

**IMPROVING FULL INSTANT AVAILABILITY OF UNDERCARRIAGE
SPARE PARTS THROUGH FORECASTING ACCURACY ENHANCEMENT
AND INVENTORY OPTIMIZATION : A CASE STUDY IN THE PT XYZ
SUMATERA REGION**

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MASTER'S DEGREE
in

MASTER OF MECHANICAL ENGINEERING
FACULTY OF ENGINEERING AND INFORMATION TECHNOLOGY

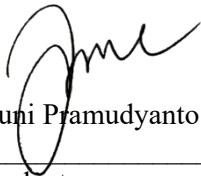


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Revision after the Thesis Defense on 04 February 2026

January 2026

STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, it contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma at any educational institution, except where due acknowledgement is made in the thesis.



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ABSTRACT

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Inventory management is key for a company to be competitive in today's business world. Managing inventory also aims to maintain service levels for customer satisfaction. PT XYZ is a distributor company engaged in heavy equipment. One of the supported areas is the Sumatra area. The coverage area is very broad with a population of PCXXX units of more than 9,000 units spread from Lampung to Aceh. PT XYZ has difficulty supporting customer operations in the Sumatra area, namely the low full instant availability. This research is related to inventory management with the aim of obtaining standardization of effective and efficient inventory management. The case study was conducted on 1 Undercarriage parts number that has the most influence on service levels and has the highest price. The Economic Order Quantity (EOQ) method was chosen to answer PT XYZ's difficulties. The use of EOQ to obtain safety stock values and reorder points that will help the company prepare goods that will be needed by customers. The results of the study showed that there was an increase in full instant availability. The same method can be applied to other undercarriage parts numbers that will support PT XYZ's operations to be more effective and efficient.

Keywords: Economic Order Quantity, EOQ, Safety Stock, Reorder Points, Excavator



DEDICATION

I dedicate this research to my late mother, father, wife and children as well as PT United Tractors Tbk where I work, my superiors, friends who always help me during my college years until this research is completed.



ACKNOWLEDGEMENTS

I would like to express my gratitude to my late mother, father, wife, children, and all my extended family who have supported me both morally and materially in the research process that I am doing. I also thanks to the management of PT United Tractors Tbk who have bridged the undergraduate education program at the Swiss German University campus. I would also like to thank Mr. Gembong Baskoro, Mrs. Filiana Santoso who guided me from the beginning to the end of this research. I also thank you to Swiss German University which has provided a lot of knowledge, both theory and practice in the field, which has greatly helped me in increasing work productivity at PT United Tractors Tbk.



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