

Cost of Living Revisited: Causes and Consequences

If your recent shopping experience left the impression that prices have been higher, this was certainly the case for several key items. As such, the cost of living has lately resurfaced as a prominent concern affecting Malaysian households. This article examines the sources of rising cost of living in 2021, their consequences, and some guiding principles to address the issue.

A. Cost of Living and CPI Inflation

Let's take a step back and review the difference between cost of living and inflation. Cost of living goes beyond price increases, and although it is related to the concept of inflation, they are distinct. **Cost of living refers to the amount of household spending, including financial obligations (e.g. car and housing loans), to maintain a certain standard of living.**¹ Given that spending patterns are unique to households' income level, location and consumption baskets, among others, cost of living differs from one household to another.

Consumer Price Index (CPI)² inflation, which captures the increases in consumer prices, is often used to assess changes in cost of living. But there are several reasons why consumers may feel that CPI inflation is not reflective of price changes that are observed on a day-to-day basis. Firstly, **CPI inflation tracks the price changes for a fixed basket of items that represents the average spending pattern among households.** This makes it a useful indicator for the conduct of macroeconomic policies, such as monetary policy, which aim to affect the broader economy. However, as there are varying spending patterns among households and different price changes across locations, CPI inflation does not reflect changes in individual cost of living. For instance, comparing across states, inflation in Terengganu was the highest in 2021 at 3.4%, compared to the national average of 2.5%.³

Secondly, while CPI inflation only considers the rate of change in prices of goods and services, changes in cost of living also take into account the income perspective. Households feel the pressures of rising cost of living not only when prices increase, but also when incomes do not increase at the same pace, eroding their purchasing power.

Thirdly, households' perceptions of the increase in cost of living can be different from CPI inflation as highlighted in the Box Article "Inflation: Perception vs. Reality" in the BNM 1Q 2017 Quarterly Bulletin. This is because households use different information sets when assessing changes in cost of living. Namely, households' perceptions are predominantly driven by price changes in items that are frequently purchased, such as groceries or eating out, as opposed to more durable items. This is referred to as frequency bias, and can be measured by the Everyday Price Index (EPI). The EPI is constructed using items which are more frequently purchased (at least once a month).

Moreover, there can be a tendency for households to remember price increases and not decreases. This is referred to as memory bias, which can be measured by the Perceived Price Index (PePI). The PePI is constructed based on the same basket of items as EPI, but only considers price increases. Items with price declines are assumed unchanged in the construction of PePI. These perceived indicators are summarised in Table 1, and generally exhibit a higher inflation rate compared to CPI inflation, as shown in Chart 1.

¹ The concepts of cost of living and inflation have been elaborated in the box article "Inflation and the Cost of Living" in the 2015 BNM Annual Report and the white box "Inflation, the Cost of Living and the Living Wage" in the 2018 BNM Annual Report.

² Compiled by Department of Statistics, Malaysia.

³ It is important to note that these are referring to the change in cost of living due to a rise in prices based on geographical locations. However, cost of living may also be affected by other structural factors such as income level, rural and urban considerations, and size of households.

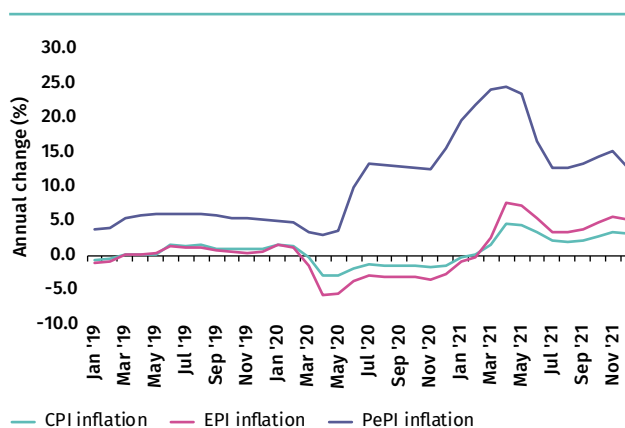
Table 1: Differences Between CPI, EPI and PePI Inflation

	CPI	EPI	PePI
Definition	Index of the prices of a fixed basket of goods and services that represents the average spending pattern among households	Index of the prices of frequently purchased consumer items (at least once a month)	A further refinement to the EPI, where it attempts to incorporate memory bias in addition to frequency bias
Construction	<ul style="list-style-type: none"> The consumption basket is determined by household expenditure survey 	<ul style="list-style-type: none"> Incorporates frequency bias by taking only items from the CPI basket which are purchased at least once a month Excludes big ticket items, infrequently purchased items and contractually fixed items 	<ul style="list-style-type: none"> Items in PePI are the same as EPI. However, the index only captures price increases
Annual change (2010-2019)	2.1%	2.6%	7.5%

Note: A comprehensive discussion of CPI and measures of perceived inflation is available in the BNM Q1 2017 Quarterly Bulletin Article: "Inflation: Perception vs. Reality".

Source: Bank Negara Malaysia, Department of Statistics, Malaysia and Bank Negara Malaysia estimates

Chart 1: Evolution of CPI, EPI and PePI Inflation

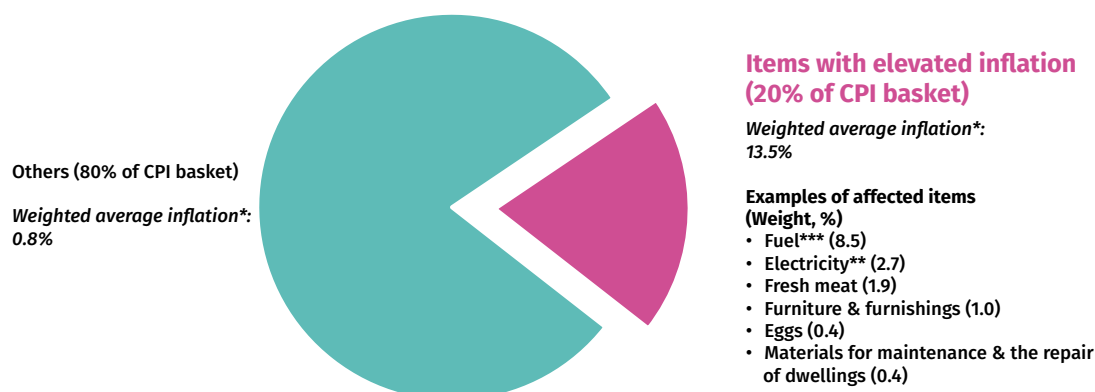


Source: Bank Negara Malaysia, Department of Statistics, Malaysia and Bank Negara Malaysia estimates

B. Causes of Cost of Living Pressures

A closer look at price movements in the CPI basket revealed that price pressures had been driven by specific items (Chart 2). These constituted about 20% of the CPI basket. Some of the most marked price increases were those of essential and frequently-purchased food items, such as *fresh chicken* and *eggs* (Table 2). Several non-food items were also affected, such as *furniture and furnishings* and *materials for maintenance & the repair of dwellings*. On the other hand, most items within the CPI basket had either modest price increases or even experienced price declines (Table 3). On balance, the overall CPI inflation was contained even as some items saw elevated prices.

Chart 2: Percentage of CPI Basket With Elevated Inflation in 2021



* The weighted average is estimated by taking the inflation of individual items, and calculating their weighted average. The figures might not add up to the official CPI inflation of 2.5% due to different methodology.

** While consumer electricity tariff was unchanged for most of 2021, electricity bill discounts from April-December 2020 meant that it had been much lower in 2020. Consequently, electricity inflation, defined as the increase from a year ago, was elevated for most of 2021.

*** While prices of retail fuel remained largely unchanged throughout 2021 (RON95 ceiling price: RM2.05/litre), the prices were much lower in 2020 (average RON95 price: RM1.67/litre), therefore leading to the high inflation number for fuel.

Note: An item is deemed to be experiencing elevated inflation if it recorded year-on-year inflation of more than one standard deviation above its historical average in any given month in 2021. The calculation uses 2011-2019 averages and standard deviation, at the granularity of 4-digit of the CPI basket.

Source: Department of Statistics, Malaysia and Bank Negara Malaysia estimates

Table 2: Examples of Marked Price Increases

Consumer items	Average inflation in 4Q 2021 (year-on-year change, %)	Average inflation 2011-2020 (year-on-year change, %)
Fresh chicken	13.9%	1.9%
Eggs	10.5%	1.7%

Source: Department of Statistics, Malaysia and Bank Negara Malaysia estimates

Table 3: Examples of Price Declines

Consumer items	Average inflation in 4Q 2021 (year-on-year change, %)	Average inflation 2011-2020 (year-on-year change, %)
Shoes and other footwear	-0.7%	-1.9%
Household textiles	-0.3%	-0.8%

Source: Department of Statistics, Malaysia and Bank Negara Malaysia estimates

The price pressures for these selected items were due to both global and domestic factors. Globally, the pandemic has hampered the production and distribution of goods as containment measures were imposed. As major economies reopened at a fast pace from around early 2021, industry reports⁴ pointed towards a prolonged difficulty faced by global producers to meet the rapidly rising demand. For example, freight costs became elevated partly due to container shortages. This led to higher import prices, eventually affecting some domestic producers. As these cost pressures persisted, some firms have passed on the higher costs to their customers.

In addition, energy prices (crude oil and natural gas) have become more expensive worldwide.⁵ While the direct impact to Malaysia was contained due to price ceilings on RON95 and diesel, there were indirect effects, for instance through costlier fertiliser (a by-product of natural gas). Furthermore, global prices of food grains such as soybean and corn reached multi-year highs in 2021.⁶ For countries like Malaysia that rely on imports of these items as animal feed, this has resulted in increased costs for livestock operators, which filtered into higher chicken and egg prices for consumers.

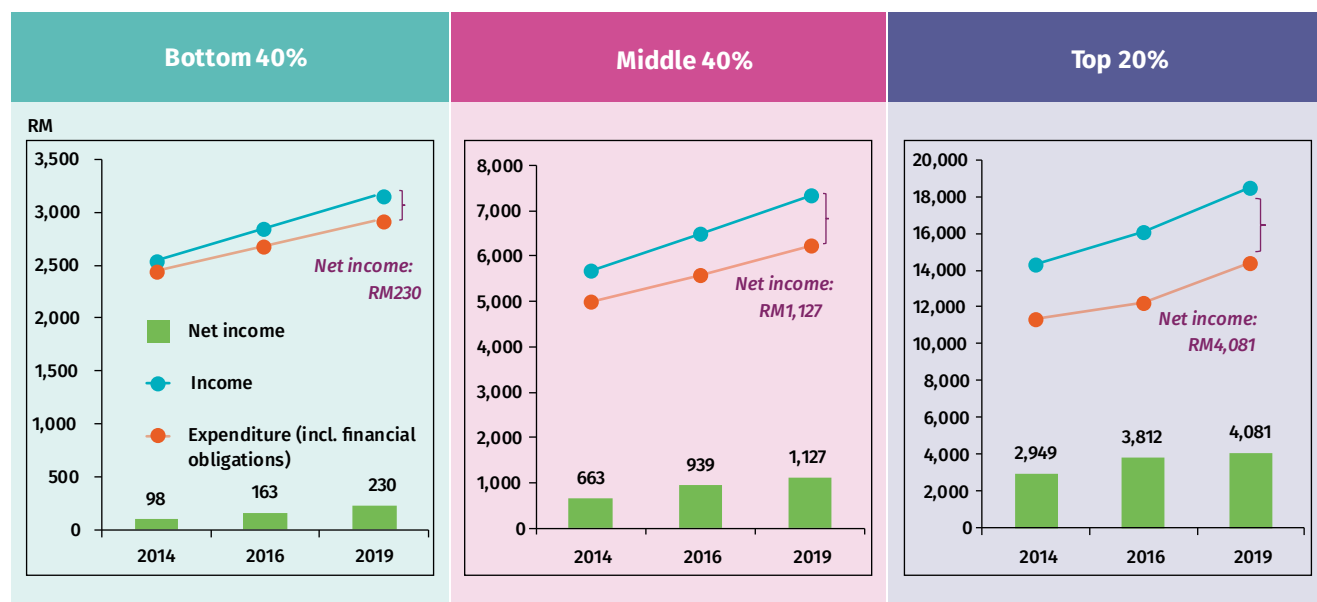
⁴ These reports include Shearing (2021) and Desilver (2021).

⁵ The price of Brent crude oil was on average 67% higher in 2021 compared to 2020, while natural gas was 187% higher. Source: World Bank Commodities Price Data.

⁶ In 2021, The FAO food price index increased by 28% compared to 2020, while the cereals index increased by 27% during the same period. Source: Food and Agriculture Organization of the United Nations.

Domestically, some food producers also faced difficulties to immediately meet the increased consumer demand as restrictions were lifted. Adverse weather conditions compounded these difficulties, for instance, by causing price increases for fresh vegetables at end-2021. Taken together, all these factors combined are pushing prices higher.

Diagram 1: Average Monthly Income and Expenditure (Including Financial Obligations) for Households in Different Income Groups



Note: The 2018 BNM Annual Report Box Article: "Inflation, the Cost of Living, and the Living Wage" also provides net income figures for 2014 and 2016. Nonetheless, figures differ slightly due to the exclusion of financial obligations in the previous article.

Source: Bank Negara Malaysia estimates based on Report of Household Income and Basic Amenities Surveys 2014, 2016 and 2019, Report on Household Expenditure Surveys 2014, 2016 and 2019, Department of Statistics, Malaysia

C. Implications to Cost of Living

What do these mean for cost of living? While higher prices pose difficulty for households, the severity varies from one household to another. Firstly, consider the B40 households, which spend relatively more on food (35% of monthly consumption expenditure) as opposed to the M40 (30%) and T20 households (23%).⁷ The implication is that when price pressures are driven by food items, cost of living pressures are disproportionately experienced by lower-income households.

Secondly, the pandemic has brought about weak income growth. This means that in the face of marked price increases, some households face greater difficulty sustaining their consumption. To the extent that lower-income households have a relatively smaller net income (income net expenditure and financial obligations), this leaves them relatively more vulnerable to cost of living pressures (Diagram 1).

D. Managing Cost of Living

Multiple solutions have been implemented by the Government to mitigate the rising cost of living. In the short term, these include price regulations on key essential items (e.g. fresh chicken, fuel and cooking oil) and income transfers to vulnerable households.⁸

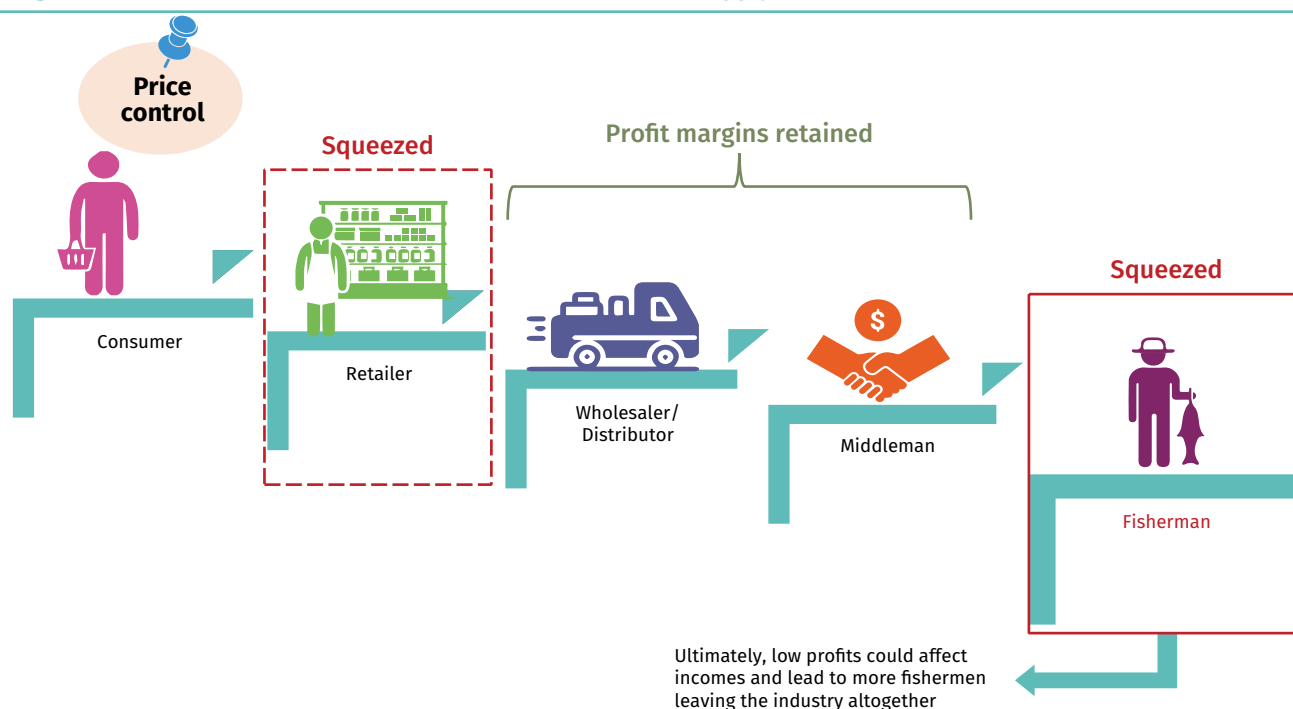
⁷ Findings from 2019 Household Expenditure Survey, Department of Statistics, Malaysia. The shares reflect the sum of food & non-alcoholic beverages, and food away from home.

⁸ For example the Bantuan Keluarga Malaysia programme, which involves direct cash assistance for targeted groups including B40 households and individuals, single parents and senior citizens.

While short-term measures such as price controls can benefit consumers in some circumstances,⁹ they may introduce long-term repercussions¹⁰ and therefore should be guided by certain principles. As a stylised illustration along the fish supply chain (Diagram 2), when price controls are implemented at the retailers' stage, players in the supply chain with greater market power could be incentivised to retain their existing high profit margins by squeezing the profit of weaker players such as fishermen. Over the long run, this may displace fishermen from the fishing industry, harming vulnerable groups which the policy intends to protect.

Other than reducing margins of vulnerable players in the supply chain, the pervasive use of price controls could result in supply shortages. Therefore, policies should be implemented with an understanding of the trade-offs involved, especially to ensure that the underserved are not left worse off.

Diagram 2: An Illustration of Price Control Effects on the Fish Supply Chain



Source: Adapted from Guenette (2020), Abu Dardak et al (2015), Bank Negara Malaysia (2015) and Ghosh and Whalley (2004)

Over the long term, as cost of living is a function of both income and costs, addressing it requires action on both fronts. While the pandemic has caused a significant shock to income, the economic recovery provides a window of opportunity to pursue policies intended to create jobs with high productivity and correspondingly higher income. Meanwhile, addressing costs requires an examination of the supply chain. This includes diversifying food import sources to mitigate concentration risk. Moreover, incentivising quality investments in the agro-food sector could better safeguard food prices against future shocks. Given undue reliance on low-productivity practices and with the threat of disruptions from climate change, such a measure can reduce the risk of cost of living from being amplified in the long run.¹¹

The elevated cost of living is a long-standing issue at the centre of many households' lives. It is recently exacerbated by the pandemic which has disrupted supply chains and resulted in supply-demand imbalances. Short-term solutions, while warranted in some circumstances, would not prevent this issue from recurring and may result in unintended consequences. Consequently, structural reforms addressing both income and cost factors are essential to enhance households' resilience against future shocks.

⁹ Ghosh and Whalley (2004) showed that price controls of rice in Vietnam has improved the welfare of consumers. Bank Negara Malaysia (2015) highlighted that price controls benefit intended target groups by ensuring that the prices of key necessities remain stable and affordable, particularly for economies at early stages of development when a substantial part of the population is living in poverty.

¹⁰ Guenette (2020) documented some of the trade-offs associated with price controls.

¹¹ Vulnerabilities in the agro-food sector in Malaysia is covered in the box article "Closing the Food Gap: The Role of Structural Improvements in Agrofood Sector" in the BNM 3Q 2021 Quarterly Bulletin.

References

- Abu Dardak R., Zakaria, M.H., Nazmi, M.S., Ab Halim, N., Rusli, R, Suhaimee, S. (2015). Roles of Cooperative Movement as Middlemen to Increase the Efficiency of Agricultural Marketing in Malaysia, Food and Fertilizer Technology Center for the Asian and Pacific Region.
- Bank Negara Malaysia (2021). Closing the Food Gap: The Role of Structural Improvements in Agrofood Sector, Box Article in BNM 3Q 2021 Quarterly Bulletin.
- Bank Negara Malaysia (2019). Inflation, the Cost of Living and the Living Wage, White Box in BNM Annual Report 2018.
- Bank Negara Malaysia (2017). Inflation: Perception vs. Reality, Box Article in BNM 1Q Quarterly Bulletin.
- Bank Negara Malaysia (2016). Inflation and the Cost of Living, Box Article in BNM Annual Report 2015.
- Bank Negara Malaysia (2015). Price Reforms: Motivation, Impact and Mitigating Measures, Box Article in BNM Annual Report 2014.
- Desilver, D. (2021). Inflation has risen around the world, but the U.S. has seen one of the biggest increases. Pew Research Center.
- Ghosh, M., & Whalley, J. (2004). Are Price Controls Necessarily Bad? The Case of Rice in Vietnam. *Journal of Development Economics*, 73(1), 215-232.
- Guenette, J. D. (2020). Price Controls: Good Intentions, Bad Outcomes. World Bank Policy Research Working Paper, (9212).
- Household Income, Expenditure and Basic Amenities Survey 2014, 2016 and 2019, Department of Statistics Malaysia.
- Shearing, N. (2021). An Anatomy of Supply Shortages. *Capital Economics*.