CHAPTER 1

INTRODUCTION

1.1 Overview of the Project

In this modern and competitive world, manufacturing industry is one of the sectors which can takes turns under all types of economic systems such as free market economy and collectivist economy. All of the products generated is competing to gain demand and satisfactory from customers. Dealing with continuous competition, company not only needs to produce quality products but excellence production systems and management also plays an important roles.

The aim of study is to improve the productivity of an assembly line in industry manufacturing production. The objective is to identify the defect of the company and create a better solution to improve the production line performance. Various industrial engineering technique and tools is implementing in this study in order to investigate and solve the problem that occurs in the production. However, 7 Quality Control tools are the main tools that will be applied to this study.

Data for the selected assembly line factory are collected, studied and analyzed. The defect with the highest frequency will be the main target to be improved. Various causes of the defect will be analyzed and various solving method will be present. The best solving method will be chosen and propose to the company and compare to the previous result or production. However, the implementation of the solving methods is depending on the company whether they wanted to apply or not.
1.2 **Problem Statement**

Nowadays, for manufacturing company, the most important goals for almost all manufacturing company is to increase the productivity, which reflect to get a better production line efficiency. There are many methods exist by which productivity could be analyzed and improved.

Simulation software such as Quest, ProModel, and WITNESS allow users to build several layout of the company and identify the problems faced and hence improve the productivity of the company. 7 Quality Control tools also can be used to identify the defects at the workstation. However, the analysis of problems consume of longer time compare with the simulation software.

This study tries to identify the defects occurs at each workstation and hence overcome and reduce the defect that occurred during the productivity process. Last but not least, is to increase the production rate hence to cope up the demand from customer.

1.3 **Objectives**

Basically, the main purposes in accomplishing this study are shown below:

1) To implement industrial engineering tools in selected manufacturing company.
2) To identify the highest frequency of defects occurs at the workstations.
3) To propose new methods to the selected manufacturing company.
4) To improve the productivity of the company
1.4 Scopes

The scope of this study is mainly focusing on the criteria shown below:

a) The study mainly focuses on 7 Quality Control tools but only selected Quality Control tools are applied. They are check sheet, Pareto chart, and cause and effect diagram.

b) The industry that will be select is limited to company with production or machining lines.

c) Only defects with highest frequency will be analyzed.

d) Propose new methods to increase the productivity of the company but depends on company whether implement the new method or not.

e) Compare between the existing and proposed productivity.

f) Sample model being analysis is 1040 mm paper.

1.5 Summary

Productivity improvement is wide, vague, and open to different interpretations. It's often troubling, undesirable, and less than productive to invest an endless amount of time and effort into trying to improve productivity. Yet, it is invariably important to be able and identify the organizational constraints which are preventing the organization from becoming more efficient and competitive. Utilizing engineering tools will map and identify the main non productive segments in productivity line and draft a plan to address and remedy the issues. One of the simplest yet efficient tools will be 7 Quality Control tools. From this study, 7 Quality Control tools will be performed via detailed implementation for the proposed of improving the productivity of the selected company/industrial.