

LIST OF CONTENTS

APPROVAL PAGE	i
SELF DECLARATION AGAINST PLAGIARISM	ii
ABSTRACT.....	iii
PREFACE	iv
ACKNOWLEDGEMENTS.....	v
LIST OF CONTENTS	vi
LIST OF FIGURES	viii
LIST OF TABLES.....	x
CHAPTER 1 INTRODUCTION.....	1
1.1 Background	1
1.2 Problem Identification	4
1.3 Objectives	4
1.4 Scope of Work	4
1.5 Hypotheses.....	5
1.6 Research Methodology	5
CHAPTER 2 LITERATURE REVIEW	6
2.1 Satellite Communication System.....	6
2.2 Starlink.....	8
2.3 Fiber to the x (FTTx)	11
2.4 Technical Aspect of NGSO Satellite	13
2.4.1 Coverage Analysis	13
2.4.2 Capacity Analysis	14
2.5 Service Performance Tests.....	15
2.5.1 Throughput.....	15
2.5.2 Latency and Jitter	15
2.5.3 Packet Loss	16
2.5.4 Availability	16
2.6 Economic Aspect	17
2.6.1 Cost-to-Income Ratio (CIR) Analysis	17
2.6.2 Cost per Mbps	18
CHAPTER 3 RESEARCH METHODOLOGY	19
3.1 Research framework	19

3.2	Related Data Information.....	20
3.2.1	Data Related to Starlink.....	20
3.2.2	Data Related to FTTx.....	23
3.2.3	Indonesia's Service Areas Market Information (West Java).....	24
3.3	Technical Analysis.....	27
3.3.1	Performance Analysis Tools.....	28
3.4	Economic Analysis	29
CHAPTER 4 RESULT AND ANALYSIS		30
4.1	Technical Analysis and Performance Test Result	30
4.1.1	Starlink Coverage and Capacity Analysis.....	30
4.1.2	Starlink Performance Analysis	31
4.1.3	FTTx Performance Analysis.....	36
4.1.4	Performance Analysis Result.....	40
4.2	Economic Analysis Result	47
4.2.1	Affordability and Cost-effectiveness Analysis	47
4.3	Comparison Analysis.....	52
4.3.1	Comprehensive Analysis	52
4.3.2	Area Performance Analysis	53
4.3.3	Policy Brief Recommendations	61
CHAPTER 5 CONCLUSION AND RECOMMENDATION.....		64
5.1	Conclusion	64
5.2	Recommendation	65
5.3	Future Works	66
REFERENCES		67