REGIONAL VALUE CHAINS:
OPPORTUNITIES FOR INDIA AND ASEAN?

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EXECUTIVE **SUMMARY**

Key Highlights

- We estimate the import demand function for Indian imports from ASEAN using the ARDL bounds test for the period 2011-12 Q1 to 2020-21 Q2.

- The results indicate rejection of the null hypothesis of a no-level relationship between the imports from ASEAN and the other explanatory variables considered.

- The long-run coefficient of log of exports is positive whereas that of the COVID-19 dummy is negative thereby implying a positive influence of India's aggregate exports on Indian imports from ASEAN and the adverse effect of the pandemic on Indian imports from ASEAN.

Background

The global trade landscape experienced a significant downturn during the lockdown in April and May 2020, reminiscent of the collapse witnessed during the global financial crisis in January 2009. While the global financial crisis saw a more pronounced decline in the exports of emerging economies compared to 2020, the impact of the pandemic on global demand and subsequent disruption in world trade was widespread, resulting in an 8.8 percent decline in export volume and an 8.5 percent decline in import volume in 2020. Developed countries bore the brunt of the pandemic's impact, underscoring the importance of global supply chains.

Global value chains (GVCs) play a pivotal role in organizing production across countries, with backward and forward linkages facilitating the flow of inputs and components upstream and downstream along the value chain. However, the literature has often overlooked the importance of imports for GVC integration.

ASEAN member states have embraced GVCs, positioning the region as a key global production hub. In contrast, South Asia exhibits a smaller share of foreign value-added in exports, primarily due to significant service exports with fewer foreign inputs. Recognizing the significance of imports in boosting exports can aid in recovering external demand and stimulating growth, underscoring the importance of estimating the import demand function for Indian imports from ASEAN.

GVC integration and imports

Over the past 25 years, there has been a significant surge in the proportion of trade involving parts and components among developing nations, with intermediate inputs now constituting up to two-thirds of global trade. However, the role of imports in GVC participation has often been overlooked.

Measuring GVC integration involves assessing a country's participation through backward or forward linkages and the length of its chains in specific industries. Importantly, understanding these linkages is crucial for enhancing efficiency, competitiveness, and sustainable development in the global economy. Furthermore, studies by Colantone and Crino (2013), Kasahara and Rodrigue (2008), Amiti and Konings (2007), and Antras et al. (2017) emphasize

the positive impact of importing intermediate goods on product creation, plant performance, and productivity growth.

Taglioni and Winkler (2016) highlight the absorption of foreign technology and expertise through importing parts for local assembly, enriching the skill set within the country. Moreover, Kowalski et al. (2015) demonstrate a positive change in domestic value added in exports due to favorable foreign sourcing. Tailored policy recommendations are necessary based on a country's primary integration direction, as indicated by the correlation between backward and forward participation. Policymakers need to consider domestic stakeholders supporting liberalization, as exporters of intermediate goods favor lower tariffs on final goods, and exporters advocate for liberalizing imports of intermediates.
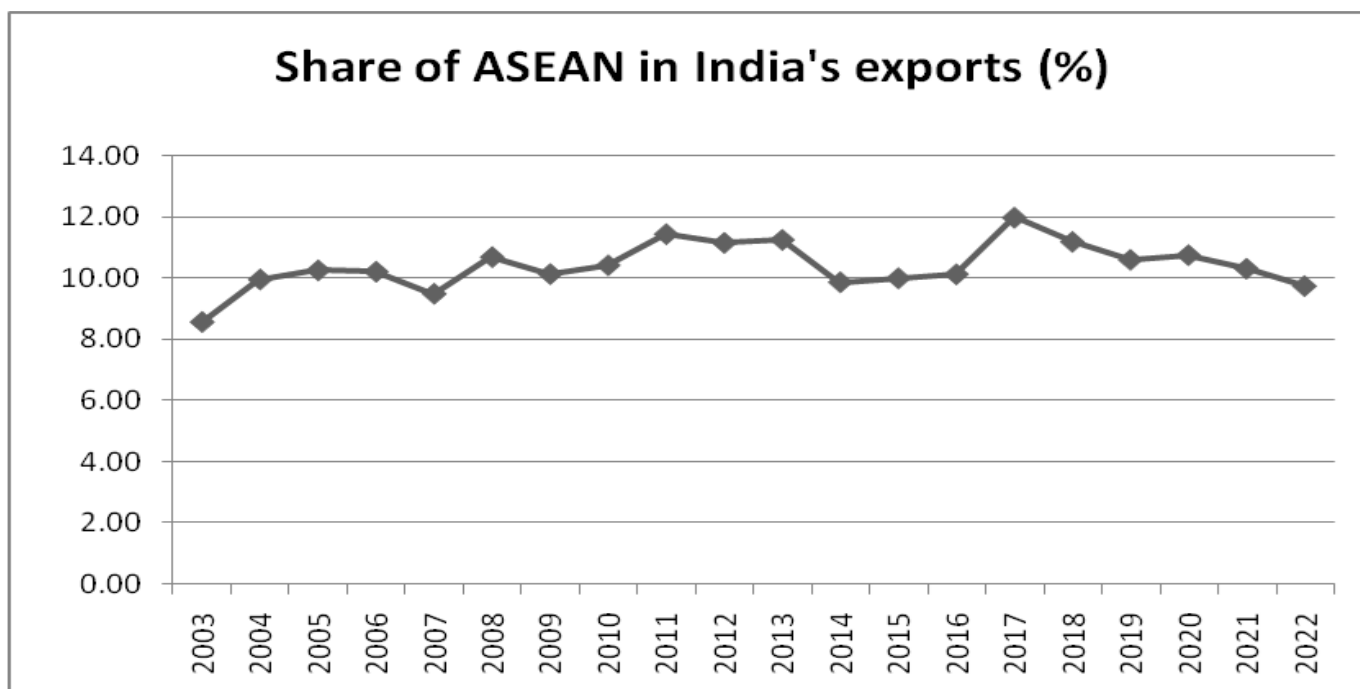
India's trade with ASEAN

India's trade with ASEAN, facilitated by the Free Trade Agreement signed in 2010, underscores the growing importance of ASEAN as a trading partner. Figure 1 illustrates the increasing share of ASEAN in Indian imports, emphasizing the need for deeper economic integration and policy considerations to maximize mutual benefits.

Figure 1: ASEAN's share in Indian imports (2003 to 2022)
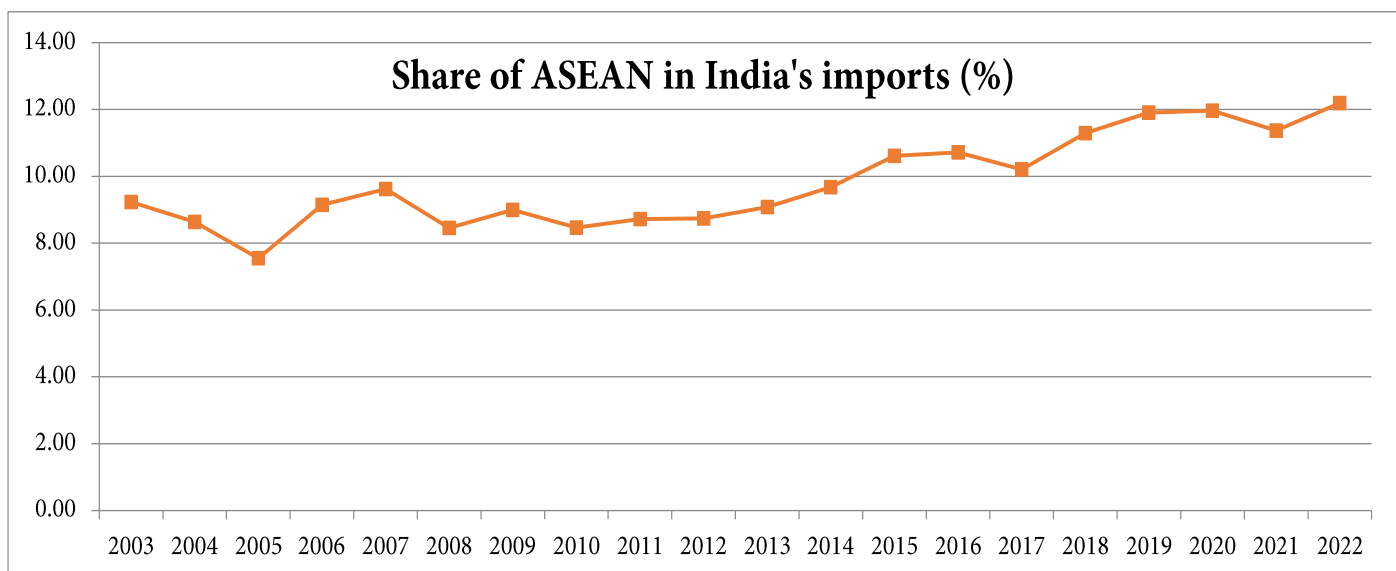
Source: ITC Trade Map, based on WITS UN Comtrade and DGCIS database

Figure 2: ASEAN's share in Indian exports (2003 to 2022)

Source: ITC Trade Map, based on WITS UN Comtrade and DGCIS database

Figure 2 shows the share of ASEAN in India's exports, which has increased marginally from 2003 to 2022. The examination of India's trade patterns with ASEAN countries reveals key insights into its export and import compositions.

India's GVC integration and import policy regime

India's integration into global value chains (GVCs) and its import policy regime play crucial roles in shaping its trade dynamics. However, the foreign value-added content of India's exports decreased from 25.1 percent in 2011 to 16.1 percent in 2016, highlighting a decline in integration with global value chains. Ray and Miglani (2021) further analyze India's import patterns using Broad Economic Categories (BEC), observing that imports of intermediate goods constitute the majority (83 percent) of India's total imports.

India's import policy has undergone significant transformations, particularly following the liberalization initiated in 1991. Before 1991, India maintained a restrictive trade policy characterized by high tariffs and quantitative restrictions on various goods. Goldberg et al. (2009) illustrate a significant upsurge in India's total imports between 1987 and 2000, mainly fueled by a rise in intermediate imports. Building on this research, subsequent studies by Goldberg et al. (2010) emphasize the favorable

outcomes of trade liberalization for India, particularly in terms of accessing new imported inputs. This liberalization facilitated dynamic gains from trade and contributed to the broadening of firms' product portfolios.

Import tariffs have been a focal point of India's trade policy, with changes in tariff structures and trade practices impacting import dynamics. The World Trade Organization (WTO, 2021) assesses India's trade policy regime, noting fluctuations in average tariff rates over the years. Despite changes in tariff structures and the introduction of the Goods and Services Tax (GST) in 2017, India's trade-weighted average tariff rose from 7% to 10.3% between 2014 and 2018. Additionally, shifts in India's sourcing patterns highlight the growing importance of China in India's imports, underscoring changing trade dynamics in the region.

Import demand function

Several studies have attempted to estimate India's import demand function to understand the determinants of import behavior. Dutta and Ahmed (2004) find that real GDP primarily determines import demand in India, suggesting limited sensitivity to changes in import prices. Conversely, Maitra (2020) corroborates the import-led growth hypothesis, highlighting the positive impact of

imports on income growth in the long run. Fukomoto (2012) analyzes China's import demand elasticity across different categories of goods, emphasizing the importance of disaggregating imports to understand their impact on economic variables.

Estimation methodology and results

The estimation methodology in this paper focuses on the role of imports in India's GVC integration with ASEAN countries. By employing the autoregressive distributed lag (ARDL) bounds testing procedure, the study aims to estimate a region-specific import demand function for India's imports from ASEAN. This empirical approach allows for a comprehensive analysis of the factors influencing import behavior and their implications for India's integration into regional value chains. Among the long-run coefficients, only the coefficients of the log of exports and the COVID-19 dummy are statistically significant at a 1 percent level of significance. While the long-run coefficient of the log of exports is positive, the long-run coefficient of the COVID-19 dummy is negative. As for the short-run coefficients, all the coefficients of the log of exports and the log of trade to GDP are statistically significant albeit at different levels of significance. All of the short-run coefficients of the log of exports are negative whereas all the coefficients of the log of trade to GDP are positive. The short-run coefficient of the first difference and first lagged difference of the log of exchange rate are positive and statistically significant. The short-run coefficient of the first difference of the

COVID-19 dummy is positive as well as statistically significant. The error correction term that reflects the speed with which adjustment towards equilibrium is made is negative and statistically significant.

Certain diagnostic tests were conducted to test the estimated model for serial correlation, heteroskedasticity, and specification. As a test of model stability, the CUSUM squared has been plotted. The plot reveals that it lies within the bounds of the 95 per cent confidence band except for slight portion of the line that lies outside of the band.

Policy implications

The onset of the COVID-19 pandemic coincided with ongoing efforts in India and other Asian nations to streamline and integrate their supply chains, both domestically and internationally. Although there was a resurgence in global goods trade in the latter part of 2020 due to economic recovery and the easing of transport and supply chain bottlenecks worldwide, the pandemic compelled nations and enterprises to re-establish connections with the global economy. In summary, India's trade dynamics with ASEAN countries are shaped by the composition of its exports and imports, its integration into global value chains, and its import policy regime. Understanding the determinants of import behavior and their impact on economic variables is crucial for formulating effective trade policies and enhancing India's competitiveness in the global market.

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