Box Article

COVID-19: Impact on Inflation

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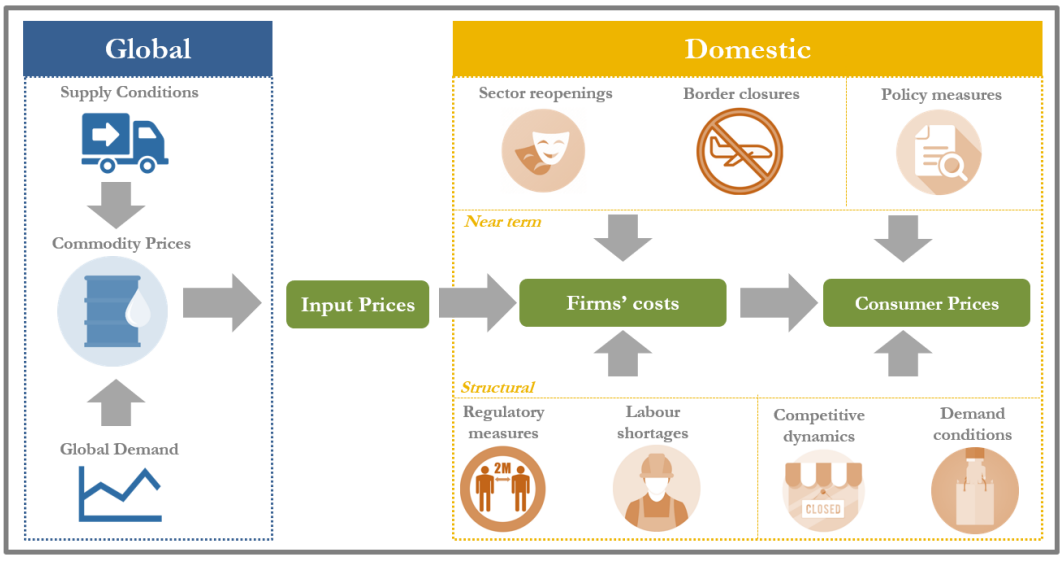
Introduction

The COVID-19 pandemic and the ensuing "Great Lockdown" (International Monetary Fund (IMF), 2020) involves a unique combination of shocks to both demand and supply (Baqaee and Farhi, 2020). As such, there has been debate surrounding whether this will lead to deflationary pressures or higher inflation.

Generally, a decline in aggregate demand amid heightened uncertainty and income fragilities may act to dampen inflationary pressures. However, higher production costs, due to supply chain disruptions and the impact of physical distancing and cross-border movement restrictions on labour supply, could lead to upward cost-push inflationary pressures. The initial lockdown at the onset of the pandemic has led to a shift in demand patterns that if permanent, could translate into changes in the degree of market power firms can exercise, ultimately affecting equilibrium inflation. This article aims to evaluate some of the channels that have affected inflation in the near-term, and provide an interim assessment of the structural changes in inflation dynamics that could materialise, yet remain highly uncertain.

Figure 1: Illustration of several global and domestic factors and their potential impact on prices



Source: Bank of England (2020) and Portes (2020)

Observed impact on inflation: What we have seen so far

Figure 1 illustrates the various factors at play. The crisis has brought about a significant decline in the demand for many key commodities. Global oil prices experienced a steep decline in March and April, as worldwide lockdowns led to a significant reduction in demand for energy products.[1] This translated into low domestic retail fuel prices, which had a large negative contribution on domestic headline inflation since March. However, prices of food commodities rose due to export restrictions amid preservation of supplies in producer nations, coupled with disruption in export logistics. For example, Vietnam and Cambodia initially elected to place temporary export restrictions on rice to ensure adequate domestic rice supply, which led to costlier imported rice.[2]

On the domestic front, significant supply disruptions were observed at the onset of the crisis due to strict movement restrictions, which led to some upward price pressures for certain perishable food items. Meanwhile, with the reopening of the economy, there is some evidence that sectors previously required to temporarily cease operations[3] continue to experience tepid demand given health concerns, leading to promotional pricing to entice customers.

The legal enforcement of health-related regulatory measures has also affected inflation. Alongside the strict stay-at-home order instituted during the Movement Control Order (MCO) period, the Government had also implemented sector-specific Standard Operating Procedures in efforts to contain the spread of the virus.[4] There has been mixed evidence showing that businesses with more inelastic demand (e.g. hair salons) were able to pass on costs to consumers, while others, such as hotels and entertainment outlets, largely absorbed cost increases to spur demand amid precautionary behaviour. The Government has also implemented measures aimed at easing cost burdens[5] which have helped to dampen inflationary pressures.

Altogether, Malaysia has experienced muted inflationary pressures since the onset of the pandemic, largely due to low global oil prices – an experience similar to other countries. The IMF has since revised inflation projections downwards for 2020, attributing a combination of lower commodity prices and weaker economic activity as key factors (see Table 1).

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[1] The decline was exacerbated by the failure of the Organization of the Petroleum Exporting Countries and its allies (collectively known as OPEC+) to agree on production cuts (Woodmac, 2020).

[2] Rice constitutes 1.1% of the Consumer Price Index (CPI) basket, of which imported rice makes up 20%.

[3] For example, entertainment and well-being outlets (e.g. reflexology services).

[4] Some of these measures include social distancing, usage of hygiene-related material (e.g. sanitisers, disinfectants, masks, gloves) within premises and other precautionary measures (e.g. digital menus, testing for employees, digital thermometers).

[5] These include tiered electricity tariff rebates and price controls on some essential goods.

Table 1: IMF Inflation Projections

	2020 projections		**2021 projections**	
	Jan-20	Jun-20	Jan-20	Jun-20
Advanced Economies	1.7	0.3 ↓	1.9	1.1 ↓
Emerging Markets & Developing Economies	4.6	4.4 ↓	4.5	4.5 ∼

Source: IMF World Economic Outlook Update Reports (January & June 2020)

Moving forward, while initial concerns are beginning to dissipate, the outlook would still depend on evolving COVID-19 developments and the pace of economic recovery. At this juncture, there are limited risks of a broad-based and persistent decline in prices, with price pressures showing signs of normalisation[6] since the gradual reopening of the economy. In addition, while underlying inflation is expected to be subdued, it is expected to average within earlier expectations for the year as a whole, reflecting the gradual resumption of economic activity and improvement in demand conditions.

Structural factors and the longer-term impact on inflation: What remains uncertain

While the impact from the various shocks outlined above were assessed based on existing frameworks (as illustrated in Figure 1), it is imperative to note that inflation channels may evolve. This section discusses where these structural changes could occur going forward.

1) **Shift in consumption patterns during the pandemic**

Households' consumption patterns shifted significantly during the implementation of the MCO as evident from the study on the Impact of MCO on Household Expenditure conducted by the Department of Statistics Malaysia (DOSM).[7]

The survey showed a shift towards higher consumption of food products, as households stock-piled during the initial MCO period and generally consumed more food at home. There was also a drop in expenditure for categories such as transport, restaurants and hotels, as well as recreation and clothing, amid movement restrictions and mandatory closures of selected sectors.

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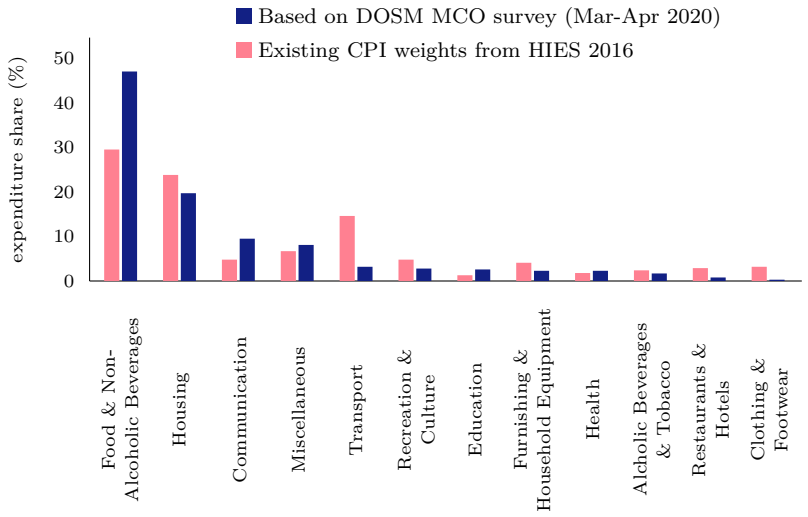
[6] The share of items displaying price increases has steadily recovered:
(June: 44% of CPI items; May: 36%; April: 10%; 2010-18 Average: 46%).

[7] Current CPI weights are based on DOSM's 2016 Household Income and Expenditure Survey (HIES).

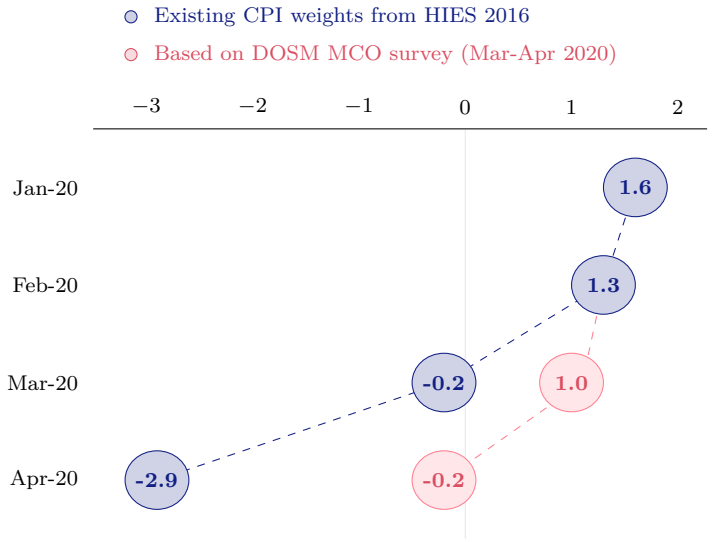
Figure 2: Shift in Expenditure Shares during the MCO period



Source: Department of Statistics Malaysia and Bank Negara Malaysia estimates

To provide a COVID-19 perspective and evaluate the impact on the measurement of inflation in Malaysia, we computed the inflation numbers by updating the Consumer Price Index (CPI) basket weights using findings from the previously mentioned study on the impact of the MCO conducted by DOSM.

Figure 3: Headline Inflation based on Various Expenditure Patterns



Source: Department of Statistics Malaysia and Bank Negara Malaysia estimates

As seen in Figure 3, headline inflation would have been higher for March and April once the shift in consumption patterns are accounted for. These findings are similar to those observed in other countries, such as the United States, France, the United Kingdom and Japan, among others[8], where researchers found that the official inflation rate would have been higher when taking into account changes in expenditure patterns (Cavallo, 2020).

Due to this distinct shift in consumption patterns, there were initial concerns surrounding the accuracy of inflation assessments. While these concerns are valid, it is important to note that according to international standards, CPI basket weights should not be adjusted in response to short-term changes in expenditure patterns.

Based on current assessments, these expenditure patterns are expected to gradually normalise as the economy recovers, health concerns dissipate and restrictions are removed. As such, no further adjustments to the CPI weights are necessary at this juncture. However, if these shifts in consumption continue as a result of other forms of structural changes in the economy, this could warrant the need to incorporate such shifts in ensuring an accurate assessment of inflationary pressures.

2) **Change in competitive dynamics**

Aside from the shift in consumption patterns, the crisis could also alter competitive dynamics (Pastor, 2020). As firms exit as a result of the pandemic, the resulting composition of surviving firms could potentially impact inflation dynamics in Malaysia. The impact could depend on whether large international chains or small businesses make up the majority of firms that survive. In the case of the former, prices of domestic goods could potentially become more sensitive to global price movements.

The responsiveness of inflation to slack in the economy may also change due to a shift in market structure (Guilloux-Nefussi, 2020). It has been shown that firms, primarily large ones with high market power, act strategically by adjusting their mark-ups in response to perceived competition, also known as strategic complementarity. It has been found that these firms mostly adjust prices in response to changes in the prices set by competitors, rather than their own costs (Amiti et al., 2019). Thus, the degree of pass-through of cost shocks to domestic prices would highly depend on whether local industries mainly constitute a few large firms, as they are more likely to employ strategic mark-up adjustments. At this juncture, such structural changes and their subsequent impact on inflation remain uncertain given the evolving developments. Going forward, more data and deeper surveillance are required to ascertain any shifts in industry composition.

[8] Cavallo (2020) also found similar results for Brazil, Uruguay, Korea, Chile, Colombia, Turkey, Spain, Argentina and Canada.

3) **Impact from economic scarring and shifts in labour market**

Economists have also raised concerns on the potential longer-term damage to the economy, or "economic scarring" (IMF, 2020), particularly on the labour market, which could have implications on inflation dynamics. Should economic recovery be more sluggish than expected, there may be a rise in unemployed individuals, particularly in sectors heavily affected by the pandemic. Some may exit the labour force altogether. In addition, prolonged unemployment for these individuals may lead to skills atrophy over time, which could lead to both a decline in the productivity of the working population (Neuman, 1995) and the labour force participation of individuals with obsolete skills (Van Loo et al., 2001). In fact, past epidemics were associated with a decline in labour productivity of 6 percent five years later in affected countries (World Bank, 2020). Nonetheless, the impact on prices remains uncertain. While the increased slack, coupled with the increase in technological adoption by firms as seen during this pandemic may lead to downward wage pressures, the decline in labour force participation and productivity growth rates may lead to higher cost pressures.

This pandemic may have also accelerated the shift to more flexible forms of employment, such as gig workers in selected sectors (Moulds, 2020). Such forms of employment could affect inflation dynamics mainly through its downward pressure on wage inflation due to the decline of employees' bargaining power and lower costs for firms as a result of reduction in firms' turnover costs in labour markets (Duca, 2018). In the long run, some may not be offered permanent employment, which would lead to smaller pressures on wage inflation when the economy eventually recovers (Cœuré, 2017).

If the pandemic and containment measures persist, disruptions to the labour market would delay the recovery of output to pre-COVID-19 levels. The extent of the permanence of these output losses would certainly depend on how deep and persistent the pandemic would be. While a complete and definitive assessment on these structural changes would not be possible at this current stage given the uncertainty surrounding the ongoing crisis, it is prudent to closely monitor the developments and their impact, if any, on inflation.

Conclusion

The COVID-19 pandemic and the ensuing unprecedented containment measures have brought about significant changes to the way the economy operates. Beyond the near-term impact, there are also channels that would lead to structural implications on inflation dynamics in the longer term. As we transition into a new normal, however, there remains a significant amount of uncertainty surrounding the future assessment of inflation and growth trajectories – a common sentiment across countries.

While the situation has begun to stabilise, it is certain that we are not in the clear yet and thus greater vigilance is necessary as we continue to assess any changes in inflation dynamics. To this end, the Bank will continue to closely monitor price developments and inflation expectations, complemented by real-time and high frequency indicators, as well as engage industry players to gain deeper insights. In addition, the Bank will continue to communicate clearly to the public on inflation developments and outlook as they unfold to ensure that price expectations remain anchored.

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