

## Table of Contents

Dedication .....	iii
Acknowledgment .....	iv
Abstract .....	v
ملخص تفیدی .....	viii
Abbreviations .....	x
Table of Contents .....	xii
List of Figures .....	xv
List of Tables .....	xvi
Chapter 1: Introduction .....	1
1.1 Preface .....	1
1.2 Problem Statement .....	1
1.3 Objectives of the Study .....	2
1.4 Importance of the Study .....	2
1.5 Methodology of the Study .....	3
1.6 Limitations of the Study .....	3
1.7 Contents of the Study .....	4
Chapter 2: Theoretical Framework .....	5
2.1 An Overview of CGE Modeling .....	5
2.2 Social Accounting Matrix .....	8
2.2.1 Introduction .....	8
2.2.2 SAM Features .....	9
2.3 SAM Versus Input Output Matrix .....	9
2.4 Data Collection .....	11
2.5 General CGE Model Description .....	11
2.5.1 Introduction .....	11
2.5.2 Use of CGE Model .....	11
2.5.3 Conditions of CGE Model .....	12

2.5.4 Characteristics of CGE model .....	12
2.5.5 General CGE Model .....	13
2.6 Sensitivity Analysis.....	16
2.7 General Algebraic Modeling System ‘GAMS’ .....	16
Chapter 3: Literature Review.....	17
Chapter 4: An Overview of the Palestinian Economy .....	24
4.1 Palestinian Economy .....	24
4.2 Electricity in Palestine.....	24
4.3 Solar Energy in Palestine .....	30
4.4 Limitations of Implementing Solar Energy Program.....	33
4.5 Political Economy of Renewable Energy in Palestine .....	33
4.6 Palestinian SAM .....	40
4.7 Measuring Ratios .....	45
Chapter 5: Model Specification .....	47
5.1 Firms .....	47
5.2 Households.....	51
5.3 Government.....	53
5.4 The Rest of the World (ROW).....	56
5.5 Investment Demand .....	62
5.6 Price Equations.....	64
5.7 Labor Market.....	65
5.8 Market Clearing Equations .....	66
5.9 <b>GDP</b> Equations.....	66
Chapter 6: Empirical Results .....	68
6.1 The Analysis of Changes in Domestic Electricity Sector (The First Approach) .....	69
6.1.1 Scenario1: An Increase of Total Factor Productivity .....	69
6.1.2 Scenario 2: An increase of Excise Tax on Electricity Imports.....	70

6.1.3 Scenario 3: Increase of Both Excise Tax on Imports and Total Factor Productivity .....	71
6.1.4 Simulation Results.....	71
6.2 The Analysis of Adding a New Sector (The Second Approach) .....	77
6.2.1 Scenario 1: An Increase of Solar Energy Production by 10% .....	78
6.2.2 Scenario 2: An Increase of Solar Energy Production by 200% .....	81
Chapter 7: Conclusions and Recommendations .....	84
References.....	87
Appendices.....	92
A.1 Optimization of Model Equations .....	92
A.2 List of Variables .....	99