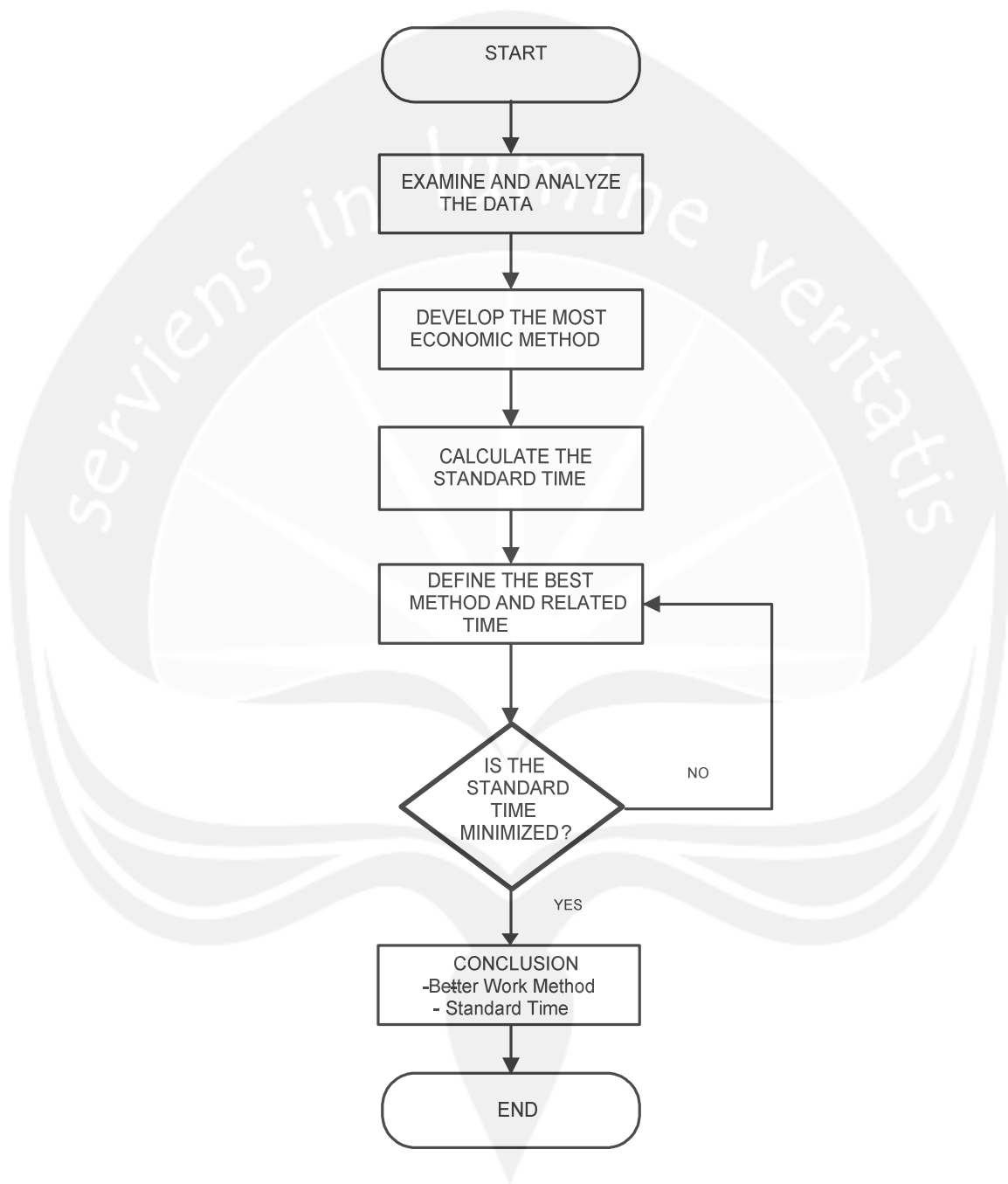


Figure 1.2. Time and Motion Study Methodology

1.6 Report Outline

This thesis consist of 6 chapters, they are :

Chapter 1 : Introduction

This chapter consist of Background, Problem Definition, The Objectives, Problem Scopes, Research Methodology and also Report Outline.

Chapter 2 : Literature Review

Literature review consists of some last researchs which have relationship with the problem research in this thesis.

Chapter 3 : Theory

This chapter consists of theory from library research that connected with this research.

Chapter 4 : Company Profile and Data

This chapter consist of profile of the company and appearing data research.

Chapter 5 : Data Analysis and Discussion

This chapter consist of the class of analyzing the data research.

Chapter 6 : Conclusion and Recommendation

This chapter consists of conclusion and recommendation.