

**INCREASING THE PRODUCTION CAPACITY IN A FURNITURE
MANUFACTURER USING ROUGH-CUT CAPACITY PLANNING (RCCP)**

A Thesis

**Submitted in Partial Fulfillment of the Requirement for the Bachelor Degree
of Engineering in Industrial Engineering**



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UNIVERSITAS ATMA JAYA YOGYAKARTA**

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IDENTIFICATION PAGE

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DECLARATION OF ORIGINALITY OF RESEARCH

I certify that the research entitled "Increasing the Production Capacity in a Furniture Manufacturer using Rough-Cut Capacity Planning (RCCP)" in this thesis has not already been submitted for any other degree.

I certify that to the best of my knowledge and belief, this thesis which I wrote does not contain the works of parts of other people, except those cited in this quotations and bibliography, as a scientific paper should.

In addition, I certify that I understand and abide the rule stated by the Ministry of Education and Culture The Republic of Indonesia, subject to provisions of Peraturan Menteri Pendidikan Nasional Republik Indonesia Nomor 17 Tahun 2010 tentang Pencegahan dan Penanggulangan Plagiat di Penguruan Tinggi.

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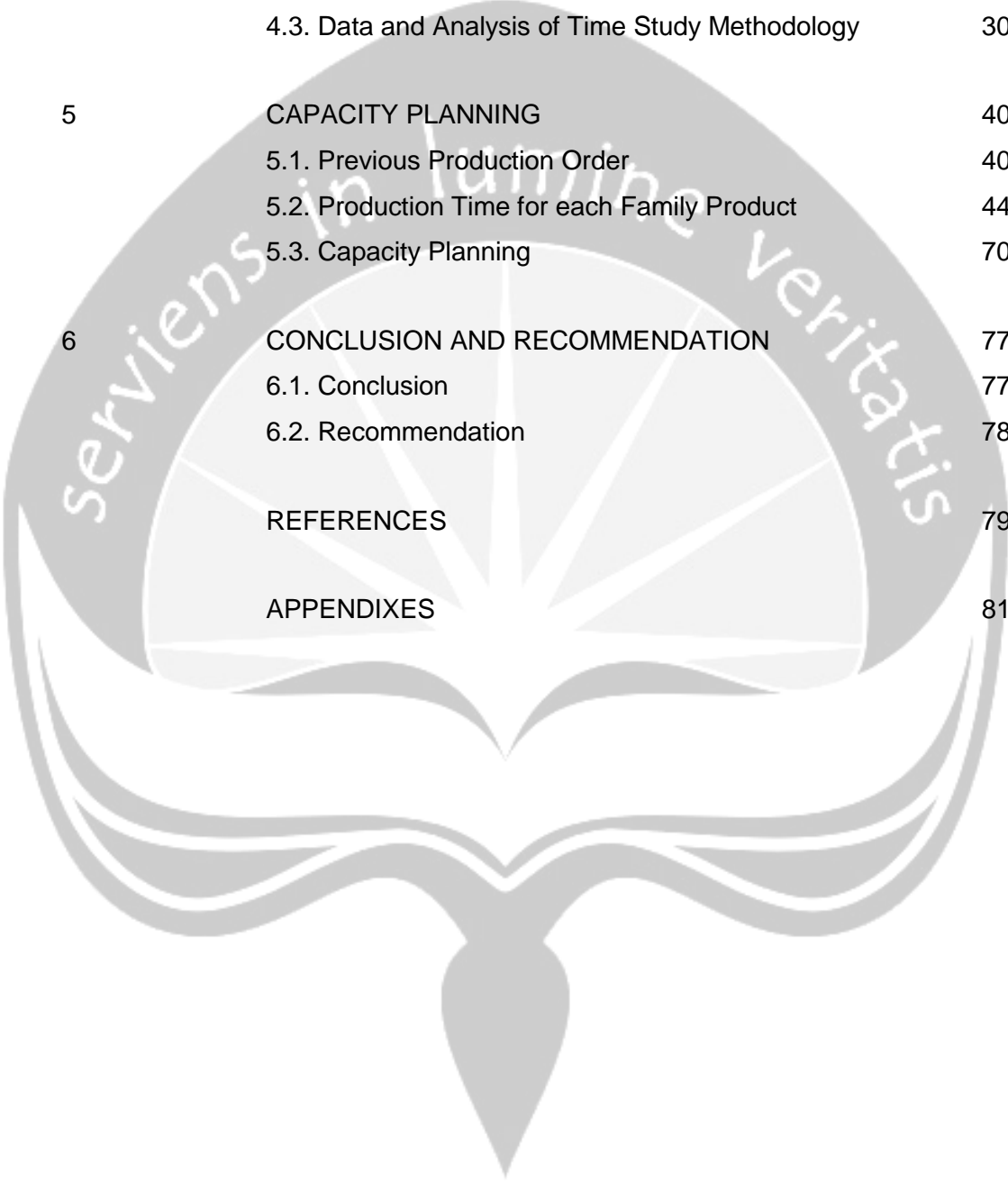
The author recognize that this thesis is far from perfection, therefore any suggestions that may inspire for the next research. The author hope that this thesis may be useful for the readers and all involved parties.

Yogyakarta, June , 2018

Author

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ABSTRACT

Customer satisfaction is a critical factor for the development of enterprises and to keep them in a today's business competition. Therefore, the enterprises should be able to provide the best of their products or services with the purpose of fulfilling their needs. In order to perform well, there are several key factors that are important to be considered, such as the quality of the product, the product price, availability of the products, and the others. This research concerns about the production capacity in a manufacture which in line with the company's ability to produce their product on time.

The main objective of this research is to analyze how many additional resources (man power) needed in order to anticipate the increment of demand in the future condition. Since the company does not have any data related with its production time for each type of family product, therefore time study analysis is used in this research as the basis of calculating the production time. The capacity planning itself is done by using Rough-Cut Capacity Planning (RCCP) as it is used to analyze the aggregate production order.

The result of this research is about the number of workers in each production department. There are some workers in a production department which are transferred to the another in order to balance the production system. Three workers in Sanding department are moved into Finishing department, and one additional worker is added to each of Woodworking, Finishing and Packing department. The adjustments are needed to maintain the departments' utilization of 50-60% for Sanding, Finishing and Packing department, and 75-80% for Woodworking department, as the limit of the production department in this research. The second alternative is by removing one worker from each of Finishing and Packing department from the first solution, and only add one worker to work in Finishing and Packing department alternately. But, in order to implement the second solution, further research is needed to be held.

Keywords: Production Capacity, Capacity Planning, Rough-Cut Capacity Planning (RCCP), Time Study