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Research Article

India's Trade Relationship with other BRICS Nations: A Recent Stocktaking

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ABSTRACT

Trade has been performing as a suitable vehicle to attain sustainable economic development in a nation. The existing trade theories portray that there is a well-defined relationship between trade and economic development. Further, it is observed from the development pattern of the world that trade promotes the efficient allocation of resources, allows a nation to attain the economies of scale, disseminates knowledge, fosters the technological development and creates a stiff competition that leads to attaining special benefits from the modern business. Against this theoretical background, the present study estimated annual average growth rates and trade intensities (import intensity and export intensity), for the BRICS (Brazil, Russia, India, China, and South Africa) nations. In order to execute this research, time series secondary data have been sourced from IMF and UNCTAD for the period of 1996 to 2016. The variables used in this study include import, export, and GDP. The result from the empirical estimation revealed that China emerged as an important supplier to fulfill the requirement of our customers.

1. INTRODUCTION

Right from the historical period, trade has been playing a significant role in the development of the economy and enhancing the standard of living of the society. Trade offers different types of benefits to society and facilitates the human being to attain a well-sophisticated life. Trade provides a variety of benefits to the emerging and underdeveloped nations in the world, they include the optimum level of resource allocation, comparative advantage, economies of scale, technological advancement, foreign investment, machine and managerial skill and increased employment opportunity to manage their long-pending problems. While studying the effect of trade, Asher (1970) found that the less developed countries earned around 80 per cent of the foreign exchange by exporting goods and services. Whereas, Massel et. al., (1972) examined the pattern of economic growth in developing countries, the regression result of this work exposed that there is a high degree of relationship between exports and economic growth in these nations. Interestingly, the 2.5 per cent increase in export facilitated to attain a 1 per cent growth in their economy.

The positive effect of international trade in the course of economic growth of a nation was well documented in the famous contributions of the father of economics Adam Smith (1776). Later, some comprehensive research studies pursued by world-famous authors, put forward the benefits of international trade in an economy and society. For instance, Krueger (1997) highlighted that during 1960s some less developed nations have removed their trade controls and achieved a perceptible development in their economy. In recent research, Frankel and Romer (1999) considered 150 countries in the world to assess the effect of trade on the level of economic development of these

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nations. The study found that trade has increased the income in most of these nations by accumulating physical and human capital. A study undertaken by Almeida and Fernandes, (2008) concluded from their research outcomes that the increased international trade can create economic growth by dispersal of knowledge and advanced techniques.

Trade and Growth:

The integral relationship between trade and economic growth has been assessed by scholars around the world. Among the existing studies, the World Bank study underlined that the four Asian tigers such as Taiwan, Hong-Kong, Singapore and Korea, revealed their successful performance of importunate economic growth since the early 1960s; thanks to free-market, outward economies etc. (World Bank, 1984), while Khan and Zahler (1985) believed from their research output that trade can promote growth from the supply side. In another study pursued by Kavousssi (1984) concluded that the high rate of economic growth was strappingly associated with the high rate of export growth in middle and low income.

In a recent cross-section panel analysis, Ann Harrison, (1991) concluded that trade openness strongly correlated with the growth of GDP. While Sachs and Warner, (1995) using the cross-country growth model found that trade liberalization showed the way to higher growth in poorer countries. Krueger (1997) reached the conclusion from his research work that there was a strong association between export and economic growth in 10 countries between 1957 and 1974. When assessing the long-run relationship among, export, import and GDP, Sinha and Sinha (1996) uttered that there was a positive relationship between growth and export. In another wide-ranging research, Greenway, Morgan and Write (2002) used data for 70 developing countries to find the link between trade and economic growth. The study concluded that international trade is the bedrock for economic growth in these nations. These results are corroborated with the research findings of Irwin and Tervio (2002). The appreciable performance of Malaysia for the past fifty years from 1961 to 2000 was partly due to the amazing success in the export-oriented industrialization Wah (2004).

Literature Review:

Researchers all over the world have been focused on the different dimensions of trade for the past few decades using well-sophisticated tools for different sets of data. In this regard, Sinha and Sinha (1996) noted that the opening up of the global market boosted the employment opportunity in the European Union. In countries, which are following the open-door system, there was no higher level of unemployment (Rama (2003). In a comprehensive research study by Wood (1994) found that the export of value-added commodities had a large and positive impact on employment. Krugman (1994, 1995) concluded that trade expansion moderately increased the employment level in developing countries. Gaston and Trefler (1997) find that the tariff cuts in an international level increased the employment rate in exporting countries.

It is generally observed that there is a differential impact of trade/trade openness on labour productivity. In the study conducted by Freeman and Katz, (1995) examining the impact of trade on labour productivity found that there is a considerable impact on labour market due to trade liberalization in the US. There is a considerable impact of trade on the wages of both casual and permanent workers in the business world. Using panel data for 60 high-income countries and 17 low-income countries Stone and Cavazos (2011) found there was a positive and significant effect of trade on a wage from 1989 to 2004. While assessing the effect of trade, Melitz, (2003) noted that export increases investment, technology, human capital, and labour productivity consequently the average wage rate increases. Bernard et al., (2007) concluded that in the United States, the exporting firms pay around 6 per cent higher wage than that of non-exporting firms over the period of study.

A sizable amount of literature is available to understand the nexus between international trade and economic development. International trade stimulated economic growth through an increase in efficiency and economies of scale. (Grossman and Helpman (1991), and Obstfeld and Rogoff (1996). Among the available empirical studies, Gemechu (2002) using co-integration and error correction models concluded that there was a positive effect on an overall domestic product by trade. A scientific approach Romer (1993) concluded that the less developed countries used to increase the rate of economic growth through international trade. In developing countries in Asia and Latin America, Erfani (1999) detected a well-defined positive relationship between trade and economic growth. Also Sipahi (2020), the research findings showed that brand attachment has a positive and significant effect on brand love. Brand trust has a positive and significant effect on brand love. Brand addiction has a positive and significant effect on consumer self-esteem and also, brand attachment has a positive and significant effect on consumer self-esteem.

A multi-country study pursued by Vohra (2001) found that exports of India, Pakistan, the Philippines, Malaysia, and Thailand have a positive and significant effect on the economic growth of these nations from 1973 to 1993.

Methods and Materials:

Trade has been playing a significant role in both developed and developing countries. In fact, underdeveloped countries are assuming the trade as an effective instrument to remove their chronic problems are poverty and unemployment. Further, irrespective of the level of development, almost all the nations in the world are considering international trade as the best support system to manage the balance of payment problem, augment the investment level and update the level of technology. Against this theoretical background, the present study is an attempt to assess India's trade status with the rest of the BRICS countries in the recent past. With the aim of pursuing this research, the time series secondary data have been collected from IMF and UNCTAD for the period of twenty-one years from 1996 to 2016. In order to understand the trend, volume and export and import intensities, the study considered an import, export, and GDP for the BRICS nations. At first, the obsolete value of all these

variables and the result of annual average growth rates are considered to understand the trend of trade. In order to capture the intensity of export, the export intensity indices are calculated as:

$$EI_{zj} = \frac{X_{zj}}{X_z} / \frac{X_{wj}}{X_w}$$

Where X_{ZJ} equals India's exports to country J, X_z equals total India's export, X_{wj} equals total world exports to country J, and X_W equals total world exports. Whereas, in order to estimate the intensity of import, the import intensity indices are calculated as:

$$MI_{zj} = \frac{Y_{zj}}{Y_z} / \frac{Y_{wj}}{Y_w}$$

Where Y_{ZJ} equals India's imports from country J, Y_z equals total India's import, Y_{wj} equals total world import to country J, and Y_W equals total world import. Further, the present study used trend lines and diagrams to explain the trend, and trade intensity of BRICS countries from India's point of view.

Results and Discussion:

According to the ***World Economic Forum***, the term BRICS label refers to a group of large and developing countries in the world that are striving for tremendous growth potential. Because of the geographic and demographic magnitude, BRICS nations are strongly influencing the economy of the world to a great extent, particularly in developing countries by increasing their financial and technical supports. These nations are establishing stability in trade and investment in the recent past (Morazan et. al., (2012). Further, it is observed that these BRICS nations are the main source for the architecture of international development corporation, not only in terms of capital flow but also as appreciable donors Morazan et. al., (2012). Hence, it is accepted by even international level organizations that the BRICS have strengthened and enlarged their position in the global map in the past ten years. With the support of these statistical evidence, the present study attempted to assess the trend and trade intensity of BRICS nations from India's point of view.

Table 1: India's trade with other BRICS nations.

Values are in US$ Thousand.

Country	Export			Growth rate	Import			rowth rate
Year	**1996**	**2010**	**2016**		**1996**	**2010**	**2016**	
Brazil	132485	3669558	2300195	***22.8***	152529	3220988	3614718	***4.9***
Russia	602826	2143335	2397222	***15.23***	793572	5406299	5312787	***.85***
China	614776	17439991	8916073	***19.1***	756522	41249116	60483103	***6.7***
South Africa	320787	3650058	3243165	***16.7***	328001	6912186	5092336	***1.3***

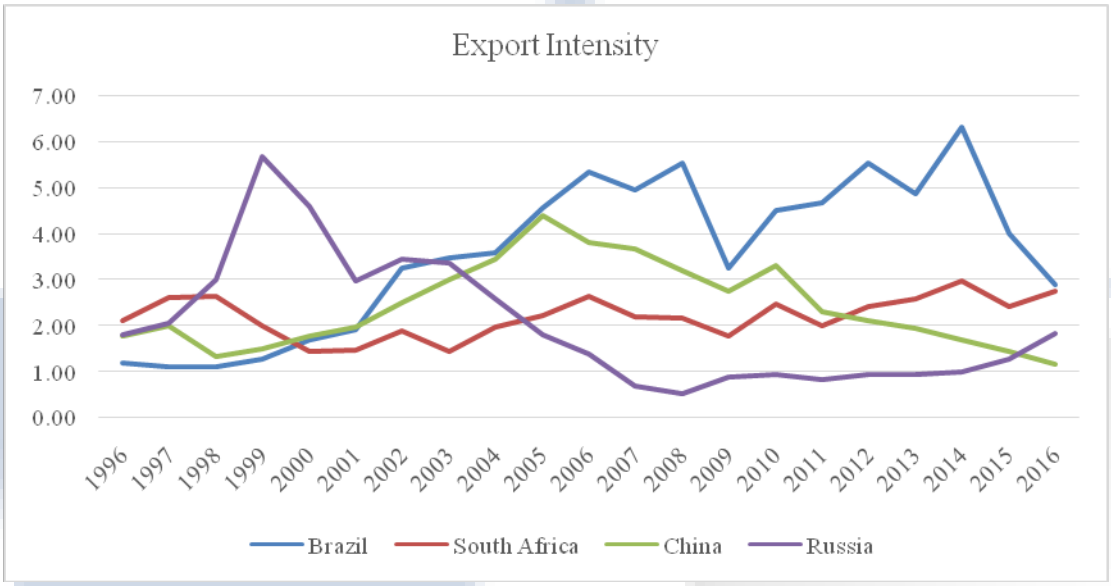
Source: Calculated from WITS data

In table 1 India's export to other BRICS nations, and import from other BRICS nations have presented. The table illustrates that the total value of export to Brazil has increased around 17 times from 1996 to 2016. But in the case of Russia, it is only a 3-fold increase. At the same time, the export to China and South Africa has increased to 15 times and 10 times respectively during the above-mentioned period. This implies that among the BRICS nations, India is tapping the potential market in Brazil, followed by China. The second portion of the table says that the total volume of imports by India from the rest of the BRICS nations. It is very clear from the table that China is in the predominant place in terms of India's import. The statistical evidence says that the total value of imports from China has increased around 80 times followed by Brazil and South Africa. Russia is in rock bottom with an around 7-fold increase in the total value of imports by India during the study period.

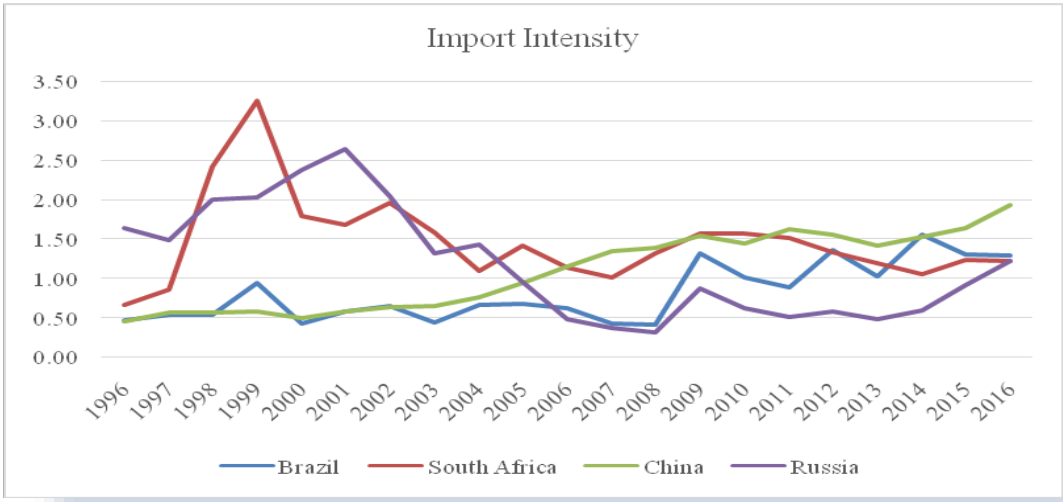
Annual average growth rates have been computed for the study period for export of India to other BRICS nations and import by India from other BRICS nations. It can be observed from the results that the growth rates of imports from BRICS nations (except Russia) to India are higher than that of export value. This result proved that India is not in an appreciable place even in the BRICS group in terms of trade, as growth rates of its import values are higher than that of export values during the study period.

Trade intensity comprises two aspects such as export intensity and import intensity. Generally, it is believed that foreign export is powerful equipment for accumulating foreign exchange reserves, augment employment opportunities, and enhancing overall social prosperity (Czinkota, 1994). Further, export is a special channel for the disposal of excess production to widen the potential market in domestic and foreign countries (Cannon, 1981). Export intensity is defined as the share of a country's exports going to a trading partner relative to the share of world exports going to that partner

(Chukwuka and Eberechukwu, 2014). In this study at first, we have calculated the export intensity, the result of the computation has been presented in appendix-I, and the same also presented in the form of trend lines.



The export intensity index revealed that there has been a fluctuating trend over the period of study. Brazil emerged as an important trade destination particularly after 2000, which reflects that there is a strong demand for instruments, motor vehicles, medicaments, etc. for the development of the Brazilian economy. At the same time, the export intensity in connection with Russia showed a downturn trend after 2000. India is in the highest position with regard to export intensity, which shows that India has been South Africa's most important export destination over the period study. Even though, the performance of the other two nations such as China and South Africa are moderate, due to rapid industrialization in China particularly in the 2000s the export intensity in connection with China has decreased drastically after 2005. The average export intensity for the period from 1996 to 2016 was Brazil 3.56, South Africa 2.19, China 2.44 and Russia 2.02.



Like export, import also has its direct bearing in an economy; it is emphasized in the research studies that import is an important channel to obtain foreign technology, machines, and managerial skills for the development of the domestic economy (Grossman and Helpman, 1991). From the import intensity index, it can be understood that there was considerable fluctuation in these studied nations except China. Owing to mushrooming home-based and micro industries and mechanization in China, the import intensity with China has been gradually increasing particularly after 2000. At the same time, the import intensity of Brazil and Russia also increased after 2008. The overall picture of this import intensity expressed that the average intensity with Brazil was 0.82. At the same time, which accounted for 1.47 for South Africa, 1.08 for China and 1.19 for Russia. Overall, the trade intensity analysis demonstrated that Brazil is the potential market for India's product, which revealed the historical and cultural ties with India. At the same time, China emerged as an important supplier to fulfill the requirement of our customers.

1. Conclusion:

Trade is a driving force to attain a paramount socio-economic development in a nation within a stipulated period. While highlighting the importance of international trade, ***Krugman*** (1994) portrays that the "*efficient employment of the productive forces of the world is a direct economic advantage of foreign trade*". The present study has examined the trend and trade relationship between India and the rest of the BRICS nations. In order to execute this research work, annual time series secondary data have been sourced IMF and UNCTAD. The study covered a period of two decades from 1996 to 2016. With the intention of estimating the trend and trade intensity, the variables used in this study include import, export, and GDP for the BRICS nations. Using some statistical and econometric tools, the present study obtained that the total value of export to Brazil has increased around 17 times from 1996 to 2016, at the same time, the export to China and South Africa has increased to 15 times and 10 times respectively, but in the case of Russia, it is only 3 fold increased. China is in the predominant place in terms of India's import, the statistical evidence says that the total value of imports from China has increased around 80 times followed by Brazil and South Africa. The export and import intensity

index revealed that there have been fluctuating trends over the period of study. While, Brazil emerged as an important trade destination particularly after 2000, which reflects that there is a strong demand for instruments, motor vehicles, medicaments etc for the development of the Brazilian economy. As a result of mushrooming home-based industries, and mechanization in China, the import intensity with China has been gradually increasing particularly after 2000. Hence, it is suggested that policymakers should strive to reshape the trade policy in coordination with other developmental policies to reap benefit from the BRICS nations' trade.

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