Variations in Household Propensity to Consume across Income Segments

Introduction

Private consumption was again a major driver of growth in 2012. Its robust performance of 7.7% was mainly supported by stable employment conditions and continued strong wage growth. However, at the micro level, there were also economic and policy developments that affected the incomes of different segments of households to varying degrees. The decline in crude palm oil prices in the second half of 2012 impacted the incomes of small-holders in that sector. Meanwhile, households earning less than RM3,000 per month benefited from a transfer of RM500 from the Government under Bantuan Rakyat 1Malaysia (BR1M).

To assess the aggregate effects of such developments on various income levels, it is necessary to identify: (1) Their magnitudes; and (2) the affected households and the likely change in their spending patterns. The latter requires knowledge of households' responsiveness to a change in income, which may vary according to the level of household income. This article highlights the diversity in households' propensity to consume from income, and the need to account for this heterogeneity while assessing the impact of income shocks.

Diversity in Household Consumption Behaviour across Income Segments

The literature posits that, in general, households aim to maintain a stable standard of living by avoiding excessive fluctuations in consumption in response to temporary changes in their income. Ideally, households would save more during periods of temporarily higher income and draw down on savings during periods of temporarily lower income. Alternatively, some households may access credit markets instead of drawing down from their savings. This concept, consumption smoothing, explains why temporary fluctuations in income are often observed to have less than proportionate effects on spending. In reality, despite the desire to smooth spending, households earning different income levels differ in their ability or willingness to do so. Lower income households are often less able to smooth expenditures and thus their spending behaviours display a higher sensitivity to fluctuations in income.

There are three main reasons underpinning this observation. Firstly, lower income households are often less able to save, mainly because this group tends to spend a higher share of total income on essential items such as food and utilities. The inability to accumulate sufficient savings results in their expenditures being more sensitive to changes in income. In the absence of credit, a drop in income will induce a household without savings to reduce its expenditures by an amount that corresponds to the decline in income, while a household with sufficient savings has the option of continuing to spend by using its savings. Secondly, within the context of imperfect credit market conditions, access to credit for lower income households is also more constrained, given the lower current and expected future incomes and the ability to secure collateral for borrowing. Households with limited access to credit, when faced with an adverse income shock, would have to reduce their expenditures by a greater magnitude compared to households who are able to borrow. Finally, studies have found that the spending behaviour across different income levels is also a function of the level of financial literacy. Lower income households with lower levels of financial literacy are less likely to purchase insurance, have a lower capacity to save and are more likely to undertake borrowing at a higher cost than necessary. These factors, taken together, would cumulatively inhibit the ability to smooth consumption against unanticipated income shocks, thus making expenditures of lower income households more sensitive to income shocks, relative to the higher income segments.

Empirical Evidence for Households in Malaysia

Consumption functions across income groups were estimated to capture the differing spending behaviour of households at various income levels. This was done using a cross-section of 21,641 households categorised into seven income brackets based on data from the 2009/2010 Household Expenditure Survey (HES). In the empirical specification, consumption was regressed on income, credit and wealth factors, and the life cycle stage of the households.

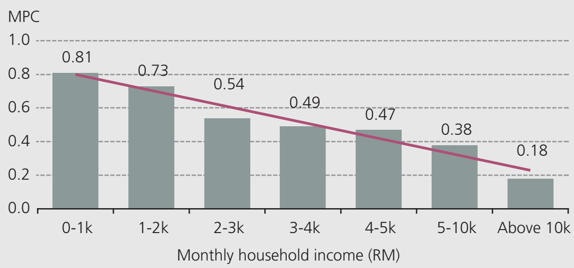
Chart 1 presents the main results, showing the estimated income elasticities vis-à-vis marginal propensity to consume (MPC) across income groups. Households earning less than RM1,000 per month will, on average, spend RM0.81 out of RM1 of additional income. This is much higher compared to the comparable estimate of RM0.18 for households earning more than RM10,000 per month.

Chart 2 shows the food-to-income ratio and household savings rate across income groups. The left panel shows a negative relationship between the food-to-income ratio, which proxies the extent to which income is spent on necessities, and income. The right panel shows a clear positive relationship between the ability/desire to save and income. The results support the *a priori* prediction that lower income households are more sensitive to income shocks. It is also consistent with the earlier hypothesis that lower income households tend to have lower savings as most of their expenditures are for necessities.

Overall, the significant differences in the MPCs across income segments suggest that applying the overall MPC across all income groups would not produce accurate results. This is illustrated in the assessment of the impact of BR1M, which disbursed RM500 to households earning less than RM3,000 per month in 2012. Two scenarios of the impact are computed. Scenario 1 uses the estimated MPC for each of the three income groups that received the RM500 payment. Scenario 2 uses a constant MPC of 0.51, the average across all income groups, for households

Chart 1

The MPC from Income across Income Groups



Source: Bank Negara Malaysia estimates based on HES 2009/2010, Department of Statistics, Malaysia

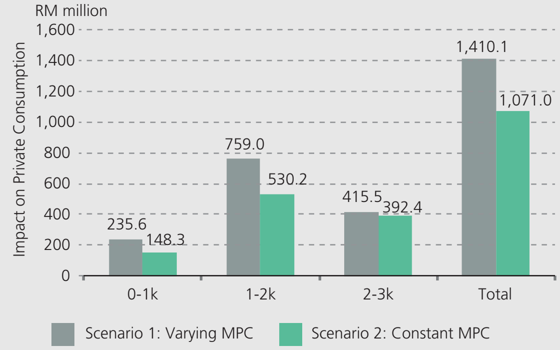
Chart 2

Spending and Saving Patterns across Income Groups

Source: Bank Negara Malaysia estimates based on HES 2009/2010, Department of Statistics, Malaysia in all three income groups. The difference in the estimated impact under both scenarios is shown in Chart 3[1]. The impact under Scenario 1, at RM1.4 billion, is larger compared to the RM1.1 billion estimate under Scenario 2 because the former is sensitive to the variations in the MPC across different income groups.

Chart 3

The Potential Impact of BR1M Using Varying and Constant MPCs



Source: Bank Negara Malaysia estimates based on HES 2009/2010, Department of Statistics, Malaysia

Conclusion

The empirical evidence indicates that households differ significantly in their consumption responses to income, with spending by lower income households being the most sensitive to income changes. This implies that recent policies such as 1Azam and BR1M, in addition to achieving their intended welfare objectives, have also generated an impact on aggregate private consumption. Looking ahead, as the country transitions to a high-income economy, the current policy framework needs to be complemented with a comprehensive social safety net system. Such an initiative will foster economic progress that is also inclusive.

[1] The estimates under both scenarios reflect only the direct impact of the policy on private consumption. There are also benefits from second-round effects through higher profits and employment in the consumption-related sectors which are abstracted from this example.