

CHAPTER 6

RESULTS : STRUCTURAL DIFFERENCES

6.1 OVERVIEW

In the analytical model, a total of 14 equations are simultaneously solved on Eviews software application. There are 24 economic variables, 10 of which are exogenous and 14, endogenous. The number of exogenous variables meets the identification criteria. These economic variables represent an economic system and they interact upon each other. With regard to the following analyses, kindly refer to the appendices for further statistical results.

6.2 TREND ANALYSIS

In this comparative study that use graphical and tabular analyses of broad indices, a total of 23 economic fundamentals governing Singapore and Malaysia have been taken into account (kindly refer to the appendices for the respective graphical and tabular illustrations). These include balance of payments (BOPs), capital account balance (CAB), total private and government consumption expenditure (CSUMTION), consumer price index (CPI), current account balance (CUB), deposits received by the banking sector (DEPOSITS), exports of goods (EXPORTS), gross national product (GNP), imports of goods (IMPORTS), total private and government gross domestic formation (IVESTMEN), long term capital (LC), liquidity ratio in the banking sector (LR), loans given out by the banking sector (LOANS), broad money supply (M3), daily average overnight interbank lending rates of 10 banks (R), real effective exchange rate (REER), gross national saving (GNS), short term capital (SC), annual turnover unit of shares traded in Kuala Lumpur Stock Exchange (KLSE) or Stock Exchange of Singapore (SES), trade balance (TB), total factor productivity (TFP) and unemployment rate (U).

Among the key findings obtained in the study are as follows :-

1. In the last 22 years, Malaysia and Singapore showed a fairly high degree of similarity in these economic variables in terms of overall trend:- BOPs, CAB, CSUMTION, CPI, DEPOSITS, EXPORTS, GNP, IMPORTS, IVESTMEN, KLSE or SES, LOANS, LR, M3,

R, REER, SC and U. This implies that out of the 23 economic variables, almost 80 per cent of them have been showing the same path characteristics. For example, troughs and peaks are broadly similar.

2. In the last 22 years, the CUB of Malaysia has shown an irregular downward trend whereas the CUB of Singapore has shown a relatively smooth upward trend.

3. In the last 22 years, the SB of Singapore fluctuated about an upward trend while the SB of Malaysia showed an irregular movement on the down side.

4. In the last 22 years, the TB of Malaysia fluctuated at an average level of US\$2300 and within the range of -US\$108 to US\$5905. Meanwhile, the TB of Singapore rose during the same period of time and the trend incorporating fluctuations.

5. In the last 22 years, the GNS of Malaysia hovered within the range of 28.8 per cent to 41.5 per cent of the GDP. Meanwhile, the GNS of Singapore had been showing non-smooth upward trend during the same period.

6. In the last 22 years, the LC of Malaysia showed a fairly low level and constant change in its trend before starting to shoot up tremendously after year 1990. Meanwhile in Singapore, its LC showed a fairly constant trend before starting to fluctuate massively after year 1990. The salient difference between both countries after year 1989 is that Malaysia was no longer recording negative balance of LC flows whereas Singapore was still recording negative balance of LC flows. Since most of the LC flows consist of foreign direct investment (FDI), the result has indirectly indicated that Malaysia was more attractive to FDI in the 1990s.

7. In the last 22 years, the economic fundamentals of Malaysia and Singapore that showed smooth upward trend are CSUMPTION, DEPOSITS, EXPORTS, GNP, IMPORTS, INVESTMEN, LOANS and M3.

8. In the last 22 years, the TFP of Malaysia fluctuated only within a small range whereas the TFP of Singapore fluctuated quite substantially. Overall, the TFP level of Singapore is higher than the Malaysia one.

9. In the last 22 years, the economic fundamentals of Malaysia and Singapore that showed massive fluctuation in the 1990s are BOPs, CAB, KLSE or SES and SC. This is mainly due to the several financial liberalisation approaches taken by both governments. These bold financial

approaches had induced massive inflow of short term funds that could destabilize the above four economic fundamentals.

10. In the last 22 years, the economic fundamentals of Malaysia and Singapore that showed non-smooth downward trend are LR and U.

11. In the last 22 years, the economic fundamental of Malaysia and Singapore that showed a very steeply dive in the early of 1980s is REER. It is interesting to note that both currencies strengthened immensely when the two economies were in malaise. However, the real appreciation during the period did not significantly affect their exports.

In a nutshell, except SB and TFP, the trend analysis shows that there is no significant difference between the two economies. This is mainly due to the close similarity of the two economies in terms of openness and geography. The difference in SB might indicate that Malaysia and Singapore have different economic structure whereas the overall upward trend of Singapore TFP shows that their resources have been utilised more competitively.

6.3 FINDINGS BASED ON SIMULTANEOUS EQUATION MODELS

6.3.1 CONSUMPTION

6.3.1.1 CONSUMPTION AND M3

In Malaysia, the results show that for every increase of US\$1 in M3, the consumption expenditure increases by US\$0.06. In Singapore, the sensitivity of consumption behaviour towards M3 is stronger. The results show that for every increase in US\$1 in M3, the consumption expenditure increases by US\$0.18.

The results are in line with the proposition that an increase in M3 will reduce the interest rate as the LM curve shifts to the right in an IS-LM model (assuming that the IS curve is fixed). The lower interest rate stimulates the consumption of consumers as the opportunity cost of purchasing falls. The findings also suggest that monetary policies would have a larger effect in Singapore than Malaysia.

6.3.1.2 CONSUMPTION AND INVESTMENT

In Malaysia, the results show that for every change of US\$1 in investment, the consumption increases by US\$0.31. In Singapore, the sensitivity of consumption towards

investment change is larger as seen in the estimated coefficient. The results show that for every change of US\$1 in investment, the consumption increases by US\$0.32.

6.3.2 DEPOSITS

6.3.2.1 DEPOSITS AND CONSUMER PRICE INDEX

In Malaysia, for every 1 point rise in the consumer price index, the deposits in the banking sector would reduce by US\$1,262.33 million. However, in Singapore, the sensitivity between deposits and consumer price index is weaker. For every 1 point increase in the consumer price index, the deposits in the banking sector fall by US\$1,186.51 million.

The result is in line with the economic theory proposed by Irving Fisher. According to Fisher (1907), the (expected) real rate of interest is the nominal rate less the expected rate of inflation. As such, the higher is the inflation rate (measured by consumer price index), the lower is the real rate of interest. If the real rate of interest is less lucrative, an individual might want to park his or her money in other investments which are profitable than the deposits in the banking sector.

6.3.3 EXPORTS

6.3.3.1 EXPORTS AND REAL EFFECTIVE EXCHANGE RATES (REER)

In Malaysia, for every rise of 1 point in the REER index number, exports increase by US\$888.80 million. In Singapore, the relationship between exports and REER is even stronger. For every rise of 1 point in the REER index number, the exports would increase by US\$4,332.38 million.

The result is consistent with the fact that an increase in REER implies a depreciating currency. Hence a country will gain competitiveness in their exports as the prices purchased in foreign currencies are relatively lower.

6.3.3.2 EXPORTS AND TOTAL FACTOR PRODUCTIVITY (TFP)

The results show that TFP has different effects on exports in Malaysia and Singapore. In Malaysia, for every 1 point growth in TFP exports fall by US\$ 575.18 million. In

Singapore, for every increase of 1 point in the TFP growth rate, exports increase by US\$ 7,617.86 million.

In Part 2.3, several studies have been conducted by three well known economists and their results are contradictory. Baumol and McLennan (1985) and Lie (1971) argued that TFP affects a country's competitiveness in exports. However, Krugmen (1990) in his study using economy without trade refuted the former argument. Krugmen's findings proved that TFP only affects the standard of living (per capita income). Kindly refer to the Appendix 3 for further explanation on Krugmen's experiment results.

It is argued that TFP does matter in determining Malaysia's and Singapore's exports. This is clear for the Singapore case. In Malaysia, the effect is not pronounced; most probably because firstly, it has been eclipsed by other economic factors such as REER and, secondly, the growth in exports of Malaysia in the last 22-year was mainly due to capital widening but not capital deepening. Without capital deepening, it is very difficult to achieve any major improvement in the productivity of labour or capital.

6.3.4 IMPORTS

6.3.4.1 IMPORTS AND GROSS NATIONAL PRODUCT

The results show that in Malaysia, every US\$1 rise in the investment increases imports by US\$1.71. In Singapore, the sensitivity of imports towards investment is higher. Every US\$1 rise in the investment will increase the imports by US\$1.90.

The findings show that both countries are still heavily dependent on the imported intermediate goods for their investment activities. Substitution of imports with locally produced products will be likely to assist in containing the deficit problem.

6.3.5 INVESTMENT

6.3.5.1 INVESTMENT AND M3

In Malaysia, the results show that for every rise of US\$1 in M3, the investment would increase by US\$0.31. In Singapore, the consumption is even more sensitive to M3. The results show that for every rise of US\$1 in M3, the investment would increase by US\$0.18.

The result is in line with the hypothesis that the increase in M3 will reduce the interest rate as the LM curve shifts to the right in a IS-LM model (assuming that the IS curve is fixed). The lower interest rate will stimulate the investment as the cost of investing has descended. The analysis assumes the use of money supply as a policy tool, rather than interest rate. The findings also show that monetary policies are more effective in Singapore than Malaysia.

6.3.6 LIQUIDITY RATIO

6.3.6.1 LIQUIDITY RATIO AND DEPOSITS OR LOANS

In Malaysia and Singapore, the results show that the economic relationship between liquidity ratio and deposits or loans is negligible as the coefficients obtained are low figures. In Malaysia, for every rise of US\$1 million in deposits and loans, the liquidity ratio would drop by 0.000059 and 0.00015 point in percentage respectively. Meanwhile, in Singapore, for every rise of US\$1 million in deposits and loans, the liquidity ratio would drop by 0.00018 point in point in percentage and increase by 0.00013 point in percentage respectively.

In terms of deposits, the result shows that both Malaysia and Singapore do not in line with the economic theory that the higher is the deposits, the higher is the liquidity ratio. This can be explained as follows :- Besides deposits, there are several monetary policies that also be able to determine liquidity ratio. These include total amount of loans given out, statutory reserve requirement, M3 and so forth. As such, the suppose economic relationship between liquidity ratio and deposits might have been eclipsed by those monetary policies.

In terms of loans, the result of Malaysia is in line with the economic theory whereas the result of Singapore is otherwise. Theoretically speaking, when loans are given out by a bank, there will be an increase in asset. Assuming that there is no any changes in the liabilities (the deposits), the liquidity ratio will deteriorate as sufficiency of funds to finance any forthcoming loans will be affected. Therefore, the economic relationship between liquidity ratio and loans should be negative. And, this has happened in Malaysia. In Singapore, the otherwise result can be explained as follows :- Same with deposits, there are several monetary policies that might also be able to determine the liquidity ratio. These monetary policies might have eclipsed the effect that diffused by loans. Moreover, the coefficient obtained is too small to establish any convincing hypothesis that the more we loan, the higher is the liquidity ratio.

effect that diffused by loans. Moreover, the coefficient obtained is too small to establish any convincing hypothesis that the more we loan, the higher is the liquidity ratio.

Apart from that, it is very interesting to note that puny value of the coefficient. It is expected as since February 1987, the Central Bank of Malaysia has allowed the actual liquidity ratio for each financial institution to only fluctuate within a band of 2 percentage points on either side of the prescribed ratio during each half-month period (Lee, 1992). As such, any changes in the deposits would not diffuse significant effect on the liquidity ratio. On the other hand, in Singapore, since year 1987, the Monetary Authority of Singapore has reduced the minimum requirement of liquidity ratio from 20 percent to 18 per cent (Tan, 1996). Since most banks would like to maximize their profits by giving out loans as many as possible, the liquidity ratio has been approaching the minimum level all the time. As such, the moving band of the liquidity ratio has been small all this while and it has been reflected in their tiny value of coefficients.

6.3.7 LOANS

6.3.7.1 LOANS AND M3

In Malaysia, for every rise of US\$1 million in M3, the amount of loans given out by the banking sector would increase by US\$0.69 million. The association between loans and M3 in Malaysia is slightly stronger than in Singapore. In Singapore, for every rise of US\$1 million in M3, the amount of loans given out by the banking sector would increase by only US\$0.58 million.

The results correspond to the hypothesis that an increase in M3 stimulates loan growth. Transactions demand for money increases with the brokerage fee, or the cost of transacting, and with the level of income; the demand for money decreases with the interest rate (Baumol, 1952 ; Tobin, 1956). This means that when M3 is increased, the interest rate would dive. A lower interest rate would then stimulate investment activities as the cost of capital falls. For further discussion on Tobin's q theory, kindly refer to Romer (1996).

6.3.8 SHORT TERM CAPITAL

6.3.8.1 SHORT TERM CAPITAL AND DOMESTIC OR WORLD INTEREST RATE

In terms of domestic interest rates, in Malaysia, for every rise of 1 point, the short term capital increases by US\$265.06 million. The sensitivity of short term capital towards interest rates in Singapore is much higher than in Malaysia. In Singapore, for every increase of 1 point in interest rate, the short term capital would increase by US\$928.85 million.

In terms of world interest rate, in Malaysia, for every increase of 1 point in interest rate, the short term capital falls US\$43.00 million. Again, the relationship between short term capital and world interest rate in Singapore is stronger than in Malaysia. In Singapore, for every increase of 1 point in the world interest rate, the short term capital in Singapore falls US\$368.28 million.

It is not surprising to notice that for every 1 point change in the interest rate, there would be a tremendous swing of flows in the short term capital. This is because this type of capital is unstable in nature, and mainly profit motivated.

The result is in line with the economic theory that assuming the exchange rates are fixed, taxes are the same everywhere, and foreign asset holders never face political risks (nationalization, restrictions on transfer of assets, default risk by foreign governments), it is expected that asset holders choose a portfolio with the highest returns. As such, if the domestic interest rate is relatively higher, the higher would be short term capital inflows. Conversely, if the world interest rate is relatively higher, the lower would be the short term capital as investors profit-seek. Kindly refer to Part 4.8 for further theoretical explanation.

6.3.8.2 SHORT TERM CAPITAL AND STOCK MARKET TURNOVER

In Malaysia, the results show that for every rise of 1 million unit turnover of shares in Kuala Lumpur Stock Exchange (KLSE), the short term capital would have increased by US\$0.0078 million. In other words, every US\$1 million of short term capital could have raised the KLSE's turnover by 128.21 million unit. The sensitivity between stock market turnover and short term capital in Singapore is almost 3 times lower than in Malaysia. In Singapore, for every rise of 1 million unit turnover shares in Stock Exchange of Singapore (SES), the short

term capital expands by US\$0.021 million. In other words, every US\$1 million of short term capital could have increased the SES's turnover by only 47.62 million unit.

The result has sent us two important messages. Firstly, the effect of short term capital on SES's volatility would not be as strong as on KLSE's volatility. Secondly, if there is a period in which the turnover of KLSE and SES are similar, the short term capital portion in the KLSE's total capitalisation is expected to be almost 2.5 times higher than the short term capital portion in the SES's total capitalisation, provided other factors remain unchanged.

6.3.9 UNEMPLOYMENT RATE

6.3.9.1 UNEMPLOYMENT RATE AND CONSUMER PRICE INDEX

In Malaysia, the results show that for every increase of 1 point in the consumer price index, the unemployment rate reduces by 0.48 points in percentage. The relationship between the unemployment rate and consumer price index in Singapore is not as strong as in Malaysia. In Singapore, for every rise of 1 point in the consumer price index, the unemployment rate only reduces by 0.24 points in percentage.

The result is in line with the economic theory associated with Phillips curve. The Phillips curve stipulates an inverse relationship between the rate of unemployment and the rate of increase in money wages. The higher the rate of unemployment, the lower is the rate of wage inflation. In other words, there is a tradeoff between wage inflation and unemployment. Part 4.9 provides the related theoretical exposition.

6.3.9.2 UNEMPLOYMENT RATE AND GROSS NATIONAL PRODUCT (GNP)

In Malaysia, the result shows that for every hike of US\$1 million in the GNP, the unemployment rate would reduce by 0.00011 points in percentage. The sensitivity between unemployment rate and GNP in Singapore is significantly lower. In Singapore, for every hike of US\$1 million in the GNP, the unemployment rate would reduce by 0.000043 points in percentage.

This implies that in order to reduce 1 percent of unemployment rate in Malaysia and Singapore, the GNP needs to be jacked up by US\$9,090.91 million and US\$23,255.81 million respectively. The result is also in line with the economic theory that an increase in GNP would

2.25 per cent. Specifically, for every percentage point of growth in real GNP above the trend rate that is sustained for a year, the unemployment rate declined by one-half percentage point (Dornbush and Fischer, 1994). This relationship is stated below where ΔU denotes the change in the unemployment rate, y is the growth rate of output (GNP), and 2.25 is the trend growth of output.

$$\Delta U = -0.5 (y - 2.25).$$

To show the use of the formula, we take the growth of Malaysia in year 1996 which was 8.4 per cent. That would imply an unemployment rate reduction of 3.075 [= 0.5 (8.4 - 2.25)] percentage points. This law may be more appropriately labelled as an empirical regularity in the sense that it provides a rule of thumb for translating growth rates of output into reductions in the unemployment rate. Although the rule is only approximate, it still gives a sensible association between growth and unemployment.

6.4 KEY FINDINGS AND IMPLICATIONS

1. Using a framework of equations, the paper has objectively assessed the economies of Malaysia and Singapore particularly from the view point of fundamentals. It can be surmised that the structural systems are broadly similar and that differing economic fundamentals are not likely to have been critical in the disparity between the two economies in-so-far as the impact of SACC is concerned. Although the actual numbers differ, the magnitudes of responses measured as parameters do not diverge significantly.
2. An implication of the findings, is that the quantum of impact also depends on the type, duration and magnitude of the exogeneous changes which trigger an economic response, whether in expansionary or contractionary stimulus.
3. The importance of external factors is implied since the similarity in fundamentals between the two economies suggests that external factors play an important role.
4. This concurs with the characteristic of openness associated with both countries whereby the proportion of trade to GDP is well known to be high.

5. Some degree of insulation can be derived from financial governance. Although it cannot alter relative openness, it provides the individual countries with better capacities to handle changes in the wake of turbulence.

6. Diversification of resources may aid in cushioning the impact of such disturbances. For example, during the time when RM experienced devaluation, Malaysia had gained foreign exchange via palm oil export. As such, we need to mull over the importance of the key agricultural and manufacturing industries.

7. Although capital control has provided some protection against externalities, it cannot be maintained in the long run. This is partly attributed to building investor confidence which will determine the amount of Foreign Direct Investment (FDI) coming to Malaysia. In fact, in the midst of recuperating from the SACC, FDI is playing a pivotal role.