UNIVERSITI TEKNOLOGI MARA

ELECTRICITY CONSUMPTION AND ECONOMIC GROWTH IN ASEAN COUNTRIES

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ABSTRACT

The relationship and causality direction between electricity consumption and economic growth is an important issue in the fields of energy economics and policies towards energy use. Extensive literatures has discussed the issue, but the array of findings provide anything but consensus on either the existence of relations or direction of causality between the variables. This study extends research in this area by studying the long-run and causal relations between economic growth, electricity consumption, labor and capital based on the neo-classical one sector aggregate production technology model. The study uses electricity consumption and real GDP measures the economic growth of these countries. These relations are analyzed for ASEAN countries as a whole and also for a group of six ASEAN developing countries. The analysis is conducted using advanced panel estimation approaches. The Westerlund co-integration test and panel Auto Regressive Distribution Lags (ARDL) estimation technique found no long run co-integration in both groups. Results from the panel Granger Causality method found no causality in the short run between energy consumption and economic growth in all ASEAN countries' groups. However, in the long-run, the results indicate that there are bidirectional relationship in group of all ASEAN countries. This study provides supplementary evidences of relationship between electricity consumption and economic growth in ASEAN countries.

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TABLE OF CONTENTS

	Page
CONFIRMATION BY PANEL OF EXAMINERS	ii
AUTHOR'S DECLARATION	iii
ABSTRACT	iv
ACKNOWLEDGEMENT	v
TABLE OF CONTENTS	vi
LIST OF TABLES	ix
LIST OF FIGURES	x
LIST OF ABBREVIATIONS	xi
CHAPTER ONE: INTRODUCTION	1
1.1 Background of the Study	1
1.2 The Association of Southeast Asian Nations (ASEAN)	4
1.2.1 Economic and Electricity Outlook in ASEAN countries	6
(a) Brunei	9
(b) Cambodia	10
(c) Indonesia	11
(d) Lao P.D.R.	12
(e) Malaysia	13
(f) Myanmar	14
(g) Philippines	15
(h) Singapore	16
(i) Thailand	17
(j) Vietnam	18
1.2.2 ASEAN Energy Cooperation	20
1.2.3 ASEAN Power Grid (APG)	21
1.3 Problem Statement	22
1.4 Research Objectives	24

1.5 Research Questions 24
1.6 Scope of the Study 24
1.7 Significances of the Study 25
1.7.1 Contributions to Body of Knowledge 25
1.7.2 Contributions to Policy Makers 27
1.8 Organization of Study 28

CHAPTER TWO: LITERATURE REVIEW 30
2.1 Introduction 30
2.2 Theoretical Literatue 30
2.2.1 Harrod-Domar model 31
2.2.2 Solow's Neo-classical Growth Model 32
2.2.3 Endogenous Growth Model 34
2.2.4 Neo-classical one-sector Aggregate Production Technology 35
2.3 Empirical Literature 36
2.3.1 Time-series 39
2.3.2 Panel Analysis 42
2.3.3 Levels of Development 45
2.3.3.1 Developed Countries 47
2.3.3.2 Developing Countries 48
2.3.3.3 Underdeveloped Countries 50
2.6 Conclusion 51

CHAPTER THREE: DATA & METHODOLOGY 54
3.1 Introduction 54
3.2 Theoretical Framework 54
3.3 Hypotheses 56
3.4 Data 57
3.5 Statistical Techniques 60
3.5.1 Panel Unit Root Tests 61
3.5.2 Panel Cointegration Tests 64