Economic changes, inflation dynamics and policy responses: the Malaysian experience

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Abstract

This note examines Malaysia's inflation dynamics as influenced by changes in the policy environment and economic structure. In particular, it highlights the growing role of domestic demand, increased integration with the global economy, and the policy reforms that are shifting the economy towards more market-based prices and greater competition. As a result, Malaysia's inflation dynamics are expected to change, and this will have implications for the central bank's policies.

Keywords: Inflation dynamics, market-based prices, reforms, integration, monetary policy

JEL classification: E31, E52, E58, F60

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The views expressed in this paper are those of the author and do not necessarily reflect the official views of the Central Bank of Malaysia or its Monetary Policy Committee.

1. Introduction

Malaysia has generally experienced low and stable inflation over the last two decades. This period coincided with domestic macroeconomic stability and lower global inflation. However, these inflation dynamics are expected to change, following four fundamental changes in the domestic economy. These are the move towards a more market-based pricing of goods and services; changes in the labour markets; the growing role of domestic demand as a driver of growth; and greater integration with the world economy through trade and global value chains. This note discusses these changes and how they will affect Malaysia's inflation dynamics, and the implications for monetary policy.

2. Key changes in the Malaysian policy environment and economy

2.1 Shifting towards more market-based prices and greater competition

In the past decade, policy reforms in Malaysia have focused on shifting the economy towards more market-determined prices by removing subsidies and promoting greater competition in the goods and services markets, as well as through reforms in the labour markets.

As part of the fiscal reforms undertaken since 2010, subsidies on selected food items (such as cooking oil and sugar), fuel and utilities have been gradually removed. One important adjustment that has changed the country's inflation dynamics is the implementation of the managed-float pricing mechanism for fuel in December 2014.[2] Under this mechanism, fuel prices are adjusted monthly in response to changes in market prices. Aside from the removal of subsidies, the other element of the fiscal reforms that have an implication for inflation dynamics is the implementation of the Goods and Services Tax (GST) in 2015. Potential future changes to the GST rate would have broad-based effects on prices. The Government has also introduced measures such as the introduction of the Competition Act (2010) and establishment of the Malaysian Competition Commission to enforce the Competition Act. This is to ensure well functioning and competitive markets.

The other factor that is likely to affect inflation dynamics is ongoing reform in the labour market. These measures include the implementation of the minimum wage policy in 2013; the introduction of a productivity-linked wage system; a gradual reduction in reliance on low-cost and low-skilled foreign workers; and measures to address labour market rigidities such as restrictive regulations on the hiring and firing of workers.

[2] Prices of petrol and diesel are determined through the managed-float pricing mechanism, which incorporates changes to global oil prices, the USDMYR exchange rate, profit margins for dealers, and marketing costs. The government announces domestic fuel prices at the start of the month based on developments in global oil prices and the exchange rate in the previous month. Previously, prices of petrol and diesel were adjusted irregularly and were heavily subsidised.

Finally, following the unpegging of the ringgit in 2005,[3] the ringgit exchange rate under the managed float system has moved actively in response not only to fundamental economic shocks but also to the volatile capital flows arising from the unconventional monetary policies of the major developed economies.

2.2 Growing role of domestic demand

There has been a shift towards domestic demand as a key driver of growth over the recent years. This change reflects stronger growth in private consumption and domestic investment amid the slowdown in external demand following the financial crises in the United States and Europe (Table 1). On the supply side, the shift towards a more domestic-demand driven economy is also reflected in the larger share of the services sector, which is closely correlated with private consumption, and the higher share of the construction sector that is closely related to domestic investment (Graph 1).

Growth in components of GDP in Malaysia

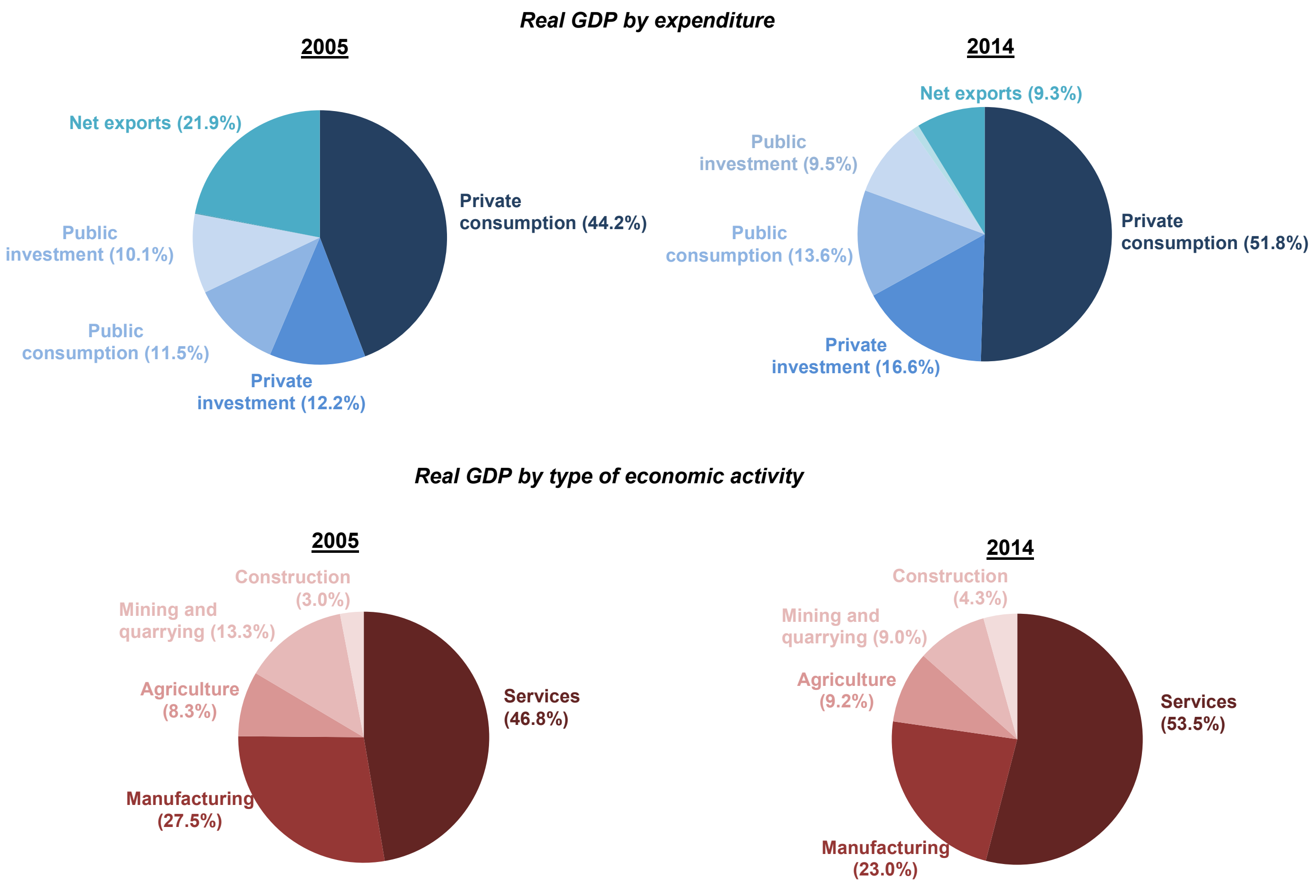
Table 1

CAGR, %	2005–06	2007–08	2009–10	2011–12	2013–14
Domestic demand	**6.9**	**8.2**	**3.9**	**9.3**	**6.6**
External demand	7.5	2.7	–0.5	1.2	2.7

Source: Central Bank of Malaysia.

[3] The ringgit was pegged to the US dollar in 1998 during the Asian Financial Crisis. This was one of a host of measures introduced to stabilise economic and financial conditions.

Components of the GDP of Malaysia: 2005 vs 2014	Graph 1



Source: Central Bank of Malaysia.

Stronger growth in household consumption and increased investment in properties and financial assets reflected primarily the increase in household incomes, although access to financing also played a role.[4] Average monthly household income rose threefold from MYR 2,020 in 1995 to MYR 6,141 in 2014 and it is expected to increase further to MYR 10,540 by 2020.[5] As income grows, there is also a shift in consumption patterns. For example, a larger proportion of expenditure is now spent on services such as housing, transport and communication, while the share spent on food has declined.[6] Rising household income also corresponds with a significant expansion of the household balance sheet, such that the ratio of household assets to

4 Household debt-to-GDP ratio increased from 65.9% at end-2006 to 88.4% at end-September 2015.

5 Source: Department of Statistics, Malaysia and Economic Planning Unit, www.epu.gov.my/en/household-income-poverty.

6 The share of housing, transport, communication, recreational services and culture, restaurants and hotels and education in the CPI basket increased to 52.4% in 2010 from 44.8% in 1995. Conversely, the share of food and non-alcoholic beverages declined to 30.3% in 2010 from 34.9% in 1995.

GDP has risen from 267% in 2002 to 322% in 2013.[7] This in turn has increased the relative importance of housing and financial wealth, leading to a greater role of asset price movements in influencing private consumption.[8]

2.3 Greater economic integration

Malaysia's economy is highly integrated with the global economy and is now among the top 20 most open economies in the world.[9] However, there has been an evolution in the nature of that integration. First, as noted earlier, growing incomes have led to increased consumption of imported goods and services. Second, Malaysia has had a very open policy towards international trade and investment and has actively sought to diversify both its exports and its trade partners. Some of the market diversification has occurred due to growing regional integration and the deepening of regional value chains. In particular, Malaysia is exporting more to, and importing more from, the Asian region, with a significant increase in trade with China.[10] Malaysia has also become highly integrated through linkages formed with the global and regional value chains, which has increased competition both internationally and locally, and affected the way firms set prices and wages.

Economic integration will be further enhanced in the coming years by Malaysia's participation in the ASEAN Economic Community (AEC) and the Trans-Pacific Partnership Agreement (TPPA). These will further reinforce the domestic trends toward more market-based prices, more competition, and greater market liberalisation.

The implication of this increasing economic integration is that domestic price dynamics are increasingly determined by what happens outside the economy and that inflation is increasingly sensitive to external price shocks. A recent example has been the impact of lower global oil and commodity prices.

3. Inflation dynamics in Malaysia

Historically, headline and core inflation have been low and generally stable around their long-run values (Graph 2 and Appendix I).[11] Of significance, inflation dynamics in the past two decades have been dominated by supply-side shocks.[12] These

[7] Household assets include housing wealth, deposits and equity. Source: Box article "Evolving household balance sheets and implications for private consumption" in BNM, *Annual Report 2013*.

[8] In Malaysia, housing wealth is the largest contributor to private consumption growth after income, contributing on average 14.5% between 2005 to 2Q 2013. Source: Box article "Evolving household balance sheets and implications for private consumption" in BNM, *Annual Report 2013*.

[9] Total trade as a share of GDP rose from 105% in 2000 to 131% in 2014.

[10] Close to 70% of Malaysia's total trade is now with the Asia region and trade with China rose from 4% of total trade in 2000 to reach 14% in 2014.

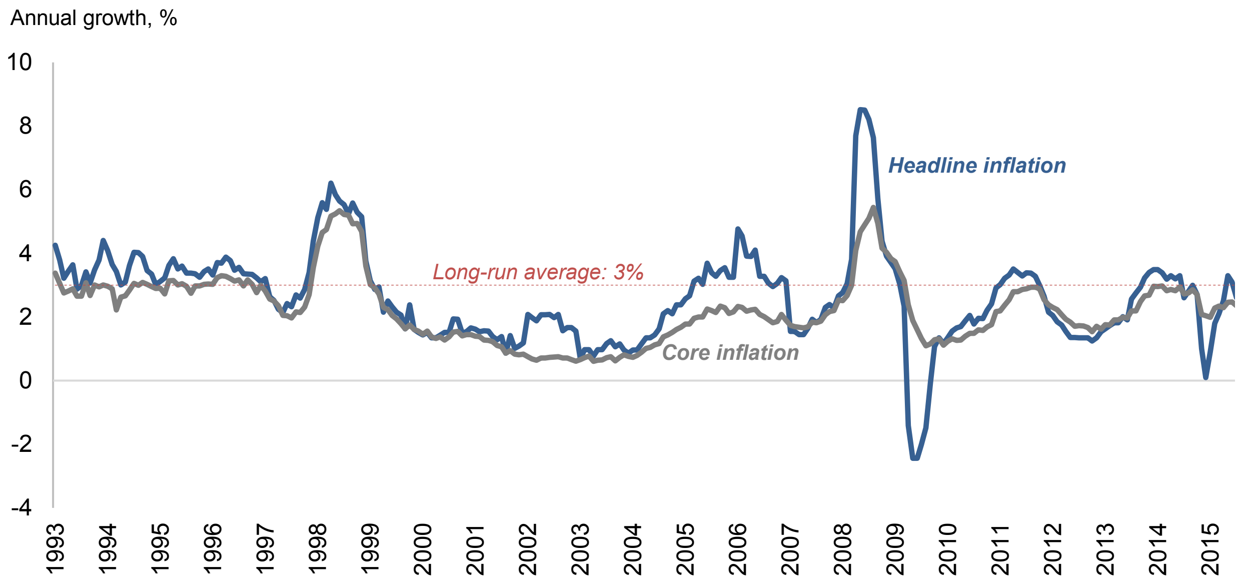
[11] Headline inflation and core inflation averaged close to 3% and 2% respectively in the last two decades (standard deviation of 1.5 and 1.0 respectively).

[12] Terms of trade shocks can drive inflation dynamics in small open economies that are heavily dependent on commodity exports. To this end, continued diversification of the Malaysian economy

domestic supply shocks have been primarily driven by disruptions in supplies and by periodic changes to the administered prices of certain goods (which account for 17% of the CPI basket). To some extent, the existence of subsidies and controlled prices for administered goods had limited the impact of external shocks on domestic inflation. These shocks were transmitted mainly through changes in the prices of fuel and food, which together account for close to 40% of the CPI basket. It also helped that most of the supply shocks were exogenous and transitory in nature and therefore facilitated the convergence of headline inflation to core inflation relatively quickly.[13] This, in part, explains why second-round effects were largely absent in Malaysia.[14] Finally, inflation persistence in Malaysia has declined in the recent years, a common empirical finding across many countries.

Headline and core inflation in Malaysia

Monthly: 1993–2015 Graph 2



Source: Department of Statistics, Malaysia; Central Bank of Malaysia.

towards manufactured exports implies that shocks to commodity terms of trade play a less prominent role in shaping inflation dynamics in Malaysia, unlike in the 1970s and 1980s. In fact, more than two thirds of the fluctuations in the overall terms of trade are driven by the manufacturing sector, with about half due to terms of trade in electric and electronic goods (E&E) given Malaysia's prominent role in E&E value chains.

13 See Chuah, Chong and Tan (2015).

14 This is also supported by the supply of foreign workers and the structure of trade unions in Malaysia. Trade union members are less than 10% of the labour force and the collective wage bargaining process covers 2% of the labour force. There is also no wage indexation and there is a lack of wage setting coordination across industries.

3.1 Larger and quicker pass-through of shocks resulting in greater inflation variability

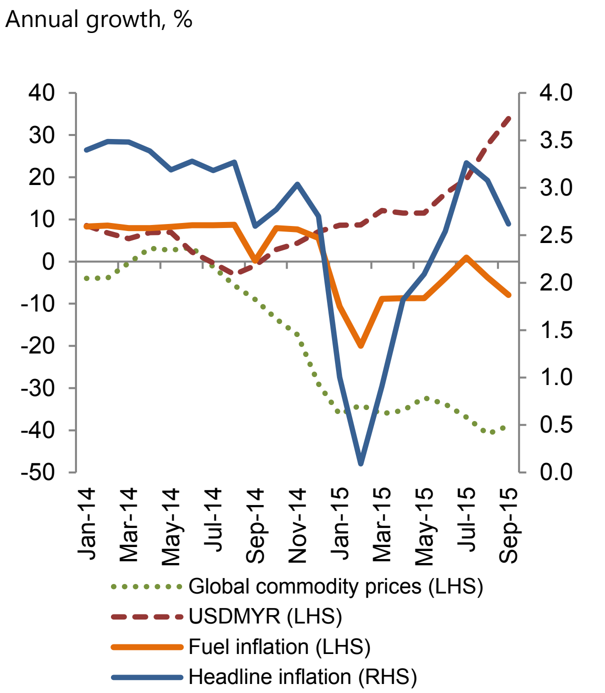
The shift towards more market-based prices means that the pass-through to inflation is expected to change in terms of size, persistence and pervasiveness. There is likely to be larger and quicker pass-through of shocks that could lead to higher inflation variability. For example, under the managed-float pricing mechanism for fuel, changes in global oil prices will have a larger and quicker pass-through to domestic inflation. The greater volatility of the exchange rate is also expected to make it a more important consideration in domestic price-setting. Hence, the expected higher volatility and uncertainty of global oil prices and exchange rates over the near to medium term is likely to make inflation and inflation projections more variable and uncertain. Moreover, as fuel is an important cost component for firms, more variable fuel prices could lead to increased variability of other prices in the CPI, especially food. As such, global oil prices and the exchange rate are now likely to play a more important role in the inflation expectations of households and firms.[15]

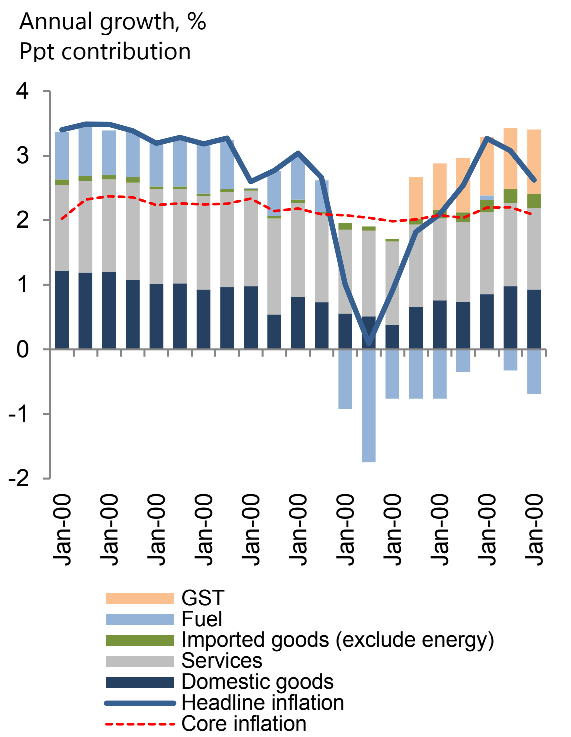
Assessing inflation dynamics in Malaysia is also more challenging when shocks move in opposite directions (Graph 3). Specifically, the recent marked downtrend in global commodity and energy prices has helped mitigate the inflationary impact from the persistent ringgit depreciation and the implementation of the GST (Graph 4). Thus far, the inflationary impact from the exchange rate depreciation has been contained despite the continued ringgit weakness since September 2014.[16]

15 Factors that influence the formation of inflation expectations include prices of items frequently purchased by households, notably food and petrol; and items regularly captured by media coverage. See Georganas, Healy and Li (2014), and Cavallo, Cruces, and Perez-Truglia (2014).

16 The ringgit's current weakness represents the most persistent depreciation episode in the last two decades. The ringgit has cumulatively depreciated against the USD by over 26% since September 2014 and against the currencies of Malaysia's main import partners, the ringgit has depreciated by 16.0%. In Graph 3, a positive growth represents depreciation.

Global commodity prices, exchange rate and inflation 2014–15	Graph 3	Contributions to headline inflation in Malaysia 2014–15	Graph 4





Source: Department of Statistics, Malaysia , Bloomberg, IMF and Central Bank of Malaysia.

3.2 Demand-side shocks and wage dynamics to feature more prominently in inflation dynamics

Given the increased role of domestic demand in the economy, its strength has become a fundamental force in determining inflationary conditions. First, the shift in consumption patterns – as shown by the change in the CPI's composition towards more non-tradable goods and housing – means that the key drivers of inflation will be domestic factors such as the prices of services and rentals. Second, strong growth in domestic investment activity could also lead to higher inflation given the competition for resources, although the ability to import may reduce some of those inflationary pressures – but at the expense of a deterioration in the current account of the balance of payments. Third, as private consumption is increasingly supported by housing and financial wealth, asset price shocks could have larger implications on consumption, and consequently, on inflation.

In future, a more competitive and flexible labour market is also expected to make the inflation process more interlinked with wage dynamics. A tighter labour market amid a less elastic supply of foreign labour would mean that rising inflation expectations could trigger wage inflation as workers demand higher wages to compensate for the decline in purchasing power. This wage inflation could give rise to second-round effects that lead to greater inflation persistence.[17]

3.3 Higher sensitivity to external factors

Even though domestic demand is a key economic driver, increasing global integration implies that domestic prices are increasingly linked to global prices and global developments can now have a more significant impact on domestic prices than before. Generally, greater integration has contributed to lower inflation in Malaysia. First, lower production costs in EMEs amid increasing competition in goods, services and labour markets, together with advances in productivity, have contributed to lower and more flexible prices. A more competitive landscape, both domestically and globally, is expected to reduce price stickiness and lead to lower persistence in the inflation process.

Second, complex global and regional value chains have increased competition and price flexibility, and this has dampened domestic inflation.[18] International firms that are exposed to multiple stages of production, currencies and markets have greater flexibility to make the necessary adjustments – whether it is to establish natural hedges for the cost of their inputs or to allocate resources along the value chain. This allows them to better manage the pricing of their products. For local firms that have to compete directly and indirectly with international firms, they need to behave strategically and manage their costs and product pricing in order to retain market share.

Overall, it is evident that increasing global integration has led to domestic prices co-moving to a greater extent with international prices. Global developments are transmitted to Malaysia more quickly and pervasively through the trade, commodities and financial channels. Such co-movement of prices has been observed over the last decade with respect to the impact of changes in global commodity prices.

Since the fourth quarter of 2014, the ringgit exchange rate against the US dollar has depreciated significantly. This has been the outcome of unfavourable domestic developments, large capital outflows, a drop in export earnings due to lower oil and commodity prices, and the strong US dollar. As noted earlier, a combination of lower global inflation, weak global fuel and commodity prices, and more moderate domestic demand has helped to offset some of the pass-through of the weaker exchange rate. In other circumstances, the impact of changes in the exchange rate have not been favourable in terms of domestic inflation, leading to asymmetrical adjustments with prices often increasing when the exchange rate depreciates but rarely coming down when the exchange rate appreciates.

17 Nevertheless, the risk of wage inflation in Malaysia's case is limited, given the absence of some preconditions such as wage indexation to inflation, high labour unionisation, coordinated wage bargaining across industries, and centralised wage bargaining (control of aggregate and relative wage movements).

18 See Aron, Macdonald and Muellbauer (2014).

4. Policy implications

First and foremost, it is important to highlight that monetary policy in Malaysia has not been determined solely by the level of inflation. The impact of monetary policy on financial conditions has also been a key consideration. Therefore, the setting of monetary policy has required a balance between the need to support the economy, maintain a low inflation rate and avoid creating incentives for excessive financial risk-taking. The outcome has been a monetary policy that has avoided setting very low interest rates for extended periods. In particular, monetary policy has avoided negative real interest rates for sustained periods, although temporary negative real interest rates were tolerated when the inflation rate increased due to the transitory effect of various shocks. Low interest rates have a propensity to create various financial imbalances, particularly in a high savings society like Malaysia, where the risk is not only of imprudent increases in leverage but also that the search for yield will cause savings to be disintermediated into the informal sector and into potentially risky ventures. When it comes to the economy, our experience has been that, more than just low interest rates, an economy needs supportive credit conditions and a prudent credit culture to grow in a healthy sustainable manner. The aversion to long periods of negative interest rates, combined with other policy tools such as micro- and macroprudential measures are, in the Monetary Policy Committee's view, the best way to ensure that monetary policy supports both macroeconomic and financial stability.

Turning specifically to the issue of structural developments in the economy affecting the inflation process and their implications for monetary policy, the outcome has been that these structural developments have made the conduct of policy both easier and at the same time more complex. First, the fact that the price movements are now less distorted by arbitrary adjustments to subsidies and administered prices, means that changes in the inflation rate are more reflective of actual changes in macroeconomic conditions in the domestic and global economies. This makes it easier to analyse the underlying causes of changes in inflation and assess the need for a monetary policy response.

However, the structural changes also make it more difficult to interpret various price series and other indicators used by the central bank. This makes existing analytical models based on historical data less reliable when assessing the inflation outlook. As a result, industry and household surveys have become more important for an understanding of how behaviours are changing and the likely impact on inflation dynamics. The new understanding can also be useful in calibrating existing models to account for these shifts.

Given the increased sensitivity to global price developments, there is a need to improve the quality of indicators of relevant global prices, as well as the need to devote more resources to developing a deeper understanding of the link between global and domestic prices. More reliance is now placed on various measures of core inflation that cover data at the domestic and global level.[19] These improvements have

[19] See Amstad, Huan and Ma (2014).

taken the form of building a more holistic framework[20] to monitor, assess and forecast inflation, which includes collecting and analysing micro-level data on households and businesses.

The ongoing price reforms and more market-based prices can lead to multiple adjustments to prices and market structures that can result in repeated shocks to inflation. The consequence could be periods of persistently higher and more volatile inflation, with the potential to unanchor inflation expectations. In Malaysia's case, while the overall environment supports a generally benign inflation outlook, the introduction of the GST and the removal/reduction of subsidies within a relatively short period have led the public to perceive that their welfare has been eroded by the rising cost of living.

As monetary policy is not the tool for managing the issue of a rising cost of living, there is a role for other policies, including fiscal policy. In the short run, the Malaysian government has undertaken measures to provide basic goods and services at more affordable prices, undertaken efforts to ensure adequate supplies of basic goods, and introduced the monitoring of price increases by firms to address profiteering. Food inflation warrants special attention for a number of reasons: it is currently the largest CPI component (30.3%), it is directly affected by the price reforms, and it plays a prominent role in influencing households' inflation expectations. High food inflation can be mitigated in the long run through structural reforms to increase competition, the removal of agricultural trade restrictions and improvements to domestic supply and supply chain logistics.

The central bank has a role to play in explaining the factors that affect the inflation rate. This is particularly important with respect to shocks that have a transitionary impact on inflation. It has been observed that there is asymmetric coverage by the media with respect to inflation, with more coverage being given to inflation when it is increasing and little or no coverage when it is low or declining.[21] When inflation is increasing in response to a series of supply shocks, such pervasive media coverage could feed into, and exaggerate, public perceptions of the actual inflation rate. The outcome could be excessive demands for higher wages. It is therefore important for the central bank to explain, preferably in layman's terms, the underlying causes of the inflation and its views on its likely persistence.

In order for such communications to be effective, the central bank must understand the situation from the perspective of households and businesses. Otherwise, the central bank risks talking in a language that its stakeholders do not understand. In Malaysia, the central bank has tried to address this by collecting monthly household data through the BNM Consumer Sentiment Survey, carrying out focus group discussions to understand household behaviour and using industrial visits and engagements to understand the conditions faced by firms and their price-setting behaviour.

Given the open nature of the Malaysian economy, the exchange rate is an important economic variable. The increased volatility of the exchange rate has become a key consideration in public perceptions about inflation and corporate price

[20] For the case of Malaysia, the framework for inflation includes cross-checking against three approaches: data-driven analysis, model-driven assessment and outlook, and survey-driven analysis. The framework starts by analysing first-round inflation followed by second-round effects where labour market slack and inflation expectations play an important role.

[21] Singh (2009).

setting behaviour. Uncertainty about the future direction of the exchange rate has become an issue that is often discussed publicly. The role of the central bank has been to explain the different factors, besides the weaker exchange rate, such as low commodity prices and generally benign global inflation, which would ultimately influence the domestic inflation outcomes. Given the generally negative public perceptions about the weaker exchange rate, the central bank has also sought to highlight the benefits of a flexible exchange rate, the factors (global and domestic) that weaken the exchange rate, and the beneficial role of the exchange rate, given the negative terms-of-trade shock to the economy from the sharp decline in the prices of its key commodity exports

5. Conclusion

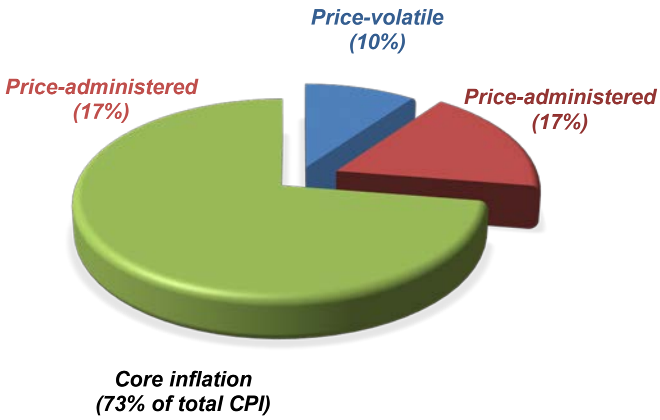
The conduct of monetary policy in a small open economy has always been more complicated than in larger and more closed economies. The structural evolution of the Malaysian economy towards being primarily domestic demand-driven while at the same time being more open to global price developments has been, and will continue to be, the subject of research at the central bank. The central bank views the ongoing structural reforms as beneficial in terms of making the economy more flexible and responsive. The inflation rate will become more responsive to economic developments and this will certainly facilitate the conduct of monetary policy. However, the rapid pace at which some of these price adjustments are occurring does pose short- and medium-term challenges. Over the short term, the challenge is to explain higher inflation to the public and to manage inflation expectations. Over the medium term, the challenge is to adapt the central bank's analytical and surveillance tools to ensure that they continue to provide appropriate guidance to the setting of monetary policy. A part of this exercise is the need to develop an understanding about how households and businesses are reacting to the new environment and the potential implications of any change in behaviour for inflation and growth.

Appendix I

CPI Categories in Malaysia 2010

Graph 5

CPI sub-categories	Weight (%) 2010=100
Food and non-alcoholic beverages	30.3
Alcoholic beverages and tobacco	2.2
Clothing	3.4
Housing and utilities *of which* Rental	22.6 *17.2*
Health	1.3
Transport *of which* Fuels and lubricants	14.9 *8.8*
Communication	5.7
Recreation services	4.6
Education	1.4
Restaurant and services	3.2
Miscellaneous	6.3



Source: Central Bank of Malaysia.

Weights of the main CPI Categories in Malaysia (1990–2010)

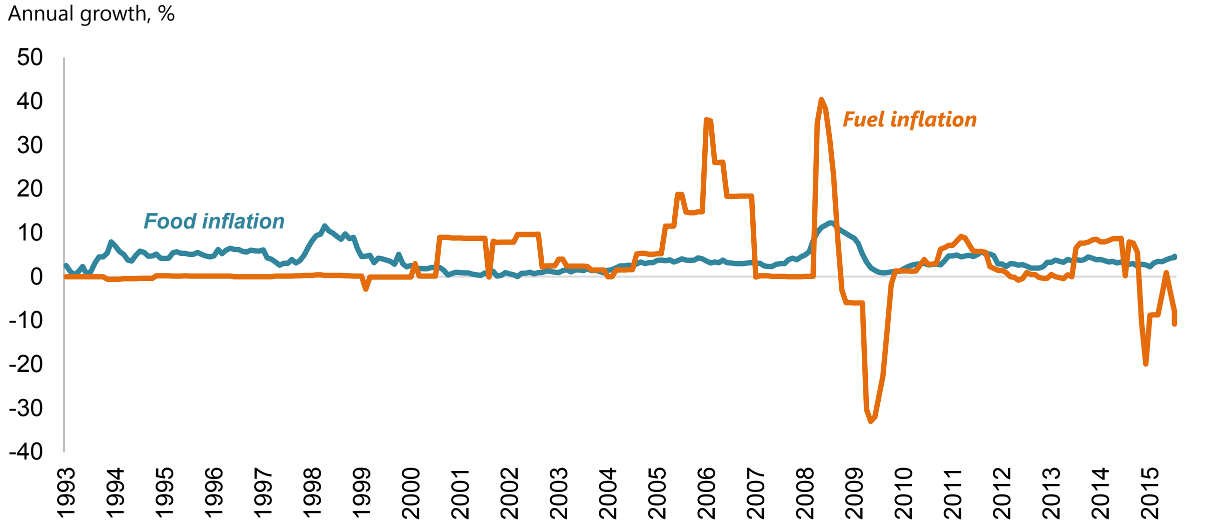
Table 2

Category	1990=100	1994=100	2000=100	2005=100	2010=100
Food and non-alcoholic beverages	34.6	34.9	33.8	31.4	30.3
Alcoholic beverages and tobacco	4.4	3.6	3.1	1.9	2.2
Clothing and footwear	2.9	3.6	3.4	3.1	3.4
Housing, water, electricity, gas and other fuels	20.5	21.1	22.4	21.4	22.6
Furnishings, household equipment and routine household maintenance	5.7	5.6	5.3	4.3	4.1
Health	1.7	1.9	1.8	1.4	1.3
Transport	18.7	17.9	18.8	15.9	14.9
Communication				5.1	5.7
Recreation services and culture	5.1	5.8	5.9	4.6	4.6
Education				1.9	1.4
Restaurants and hotels				3.0	3.2
Miscellaneous goods and services	5.4	5.6	5.5	6.0	6.3
TOTAL CPI	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: Department of Statistics, Malaysia.

Food and fuel inflation in Malaysia

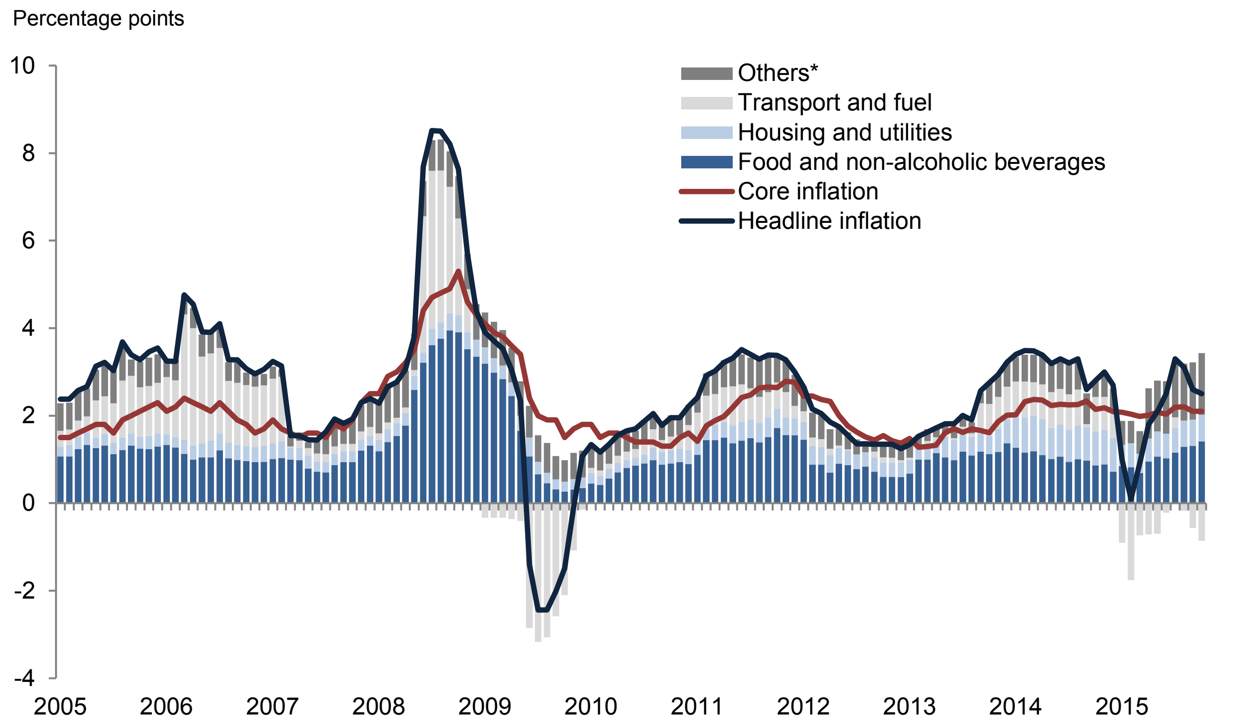
Monthly: 1993–2015 Graph 6



Source: Department of Statistics, Malaysia.

Contribution of selected CPI Categories to headline inflation in Malaysia

Monthly: 2005–2015 Graph 7



* Others include *alcoholic beverages & tobacco; clothing & footwear; furnishings & household equipment; health; communication; recreation services and culture; education; restaurants & hotel, and miscellaneous goods & services.*

Source: Department of Statistics, Malaysia.

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