



Inflation in Malaysia

Ming-Yu Cheng and Hui-Boon Tan

Faculty of Management, Multimedia University, Malaysia

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Malaysia

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Abstract *Maintaining a low and stable inflation rate has become one of the challenges in the macroeconomic management of most countries. Among others, Malaysia has a very unique experience in terms of inflation. The economy has experienced episodes of high (1973-1974, 1980-1981) and low (1985-1987) regimes of inflation, and was able to contain low and stable inflation during the high economic growth period of 1988-1996. The objective of this study is to identify important factors that contribute significantly to inflation in Malaysia. This study also aimed to examine the possible existence of international and intra-ASEAN inflation transmission to Malaysia. The analysis is carried out based on the time-series approach of multivariate cointegration, vector error-correction modeling, impulse response functions and variance decompositions. The empirical results of this study show that external factors such as exchange rate and the rest of ASEAN's inflation are relatively more important than domestic factors in explaining Malaysian inflation.*

Introduction

The issue relating to inflation has generated an enormous volume of literature and heated debate in recent years. Different schools of thought, from classical, Keynesian, monetary to structural, each carry different banners and offering different evidence on the nature and causes of inflation. It is essential to study inflation in each country because inflation is devastating. Inflation creates problems and introduces noises in the functioning of the economy that is likely to affect economic growth. However, it is not an easy task to tackle the inflation problem effectively. In order to hand the inflation problem successfully, accurate assessment of the causes of the problem is critical as wrong diagnosis of the nature of the problem will lead to the application of inappropriate cures that might produce unintended adverse effects on the economy.

The review of literature on the causes of inflation points out that the inflationary effects of major macroeconomic variables such as excess money supply and fiscal deficit in a domestic economy deserve further investigation. There is a need, particularly for the fast developing countries, to empirically examine the causes of inflation by incorporating both monetary and fiscal factors. In a study by Friedmand and Schwarts (1982), it is shown that money growth rate and inflation rate exhibit a positive relationship. However, Saini (1982), who examines inflation in six Asian countries including India, the Philippines, South Korea, Sri Lanka, Taiwan and Thailand, found that the growth of money stock is not the primary source of inflation in these countries. Similarly, Turnovsky and Wohar (1984) and Togan (1987) also observed no significant relationship between these two variables. In a recent study carried out by Dhakal *et al.* (1994), monetary as well as non-monetary variables are incorporated in the model to examine major determinants of inflation rate in the USA. The empirical results suggested that changes in the money supply, the



wage rate, the budget deficit and energy prices have important inflationary effects in the USA. Lim (1996), who examines inflation in the SEACEN countries concluded that money supply is the common denominator for the causes of inflation in the SEACEN countries (SEACEN countries refer to the South East Asian countries, for example Malaysia, Singapore, Indonesia, the Philippines, Thailand, Nepal, South Korea and Taiwan). In Paul's (1997) study, inflation in five Asian countries, namely Malaysia, India, South Korea, Japan and Pakistan is examined by using quarterly data from 1970 to 1992. Paul (1997) obtained rather different results for each country. In the case of Malaysia, exchange rate is an important determinant of inflation in the country, while money supply in broad terms (M2) is important for India. In Japan, money supply is found to be significant in explaining inflation while exchange rate is not. On the other hand, money supply is found to be insignificant while exchange rate is a significant contributing factor to inflation in South Korea. In Pakistan, money supply is found to be a significant variable in generating inflation in the country.

In addition to the domestic causes, the recent discussions on inflation have witnessed increasing recognition of the importance of the external influences in the generation of domestic inflation. Darby and Stockman (1985), Medio (1983), Frisch (1977), Sallant (1977) and Laidler and Parkin (1975) are among the pioneers who investigate the international transmission of inflation in developed countries. Darby and Stockman (1985) have developed a simultaneous equation model, the Mark III international transmission model to test for the existence of various channels that transmitted inflation from country to country in the developed region. The countries observed are:

- the USA;
- the UK;
- Canada;
- France;
- Germany;
- Italy;
- Japan; and
- The Netherlands.

The study reached the conclusion that linkages among countries during fixed exchange rates appear to be much looser than has been normally presumed in many studies and the currency substitution does not seem to provide a significant link between countries. The study also found that the effect of money shocks on real income is much weaker in countries other than the USA. Browne (1984) analyzed the transmission of inflation from the UK to Ireland with a seven equation structural model. The analysis emphasized the importance of capital movement as the channel of inflation transmission and the study shows that the direction of causality is from the UK's capital flow to

Ireland's money stock and, ultimately, Ireland's inflation rates. Juselius (1992) who examines the domestic price determination in Denmark uses a multivariate cointegration model. It is found that domestic effects are small compared to foreign effects. Although many studies have been devoted to examining the issue of inflation in the context of open economy for developed countries, only a few studies have focussed on the ASEAN economies, except for Wahyudi (1986). Wahyudi examines the international transmission of inflation to Indonesia for the period 1969:I to 1984:IV. He found that the channel through which the world inflation was transmitted is capital account and its vehicle was foreign loan and credits. Meenakshi and Gustav (1988) employed an input-output model to assess the impact of international price increases on India's domestic price level for the periods of 1973-1974 and 1974-1975. They found that international price activities affected India's inflation in which the import sector, though small, caused a significant effect on the country's price level. The literature review shows that there is so far no complete model to analyze inflation in the context of an open economy for the ASEAN economies.

To fill the lacuna in the literature, this paper attempts to provide empirical evidences for several issues that remain unsolved so far. The first research issue is related to what the major causes of inflation are in Malaysia. The second issue relates to whether external factors are important in the generation of inflation in the Malaysian economy. It is also interesting to compare the relative importance between the domestic and the external factors. To complete the analysis of external influences, regional interactions are also of considerable interest. Since the interdependence among the ASEAN economies has been increased over years, it is also crucial to investigate whether inflation in Malaysia is closely linked to inflation in the other ASEAN countries.

Inflation in Malaysia

In the history of inflationary experiences in Malaysia, 1973 and 1974 were exceptional years. Inflation rose significantly in both the international and domestic markets in 1973. The sharp oil price increase in 1973 and 1974 was the principal reason for the escalation of world inflation in 1973-1974. However, the effect of an increase in oil price was actually felt in 1974. The substantial price increases in 1973 were brought about mainly by the shortages of food and raw materials arising from bad weather and increased aggregate demand. Consequently, consumer prices in Malaysia began to rise and had reached a high level of 10.62 per cent by the end of the year of 1973. In 1974, the surge in the oil price by over 230 per cent put strong fuel on inflation, and the inflation rate in Malaysia was increased to its record high of 17.29 per cent. A year later, the Malaysian economy slumped into its great recession, with a GDP growth rate of only 0.8 per cent in 1975, compared to 8.3 per cent in 1974. On the other hand, inflation rate reduced to the level of 4.5 per cent in 1975 (University of Finance, various years).

Malaysia experienced a second episode of high prices in 1980 and 1981, which were due mainly to external factors. Oil prices rose by 47 per cent in 1979

and 66 per cent in 1981. At the same time, prices of industrial raw materials and investment goods also increased rapidly. As a result, inflation in Malaysia accelerated from 3.6 per cent in 1979 to 9.62 per cent in 1981. In 1979, higher inflation rates in the OECD countries of about 10 per cent in the major industrial countries due to rising wages and low productivity inevitably led to higher consumer prices in Malaysia through increases in import costs. In addition to that, the increase in petroleum prices by OPEC exerted powerful pressure on consumer prices, particularly in the latter part of the year. On the domestic front, supply shortages of certain essential commodities such as diesel and certain construction materials, and the increase in petrol prices by an average of about 9.1 per cent, caused the domestic price level to face greater pressures during the year of 1980-1981 (*Ministry of Finance*, various years).

The development of the Malaysian economy was at an important crossroad in 1985. The economic performance of the country had slumped into its greatest recession, with 1.1 per cent growth rate. The severity of the international economic recession during the early 1980s imposed considerable constraints on the growth and development of the nation in 1985. As a result of tight liquidity position and moderate increases in demand under conditions of increased under-utilisation of capacity of plants and manpower, prices in 1985 increased with a slower rate. The inflation rate in Malaysia decelerated, in concert with world inflation. Thus, the CPI registered less than 1 per cent rates of growth for three consecutive years, from 1985 to 1987. The deceleration in the rate of increase in the CPI reflected to a large extent the influence of weakening demand conditions, following the protracted world economic recession which significantly depressed export earnings and consequently private sector incomes as a whole (*Ministry of Finance*, various years).

After registering a significant growth with more than 8 per cent for three consecutive years, the economy in 1990 strengthened further in the country despite some slowing down of growth in the industrial countries. The outbreak of hostilities in the Gulf on August 2, 1990 as a result of the Iraqi invasion of Kuwait has since set off a round of oil price increases, with prices rising from US\$18 per barrel from its pre-Gulf crisis level to an average US\$36 in October 1990. The immediate impact of the third oil crisis in 1990 has been an increase of inflationary pressure in both the industrial and developing countries (*Ministry of Finance*, 1990). In Malaysia, the effect of the increase in oil price was felt with some time lags. The inflation rate increased after one year of the outbreak of Gulf war, from 2.61 per cent in 1990 to 4.39 and 4.75 in 1991 and 1992 respectively.

With the outburst of the recent financial crisis in Asia starting July 1997, interest rates, fuel prices and prices of goods and services have increased. Robust foreign demand as a result of the depreciation of the Malaysian Ringgit (RM) of over 40 per cent has placed an extremely powerful inflationary pressure on Malaysia. However, the prudent and immediate action taken by the government on September 2, 1998 to effectively fix the nation's currency to the

US dollar at US\$1 = RM3.80 has had some controlling effect on inflation in the country.

The problem of inflation in Malaysia was relatively well controlled during the recent financial crisis period compared to her neighbouring countries, for example Indonesia, which experienced a high inflation rate of more than 60 per cent in the midst of the crisis in 1998. After experiencing an economic downturn for approximately two years since mid-1997 due to the financial shocks, the Malaysian economy has begun to pick up again from the third quarter of 1999 and the pressure on consumer prices has therefore subdued to a substantial extent. The inflation rate for the first quarter of 2000 has registered at a level that was compatible with the pre-crisis rate of less than 3 per cent.

Figure 1 shows the relationship between GDP growth rates and inflation rates in Malaysia for the period of 1963 to 1997.

Data and methodology

The data set considered for the analysis contains 11 variables. These variables are:

- (1) domestic consumer price index (LF);
- (2) money supply (LM);

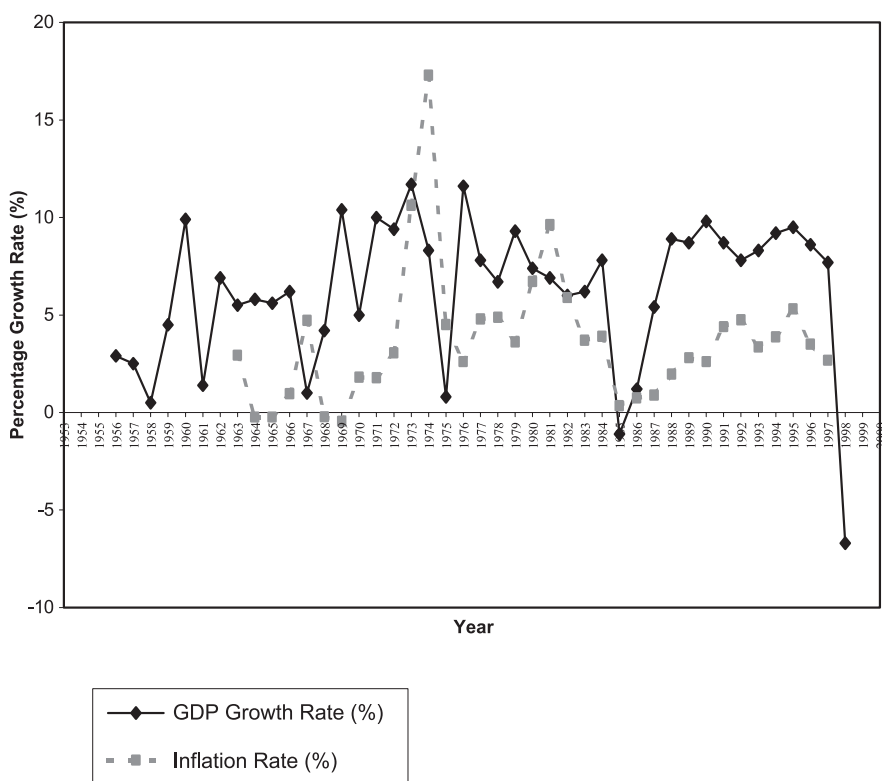


Figure 1.
The GDP growth rate
and inflation rate in
Malaysia

- (3) interest rate (IR);
- (4) income (LY);
- (5) private consumption (LC);
- (6) government expenditure (LE);
- (7) exchange rate (LX);
- (8) trade balance (LT);
- (9) capital inflows (LK);
- (10) the rest of the ASEAN's inflation (LAF); and
- (11) the rest of the world's inflation (LWF).

The data from 1973:I to 1997:II on a quarterly basis are used for the analysis. This time period is selected to cover the period of the flexible exchange rate regime and also to avoid the extraordinary effects of the financial crisis that started on July 1997.

The data employed in this study are collected from various issues of *International Financial Statistics* published by the International Monetary Fund, *Annual Reports* and *Quarterly Bulletins* of Bank Negara Malaysia, and *Economic Reports of Finance Ministry*, Malaysia. All the variables, except the interest rate, are in the natural logarithm form as a means to render homoscedastic observations.

The objectives of this study are achieved by the estimations of a vector error correction model (VECM), the analysis of impulse response functions and the variance decomposition of the model. The 11 variables were selected based on relevant economic theories that allow for the interaction among domestic demand, income, fiscal, monetary, interest rate and exchange rate policies in addition to responses to external influences.

One of the important criteria in setting up a well-specified model is to select an appropriate lag structure for the estimation of the model. To do so, the likelihood ratio test as described in Sims (1980) is used to specify the lag structure of the system. Besides, as inferences drawn from VECM are sensitive to time series specification, it is also necessary to examine the possibility of the existence of a constant, time trends and seasonal dummies in the series. The investigation on the time series properties is conducted by employing the likelihood ratio test as well. Another important aspect to look at is the stationarity of each variable at level and first difference. ADF and PP tests are conducted to test for the order of integration of these series.

After the above considerations, the model in equation (1) is constructed for the purpose of analyzing the transmission mechanism of inflation in Malaysia. A series of tests, namely the Johansen multivariate cointegration test, the Granger causality test in VECM, the impulse response functions and variance decomposition, are conducted:

$$\begin{bmatrix} \text{LF}_{it} \\ \text{LM}_{it} \\ \text{IR}_{it} \\ \text{LY}_{it} \\ \text{LC}_{it} \\ \text{LE}_{it} \\ \text{LX}_{it} \\ \text{LT}_{it} \\ \text{LK}_{it} \\ \text{LAF}_{it} \\ \text{LWF}_{it} \end{bmatrix} = \begin{bmatrix} \theta_1 \\ \theta_2 \\ \theta_3 \\ \theta_4 \\ \theta_5 \\ \theta_6 \\ \theta_7 \\ \theta_8 \\ \theta_9 \\ \theta_{10} \\ \theta_{11} \end{bmatrix} + \begin{bmatrix} \lambda_{1,1}(\text{L}) & \dots & \lambda_{1,11}(\text{L}) \\ . & \dots & . \\ . & \dots & . \\ . & \dots & . \\ . & \dots & . \\ . & \dots & . \\ . & \dots & . \\ . & \dots & . \\ . & \dots & . \\ . & \dots & . \\ \lambda_{11,1}(\text{L}) & \dots & \lambda_{11,11}(\text{L}) \end{bmatrix} \begin{bmatrix} \text{LF}_{it} \\ \text{LM}_{it} \\ \text{IR}_{it} \\ \text{LY}_{it} \\ \text{LC}_{it} \\ \text{LE}_{it} \\ \text{LX}_{it} \\ \text{LT}_{it} \\ \text{LK}_{it} \\ \text{LAF}_{it} \\ \text{LWF}_{it} \end{bmatrix} + \begin{bmatrix} \mu_1 \\ \mu_2 \\ \mu_3 \\ \mu_4 \\ \mu_5 \\ \mu_6 \\ \mu_7 \\ \mu_8 \\ \mu_9 \\ \mu_{10} \\ \mu_{11} \end{bmatrix} \quad (1)$$

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where:

- LF_{it} = consumer price index;
 LM_{it} = the stock of money supply (in a narrow sense);
 IR_{it} = interest rate;
 LY_{it} = income (proxied by GDP or industrial production index);
 LC_{it} = private consumption;
 LE_{it} = government expenditure;
 LX_{it} = exchange rates (per US dollar);
 LT_{it} = trade balance;
 LK_{it} = total capital inflows;
 LAF_{it} = the rest of the ASEAN's inflation (calculated by weighted average of CPIs from Indonesia, the Philippines, Singapore and Thailand);
 LWF = the rest of the world's inflation (calculated from CPIs of seven foreign countries, namely the USA, Japan, Australia, Germany, the Netherlands and the UK);
 θ = the deterministic components of the model (may include constant, time trend or seasonal dummies as determined by model specification mentioned earlier); and
 μ = the white noise error term.

Results and discussion

The examination of the time series properties such as trending, seasonality and optimal lag structure using a likelihood ratio test suggested that a constant and a trend as well as three seasonal dummies should be included in the model. The optimal lags to be incorporated in the model are equal to two.

Another important aspect to look at is the degree of integration of each variable in the model. In this study, to test for the stationarity and the order of integration of all the series, both ADF and PP tests were conducted. Nevertheless, in cases of contradiction, ADF results are preferred (Campbell and Perron, 1991; Schwert, 1987; Arize, 1996). The results of the unit root test are contained in Table I.

	Level		First difference		Second difference	
	ADF	PP	ADF	PP	ADF	PP
LF	-2.8614	-4.2854*	-5.3581*	-8.1964*	–	–
L1	-1.6393	-0.6097	-2.0992	-9.5297*	-6.4941*	-17.981*
IR	-3.1299	-4.4959*	-3.4463*	-14.132*	–	–
LY	-1.3464	-3.5870*	-3.6242*	-10.331*	–	–
LC	-2.5133	-2.6582	-3.4434*	-8.2171*	–	–
LE	-1.8856	-8.3138*	-2.3183	-19.378*	-3.6590*	-26.070*
LX	-1.8696	-3.1250	-3.6833*	-8.3654*	–	–
LT	-2.0732	-6.6263*	-5.3581*	-15.827*	–	–
LK	-2.9352	-4.8534*	-3.8913*	-12.582*	–	–
LAF	-2.5992	-4.7235*	-3.4174*	-5.3425*	–	–
LWF	-2.3508	-5.0242*	-2.9901	-6.8539*	-3.4897*	-18.173

Notes:

1. The null hypothesis in that series is non-stationary. The critical values for rejection are the same for both PP and ADF test (at 5 per cent significance level, the critical value is -3.41 for model with a linear trend and constant). The (*) indicates the rejection of null hypothesis. The values are given in MacKinnon (1991) computed by "SHAZAM" package
2. The denotation: LF – inflation; L2 – money supply in broad term; IR – interest rate; LY – income; LC – private consumption; LE – government expenditure; LX – exchange rate; LT – trade balance; LK – capital inflows; LAF – the rest of ASEAN's inflation; LWF – the rest of the world's inflation

Table I.
Unit root test

The results of the cointegration analysis are presented in Table II which lists the maximum eigenvalue ($\lambda_{\max}$) from multivariate cointegration test. The value of the test statistics ($\lambda_{\max}$) indicates the existence of two cointegrating vectors among the set of variables. This implies that the 11 variables in the system are tied together by some long-run equilibrium relationships. The existence of common trends in the model implied that there are some causal relationships among the variables in the system. The future fluctuations of the inflation variable could be forecast, to some extent, using the relevant information set provided by the model. The direction and the intensity of the causal effects, however, can only be determined in the vector error correction model (VECM).

The result of the multivariate causality test from VECM is summarized in Figure 2. The results showed the direct causality running from exchange rate (LX) and the rest of ASEAN's inflation (LAF) to domestic inflation (LF). Other variables that have indirect effects on inflation included the money supply in a narrow sense (L1) and the government expenditure (LE) which imposed their notability effect via the exchange rate channel. The interest rate (IR) has its effect on inflation through government expenditure while the private consumption (LC) has an indirect causal relationship with the inflation variable in Malaysia via the interest rate variable. Other variables in the system, namely income variable (LY), trade balance (LT), capital inflows (LK) and the rest of the world's inflation (LWF) did not show either direct or indirect causal relationships with inflation in Malaysia at the 10 per cent significance level.

H_0 : rank $r \leq k$	Maximum eigenvalue ($\lambda_{\max}$)
$r \leq 0$	90.43**
$r \leq 1$	67.29*
$r \leq 2$	52.62
$r \leq 3$	43.82
$r \leq 4$	39.59
$r \leq 5$	29.47
$r \leq 6$	25.15
$r \leq 7$	13.89
$r \leq 8$	9.88
$r \leq 9$	6.99
$r \leq 10$	0.45

Notes: r indicates the number of cointegrating vectors. The (*) indicates rejection of null hypothesis at 5 per cent significance level while (**) indicates rejection at 1 per cent significance level

Table II.
Johansen cointegration
analysis

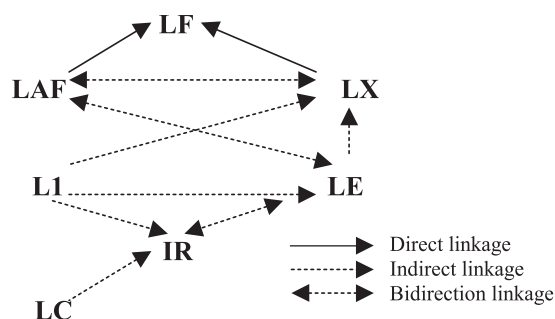


Figure 2.
The short-run causal
channels summarized
from the VECM results

The causality results suggested that external forces have dominant influences on Malaysian inflation, especially the rest of the ASEAN's inflation (LAF) and exchange rate variable (LX) as these variables have direct predictive values on the inflationary pressures in Malaysia. It is understandable since the Malaysian economy has been traditionally open, outward looking with foreign trade, technology and foreign direct investment playing a crucial role in the economy's growth. A recent development in the Malaysian economy was an increasing interaction with the rest of the ASEAN nations in the region, particularly in terms of intra-ASEAN trade. As a consequence, volatility in the prices outside Malaysia, especially the ASEAN neighbouring countries, would be transmitted to Malaysia through various transmission channels and impose significant impacts on domestic prices in Malaysia.

Domestic variables such as income variable (LY) did not seem to have a significant direct impact on inflation. This is attributed to the countermeasures in controlling overheated expansion in domestic demand in Malaysia, such as the restriction of consumption through the imposition of a tax on expensive luxury items and an increase in minimum credit card repayments, as well as the provision of savings incentives and the imposition of real estate transaction

taxes to curb real estate speculation. In addition, interest rate policies have been formulated towards preventing inflation in the country, as inflation obviation has remained the key government policy throughout the years. Among all the domestic factors, government expenditure and private consumption are the two most important factors in influencing inflation in the long run. However, the impacts of these two factors are not as significant as external influences, particularly the rest of the ASEAN's inflation.

The dominance effects of external factors as compared to domestic variables could be attributed to the compilation of consumer price index (CPI) that covered control items to a substantial extent. The control items where prices are supervised by the government caused domestic influences on domestic price to be suppressed. In Malaysia, CPI is a composite index weighted by the regional expenditure weights of Peninsular Malaysia, Sabah and Sarawak consumer prices indices measured separately. Prices of about 430 items are used in the computation of current CPI and the weights are based on final weights from the 1993/1994 household expenditure survey. As in 1995, 8.2 per cent of the items in the total weights are under the price control act, while 12 per cent are under the supplies control regulation where prices are supervised by the government. Appendix A shows the categories of items included in the basket of goods and services of Malaysia as well as weightage attached to each item.

Table III and Figure 3 illustrate the dynamic properties of the inflation variable in Malaysia beyond the sample period. Since none of the variables in the system is perfectly exogenous, the ordering chosen is based on the correlation among innovations in variables as well as correlation with the inflation variable. The ordering is as follows: IR, LT, LC, LK, DL1, DLE, LAF, DLWF, LY, LX, LF. Consistent with the VECM results, the variance decomposition analysis also indicating the relative exogeneity of the inflation variable in relation to other variables in which nearly 70 per cent of the forecast error in the Malaysian inflation is explained by its own innovation in the first quarter and even after two years, almost 40 per cent of its own variance was explained by its own shock. The value reduced continuously to approximately 32 per cent after 20 quarters. The variance decomposition also indicated that the rest of the ASEAN's inflation (LAF), which has a direct influence on inflation, contributed significantly to forecast error variance in inflation. The influence of LAF is increased throughout the 20 periods ahead, with 4.93 per cent in the first quarter to 26.84 per cent at the end of the 20th quarter. The results suggested that LAF affects price with a long and possible lag, and it contains prediction information on inflation well into the fifth year. On the other hand, the exchange rate variable (LX) has a transitory and short-lived effect on inflation. The responses of inflation to variation in exchange rate decreased dramatically over time, from 8.55 per cent in the first quarter to only 0.41 per cent at the end of the 20th quarter. Other influences, namely money supply (L1), government expenditure (LE), interest rate (IR), private consumption (LC) and the rest of the world's inflation (LWF) did not have a

Period	S.E.	LF	DL1	IR	LY	LC	DLE	LX	LT	LK	LAF _M	DLWF _M
1	0.0094	68.17	0.53	2.08	2.78	0.43	7.71	8.55	0.14	0.00	4.93	4.68
2	0.0135	57.67	0.36	2.66	1.50	5.74	13.72	4.16	0.18	0.06	6.85	7.10
3	0.0178	48.94	1.71	2.92	1.29	7.49	13.54	2.37	0.32	0.04	11.72	9.65
4	0.0214	45.57	1.54	4.09	1.17	8.87	13.21	1.66	0.25	0.15	14.04	9.47
5	0.0248	42.47	1.86	4.36	0.98	9.12	13.21	1.29	0.25	0.11	16.89	9.45
6	0.0280	40.48	1.95	4.62	0.91	9.37	13.23	1.06	0.27	0.09	19.00	9.03
7	0.0309	38.59	1.97	4.93	0.84	9.55	13.66	0.89	0.24	0.08	20.61	8.65
8	0.0336	37.28	2.03	5.15	0.81	9.63	13.75	0.78	0.24	0.06	21.83	8.43
9	0.0362	36.29	2.07	5.33	0.77	9.75	13.80	0.71	0.23	0.06	22.76	8.22
10	0.0387	35.48	2.11	5.44	0.73	9.82	13.87	0.65	0.22	0.05	23.56	8.07
11	0.0410	34.79	2.15	5.54	0.70	9.87	13.99	0.60	0.21	0.04	24.16	7.94
12	0.0432	34.24	2.18	5.63	0.68	9.90	14.04	0.56	0.21	0.04	24.68	7.83
13	0.0452	33.79	2.20	5.70	0.66	9.93	14.09	0.53	0.21	0.04	25.11	7.74
14	0.0472	33.41	2.23	5.75	0.65	9.95	14.13	0.51	0.20	0.03	25.49	7.66
15	0.0492	33.07	2.24	5.80	0.64	9.97	14.18	0.48	0.20	0.03	25.79	7.59
16	0.0510	32.79	2.26	5.85	0.63	9.98	14.21	0.47	0.20	0.03	26.06	7.53
17	0.0528	32.55	2.27	5.88	0.62	10.00	14.24	0.45	0.20	0.03	26.29	7.48
18	0.0545	32.33	2.28	5.91	0.61	10.01	14.26	0.44	0.19	0.02	26.50	7.44
19	0.0562	32.14	2.29	5.94	0.60	10.02	14.29	0.42	0.19	0.02	26.68	7.40
20	0.0578	31.97	2.30	5.97	0.59	10.03	14.31	0.41	0.19	0.02	26.84	7.36

Table III.
Variance decomposition

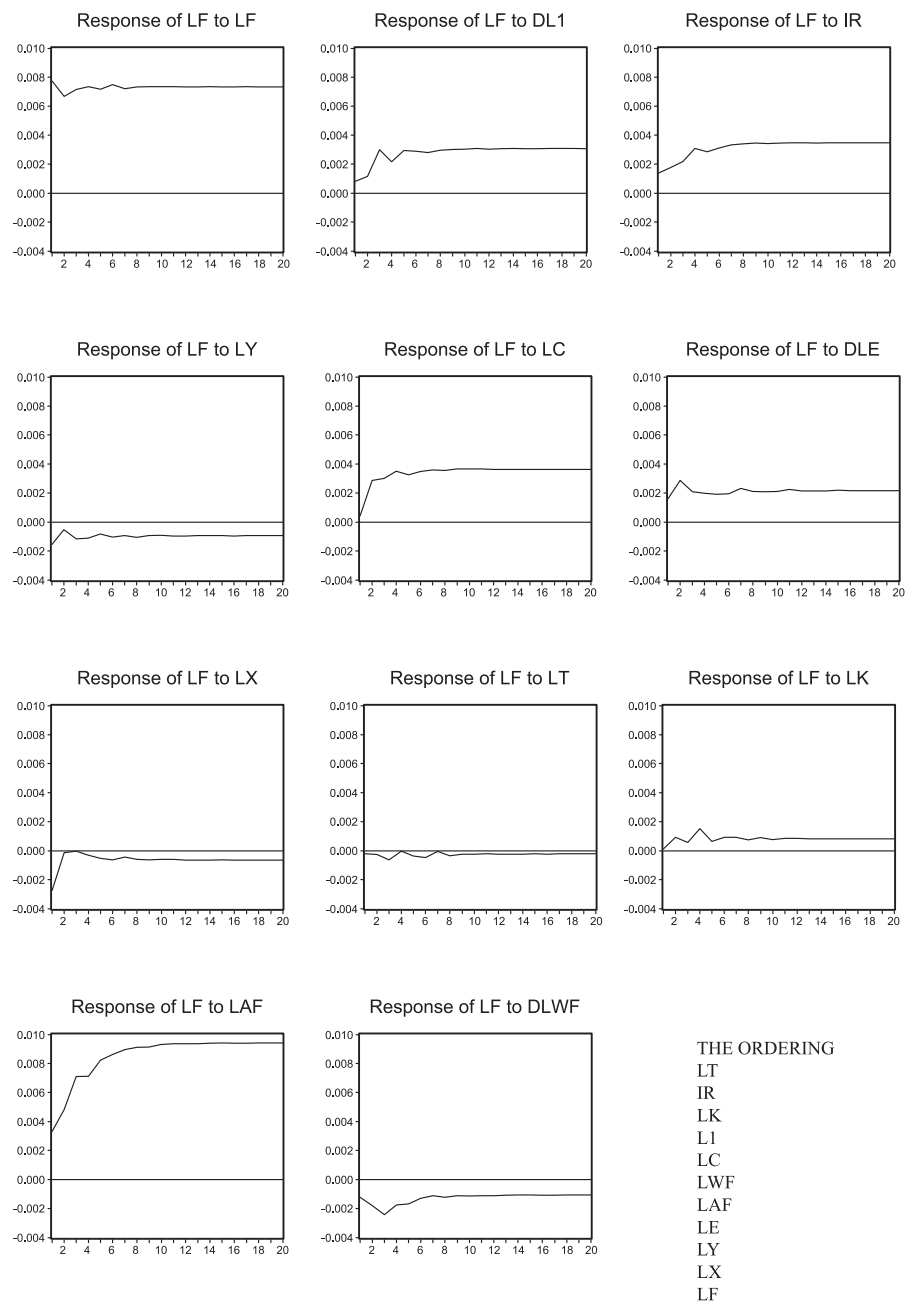


Figure 3.
Response to one SD
innovations

direct predictive relationship with the inflation variable, and contributed quite significantly as well. These variables explain 2.30 per cent, 14.13 per cent, 5.97 per cent, 10.03 per cent and 7.36 per cent each in the variance of inflation at the end of the 20 quarters.

Figure 3 shows that a shock to price persists over the 20 periods ahead. In addition, a positive shock of one standard deviation unit in money supply (L1), interest rate (IR), private consumption (LC), government expenditure (LE) and the rest of the ASEAN's inflation (LAF) contained significant positive and persistent effects on inflation well into 20 quarters post-shock horizon. Contrariwise, the inflation variable reacts negatively to depreciation in the exchange rate (LX) and the response is fairly rapid and transient.

Conclusion

Malaysia exhibits an exceptional feature in terms of inflationary experiences; the economy had experienced high (1973-1974, 1980-1981) and low (1985-1987) regimes of inflation, and was able to contain a low and stable inflation during the high economic growth period of 1988-1996. The achievement of this relatively low inflation during the high economic growth regime was attributed to the effective and consistent policy mix adopted by the Malaysian government. The "zero inflation campaign" that was launched on 2 June 1995 marked the government's strong intention to curb the inflation in the country.

The estimated results of this study indicate that, besides the domestic factors which include private consumption, government expenditure, interest rate and money supply, external factors also have a significant influence on Malaysian inflation. In fact, the impacts from the external factors are relatively more dominant and direct as compared to those from the domestic factors. This could be reviewed through the direct causality running from the exchange rate and the rest of the ASEAN's inflation to Malaysian inflation. These results are understandable since the Malaysian economy has been traditionally open, outward looking with active foreign trade, technology transfer and foreign direct investment. A recent development in the Malaysian economy has witnessed an increasing interaction between the country and the rest of the ASEAN nations, particularly in terms of the intra-ASEAN trade. As a consequence, the price volatility in the other ASEAN countries was transmitted more readily to Malaysia.

However, the dominance effects of foreign factors should be interpreted with great care. The importance of external influences on domestic inflation rate as compared to domestic factors could be attributed to the composition of CPI that put heavy weight on control items and caused domestic effects to be underestimated. For future research, it is recommended that the effect of control items on domestic price be considered in the empirical analysis.

The financial crisis that hit the ASEAN region in July 1997 caused the Malaysian Ringgit to depreciate to a substantial extent. The consequent increase in import prices, especially prices for intermediate and capital goods, has placed an extremely powerful inflationary pressure in the country. In addition, the robust foreign demand on the Malaysian products induced by the sharp depreciation of the Ringgit has also escalated the price level of the country. Inflation thus once again becomes an important issue and the focus of the government in macroeconomic management.

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Appendix

Categories	Weights (per cent)
Food	34.9
Beverages and tobacco	3.6
Clothing and footwear	3.6
Gross rent, fuel and power	21.2
Furniture, furnishings and household equipment and operation	5.6
Medical care and health expenses	1.9
Transport and communication	17.9
Recreation, entertainment, education and cultural services	5.8
Miscellaneous	5.6

Source: *Economic Report* (1997/1998), Malaysia

Table AI.
The weights of CPI by
major categories in
Malaysia