

## **Chapter 1**

### **Introduction**

The aim of this study is to evaluate the effects of money supply and government expenditure changes on the Malaysian economy. In general, the question of the effectiveness of stabilization policy has usually raised in the context of Keynesian-monetarist debate. This debate has been going on in the United States since the mid 1950, has also influenced the view of the writers on economic problems of present days in developing countries. A number of them have suggested that the modern quantity theory or monetarist approach is more appropriate than the Keynesian approach for explaining the formation and fluctuations of income in developing countries (Shah, 1962; Polak, 1957; Park, 1970).

The monetarists assert that, the basic differences between monetarist and Keynesian economic are essentially empirical rather than theoretical (Friedman, M. 1970, p.234). In the context of Keynesian-monetarist controversy, Friedman and Meiselman (1963) attempted to test empirically the two rival theories of income determination, namely quantity theory and the Keynesian income-expenditure by formulating simple models and then fitting them to the United States data for the period from 1897-1958. The conclusion from their study is that the supply of money is more closely and consistently related to aggregated income than are "autonomous expenditures", the empirical variable in their version of Keynesian theory. However, Ando and Modigliani (1965), DePrano and Mayer (1965) and Hester (1964) criticized their methods and disputed their conclusions<sup>1</sup>.

Subsequent study by Andersen, L. C. and Jordan, J. L. (1968), also supported Friedman-Meiselman view. They developed a three variables equation, known as St. Louis in economic literature to compare the relative

performance of certain fiscal and monetary actions in economic stabilization. Their study presented evidence that, monetary has a large influence, more predictable and faster effect on economic activity than fiscal influences in the period from 1953 to 1968. Study by Michael W. Karen (1969) also support the view that, monetary influences have a significant impact on economic activity. Hence, monetary policy should be given a central role in any economic stabilization program. Using different formulations of the alternative models in different studies, Macesich (1964 and 1969), found different results for Canada<sup>2</sup>. However, study by Poddar, Arun K. and Hunking, N.J. (1971) favor the Keynesian "Income-expenditure" theory. Their study for the case of Canada concluded that fiscal variables had the greater impact than monetary variables. Their conclusion from the study indeed contradict from the monetarists study. Subsequent study for India by Iyengar (1969) appears to favor Friedman-Meiselman quantity theory approach. However, study by Bhattacharya, B.B.(1972) and Hussain, Muhammad (1975) for the case of India produced inconclusive results. In their findings, they concluded that there is not much different to choose between money supply and autonomous expenditure as a policy variable for stabilization policy. Khan (1978), improved the Friedman-Meiselman to test the relative stability of velocity and the investment multiplier for the postwar period in the United States. His findings by using four different tests<sup>3</sup> contended that monetary velocity relationship appears to be relatively more stable than the investment multiplier<sup>4</sup>.

In our study, a small annual macroeconometric model is constructed to analyze the impact and efficacy of various monetary and fiscal policy changes on key macroeconomic variables such as income, balance of payments and prices. The model constructed here is essentially of the Keynesian income-expenditure variant, based on the determination of effective final demand. It is not the intention of the study attempt to develop

large scale macro model. It is a relatively simple and highly aggregated model.

The models comprises of two sectors; namely real sector and monetary sector. In the real sector, behavioral equations are developed for private consumption and investment. The government expenditure that consists of consumption and investment is treated endogeneously. The tax function is also modeled in this sector. The external trade sector will consist of the aggregated imports and exports function. In the monetary sector, the money-multiplier approach to money supply determination is adopted. Variation in the money supply is expected to emanate from three factors; namely net domestic assets and net foreign assets of the central bank (they form the monetary base or high-powered money) and the statutory reserve ratio imposed upon commercial banks by the central bank.

The real and monetary sector is linked through several channels: investment, consumption, and price functions and government budget constraint (is treated as identity). The linkages between investment and consumption with the monetary sector is to capture the direct influence of the liquidity conditions on the real sector. The extent to which the government deficit is monetized, will then serve as a link with the monetary sector via the monetary base. Our model then will be subjected to two phases of simulation exercises. The first is intended to test the validity by reference to its tracking ability and stability, and second comprises a series of policy simulations.

The period under review is based on annual observations spanning from 1960-1991. However, in order to take into account the lagged observations, the estimation of the equations will cover from 1962 to 1991. All the equations were estimated by ordinary least squares (OLS) method using Times Series Processor. Although it is well known that OLS produces biases and inconsistent estimates in simultaneous systems, it has become conventional in macro modeling to carry out

preliminary work on a model using this method. Generally, the appeal of OLS stems from the fact that its statistical properties are relatively well known compared to other estimation techniques, especially in small samples, and because it offers a computationally cheap way of testing a range of hypotheses. In addition, more complex techniques such as full information estimators, tend to be more sensitive to specification errors. OLS has the advantage of 'quarantining' the effects of misspecification until properties of the model are better understood and is relatively easy to interpret.

Chapter 2 of this text is about a general brief review of the monetarist-keynesian controversy and some past models developed for Malaysia. Chapter 3 presents a general review of the Malaysian economy background with two other sub-sections dealing with the demand management policies. Specification and estimation of the equations are presented in Chapter 4. The entire structure of the model is presented in Chapter 5 which also discusses the outcome of various simulation experiments. The text ends with summary and conclusion in chapter 6. Finally, data used in the study along with the sources are reported in Appendix at the end.

## Notes to Chapter 1

1. Friedman-Meiselman's study was criticized on three grounds: The first was that their particular definitions of money and autonomous expenditure were said to be biased in favor of their presumed conclusions; second, that, their formulations of alternative hypotheses were naive; and finally, that a single equation containing a single explanatory variable was a crude method of testing the performance of the alternative models. The modified tests, performed by the critics showed that the multiplier model predicted income almost equally well if not better than the money model (Bhattacharya, B.B. ,1972, p.17).
2. In the first empirical study, Macesich findings favored the Quantity theory approach. But in the second study, the results are quite inconclusive, ".....autonomous expenditures as defined by Ando-Modigliani and DePrano-Mayer give better fits than the Friedman-Meiselman definition. However, the performance of money (which include notice on time deposits held by the public in chartered banks) is somewhat better" (Macesich, 1969, p.452).
3. The approaches that Khan used are, cusum test; Quandt's log likelihood ratio test; time-trending regressions and moving regressions. These approaches are different from the methods used by Friedman-Meiselman (1963).
4. In his findings, Khan claims that, "this result does not, however lead us to the conclusion that autonomous expenditures are unimportant On the contrary, our results have shown that autonomous expenditures do have significant effects on the behavior of nominal income. It is simply the case that the velocity relationship is more reliable from the point of view of forecasting" (Khan,1978, p.118).