Inflation Dynamics in GCC

Abstract

Inflation in the Gulf Cooperation Council (GCC) has remained relatively stable over the past decade and below 3 percent on average. However, inflation has picked up in several GCC countries since the end 2021, mainly due to an increase in food and transport prices. For policymakers to effectively address the inflation problem, it is critical to understand its causes. This paper seeks to contribute to this endeavor by applying a Global Vector Autoregressive (GVAR) model to study the main determinants of inflation in GCC over the past two decades and identify policy options to curb it. Our results suggest that inflation abroad is one of the main determinants of inflation dynamics in the GCC. Moreover, our estimates also suggest that the recent appreciation of the nominal effective exchange rate in line with that of the USD appears to shield GCC countries from inflationary pressures. Lastly, we highlight that the composition of the CPI baskets and subsidies have played an important role in keeping inflation relatively contained in the GCC as compared to other emerging and advanced economies in recent times.

Key Words: Inflation; food prices; subsidies; GCC.

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1. Introduction

GCC countries are small open economies with high dependence on international trade which makes them vulnerable to global shocks in addition to domestic ones. Inflation in the GCC has started to increase since mid-2021, following a similar trend as the one observed in trading partners, while remaining below regional peers. Inflation has been on the upward trend, increasing from 0.7 percent (y/y) in July 2021 to 3.2 percent (y/y) in July 2022. There was a pickup in inflation in mid-2020 which was mainly driven by inflation in Saudi Arabia which jumped to over 6 percent (y/y) as a result of the tripling of the VAT rate to 15 percent in July 2020. As of July 2022, inflation in the GCC ranged from 2.6 percent (y/y) in Oman to 5 percent (y/y) in Qatar (Figure 1).

The recent increase in GCC inflation seems to be mainly driven by food and transport. Food inflation has increased from 2.2 percent (y/y) in April 2021 to 6 percent (y/y) in June 2022. While food inflation has been on an upward trend, it has remained below MENA peers, which can be explained by the prevalence of administered prices, subsidies on certain food products, stockpiling of basic food items (e.g., wheat) and low share of food imports in total imports. The transport basket also picked up as prices of cars saw a sharp increase internationally during the past year and transport services, mainly international transport by air and travel by sea, also picked up (Figure 2).

For policymakers to effectively address the inflation problem, it is critical to understand its underlying causes. This paper studies the determinants of inflation in GCC countries to identify effective policies to fight it. Using a Global Vector Autoregressive (GVAR) model, this paper quantifies the impact of various domestic as well as external factors on inflation.
The rest of the paper is structured as follows. Section 2 provides an overview of the related literature, Section 3 provides some stylized facts about inflation in the GCC, Section 4 sets out the empirical methodology and discusses the main results. Section 5 then concludes.

2. Snapshot of Existing Literature

There have been several empirical studies that evaluate the determinants of inflation in GCC countries. These studies have looked at factors such as import cost pass-through, exchange rate, oil price, government spending, money supply, US monetary policy, and remittance outflows, as well as other factors. Among those factors, import cost has shown to be one the most significant determinant of inflation in GCC. For instance, Kandil and Morsy (2009) find that inflation in trading partners is the highest contributor to inflation among foreign factors. Murshid and Nakibullah (2015) also find a similar impact for inflation in trading partners, while other domestic factors have limited effect.

Other studies have differentiated between short-run and long-run inflationary factors in the GCC. According to Hasan and Alogeel (2008), inflation in Kuwait and Saudi Arabia is driven mainly by trading partners’ inflation in the long term. The exchange rate pass-through effect and oil prices also have a significant but minor impact on inflation. On the other hand, demand and money supply shocks affect inflation in the short run. Another study, Basher and Elsamadisy (2012), found that GCC inflation is primarily driven by the money supply in both the short and the long run. While in the long run, foreign prices and nominal effective exchange rates explain inflation better.

Changes in US short-term interest rates have also been known to impact consumer prices in GCC countries. Espinoza and Prasad (2012) use a PVAR setup and find that US monetary policy tightening decreases global commodity prices resulting in lower inflation in the GCC. According to Cevik and Teksoz (2013), bank lending rates influence non-hydrocarbon output and consumer prices, but the exchange rate channel is ineffective. Remittance outflows have also been shown to affect inflation as they have a sizable share in GCC countries. Termos et al. (2013) find that while the current account and the federal fund rate do not affect GCC’s inflation, remittance outflows put deflationary pressures on prices.

Some studies also look at the asymmetric effect of shock on consumer prices in GCC. For instance, Nusair (2019) finds that an increase in oil price has a positive effect on inflation while a fall in oil price has an insignificant or negative effect. Alsamara et al. (2018) study the asymmetric impact of import costs on inflation in GCC countries using quarterly data from 1990-2014. They find that inflation responds to positive shocks to import costs more than negative ones.
3. Stylized Facts about Inflation in GCC

Inflation has remained relatively stable in GCC over the past decade despite challenges posed by fluctuations in international commodity prices (Figure 3). Since 2012, average inflation in GCC has been less than 3 percent a year. In the past, positive oil price shocks have often been associated with increased government spending resulting from higher oil revenues while exerting upward pressure on consumer prices. Given that GCC countries are mostly relying on fiscal policies and changes in exchange rates do not affect the volume of overall exports¹, the GCC monetary policy frameworks targeting a stable exchange rate seem to have contributed to stabilizing inflation.

**Contained domestic energy prices, due to subsidies and price caps, have contributed to relatively low levels of inflation in recent years.** Retail sale prices of gasoline and diesel remain lower in GCC countries compared to G20 countries as of August 2022 (Figure 4). In Saudi Arabia, a cap on local gasoline prices was put in place in 2021 and electricity prices have also remained capped, though a step increase in diesel prices and other fuel products took place in 2022. In the UAE, diesel prices were frozen by the Fuel Price Committee after the onset of the coronavirus pandemic in 2020. The controls were removed in March 2021 to reflect market movements, but the levels remain lower than the ones observed in G20 countries. Kuwait’s fuel prices have been fixed and Oman authorities have also imposed administered prices and subsidies on selected fuel items.

The composition of the CPI baskets can also explain the relatively low level of inflation in GCC countries to some extent. Countries where food represents a larger share of consumption have been feeling the impact of inflation most strongly. GCC countries have lower shares of food in their CPI baskets, based on their consumption patterns, compared to other countries in the MENA region.

¹ SAMA, 2016 “Inflation mechanisms, expectations and monetary policy in Saudi Arabia.”
Moreover, contained rental prices and their high share in the CPI basket also contributed to low inflation levels in GCC in recent times. For example, the housing rental component is about 21 percent of the overall CPI basket in Saudi Arabia, which has either stayed constant or even declined slightly in the recent past amidst higher supply, increased home ownership and changes in the characteristics of housing demand (e.g., less for villas which are overrepresented in the CPI, and more for smaller units and apartments).

4. Empirical Strategy and Results

Given the high import dependency of the GCC countries, we use a Global VAR model to investigate the spillover of global inflation to the region and underpin the other main drivers of inflation. The GVAR model incorporates regional and global inflationary pressures as well as domestic factors such as money supply and effective exchange rate. The model consists of 38 countries covering about 90 percent of the world GDP. The GVAR includes five domestic variables for each country (real GDP, inflation, growth of money supply, nominal effective exchange rate (NEER), interest rates), which are endogenous to each economy. Except for the US, a weighted average of trade partner's domestic variables is entered in the model as foreign variables, which are treated as weakly exogenous following Dees et al. (2007). For the US model, we only include foreign CPI and foreign growth of money supply as foreign variable consistent with our weak exogeneity tests. Oil price and the price of agricultural materials are included in the GVAR as global variables endogenous to US foreign variables but weakly exogenous to all other countries. We use quarterly data of the variables mentioned above from 1990Q1-2021Q4.

GVAR estimations indicate that domestic inflation in the GCC is mainly driven by imported inflation from its main trading partners, which has been recently pushed upwards by rising oil and food prices, supply chain disruptions and tensions on the labor market. Results show that an initial 1 percentage point increase in inflation abroad leads to a 0.22 percentage point increase in inflation in the GCC based on historical data (Figure 7). Given recent global developments—where
foreign inflation has been driven up by an unusual supply of shocks associated with the pandemic and later on with the war in Ukraine, inflation in the GCC is expected to increase in the coming months. Empirical evidence also shows that higher food and energy prices would mostly impact GCC domestic inflation through the foreign inflation channel (higher costs of trading partners) for some of the reasons mentioned earlier (e.g., caps on fuel prices). For instance, the estimated pass-through for Saudi Arabia shows that a rise in oil and food prices does not translate, on average, into an increase in domestic inflation.²

The recent appreciation of the nominal effective exchange rate in line with that of the USD appears to shield GCC countries against inflationary pressures. The recent appreciation of the US dollar is expected to help contain inflation by reducing import costs. However, over the medium term, domestic currency overvaluation can hinder economic diversification efforts and weaken the credibility of the pegs.

![Figure 7. Cumulative Impulse Response Functions of GCC Domestic Inflation to Each Individual Shock after a Year (ppt)](image)

Note: Bars are median generalized impulse responses to a 1 ppt increase in annual inflation abroad, growth of money supply, or a 10 percent increase in oil prices, NEER, and agriculture material prices, together with the 15th and 85th percentile error bands.

Sources: Haver Analytics, IFS, and Bloomberg databases; and IMF staff estimates.

5. Concluding Remarks
The inflation dynamics in GCC countries can be explained by both external and domestic factors that are hard to disentangle and that feed one another. This paper seeks to contribute to this endeavor and analyses the main determinants of inflation over the past two decades using a GVAR model. Our results suggest that inflation abroad is one of the main determinants of inflation dynamics in the

² Saudi Arabia: 2022 Article IV Consultation-Press Release; and Staff Report (imf.org)
GCC whereas the recent appreciation of the nominal effective exchange rate in line with that of the USD appears to shield GCC countries from inflationary pressures. We also highlight that the composition of the CPI baskets and subsidies have played an important role in keeping inflation relatively contained in the GCC as compared to other emerging and advanced economies in recent times.
Appendix

Figure. GCC Inflation

MENA excluding GCC and Lebanon: CPI Inflation
(Percent, year-on-year, unweighted average)

GCC: CPI Inflation
(Percent, year-on-year, unweighted average)

Sources: Haver Analytics, national authorities; and IMF staff estimates.