

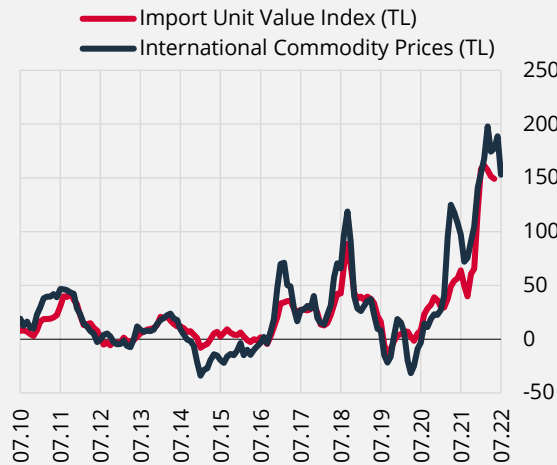
Box 2.7

Import Intensity and Inflation

Imported inputs used in production and directly imported products for consumption play an important role in domestic inflation developments through the cost channel. The import unit value index and TL-denominated international commodity prices, which are indicative of the costs of imported products, have recently recorded significant increases due to the recovery in demand after the pandemic, supply constraints and rising geopolitical risks (Chart 1). These increases in the costs of imported products shape the inflation outlook of consumption groups with a high import content. As of June 2022, there is a divergence of 41 points between the annual inflation rates of the goods group, which has a high import content, and the services group. In this box, the effects of increases in imported input costs on the inflation outlook are analyzed by using the decomposition between items with low import intensity and high import intensity.

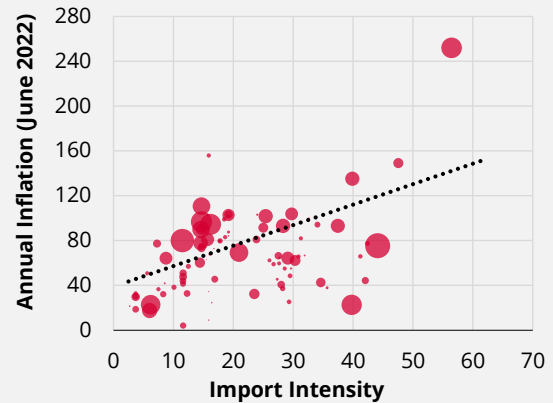
In order to reach the imported input intensities of the items that make up the consumer basket, sectoral import intensities are calculated using the input-output tables as in the work of Fröhling et al. (2022), and the values reached are matched with the CPI sub-items. The work of Özcan-Tok and Sevinç (2019) was used for the sectoral import densities used in this analysis.¹ Total imported input densities for 91 CPI items in 4D detail are obtained using the calculated sectoral figures and CPA-CPI matching key.² The results show that annual inflation reached high levels in items with high imported input intensities as of June 2022 (Chart 2). In order to look at the discriminatory effect of import costs collectively, the items with imported input intensity below a certain value and the remainder are indexed separately, and the results are reported for threshold values of 10% and 15% (Charts 3 and 4).

Chart 1: Import Unit Value Index and International Commodity Prices (Annual % Change)



Source: Bloomberg, CBRT, TURKSTAT.

Chart 2: CPI Sub-items (4D) Import Intensity (%) and Inflation (Annual % Change)*



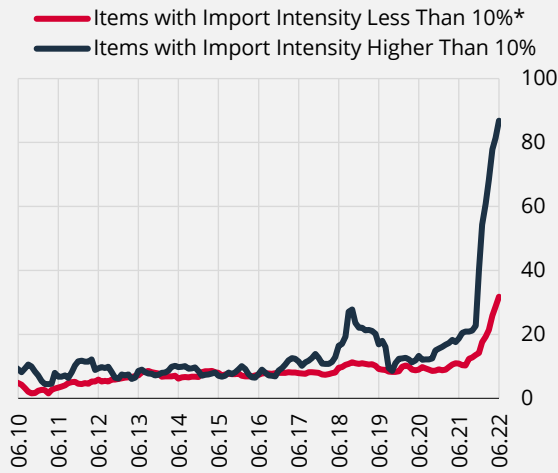
Source: CBRT, TURKSTAT.

* The sizes of the dots show the weights of the CPI items in the basket. The trendline was obtained using the weighted least squares (WLS) method.

¹ In their work, the import content of total production was calculated by taking into account the direct and indirect imported input contents for the sectors in 2008 CPA classification, using 2012 input-output tables.

² Imported input intensity of CPI items matching multiple CPAs was obtained by weighting imported input intensities of matching sectors by sectoral production amount.

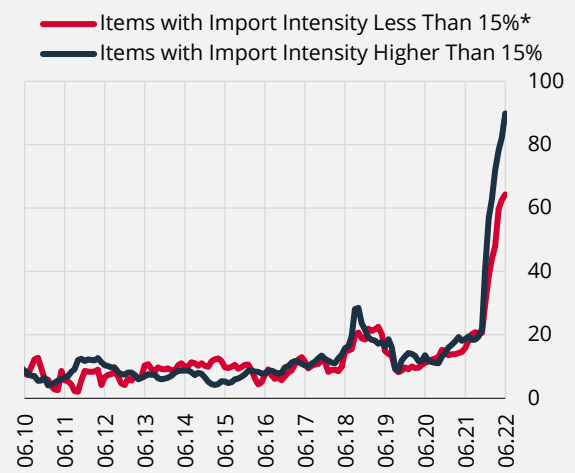
Chart 3: Price Indices for Items with Import Intensity Less than and Higher than 10% (Annual % Change)



Source: CBRT, TURKSTAT.

* Its weight in the CPI basket is 12.8%.

Chart 4: Price Indices for Items with Import Intensity Less than and Higher than 15% (Annual % Change)



Source: CBRT, TURKSTAT.

* Its weight in the CPI basket is 41.6%.

A closer look at the results reveals that service items such as education, rent, communication and accommodation are dominant in groups with low imported input intensity. With the recent increases in imported product costs, there is a significant divergence between the inflation rates of items with imported input intensity less than 10% and the remaining items (Chart 3). When we take the threshold value of imported input intensity as 15%, the difference between group inflation rates, especially with the addition of food sub-items, becomes smaller although it is still around 25% (Chart 4). An analysis of the products and services in the CPI basket according to their imported input intensities shows that negative supply shocks, which persisted after the pandemic and grew amid escalating geopolitical risks, largely shaped the current inflation figures and will in turn shape the disinflationary process.

References

Fröhling, A., O'Brien, D. and Schaefer, S. (2022). "A New Indicator of Domestic Inflation for the Euro Area", ECB Economic Bulletin, Issue: 4/2022.

Özcan-Tok, E. and Sevinç, O. (2019). "Üretimin İthal Girdi Yoğunluğu: Girdi-Çıktı Analizi". CBRT Research Notes in Economics, No: 2019-06.