

# **CHAPTER 1**

## **INTRODUCTION**

### **1.1 Introduction**

Fiscal policy is an important tool for promoting price stability and sustaining growth in output and employment. Both Government revenue and expenditure are two important instruments of fiscal policy. Effectiveness of fiscal policy depends on how the government regulates these two instruments through budgetary management. Understanding the relationship between revenue and expenditure is a crucial prerequisite for effective policy formulation. Fiscal deficits can be reduced through changes in government expenditure or revenues or both. If policy makers understand the relationship between revenue and expenditure, persistent budget deficits can be prevented. Thus the relationship between revenue and expenditure has attracted a significant interest among economists.

The causal relationship between government revenue and expenditure is a very important topic and has been an essential issue of concern for many economists and policy makers as it forms the basis of management of budget deficits. Since the main objective of every government is to improve economic growth along with low deficits and low debt levels, better fiscal policy is needed to achieve these goals. Understanding the causal relationship between government revenue and expenditure is important from a policy point of view, especially for south-East Asian countries which are suffering from persistent budget deficits with the singular exception for Singapore. Budget deficit has been one of the major economic problems in Indonesia, Malaysia and Thailand. All these countries had experienced persistent budget deficits over the last five decades. Only Singapore experienced a budget surplus.

### **1.2 Rationality behind the Present Study**

Over the last five decades, several studies have put light on the relationship between revenue and expenditure for different countries including all South East Asian countries over different time periods with different econometric methodologies. All the studies have investigated into the relationship between revenue and expenditure over the historical dataset and the empirical results of these studies were found to be conflicting. Existing studies have not taken into account the effects of structural changes in the economy which might occur over a historical dataset. Since every economy passes through several structural changes over a period of time and this may happen due to policy changes, institutional changes, external shocks or changes

in social attitudes and motivations. The constancy of estimated econometric parameters over a long period of time will be suspected if any structural changes occur in the economy. If the structural changes are not taken into account, the whole analysis and conclusion undertaken in the study may be misleading. All the researchers have focused on the relationship between government revenue and government expenditure on different countries and on different times but no studies have been carried out on the effects of structural changes in the relationships between Government revenue and Government expenditure in South East Asian countries. The present study is an attempt to fill in this gap in view of the fact that it investigates into the effects of structural changes in the relationship between government revenue and government expenditure in four South East Asian countries and providing more conclusive findings to the policy makers of these countries in moving towards economic and monetary cooperation.

The present age is the age of integration like integration of Europe, integration of South Asian Countries. Similarly there is a region of great diversity among the Southeast Asian countries in terms of size, factor endowments, economic policies and their history and politics. All the Southeast Asian countries have been agreed to move toward economic cooperation and integration after 1997 financial shock. These countries stress upon economic integration and such integration can only be achieved through proper economic coordination, i.e coordination of monetary policies and fiscal policies in these countries. This present study is an attempt for understanding the nature of fiscal policy measures adopted in these countries.

### **1.3 Fiscal Position in Four South-East Asian Countries**

The fiscal trend in Indonesia, Malaysia, Singapore and Thailand over different periods of time suggests that all these countries barring Singapore have been consistently facing budget deficits along with high debt to Gross Domestic Product. Indonesia, Malaysia and Thailand were suffering from persistent budget deficits from 1968 to 2008, 1963-2007, 1953 to 2007 and Singapore had experienced budget surplus during 1966 to 2007. Government budget deficit in Indonesia averaged 1.93% of GDP during 1978 to 1988 and during 1989 to 2008 it was around 1.02% of GDP. As a result government debt to GDP in Indonesia registered an increasing trend and averaged 40% during 1990 onwards reaching all time high of 87% in 2000. Government budget deficit in Malaysia averaged 10.70% during 1978 to 1988 and from 1989 to 2007 Malaysia experienced deficit by 2.95% of GDP, reaching all time high of

19.1% of GDP in 1981. Government debt to GDP in Malaysia averaged 48.22% from 1990 until 2007 reaching all time high of 80.74% in 1990. Government budget deficit in Thailand averaged 2.33% of GDP during 1978 to 1988 and from 1989 onwards. It was 1.09% of 2.50% of GDP in 2003. Government debt to GDP in Thailand 45.44% from 1990 to 2007 reaching all time high of 57.80% in 2000. Government budget surplus in Singapore averaged +1.45% of GDP from 1978 to 1988 and from 1989 to 2007 it was around 8.89% of GDP reaching all time high of 21.33% of GDP in 1994. Debt to GDP in Singapore averaged 88.92% from 1993 until 2007. The 1980s and 1997s emerged extremely difficult time for most of the south East Asian countries like Indonesia, Malaysia and Thailand who had to contend with fiscal deficits resulting from the pursuit of countercyclical fiscal policy during the global recession of the 1980s. The Asian financial crisis started on 2 July 1997 resulting from sudden flight of large amounts of capital from South East Asian countries. Apart from Singapore all the Southeast Asian economies were hardest –hit countries owing to massive depreciation of their currencies. Singapore was least affected country because of their sound economic and financial systems.

## **1.4 Objectives**

In economics, fiscal policy is the use of government revenue and government expenditure to influence the economy. The two main instrument of fiscal policy are government expenditure and government revenue. Government uses fiscal policy to influence the level of aggregate demand in the economy, in an effort to achieve economic objectives of price stability, full-employment and economic growth. For effective policy formulation, the relationship between government revenue and government expenditure needs to be examined in the presence of structural change in the economy.

The objectives of the present study are as follows:

- (1) To examine whether there is any existence of long-run relationships between government revenue and government expenditure over the period of study in four South East Asian countries.
- (2) To examine if the relationship, in the event of this existence is stable over the period of study.
- (3) To investigate the presence, nature and direction of causal relationship between government revenue and government expenditure over the period of study.

- (4) To examine how far the causality link is strong and to examine how a shock on revenue is transmitted to expenditure and vice versa.
- (5) To examine if any structural shift occurred in revenue-expenditure relationship in four South East Asian countries over the period of study.
- (6) To identify whether there exist some definite sub-periods within the historical dataset in which the relationship underwent significant changes following structural changes.

### **1.5 Statement of Research Hypothesis**

In order to examine the relationship between government revenue and government expenditure in presence of structural changes in four southeast countries, the following null hypotheses are used.

*H<sub>0</sub>*: The time series on government expenditure and government revenue are stationarity.

*H<sub>0</sub>*: The government revenue and government expenditure are cointegrated.

*H<sub>0</sub>*: There exists Stable Error Correction Mechanism for these variables in the short-run and Granger causal relationship.

*H<sub>0</sub>*: There exist structural change in the long-run relationship between the variables concerned.

*H<sub>0</sub>*: There exists Granger Causality relation between the variables concerned in different sub-periods.

### **1.6 Limitations of the present Study**

The following are the limitations of the present study.

- (1) Due to non availability of time series dataset on government revenue and government expenditure in other Southeast Asian countries the present study is confined to only four Southeast Asian countries.
- (2) Owing to lack of monthly and quarterly data on government revenue and government expenditure the present study uses only annual data.
- (3) The study includes only two fiscal variables to explore the relationship between government revenue and government expenditure but other variables like inflation, interest rate, budget deficit, money supply etc. are left for future research.

- (4) Due to lack of sufficient observations in sub-periods the present study takes only single structural break.

## **1.7 Scope of Future Research**

There is no study undertaken by a researcher which is perfect. Due to some limitations in course of carrying out research, imperfection exists. Here the present study is confined to two fiscal variables to examine the inter relationship between them. The study would be beneficial to the future researcher to identify other variables which may explain the revenue-expenditure relationship in a better way. New econometric technique and sophisticated software are being developed to study the revenue-expenditure relationship. The study would be more fruitful with the application of advanced econometric techniques which are not applied by the present study. Future researchers would be benefited to bridge the research gap relating to the revenue-expenditure relationship as well as the relationship among other variables.

## **1.8 Plan of Study**

The present study has been divided into twelve (12) chapters which covers the entire study.

**Chapter Two** is devoted to Review of Literature incorporating some theoretical and empirical analysis of previous studies.

Data and Research Methodology are presented in **Chapter Three**.

**Chapter Four** reports the results of Stationarity and non-stationarity of time series data on government revenue and government revenue in four Southeast Asian countries.

Study of Cointegration between government revenue and government expenditure in countries concerned through Johansen Cointegration Method is presented in **Chapter Five**.

**Chapter Six** explains the study of short-run dynamics and stability of the long-run relationship through the VECM with a view to investigating the short-run causal relationship between revenue and expenditure, if any.

**Chapter Seven** reports the results of Granger Causality between government revenue and government expenditure through unrestricted VAR method and Standard Granger Causality Test in order to examine the nature and direction of the causal relation, if any, between the variables.

**Chapter Eight** is devoted to the study of innovative Accounting through Impulse Response Functions (IRF) to examine the responses of revenue and expenditure in the long-run as a result of revenue and expenditure shocks and Variance Decomposition of forecast errors is also used in order to examine the relative importance of revenue and expenditure shocks in explaining variations in these two endogenous variables over time.

**Chapter Nine** reports the results of structural changes in the causal relationship between government revenue and government expenditure with the historical dataset through Chow Test or Recursive Residual Test or CUSUM Test whichever would be suitable for the study and to identify whether there exist some definite sub-periods within the historical dataset in which the relationships underwent significant changes

**Chapter Ten** presents comparative study of relationship between these two fiscal variables among the countries concerned.

Summary of the Study is presented in **Chapter Eleven**.

**Chapter Twelve** is devoted to Conclusions and policy implications based on the present study.