Universiti Teknologi MARA

Allocation of Time and Cost in Project Management using Goal Programming Case Study: Teras Chuping Enterprise

Nur Athirah Binti Amir Hamzah

Report submitted in fulfillment of the requirements for Bachelor of Science (Hons.) Management Mathematics Faculty of Computer and Mathematical Sciences

June 2019

STUDENT'S DECLARATION

I certify that this report and the research to which it refers are the product of my own work and that any ideas or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.

.....

NUR ATHIRAH BINTI AMIR HAMZAH 2016524329

JUNE 21, 2019

ABSTRACT

The allocation of time and cost in a project have always become a common issue faced by most of the company. In the real-life activity, the project manager needs to handle multiple issues that arise regarding the project management such as the projects are not completed on time and the cost is over budget. This paper discusses about the application of preemptive goal programming model to allocate time and cost in few projects at Teras Chuping Enterprise, a metal welding and fabrication company. The data was analyzed using LINGO 17 software. The results show that when the first priority is to complete the project on time, the priority to keep the project expenditure within the budget is not fully achieved with some projects are above the budget and some projects are below the budget.

TABLE OF CONTENTS

CONTENT	S		PAGE	
SUPERVIS	OR'S A	PPROVAL	ii	
DECLARATION				
ACKNOWLEDGEMENT				
ABSTRAC	Γ		v	
TABLE OF	CONTI	ENTS	vi	
LIST OF FI	GURES	3	ix	
LIST OF T	ABLES		X	
CHAPTER	ONE: I	NTRODUCTION		
1.1	Backg	ground of the Study	1	
	1.1.1	Fabricated Metal Products Manufacturing Subsector	3	
	1.1.2	Project Management Decisions	3	
	1.1.3	Teras Chuping Enterprise	4	
1.2	Proble	Problem Statement 5		
1.3	Objective of the Study 6			
1.4	Scope	of the Study	6	
1.5	Signif	Significance of the Study		
CHAPTER	TWO: I	LITERATURE REVIEW		
2.1	Goal I	Goal Programming		
2.2	Application of Goal Programming		8	
	2.2.1	Application of Goal Programming in Optimising Prod	luction 8	
	2.2.2	Application of Goal Programming in Solving Allocati	on	
		Problem	9	
2.3	Summ	narv	10	

CHAPTER THREE: RESEARCH METHODOLOGY

3.1	Method of Data Collection	11	
3.2	Method of Data Analysis		
3.3	Goal Programming Model		
3.4	The Weighted Goal Programming Method		
3.5	Preemptive Goal Programming Method		
3.6	Combination of Preemptive and Weighted Method		
3.7	Goal Programming Model for the Time and Cost Allocation		
3.8	Model Development		
3.9	Solving Goal Programming using Lingo 17 Software		
4.0	Summary		
CHAPTER	FOUR: RESULTS AND DISCUSSIONS		
4.1	Results and Findings	24	
4.2	Discussions	26	
CHAPTER	FIVE: CONCLUSION AND RECOMMENDATIONS		
5.1	Conclusion	29	
5.2	Recommendations	30	
REFERENC	CES	32	
APPENDIC	ES		
APPENDIX A: CODING FROM LINGO SOFTWARE			
APPENDIX B: RESULT FROM LINGO SOFTWARE			
APPENDIX C: PICTURES OF PROJECTS			