

Regional Trade Integration in South Asia: An Analysis Based on a Trade Integration Index

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INTRODUCTION

Since the formation of the South Asian Association for Regional Cooperation (SAARC) in 1985, the eight South Asian countries are organized as a regional bloc to improve economic cooperation among each other. The South Asian Preferential Trading Agreement (SAPTA) in 1995 and the South Asian Free Trade Agreement (SAFTA) in 2004 are the two trade agreements implemented by the SAARC to promote intra-regional trade. The initiatives taken by South Asian countries for regional integration are much older than the SAARC. For example, Asia Pacific Trade Agreement (APTA) which started in 1975 includes three South Asian countries (Bangladesh, India and Sri Lanka) while the Economic Cooperation Organization (ECO) formed in 1985 includes two (Afghanistan and Pakistan). Moreover, the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) which was established in 1997 also includes five South Asian countries (Bangladesh, Bhutan, India, Nepal and Sri Lanka). Apart from these arrangements, South Asian countries have also signed bilateral trade agreements with their regional members. Hence, it is clear that all of them have made certain attempts to integrate themselves with their region in terms of trade.

Regional integration in South Asia is deemed necessary to address energy shortage, improve access of landlocked countries to international markets, promote peace and stability, and achieve welfare gains for all member states, especially for the poorer and smaller countries of the sub-region (Ahmed & Ghani, 2007; United Nations, 2018). However, even after decades of joint efforts, South

Asia is one of the least integrated regions in the world in terms of trade. As highlighted by numerous studies, the main reasons for low trade integration in South Asia are political conflicts between member countries, higher trade barriers, and the fact that the countries in the region are producing and trading similar commodities (Bandara & Yu, 2001; Singh, 2005; Ahmed & Ghani, 2007). In this background, gauging the level of regional integration in South Asia with a quantitative measure is crucial for the policymakers to monitor the progress and plan for better outcomes in the future.

Although recent studies have highlighted the importance of regional trade integration in South Asia, there is a dearth of studies that have attempted to produce an accurate measure of the level of trade integration in the region, focusing on the differences at the country level. Hence, this study attempted to address this gap in the literature, by conducting a country-wise measurement and analysis of the level of regional integration in South Asia in terms of trade. To this end, the analysis began with the following questions:

- i. What is the level of trade integration in South Asia by country?
- ii. Which aspect of trade (i.e. exports, imports, or trade barriers) cause those existing levels of regional integration?

In line with the above research questions, the objectives of this study were; first, to compile a trade integration index that measures the extent to which each of the countries considered is integrated with the South Asian region in terms of trade; second, to perform an in-depth analysis, decomposing the index into its components.

This analysis will help policymakers at all levels (national, regional and international), to assess the degree of regional trade integration of each country, identify the strengths and weaknesses of the integration process and analyse whether it is regional exports, imports or trade barriers that need to be focused on when aiming to improve regional trade integration in South Asia.

METHODOLOGY

1. Data

For the calculation of the trade integration index and all its sub-indices, this study used the data collected from two sources. All data on trade were obtained from the Trade Map database of the International Trade Centre (ITC) and data on GDP was obtained from the World Development Indicators database of the World Bank. The year 2018 was selected for the analysis based on the availability of data.

2. Calculation of the Integration Index

Based on the method used by AU, AfDB, and UNECA (2016)¹, this study first computed a trade integration index (TII) for all South Asian countries for the year 2018 and ranked them according to their level of intra-regional trade integration. However, the problem was that South Asia is composed of only 8 countries and such a small sample would produce biased results while inhibiting an effective comparison between countries. Therefore, second, the analysis was repeated after including 22 other countries outside the region. This way, the results could be validated after checking whether there is any change in the index values after increasing the sample size. These 22 countries were the prominent trade partners of South Asia in 2018².

TII is composed of three sub-indices which were calculated using three indicator variables: goods exports to South Asia as a share of the GDP (export integration index); goods imports from South Asia as a share of the GDP (import integration index); and the weighted

¹ African Union, African Development Bank Group and Economic Commission for Africa, *Methodology for calculating the Africa Regional Integration Index (ARII)* (2016)

² These 22 extra-regional countries were selected from the lists of topmost exporters and importers of goods for South Asia. The lists were taken from ITC Trade Map.

average of effectively applied tariff (AHS) imposed on the exports to South Asian region (trade liberalization index).

All the sub-indices were calculated following the method suggested by AU, AfDB, and UNECA (2016). As the indicator variables are expressed in different units, the following computation is allowed for their normalization in such a way that the final result is expressed on a scale of 0 (the worst possible result) to 1 (the best possible result).

$$C_{ki} = \left(\frac{x_i - x_{min}}{x_{max} - x_{min}} \right)$$

Where C_{ki} is the value of sub-index k ($k = 1, \dots, 3$) for country i ; x_i is the variable value for country i ; x_{min} is the minimum value taken by the variable; and x_{max} is the maximum value taken by the variable.³ This method allows for comparisons between countries while having a pre-determined best-possible and worst-possible case. In other words, it adopts a relative ranking, where one country's performance is expressed relative to that of the other countries. Having a sub-index value of 0 does not mean that the particular country is not integrated with South Asia. It only means that the particular country is the least integrated when compared to others.

The trade integration index is calculated as the arithmetic mean of its respective sub-indices. Hence, all the sub-indices are given the same weight.

$$K_i = \frac{1}{3} \sum_{k=1}^3 C_{ki}$$

where K_i is the value of the trade index for country i .

³ In the case of trade liberalization index, C_{ki} is deducted from 1 to get the sub-index value, as higher tariff rates indicate lower trade liberalization.

FINDINGS

Overall trade integration as measured by TII

Relative to all other countries in the region, Bhutan is the most regionally integrated country with respect to trade. In fact, all the landlocked countries in South Asia, i.e. Bhutan, Nepal and Afghanistan occupy the first three places in the list in terms of overall trade integration, indicating their dependency on the region for trade. Among all the eight South Asian countries, Pakistan records the lowest level of regional trade integration. Even after increasing the sample size to include 30 countries in the analysis, there is no increase or decrease in the sub-indices or the overall TII. Among the extra-regional countries, only Iraq and UAE show a considerable level of trade integration with South Asia. It is important to note that both of them are oil-exporting countries.

Exports and imports

Among all members in the region, Bhutan is the most open country to exports and imports of final goods produced by South Asian peers. Data reveal that the country's exports of goods to South Asia as a share of GDP was 12.5 percent in 2018, while its imports of goods from South Asia as a share of GDP was 26.7 percent. Except for Bhutan, South Asia serves as an important export market for none of the other regional members. Moreover, only Bhutan and Nepal reflect a considerable openness to imports of South Asian goods than other countries in the region.

Trade Liberalization

In terms of trade liberalization, while Nepal is ranked first, all other regional members record a relatively equal level of trade liberalization except for India and Pakistan. In this context, it is quite clear that the lower and varying levels of trade between

countries in South Asia are caused by non-tariff barriers to trade than tariff barriers.⁴

Performance of large countries in South Asia

India, the largest economy in South Asia, is the least integrated in terms of both intra-regional exports and imports of final goods. Data reveal that the country's exports of goods to South Asia as a share of GDP was 0.1 percent in 2018, while its imports of goods from South Asia as a share of GDP was 0.04 percent. This raises the question of whether the region does not provide sufficient markets for India's exports and imports. Pakistan also shows a relatively lower level of integration with South Asia in terms of intra-regional imports and trade liberalization. The weighted average of effectively applied tariff rates for imports from South Asia is 0.03 percent in Nepal, the same is 27.3 percent in Pakistan.

CONCLUSIONS

Indicating the importance of trade integration for landlocked countries in South Asia, as highlighted in the literature, among all South Asian countries, only those which are landlocked (i.e. Bhutan, Afghanistan and Nepal) show higher levels of regional trade integration. The findings clearly imply that South Asia needs a vast improvement in its regional trade agreements as they do not prove to be effective in raising the levels of trade integration within the region. The low level of intra-regional exports and imports in South Asia is largely due to the availability of better markets for South Asian exports and imports outside the region, as well as the existence of non-tariff barriers against trade between regional members. Hence, the policymakers should focus on all three aspects, i.e. exports, imports, trade liberalization to improve regional trade integration in South Asia.

It should be noted that a broader analysis, computing the indices for a range of past years, could reveal more important trends in regional trade integration. Moreover, using more recent data will

⁴ As suggested in AU, AfDB, and UNECA (2016), alternatively, MFN weighted average tariff rates can be used for the index calculations to get further accurate conclusions on trade liberalization.

also help validate the results and identify the changes in trade patterns after the outbreak of the COVID pandemic.

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APPENDIX

Table I: Sub-indices of the regional trade integration index for South Asia

Sub-Index	Indicator (variable used to calculate the sub-index)
Export Integration Index	Value of goods exports to South Asia as a percentage of the country's GDP.
Import Integration Index	Value of goods imports from South Asia as a percentage of the country's GDP.
Trade Liberalization Index	The weighted average of tariffs, effectively applied (by the regional members) as a percentage of the country's total exports to South Asia. Effectively applied tariff represents the lowest available tariff. If a preferential tariff exists, i.e. if the country is part of a preferential trade agreement, the particular preferential tariff is considered as the effectively applied tariff. Otherwise, the Most Favoured Nation (MFN) tariff will be considered as the effectively applied tariff.