Chapter 2

LITERATURE REVIEW

2.1 A Brief Review of Keynesian-Monetarist Controversy

According to monetarist view, the long run economic activity and nominal income are essentially the function of the stock of money. The adjustment to a change in the money involves substitution between money and different types of assets. This substitution effect is empirically important despite the insignificant impact of wealth on the changes in money. Monetarists agreed that money as the only assets, and the real balance effect are assumed to be tantamount. In the long run, proper growth rate of money stock is crucial for stable growth path of output and prices. To the monetarists , short term stabilization is ineffective. Because in long run is the time period when all expectation are realized , and in the short run is marked by unanticipated changes. In the short run, money will affect the output within five to ten years and in the long run it will change mainly prices within a time period of more than a decade (Ghosh, B.N., 1982, p.50).

Monetarists also claimed that, there is a direct nexus between money supply and price level, which is proportional in the long run. They also believe that money and income are directly correlated. Monetary change affects long run stock of real capital and hence output. Historically, fluctuation in money national income was largely caused by monetary policy. The effect of monetary policy is transmitted to national income not only through the bond yield but also through other channels.

Monetarists further argued that the marginal propensity to save and the interest elasticity of the demand for money is high. Under these circumstances, the impact of any demand shock is rapidly neutralized,

because small changes in investment that offset the initial shock. Similarly, the impact of fiscal expansion would be only to "crowd out" private expenditure. This render the fiscal policy ineffective. Under the assumption of an interest-elasticity demand for money, small changes in the money supply lead to large changes in the interest rate, consequently, in investment. Moreover, in the monetarist framework, monetary balances directly affect aggregate expenditure through the wealth effect, a mechanism that strengthens the impact of monetary policy on the economy (Aghevli, B.B et al, 1979, p.779).

The proposition of the Keynesian view or fiscalism is that money does not matter in the short run. The transmission mechanism of money supply, according to fiscalists, is an indirect process working through the cost of capital channel via rate of interest. They claimed that changes in federal government expenditures and tax rates exert a strong and rapid force on aggregate demand. Most monetarists, but not all, contend that the influence of such actions is transitory (Andersen, L.C.,1973, p.5).

Accordingly, post-keynesians or fiscalists advance three main arguments for the role of fiscal actions in economic stabilization. Increase in government spending add directly to aggregate demand, and reductions in tax rates increase disposable income, thereby increasing aggregate demand. Both of these actions are held to have a multiplier effect. Government borrowing adds to wealth which increases spending. With a constant money stock, the resulting higher interest rates would reduce the quantity of money demanded. The fiscal impact on aggregate demand exists if the velocity of circulation increases (Andersen, L.C. ,1973).

Monetarists pointed out empirical evidence that the government expenditure multiplier, with a constant money stock, is positive for a few quarters, but in the long run is zero. The argument often refer to support of such a response is so-called "crowding-out' effect. This is because, the fiscal actions, in the absence of

accommodative monetary actions, exert little influence on output and price level. Government spending unaccompanied by accommodative monetary expansion, that is financed by taxes or borrowing from the public, results in a crowding-out of private expenditures with little, if any, net increase in total spending. A change in the money stock, on the other hand, exerts a strong independent influence on total spending. Monetarists conclude that actions of monetary authorities which result in changes in the money stock should be the main tool of economic stabilization. Since the economy is considered to be basically stable, and since most major business cycle movements in the past have resulted from inappropriate movements in the money stocks, control of the rate of monetary expansion is the means by which economic instability can be minimized (Andersen, L.C. & Carlson, K.M., 1970, p.8).

In the Keynesian view, the main source of instability in the economy is variation in aggregate demand. Changes in aggregate demand lead to changes in the rate of interest, which in turn, given an interest-elastic demand for money, lead to an excess demand for, or an excess supply of money. The sensitivity of the economy to an initial demand shock crucially depends on three conditions, namely: (1) the lower the marginal propensity to save, the higher the magnification of initial demand shock through the "multiplier" process and the greater the degree of instability of investment; (2) the lower the interest elasticity of investment, the lower the offsetting change in investment brought about by the initial change in the interest rate and the greater the degree of instability; (3) the higher the interest elasticity of the demand for money, the higher the increase in excess liquidity brought about by the initial change in the interest rate and the greater the degree of instability.

These three conditions, which tend to accentuate the impact of demand shocks, are also the conditions that render fiscal policy more effective than monetary policy. Based on the assumptions of a low marginal

propensity to save, a low interest elasticity of investment, and a high interest elasticity of demand for money, Keynesians emphasize the relativeness of fiscal policy in stabilizing the economy although they do not rule out the use of monetary policy (Aghevli, B.B. et al. 1979, p. 778).

2.2 A Brief Review of the Past Macroeconometric Models Developed for Malaysia.

Econometric model building has been applied and widely accepted as a standard approach to forecasting and policy simulation in the industrial economies. The availability of a refined data base, advanced estimation techniques and computer facilities made it possible to construct fairly large and disaggregated models. On the contrary, in the developing countries, progress in econometric modeling is at its infancy due primarily to the absence of ample good data.

One of the earliest models built for Malaysia was that by ESCAFE[1,2] in 1968, using the two-gap approach. The primary objective of this model was to forecast the trade gap for 1970 and 1975. The system of 13 equations consisted of simple regressions, 8 of which were disaggregated import functions. The method of estimation used was ordinary least square (OLS), mainly because of the limited sample size of only 6 data points.

The Raja Lope (1975) model[3], consisting of 9 equations, was built around the national income identity. It was based on the Keynesian demand approach with behavioral equations for aggregate consumption, investment, imports and tax revenue. Three other equations determined the consumer price level, demand for liquid assets and supply of credit. The supply of credit appeared as an explanatory variable in the private investment function. The model was estimated by 2SLS approach and simulated for various policy combinations.

Cheong[4,5] (1972; 1976a; 1976b) built a series of macroeconometric models for West Malaysia, all of which shared a common national accounting framework. The first model (1972) was based on annual data for the period 1957-68, with equations for consumption, investment, imports and tax revenues, together with a set of income identities. The second model (1976a) while maintaining the same structure, incorporated a demographic and employment sector with equations for prices and wages but no monetary sector. In the third model (1976b), which was joint effort with Tillman, using quarterly data for the period 1967-74, a monetary sector was included. The monetary sub-model consisted of equations for money demand and money supply. The monetary sector was linked to the real sector through government budget constraint and the balance of payments. OLS was used in each model. None of these models were tested for stability properties nor used for policy simulations.

One of the largest macroeconometric models ever constructed for Malaysia was that by Hayes[6,7] for the Central Bank in 1977. This real sector model consisted of 118 equations, of which only 35 were behavioral. Hayes's model was to have been linked to Jaafar's Ahmad[8] monetary model. However, the linkage was not completed.

The model by Semudram[9,10] (1980), like most of its predecessors, was built around the national income identity, based on aggregate demand. The monetary sector was explicitly introduced to highlight the role of money. Data from 1959 through 1977 were used to construct the model. The model links the monetary sector to the real sector through channels:

1) the influence of loans on private investments

2) the relationship between the monetary base and government budget via the holding of government securities by monetary system,

3) the influence of net foreign assets of the Central Bank (availability of foreign exchange) on investment i.e. the influence of external sector on the domestic economy.

Validation was carried out and various policy simulations were performed on this particular model.

Ho Ting Seng[11] (1983) developed an annual model of the Malaysian economy using data for 1963-82. In this model, real GDP is determined by the interaction of supply and demand for output. Emphasis is placed upon the supply side of the economy and the role of money. He also developed a monthly monetary model of the monetary sector and link it with the annual model through balance of payments.

The model by Qua (1986), was built around the national income identity, based on the Keynesian demand approach. The system consisting of 45 equations, of which 26 are behavioral and 19 are identities, was estimated by OLS, 2SLS and 3SLS, based on annual observations covering the period 1962-83. The sectors included consumption, imports, exports, tax revenues, prices and employment. The monetary sub-model consisted of demand for narrow and broad money, and the supply of credit. This sector was linked to the real sector through the investment and consumption equations, and the government budget deficits and the balance of payments. Validation was carried out and various fiscal policy simulations were performed on this model.

Tan (1987), constructed a small and highly aggregated quarterly monetary model, spanning from 1975 to 1984. The model consisting of 12 equations, of which 6 are behaviorals and are identities respectively, was estimated by OLS. It is a demand-determined model as the Keynesian approach to income determination is employed. The model links the monetary sector to the real sector via two channels, namely via its influence on private investment and private consumption and the price level. It is

linked to the external sector through its indirect influence upon imports. Validation was conducted and monetary and exchange policy simulations were performed on this model.

Notes to chapter 2

1. see Institute of Developing Economies (ed.) (1984), *Review of National Economies and Econometric Models*, Institute of Developing Economies : Tokyo. pp.119-120.

2. see Imaoka, Hideki et al (eds.) (1990), *Models of the Malaysian Economy : A Survey*, Malaysia Institute of Economic Research : Kuala Lumpur, pp.3-4.

3. see Institute of Developing Economies, p.121, pp.125-126.

4. see Institute of Developing Economies, pp.66-70; pp.126-130;

5. see Imaoka, Hideki et al, pp.16-23.

6. see Imaoka, Hideki et al, p.13; pp.23-26.

7. see Institute of Developing Economies, pp.61-66; pp.152-153

8. see Institute of Developing Economies, pp.70-71; pp.144-151.

9. see Institute of Developing Economies, pp.54-60.

10. see Imaoka, Hideki et al, pp. 27-30.

11. see Imaoka, Hideki et al, pp.31-33.