A COMAPARATIVE STUDY OF INTERNATIONAL TRADE OF INDIA AMONG THE BRICS COUNTRIES (2006 – 2017)

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ABBREVIATION

1st CHAPTER	
BRICS	Brazil, Russia, India, China South Africa
GATT	General Agreement on Tariffs and Trade
BRICS	Brazil, Russia, India, China and South Africa
GDP	Gross Domestic Product
WTO	World Trade Organization
IMF	International Monetary Fund
UNCTAD	United Nation Conference on Trade and Development
H–O model	Heckscher–Ohlin model
RTA	Regional Trade Agreements
PTA	Preferential trade agreement
DGCI & S	Directorate General of Commercial Intelligence and Statistics
POL	Petroleum, Oil and Lubricants
U.S.A	United States of America
OECD	Organization for Economic Co-operation and Development
SAARC	South Asian Association for Regional Cooperation
OPEC	Organization of Petroleum Exporting countries
OGL	Open General Licence
CCS	Cash Compensatory Schemes
EXIM	Export & Import
OBUs	Offshore Banking Units
SEZ	Special Economic Zones
FMS	Focus Market Scheme
FTP	Foreign trade policy
IEC	Importer Exporter Code
ASEAN	Association of Southeast Asian Nations
EU	European Union
NAFTA	North American Free Trade Agreement
BIMSTEC	Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation
UN	United Nations

MERCOSUR	Mercosur, Spanish acronym of Mercado Commune del Sur,Portuguese Mercosul,acronym of Mercado Comum do Sul, or Common Market of the South, South American regional economic organization
UNESCO	United Nations Educational, Scientific and Cultural Organization.
ITO	International Trade Organization
IBRD	International Bank for Reconstruction and Development
USD	The United States dollar
CRA	Contingency Reserve Arrangement
NDB	New Development Bank
SCO	Shanghai Cooperation Organization
EAEU	Eurasian Economic Union
EMDCD-	Emerging Markets and Developing Countries Dialogue
NDB	New Development Bank
COVID-19	corona virus disease of 2019
FTP	Foreign Trade Policy
FDI	Foreign Direct Investment
2nd CHAPTER	
AOA	Agreement of Agriculture
TCI	Trade complementarily index
BRCA	Bilateral revealed comparative advantage index
M&A	Mergers and acquisitions
CPI	Consumer Price Index
BR	Broad Money
EXPO	Exports
IMPO	Imports
GFCF	Gross Fixed Capital Formation
GCEX	Gross Consumption Expenditure
GDP	Gross Domestic Product
GFCF	Gross Fixed Capital Formation
GCEX	Gross Consumption Expenditure
NDB	National Development Bank

WB-IMF	World Bank-International Monetary Fund
GDP	Gross Domestic Product
HDI	Human Development Index
S&P	Standard & Poor's
OECD	Organization for Economic Co-operation and Development
TFA	Trade Facilitation Agreement
FDI	Foreign Direct Investment
BPO	Business process outsourcing
ESO	Expanded Service Option
GSTP	Global System of Trade Performance of Developing Countries
R&D	Research and development
3rd CHAPTER	
LPG	The liberalization, Privatization and Globalization
BRICS	Brazil, Russia, India, Canada and South Africa
FDI	Foreign Direct Investment International Trade
WTO	World Trade Organization
ITC	International Trade Centre
ANOVA	Analysis of variance
GATT	General Agreement on Tariffs and Trade
4th CHAPTER	
BEA	Bureau of Economic Analysis
CV	coefficient of variation
SD	Slandered Deviation
HDI	Human Development Index
UNDP	United Nations Development Program
CAGR	Compound Annual Growth rate
5th CHAPTER	
MSMEs	Micro, Small & Medium Enterprises
MAI	Market Access Initiative
MDA	Marketing Development Assistance
CRA	Contingent Reserve Arrangement

Chapter-1

INTRODUCTION

CONTENT

CHPATER – 1 INTRODUCTION

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CHAPTER 1 – INTRODUCTION

1.1 INTRODUCTION

In pre – Independence era the international trade of India was limited to Britain only, and was under the influence and control of the British regime. It was confined to the export of raw materials especially the agricultural goods like cotton, oil seeds, tea etc. and import of finished goods like textiles, cloth, machinery etc. But in post independence period India has adopted mixed economic system to give real inputs to the rapid growth and development of our country. As a part of this policy, to establish the fundamental and heavy engineering industry; import of machinery, tools, chemicals etc. were considered most important. As a result, India remained the exporter of agricultural goods. But in the last decade of 20th century especially under the influence of Dunkel Proposal and acceptance of General Agreement on Tariffs and Trade (GATT) the contemporary government of P.V.Narasimha Rao initiated economic and financial reforms; it was the boost dose to the industrial development as well as trade and commerce.

The fruitful consequences of economic and financial reforms appeared in the first decade of 21st century. India's share in International trade is less than one percent. India's share in International trade is less than one percent.Hence India has initiated policy to join various International organizations and groups for the rapid growth in international trade. Thus India became a pioneer member of an international community of emerging economies named as Brazil, Russia, India, China and South Africa (BRICS).

1.2 MEANING OF INTERNATIONAL TRADE

International trade refers to an exchange or transaction of goods and services between different nations. International trade between different nations is an important factor in increasing transaction of goods and services, increasing standard of living, creating employment and enabling consumers to consume a greater variety of goods and services. International trade has occurred since the earliest period of civilization, but in current era international trade has become increasingly important with a larger share of GDP devoted to exports and imports in each and every country.

International trade is nothing but trade between the different countries of the world. It is also called as External trade or Inter-Regional trade. It consists of imports,exports and entrepot. The inflow of goods in a country is called import trade whereas outflow of goods from a country is called export trade. Many times goods are imported for the purpose of re-export after some processing operations. This is called entrepot trade. International trade basically takes place for mutual satisfaction of wants and utilities of resources.

International trade is the exchange of capital, goods and services across the borders because there is a need of goods or services. In most countries, role of international trade is significant because of its share in Gross Domestic Product (GDP). Carrying out trade at an international level is a complex process when compared to domestic trade. When trade takes place between two or more countries, factors such as currency, government policies, laws, judicial system and market structure etc. become very important. To smoothen and lawfully carry out the process of trade between various countries, some international economic organizations were formed, such as the World Trade Organization (WTO), International Monetary Fund (IMF), United Nation Conference on Trade and Development (UNCTAD). In the same sense BRICS was also formed as the bridge of trade among the member countries.[1]

1.2.1 TYPES OF INTERNATIONAL TRADE

Import Trade: Import trade refers to purchase of goods by one country from another country or inflow of goods and services from foreign country to home country.

Export Trade: Export trade refers to the sale of goods by one country to another country or outflow of goods from home country to foreign country.

Entrepot Trade: Entrepot trade is also known as Re-export. It refers to purchase of goods from one country and then selling them to another country after some processing operations.[2]

1.2.2 IMPORTANCE OF INTERNATIONAL TRADE

1. Make use of abundant raw materials

Some countries are naturally abundant in raw materials like Tea and Spices (India), tin, iron ore and phosphate (Brazil), oil (Qatar), metals and fish (Iceland), Congo (diamonds) Butter (New Zealand). Without trade, these countries would not benefit from the natural endowments of raw materials. A theoretical model for this was developed by Eli Heckscher and Bertil Ohlin. Known as the Heckscher–Ohlin model (H–O model) it states countries will specialise in producing and exports goods which use abundant local factor endowments. Countries will import those goods, where resources are scarce.

2. Comparative advantage

The theory of comparative advantage states that countries should specialise in those goods where they have a relatively lower opportunity cost. Even if one country can produce two goods at a lower absolute cost doesn't mean they should produce everything. India, with lower labour costs, may have a comparative advantage in labour-intensive production (e.g. call centres, clothing manufacture). Therefore, it would be efficient for India to export these services and goods. While an economy like the UK may have a comparative advantage in education and video game production. Trade allows countries to specialise. This gives them a comparative advantage which can increase economic welfare. The theory of comparative advantage has limitations, but it explains at least some aspects of international trade.

3. Greater choice for consumers

New trade theory places less emphasis on comparative advantage and relative input costs. New trade theory states that in the real world, a driving factor behind the trade is giving consumers greater choice of differentiated products. We import BMW cars from Germany, not because they are the cheapest but because of the quality and brand image. Regarding music and film, trade enables the widest choice of music and film to appeal to different tastes. When the Beatles went on tour to the US in the 1960s, it was exporting British music relative labour costs were unimportant.

Perhaps the best example is with goods like clothing. Some clothing (e.g. value clothes) from Primark price is very important and they are likely to be imported from low-labour cost countries like Bangladesh. However, we also import fashion labels Gucci (Italy) Chanel (France). Here consumers are benefitting from choice, rather than the lowest price. Economists argue that international trade often fits the model of monopolistic competition. In this model, the important aspect is brand differentiation. For many goods, we want to buy goods with strong brands and reputations. E.g. Coca-Cola, Nike, Addidas, McDonald's, apple phones etc.

4. Specialisation and Economies of scale - greater efficiency

Another aspect of new trade theory is that it doesn't really matter what countries specialise in, the important thing is to pursue specialisation and this enables companies to benefit from economies of scale which outweigh most other factors. Sometimes, countries may specialise in particular industries for no over-riding reason – it may just be a historical accident. But, that specialisation enables improved efficiency. For high value-added products, multinationals often split the production process into a global production system. For example, Apple designs their computers in the US but contract the production to Asian factories. Trade enables a product to have multiple country sources. With car production, the productive process is often even more global with engines, tyres, design and marketing all potentially coming from different countries.

5. Service sector trade

Trade tends to call up images of physical goods import bananas, export cars. But, increasingly the service sector economy means more trade is of invisibles – services, such as insurance, IT services and banking. A global economy with modern communications enables many micro trades, which wouldn't have been as possible in a pre-internet age.

6. **Grows and Strengthen Markets**

Each nation has strengths in terms of resources like labor, materials, capital or knowledge, and they all can compete together in the world market for other nation's

business. Once a nation reaches peak efficiency and effectiveness, they develop a comparative advantage to other nations and will specialize in a product or service until they are the best. That is when everyone wins.Consumers are able to purchase from more options, and sellers compete for the business by making the best products and services the most efficiently. Prohibiting international trade keeps sellers from entering the market and does not incentivize the other nations to produce the best that they can. The competition is vital for nations to grow, expand, and innovate their processes to produce the best goods and services possible.Innovation is a key tenet of competition. Trade gives nations reasons to discover new ways to produce goods and services better, more cheaply, and more quickly. Countries that only rely on themselves close themselves off from new developments the rest of the world has to offer.

International trade promotes job innovation. Protectionists are often concerned that the same jobs are not available that once were, and that is true – new industries often replace the old ones. A popular example is that in modern America, there is an abundance of car manufacturers and a minority of Conestoga wagon makers – whereas in the 1800s this would not have been the case. Companies like Samsung create new Blu-ray players and not as many VHS players (or, more likely, none at all). As trade progresses, new technology is developed. Innovation is ignited and better products are available – in greater numbers. With international trade, those innovations reach more people who also must innovate to get ahead. The consumer is able to win by getting the best products at the best price available.

7. **Global Growth and Economic Development**

International trade is an important factor in driving economic growth. This increase has led to a decline in absolute poverty levels - especially in Southeast Asia, which has seen high growth rates since the 1980s. International trade is important for nations to develop their own natural resources and participate in the global economy.

Countries can use the same amount of any given product. Americans, for example, are not able to afford all the crops that grow every year. According to the American Farm Bureau Federation, one in three acres is cultivated for export. One third of U.S. agriculture is taken for sale to other countries. The same is true of other nations. Everyone can create good or service but not all can use it themselves. This is why International trade is essential. This allows countries to convert "unnecessary" resources into money or other "essential" resources.

Participating in the global economy not only allows consumers to receive goods and services at the best prices; it also is an essential part of a nation‘srelating to other nations on a sovereign basis. Countries require interaction with one another to be recognized by the international community, and the most peaceful way is trade. International trade shows a commitment to being a part of the international community and a resolution to working with other nations in a peaceful and reasonable way.

International trade is the basis of many economies, such as the United States. Free trade and enterprise fuel competition, innovation and massive economy so that consumers around the world can get the best products at the best prices. Conservative ideologies try to build industry by removing consumer choices, but they fail to see how philosophy stops prosperity. When nations isolate themselves, they confine themselves to the labor, resources, and finished goods in their hands. Working together, especially in international trade, allows each country's efforts to bring them together and make them stronger than they are alone.[3]

1.3 GLOBAL COMMERCIAL POLICY – SOME REGIONAL AGREEMENTS

World trade policy is also called international trade policy. Trade policy is often described in terms of the scale of trade between nations. It also shows that there are no barriers to trade between countries. It deals primarily with the trade of goods (and some commercial aspects of services and intellectual property). However, in today's world, international trade involves many other aspects. When negotiating international trade, a

nation's business policy will include and take into account the policies adopted by the government of that nation. There are many factors that affect a country's trade policy, which can affect international trade policies.

In today's trade scenario, services account for 25% of world trade with third countries and 50% for trade with the United States. Half of our foreign direct investment is service-related and the union is the second largest investor in the world. When conducting their business activities, companies rely on effective protection in the form of copyrights, patents, trademarks and original designations. The rules of international trade have also changed. They no longer just cover things like the 1960s; today, the rules of service, investment, intellectual property, public procurement and competition are also regulated. A brief comparison of the GATT and WTO of 1947, or of past and present bilateral trade agreements, provides ample evidence that international law has been adapted to the realities on the ground. Against this background; the concept of general business policy has remained primarily focused on commodities. The specific decision-making process (enabling appropriate majority contracts) for general business policy only applies to goods. Agreements on certain aspects of services, investment and intellectual property have to be ratified unanimously and in some cases by the community and all member nations (mixed agreements).

1.3.1 TYPES OF COMMERCIAL POICY

There are some types and aspects of Commercial Policy such as.

1. **Regionalism:** Regionalism also referred as a Regional Trade Agreements (RTA), are trade policies and agreements. This agreement is crafted by the countries in a region for the purpose of increasing the international trade. It also emphasis on free trade with the goal of eventually merging into larger, either bilateral or multilateral and various trade deals. The major area of RTA is useful in resolving trade issue as well without causing gridlock in other trade agreements.[4]
2. **Bilateral Free Trade Agreements:** When two countries enter into a bilateral trade agreement, they are essentially giving one another special deals and favorable treatment in the arrangements. These privileges can include lowering tariffs on each other's goods and services. The United States has signed such treaties as the North

American Free Trade Agreement in 1994 as well as with Israel in the year of 1980s. Experts who support such free trade agreements argue that these deals help to increase competition and offers larger markets that businesses can reach out to.[5]

3. **Preferential Trade Agreements:** A preferential trade agreement (PTA) is a trading bloc that gives preferential access to certain products from the participating nations. This is reducing tariffs but not by abolishing them completely. It is the first stage of economic integration. These tariff preferences have created numerous departures from the normal trade relations principal. World Trade Organization (WTO) members should apply the same tariff to imports from other WTO member nations.[6]

4. **Multilateral free trade agreement:** agreements are made between two or more countries to strengthen economy of member countries by exchanging of goods and services among them Up to the level of norms in multilateral trade agreement, the member countries are treated equally. The agreements reduce tariffs and make it easier for businesses to import and export.[7]

1.4 INDIA'S FOREIGN TRADE VALUE COMPOSITION AND DIRECTION

Before independence India was a colony of the British Empire. Foreign trade was typically colonial. India was a supplier of foodstuffs and raw materials to the industrialized nations particularly England and an importer of manufactured goods as British policy did not permit industrialization at domestic level. After 1947 the colonial patterns of trade had to be changed to suit the needs of a developing economy. An economy which decides to embark on a vigorous program of development is required to extend its productive capacity at a rapid rate. Imports of machinery and equipment which cannot be produced in the initial stages at home are essential. Import required for the setting up of the steel plants, the locomotives factory and the hydro-electric projects are of a developmental nature. As well as the process of industrialization at domestic level requires the imports of raw materials and intermediate goods so as to properly utilize the capacity created in country. For a developing economy the development and maintenance imports set limits to the extent of industrialization which can be carried out in a given

period. Besides these imports, a developing economy is also required to import consumer goods and services which are in short supply at home during the industrialization period. Therefore, the period of early years the imports have to be increased at a very fast level. The balance of trade in such a situation will turn heavily against the developing nation. External assistance can help to share the burden of growth in the short run, but in the long period the developing country has to bear the burden of development itself. It is necessary to developing country, that to meet the growing foreign debt in view of inelastic imports, a developing country must increase its exports. In the same sense India have been the exporters of foodstuffs and raw materials. In the development process the raw material exports generally decline because their demands increase at domestic level to meet the requirements of growing domestic industries. In the India the main problem is fastest growing population; due to that the surplus of food grains available for exports either dwindles or is turned into a deficit. For the developing countries, it is necessary to find new commodities and new markets in which it can sell its manufactures. Foreign aid is important for an under developed country, but trade is more significant.

1.4.1 FOREIGN TRADE SINCE INDEPENDENCE

For the study of trends of India's foreign trade during post-independence period

1. **1948-49 to 1950-51 periods (On the Eve of Planning-Before planning period):** On the eve of planning the foreign trade of India showed an excess of imports than exports. The rise in imports was largely due to the war and the post war period as consequence of various controls and restrictions. The shortage of food and basic raw materials like jute and cotton as a result of partition, the rise of imports of machinery and equipment or capital goods; such as for hydroelectric and other projects.
2. **1951-52 to 1955-56 periods (The First Plan):** After the end of pre plan period in the 1951 to 1956 period the annual average value of imports was Rs.730 crores and that of exports Rs.622 crores. As the same sense the annual trade deficit found Rs.108 crores. Trade deficit was largely due to program of industrialization which gathered momentum and pushed up the imports of capital and machinery goods. But there was no improvement in exports found in the first plan period.

3. **1956-57 to 1960-61 periods (The Second Plan):** During the second plan various project of industrializationwere initiated, such as steel plants, heavy expansion and renovation of railways and many industries. And as a result, the quantum of imports also reached a very high level for these programs and also it helped to rising the domestic prices too., Exports earnings averaged Rs.613 crores per annum and Consequently the trade balance became heavily adverse to the tune of Rs.467 crores Rs. 108 corers trade deficit found in this period.
4. **1961-62 to 1965-66 periods (The Third Plan):** Third Plan shows that average export earnings worked out to be Rs. 747 crores, as against it actual annual average imports worked out to be Rs.1, 224crores. Rapid industrialization, defense needs (China and Pakistan wars) and failure of crops large quantity of food grains was imported.
5. **1966-67 to 1973-74 periods (The Fourth Plan):** 1966 period well know for devaluation of Indian rupees. Acute shortage of foreign exchange, extensive borrowing by India from IMF and other international institutions, due to these factors induced India to devalue the rupee by 36.5 per cent in June 1966. Devaluation was resorted to essentially to reduce the imports, to boost exports and create the favorable balance of trade and also balance of payments. Although after devaluation of the rupee, exports increased during 1966-67 and 1967-68 but on account of relative inelasticity of imports, imports soared Rs. 2043 crores in 1967-68. As a consequence of the policies of import restriction and reduction in food grain imports coupled with vigorous measures of export promotion, during 1972-73. In 1973-74 prices of petroleum products hiked, steel and non-ferrous metals, fertilizers and newsprint too hiked. The deficit in the trade balance of the order of Rs.432 crores appeared again in 1973-74.

6. **1974-79 (The Fifth Plan):** In the period of fifth plan the increase in the cost of India's major imports viz., petroleum, fertilizers and food grains. There was a significant improvement in India's exports as they successively rose every year during the fifth-year plan period. The rise was so fast that by 1976-77 exports at Rs.5134 crores exceeded imports by Rs. 69 crores as well as the balance of trade

surplus emerged for the second time since 1951. Exports of fish and fish preparations, coffee, tea, groundnuts, cotton fabrics, garments and handicrafts recorded substantial increase in this period.

7. **1980 onwards (The Sixth and Seventh Plan Period):** In this period the prices of petroleum products were increased by OPEC, the import bill shot up from Rs.6,811 crores to over Rs.9,142 crores in 1979-80. As well as the value of exports fell much short of imports. The result was unprecedented trade deficits from nearly Rs.2, 45 crores in 1979-80 to Rs. 5,838 in 1980-81. It was this browning deficit which forced the Government to approach the IMF in November 1981 for a huge loan. The huge trade deficit compelled the Government to approach the IMF and World Bank for an unprecedented loan of over 6.7 billion.

8. **1989-90 and thereafterperiod:** During 1990-91 according to DGCI & S figures, there is no doubt that a push was given to our export effort and exports shot up to Rs.32558 crores in 1990-91 indicating an increase of 17.7 per cent. During 2000-01 exports increased from 36,822 million dollars in 1999-2000 to Rs.44, 560 million in 2000-01, showing a sharp rise by 21.0 percent. Restriction of imports to a level of 1.7 per cent as against the increase in exports by 21 percent helped the country to reduce the deficit in balance of trade to 5,976 million dollars in 2000-01.
9. **1990-91period:** during this period India faces balance of payment crises due to huge macroeconomicimbalance in the economy. Macroeconomic crises also called currency crises. During this period high current account deficit and fiscal deficit was the cause of crises. Following are the causes of crises

1. Government spending was higher than revenue. As a result, the fiscal deficit was high. The gross fiscal deficit increased from 9% of GDP in 1980-81 to 12.7% of GDP in 1990-91.

2. The government's internal debt increased due to the above reasons. It increased from 35% of GDP in 1985-86 to 53% of GDP in 1990-91.

3. The country was importing more than exporting. As a result, the current account deficit was high.

4. The Gulf War has pushed up the current account deficit due to rising crude oil prices. As a result, India's foreign exchange reserves were largely depleted. Despite heavy borrowing from the International Monetary Fund (IMF) earlier this year.

5. As of June 1991, India had less than $ 1 billion in foreign exchange reserves, which was sufficient to meet import requirements for a period of only 3 weeks.

6. India did not have enough foreign resources to do business with the world.

7. India was on the verge of making a mistake in its international debt obligations.

8. Investors withdraw their money.

9. Short-term debt dried up; because exporters were worried they would not be repaid.

10. Inflation rise sharply.[8]

10. **1992 – 2010 (Eight, Ninth and Tenth Plan)** During 10th Plan export rose from Dollar 43,287 million in 2002 – 2003 to dollar 63,843million in 2003-2004, indicating imports under WTO pressure resulted in increase in imports from $51,413 million in 2002-03to $78,149million in 2003-04, a higher jump by 52.0%.[9]

1.4.2 COMPOSITION OF INDIA'S FOREIGN TRADE

In the view of the fact that the Directorate General of Commercial Intelligence and Statistics (DGCI & S) has revised the commodity classification of India's foreign trade with reference to 1987-88, trade data before and after 1987-88 trade data before and after 1987-88 are not strictly comparable.

Pattern of Imports

Imports have been classified into Bulk Imports and Non-bulk imports. Bulk imports are further subdivided into three components; i) Petroleum, crude and products ii) Bulk consumption goods i.e., cereals and pulses, edible oils and sugar. iii) Other bulk items comprising of fertilizers, non-ferrous metals, paper, rubber, iron and steel. Non-bulk imports are also further classified in also three components; i) Capital goods i.e., metals, electrical and non-electrical, transport equipment. Ii) Mainly export related items consist of pearls, precious and semi-precious stones, organic and inorganic chemicals, textile,

yarn and fabrics, nuts etc. iii) Artificial resins and plastic materials, professional and scientific instruments, coal and coke, chemicals, medicinal and mineral manufactures etc.

Trends of Principal Imports

1. **Food grains:** The imports of food grain were necessitated by the partition of the country and the growing demand for food for the rising population. The average annual imports of food grain which were about Rs.120 crores being the first plan rose to Rs.161 crores during the second plan. Subsequently in 2006-07 food grains worth Rs.4036 crores were imported. In the year 2010-11 food grain were just Rs.523 crores.
2. **Machinery:**imports of machinery include material and non-electrical equipment as also locomotives. The annual average during the third plan rose to Rs.472 crores. Machinery imports were Rs.1350 crores per annum during 1980-81. Machinery imports further went up to Rs.2, 33,831 crores during 2010-11. The increasing import of machinery is an indicator of our growing industrialization as well as our failure to develop our own technology and indiscriminate liberalization in import policy.
3. **Petroleum, Oil and Lubricants (POL):** Imports of POL are also on the boost. India is short on the supply of mineral oils, mainly petroleum product. The prices of crude oil prices increased during 1973-74 and later during, 1980-1981 imports of petroleum, oil and lubricants to very high level of Rs. 5,264 crores. Import of POL reached a record level of Rs.4, 82,714 crores about 30.1 per cent of total imports in 2009-10.
4. **Chemicals, drugs and medicines:** There has been an increase in the imports of chemicals, medicines and drugs. The annual average of these items was about 55 crores during the third plan of India. Imports of chemicals, drugs and medicines rose to Rs.113 crores per annum during the fourth plan. It further rose to Rs.1, 868 crores during 1985-86 and 1989-90. They rose further to Rs.23, 450 crore during 2010-11.
5. **Metals:** India imports steel and iron and nonferrous metals. The annual average import of ferrous and non-ferrous metal which were about Rs.54 crores during

first plan of India, which is gone up rapidly with every plan and were about Rs.2450 crores during 1989-90. Import of metals on such large scale in necessitated by the vast program of industrial expansion of hydroelectric plants and development of railways.

6. **Pearls and precious stones:** The import of pearls and precious stones averaged Rs.417 crores during 1980-81 and further also increased to Rs.22, 100 crores during 2000-01. In the same sense the exports of pearls and precious stones were of the order of Rs.1, 42,437 crores during 2010-11.
7. **Fertilizers:**following the adoption of the New Strategy in Indian agriculture, the imports of fertilizers were stepped up. With a rapid increased in the international prices of fertilizers, fertilizer imports rose to Rs.818 crores in 1980-81 and further shot up to Rs.3,234 crores in 2001 and also grown to Rs.31,818 crores during 2010-11.

Pattern of Exports

Exports of India are broadly classified into four categories i.e., i) Agriculture and allied products; include tea, coffee, tobacco, sugar, raw cotton, rice, fish, vegetable oils, fruits and pulses ii) Ores and minerals such as; mica ore, iron etc. iii) Manufactured goods such as textiles and ready-made garments, jute, leather, handcrafts, stones, engineering goods, iron and steel iv) Mineral fuel and lubricants.

Exports of Principal Commodities

1. **Tea and Coffee:** Tea and Coffee are important products of Indian exports. The average annual exports of tea were Rs. 106 crores during the first plan period. Tea exports further picked up to touched Rs.195 crores in 1960-61. But later they declined. Tea exports earned Rs.3114 crores in 2010-11. Coffee exports have been rising till 2010—11 when they reached Rs. 2913 rupees crore.
2. **Readymade garments:** To look of readymadegarments the exports of readymade garments have show significant improvement. These exports were Rs.91 crore in 1970-71. They jumped to Rs. 196 crores in 1974-75. During the 2010-11 readymade garments exports were Rs.51, 047 crores.

3. **Leather and leather manufactures:** One of the traditional items of Indian exports is raw hides and skins. But recently, in the exports of this item, the proportion for leather and leather manufactures to raw hides and skins is on the increase. This is really a healthy development. In 1979-80 export were Rs.486 crores exports and rose further to Rs.17265 crores during 2010-11.

4. **Handicrafts:** Handicrafts also main product of exports of India. The exports of Indian handicrafts assumed great importance in the 1970's. From a low level of Rr.70 crores in 1970-71 they increased to Rs.120 crores in 1972-73 and stood at Rs.29330 crores in 1998-99. As the single largest item of exports in handicrafts, during 2010-11 handicrafts exports were Rs.1, 866,915 crores out which jewellery accounted for a major share.

5. **Engineering Goods:** The exports in this category also include iron and steel, electronic goods and computer software. Rs.827 crores found in 1980-81 but these exports started picking up since 1990-91 they were of the order of Rs.3, 872 crores. During 2010-11 these exports have shot up Rs.1, 81,575 crores accounting for 15.7% of total exports.[10]

1.4.3 DIRECTION OF INDIA'S FORIGN TRADE

India is playing important role in international trade since pre independence, pre and post reforms period. In order to study the direction of India's foreign trade, we can classify the world into four broad groups. viz., America, Europe, Asia and Oceania and Africa.So far the American continent is concerned India had strong trade relations with North America comprising USA and Canada too. USA is the dominant country in America. The countries of Latin America and other American countries did not develop trade relations of much significance. Following table shows the direction of India's foreign trade.[11]

Table No. 1.1

Direction of India's Foreign Trade–($ US Million)

Group /Country	2015-16		2016-17		2017-18		2018-19		2019-20	
	Export	Import	Export	Import	Export	Import	Export	Import	Export	Import
I.OECD Countries	6,59,910	7,19,138	7,00,520	7,32,885	7,70,981	8,16,989	8,95,947	10,12,264	8,78,953	9,41,581
European Union	2,92,013	2,87,396	3,17,169	2,84,307	3,45,463	3,08,623	3,99,762	4,08,324	3,80,877	3,62,300
NorthAmerica	2,77,067	1,70,471	2,96,444	1,77,382	3,24,756	2,02,044	3,86,416	2,73,210	3,96,486	2,79,667
Asiaand Oceania	53,780	1,26,258	47,691	1,43,664	58,637	1,65,094	61,231	1,85,320	54,887	1,60,911
OtherOECDCountries	37,050	1,35,012	39,216	1,27,532	42,125	1,41,228	48,538	1,45,410	46,703	1,38,704
OPEC	3,02,570	5,87,977	3,02,967	6,20,585	2,85,590	7,04,829	3,40,519	9,55,488	3,41,229	8,77,719
EasternEurope	15,828	46,383	18,906	62,511	19,575	83,294	24,539	66,063	30,029	84,865
DevelopingCountries	7,20,272	10,78,148	8,09,039	11,11,682	8,63,229	13,35,986	10,25,081	15,59,826	9,49,695	14,50,156
Asia	5,03,851	8,66,565	5,93,900	8,94,319	6,44,809	10,69,480	7,59,430	12,58,757	6,79,186	11,89,421
SAARC	1,21,700	19,459	1,28,911	18,873	1,48,923	20,640	1,77,255	30,564	1,55,118	27,196
OtherAsianDeveloping Countries	3,82,150	8,47,106	4,64,989	8,75,446	4,95,886	10,48,840	5,82,175	12,28,193	5,24,068	11,62,224
South Africa	1,41,708	1,21,563	1,35,796	1,20,571	1,38,414	1,46,167	1,68,920	1,70,517	1,72,299	1,54,403
LatinAmericanCountries	74,714	90,021	79,343	96,792	80,006	1,20,339	96,731	1,30,553	98,210	1,06,332
Others	1,590	1,734	1,446	855	1,478	634	1,311	407	944	756
Unspecified	16,214	56,926	16,555	49,157	15,662	59,301	20,329	626	17,383	685
Total	**17,16,384**	**24,90,306**	**18,49,434**	**25,77,675**	**19,56,515**	**30,01,033**	**23,07,726**	**35,94,675**	**22,18,233**	**33,55,762**

Note: Data for 2018-19 are revised and for 2019-20 are provisional
Source: Directorate General of Commercial Intelligence and Statistics.

Our trade with the countries in ASIA, SAARC andOECD countries has been great significance. India's export of these countries increased (in year 2015-2016 export – 659910($ US Million) and 2019-2020 export - 878953($ US Million). However, due to increasing importance acquired by the imports of crude oil OPEC countries have very great significance in our imports.

India had a great potential for increasing her foreign trade with Asian countries, because the Indian manufactures are readily acceptable in these countries. Similarly, India can

import raw materials for her growing industries from these relatively less – developed region. This is the fact that during 2018 – 2019, 1559826($ US Million) imports from this developing countries, whereas in the year 2015 – 2016, 720272($ US Million)

1.5 TRADE POLICY OF GOVERNMENT OF INDIA

Trade policy played an important role in the development of the advanced countries. India however didn't have a clear trade policy before independence, though there was some type of import restriction which was adopted in 1923 to protect a few domestic industries against foreign competition. We can see the clear picture of India's trade policy after independence it was after independence that a trade policy was formulated as part of the general economic policy of development. Advanced countries like Germany, U.S.A., Japan and others used their trade policy to restrict their imports and provide a sheltered market for their own industries so that they could develop rapidly, promote their exports so that their expanding industries could secure foreign markets.

1.5.1 MAIN FEATURES OF INDIA'S TRADE POLICY

On the Import side

On the import side, India has been in a disadvantageous position vis-à-vis advanced countries which are capable of producing and selling almost every commodity at low prices. This meant that India could not develop any industries without protecting if from foreign competition. Import restriction: Commonly known as protection was thus essential to protect domestic industries and to promote industrial development. Since Independence, Government has restricted foreign competition through a judicious use of import licensing, quotas on import, import duties, banning import of specific goods. Under second five year plan India adopted The Mahalnobis strategy of economic development through heavy industries. The strategy included i) banning or keeping to the minimum the import of non-essential consumer goods ii) comprehensive control of various items of imports iii) liberal import of machinery, equipment and other developmental goods to support heavy-industries based economic growth and iv) favourable climate for the policy of import substitution.

On the Export side

To minimise dependency on foreign countries it was very necessary to expand exports. The Indian market for many goods within India may not be adequate to absorb that the entire domestic production and hence a search for market elsewhere was a necessity. The Indian Government had to play an important role to promote exports through setting up trading institution. Vigorous export promotion was emphasised after the second five year plan to earn foreign exchange to overcome the acute foreign exchange crisis. In the 1970's importance of export promotion was again emphasised because of mounting debt services obligations and the goal of self-reliance.[12]

1.5.2 PHASE OF INDIA'S TRADE POLICY

Five distinct phases in India's trade policy can be identified the first phase pertains to period 1947-48 to 1951052. The second phase 1952-53 to 1956-57 and the third phase after 1956-57 to June 1966 fourth phase started after devaluation of the Indian Rupees in June 1966 and the last phase after 1975-76.

Pre reform period

First Phase

During the first plan i.e. first phase 1951-52, India could have liberalised imports but on account of the restrictions placed by the United Kingdom on the utilisation of the sterling balances, some wartime controls found in this period. Since balance of payment of India with the dollar area was heavily adverse, an effort was made to screen imports from hard currency areas and boost up exports to this area so as to bridge the gap. This also necessitated India to devalue currency in 1949. By and large, the import policy continued to be restrictive during this period.

Second Phase

During the second phase 1952-53 to 1956-57, liberalisation of foreign trade was adopted as the goal of trade policy. In this period import licences were granted in a liberal manner. Liberalisation led to a tremendous increase in India's imports but exports did not rise appreciably. Consequently, there was fast deterioration in foreign exchange reserves. This necessitated a reversal of trade policy of India.

Third Phase

The third phase began in 1956-57. The trade policy was re-oriented to meet the requirements of planned economic development. The restriction found in this period on Import of various goods but export promotion drive was launched in this period too. Import substitution industries also encouraged so that dependence on foreign countries be lessened. It was in this period that India's trade policy was thoroughly reviewed by the Mudaliar committee and was launched 1962.

Fourth Phase

The fourth phase started after the devaluation of the India's rupees in June 1966. During this period the trade policy tired to expand exports and strangely liberalised imports too. The Mudaliar committee (1962) focus on export promotion, the acceptance and implementations of export of various export-oriented goods. During the fourth plan period the trade policy was quite successful in restricting imports and promoting exports, this period continued till 1975-76.

Fifth Phase

During the phase of 1975-76 the Government adopted a policy of import liberalisation, with a view to encourage export promotion. During Janata rule (1977-79) import liberalisation was also adopted to augment domestic supply of essential goods and to check rise in price level of various goods in domestic level. The Government attempted to achieve various objectives i.e. to provide further impetus to exports, to provide support to the growth of indigenous industry, optimum utilisation of the resource endowments, to

facilitate technology up gradation for export promotion goods, emphasis on manufacturing industries. Thus it is clear that the purpose of trade policy in this period has been to stimulate economic growth and export promotion via import liberalisation.

While framing the import-export policy in 1985, the Government was guided by the recommendations of Abid Hussain Committee. Whereas the Committee emphasized the need for striking a balance between export promotion and import substitution, some import liberalisation permitted and capital goods imports for technological up gradation. Thus some distortion appeared in the process of implementation of the recommendations of the committee.

The first major attempt at liberalisation was made by the Rajiv Gandhi Government. As a result in the four years from 1985 to 1990, exports surged forward and the period witnessed a record average annual growth of 17% in dollar terms, but unfortunately exports declined by 9% in 1990-91.

Reform period

Indian government announced a new Import-Export policy on 30th April 1990 for 3-year period. Improvement in our balance of payments position can be achieved not so much through import curtailment as through promotion of exports. The new policy has, therefore, provided further momentum to the ongoing process of liberalisation with emphasis on strengthening the impulses of industrial and export growth. The main features of this policy; List of items imported under Open General Licence (OGL) were expanded to facilitate easy access to import of items that are not available within the country. OGL was increased from 1,261 to 1,343, imports of certain raw materials such as petroleum products, fertilizers, oils, cereals, phosphoric acid, ammonia etc. as well as registered exporters the concept of net foreign exchange earnings was made a guiding criterion for issue of licences there under.

1.5.3. INDIA'S FOREIGN TRADE POLICY 1991

Commerce Minister, P. Chidambaram announced a Trade Policy for India on 4th July 1991. For several decades, trade policy of India has been formulated in a system of administrative controls and licenses. This system has led to delays, waste, inefficiency and corruption. The Government decided that while all essential imports like POL, fertilizer and edible oil should be protected; all other imports should be lined to exports by enlarging and liberalizing the replenishment licence system. All exports had been a uniform Replenishment rate of 30% of the f.o.b. value. As well as new Replenishment scheme gave maximum incentive to exporters whose import intensity was low. Agriculture exports which earlier had very low replenishment of 5% or 10% were expected to gain considerably. In the light of the substantial liberalisation of the trade regime, and also the changes in exchange rates (after devaluation), Cash Compensatory Schemes (CCS) was abolished from 3rdJuly 1991.

Export-Import Policy 2002-2007

Union Commerce and Industry Minister Mr. Murasoli Maran announced the EXIM policy for 2002-2007 dated 31st March 2002. The main focus of the policy was to push India's exports aggressively by undertaking several measures aimed at augmenting exports of farm goods, the small scale industries, textiles, gems and jewellery and electronics hardware etc. This policy also focused on to reduce transaction cost to trade through a number of measures to bring about procedural simplifications. Under this policy Special Economic Zones (SEZ) developed, Indian banks were allowed to set up Offshore Banking Units (OBUs) in SEZ. This policy also measures about help employment orientation in agriculture, cottage sector and handicrafts.

Foreign Trade Policy 2004-2009

Union Commerce and Industry Minister Mr.Kamal Nath announced the Foreign Trade Policy for the 2004-2009 dated on 31st August 2004. The objectives of this Foreign Trade Policy are two side i.e., to double India's percentage share of global merchandise trade from 0.7 % in 2003 to 1.5% in 2009 and to act as an effective instrument of economic

growth by giving a thrust to employment generation especially in semi-urban and rural areas. The key strategies to achieve these objectives are; unshackling of controls, creating an atmosphere of trust and transparency.

Foreign trade policy 2009-14

The Foreign Trade Policy 2009-2014 announced on 27th August 2009 by Anand Sharma Minister Commerce and Industry. The main initiatives has been taken under this policy; 29 new countries have been included within the ambit of Focus Market Scheme(FMS), for this incentives provided to FMS increased from 2.5% to 3%. Under this policy exports andimports shall be 'Free' except when regulated under the FTP(Foreign trade policy). Direct or indirect export and import of all items, materials, equipment, goods and technology which could contribute to Iran's enrichment-related, reprocessing or heavy water related activities, or to development of nuclear weapon delivery systems, as mentioned below, whether or not originating in Iran, to / from Iran is 'Prohibited. Direct or indirect import of charcoal is prohibited from Somalia, irrespective of whether or not such charcoal has originated in Somalia [United Nations Security Council Resolution 2036 (2012)]. Importers of Charcoal shall submit a declaration to Customs that the consignment has not originated in Somalia. Any goods / service, the export or import of which is 'Restricted' may be exported or imported only in accordance with an Authorization / Permission/ License or in accordance to the procedure prescribed in a notification / public notice issued in this regard. No export or import shall be made by any person without an IEC (Importer Exporter Code) number unless specifically exempted. As well as under this policy, to reduce transaction and handling costs, a single window system to facilitate export of perishable agricultural produce has been introduced.[13]

1.6 INDIA AND REGIONAL CO – OPERATION

All around the world India having potential superpower and has a growing international influence. India has been emerging as a prominent ally in world affairs. India has not only having a regional power but also having strong nuclear power in the global. India has a great history of collaboration with several countries and groups. India Acted as a prominent member of several international organizations and also been founder member of some of the organization. India always played a pivotal and influence role in various organization like World trade Organization, International Monetary Fund and Shanghai cooperation organization etc.

Table no. 1.2 India's various Regional Co – operations

Sr. No.	Organization Name Establishment Year /Head quarter	Member Countries	Objective	Logo
1.	The Association of Southeast Asian Nations (ASEAN) 8 August 1967 Jakarta, Indonesia	Member Countries 1. Brunei Darussalam 2. Cambodia 3. Indonesia 4. Laos 5. Malaysia 6. Myanmar 7. Philippines 8. Singapore 9. Thailand 10. Vietnam ASEAN Dialogue Partners 1. Australia 2. Canada 3. China 4. EU 5. India (1995) 6. Japan 7. ROK 8. New	to accelerate economic growth, social progress and cultural development in the region and to promote regional peace and stability through abiding respect for justice and the rule of law in the relationship among countries in the of the region and adherence to the principles of the United	ASSOCIATION OF SOUTHEAST ASIAN NATIONS asean

		Zealand 9. Russia 10. United States of America 7 Other Countries 1. Bangladesh 2. DPRK 3. Mongolia 4. Pakistan 5. Papua New Guinea 6. Timor Leste 7. Sri Lanka	Nations Charter.	
2.	**Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC)** June 1997 Dhaka, Bangladesh	India , Thailand, Myanmar, Nepal, Bangladesh, Sri Lanka, Bhutan	BIMSTEC is an inter regional Grouping that seeks to foster regional and economic cooperation among nations in the littoral and adjacent area of the bay of Bengal	
3.	**General Agreement on Tariffs and Trade (GAAT)** **1 January 1948 Geneva**	Australia, Belgium, Brazil, Burma, Canada, Ceylon, Chile, China, Cuba, Czechoslovakia, France, India, Lebanon, Luxembourg, Netherlands, New Zealand, Norway, Pakistan, Southern Rhodesia, Syria, South Africa, United Kingdom and the United States.	To promote international trade by reducing or eliminating trade barriers such as tariffs or quotas.	

4.	**Group of 15 (G-15)** September 1989 Geneva, Switzerland	Algeria, Egypt, Kenya, Nigeria, Senegal, and Zimbabwe India, Indonesia, Iran, Malaysia, and Sri Lanka. Latin Argentina, Brazil, Chile, Jamaica, Mexico, Peru and Venezuela.	Act as a catalyst for greater cooperation between leading developing countriesin the areas of investment, trade, and technology.	
5.	**Group of 20 (G-20)** September 1999 Cancun, Mexico	Argentina, Australia, Brazil,Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, the United Kingdom (UK), and the United States.	1. Policy coordination between its members in order to achieve global economic stability, sustainable growth; 2. Promoting financial regulations that reduce risks and prevent future financial crises; 3. Modernizing international financial architecture.	
6.	**International Monetary Fund (IMF)** December 1945 Washington DC, US	190 countries (189 UN countries)	To promote international monetary co-operation, international trade, high employment, exchange-rate stability, sustainable economic growth, and making resources available to	

			member countries in financial difficulty.	
7.	**South Asian Association for Regional Cooperation (SAARC)** December 1985 Kathmandu, Nepal	Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka	1. Promote the welfare of the peoples of South Asia and improve their quality of life 2.Accelerate economic growth, social progress and cultural development in the region by providing all individuals the opportunity to live in dignity and realize their full potential	
8.	**Shanghai Cooperation Organization (SCO)** April 1996 Beijing, China	China, India, Kazakhstan, Kyrgyzstan, Russia, Pakistan, Tajikistan and Uzbekistan	Strengthening mutual confidence and good-neighborly relations among the member countries; promoting effective cooperation in politics, trade	

			and economy, science and technology, culture as well as education, energy, transportation, tourism, environmental protection and other fields; making joint efforts to maintain and ensure peace, security and stability in the region, moving towards the establishment of a new, democratic, just and rational political and economic international order.	
9.	**United Nations Educational, Scientific and Cultural Organization (UNESCO)** November 1946 London, Uk	193 Members and 11 Associate Members including India	To contribute to the building of a culture of peace, the eradication of poverty, sustainable development and intercultural dialogue through education, the sciences, culture, communication and information.	

10.	**World Trade Organization (WTO)** 1 January 1995 Geneva, Switzerland	164 members including India	It operates a global system of trade rules, it acts as a forum for negotiating tradeagreements , it settles trade disputesbetween its members and it supports the needs of developing countries.	

Source: https://mea.gov.in/regional-organisations.htm, http://asean.org/, http://en.g20russia.ru/docs/about/about_G20.html, https://www.imf.org/en/About, https://mfasia.org/mfa_programs/advocacy/south-asian-association-for-regional-cooperation/,https://en.unesco.org/countries

1.7 RISING OF BRICS

The contemporary world order is witnessing an increase in the number of economic congregations and inter-governmental various organisations. These organizations are formed for enhancing co-operation between member countries on various issues. One such area is to faster trade between member countries. To take the protection on global level countries are forming trade blocs where regional barriers to trade (tariffs and non-tariff barriers) are reduced among the participating countries. In general terms, regional trade blocs are associations of nations at a governmental level to promote trade within the bloc and defend its members against global competition. Since trade is not an isolated activity, member states within regional blocs also cooperate in economic, political, security, climatic and other issues affecting the region.

In terms of size and trade value, there are a larger number of blocs of regional importance as ASEAN, EU, NAFTA, G7, SAARC, BRICS etc. Most of these blocs either belong to the same geographical region or are similar in some aspect. BRICS does not exist in form of organization, but it is an annual summit between the supreme leaders of five nations. The term was coined by renowned economist Jim O Neil in 2001, as an acronym for the four countries,(Brazil, Russia, India and China) which were deemed to be at a similar stage of newly advanced economic development. The leaders of the four countries held

their first summit in 2009 and in 2010 BRIC became a formal institution. South Africa began efforts to join the BRIC grouping and on December 24, 2010, was invited to join BRICS.The original aim of BRICS was the establishment of an equitable, democratic and multi-polar world order,but later BRICS became a political organization, especially after South Africa joined. O'Neill told the 2010 summit that South Africa, at a population of fewer than 50 million people, was just too small as an economy to join the BRICS ranks. The future of BRICS as an emerging economic group is questionable. In 2012, a book with the title Breakout Nations argued that it is hard to sustain rapid growth for more than a decade. Various sources refer to a purported "original" BRIC agreement that predates the Goldman Sachs thesis. Some of these sources claim that President Valdimir Putin of Russia was the driving force behind this original cooperative coalition of developing BRIC countries. However, thus far, no text has been made public of any formal agreement to which all four BRIC states are signatories. This does not mean, however, that they have not reached a multitude of bilateral or even quadrilateral agreements. Evidence of agreements of this type is abundant and is available on the foreign ministry websites of each of the four countries.[14]

1.7.1 THE REASON BEHIND FORMING/ COLLABORATION OF BRICS

Following are the reasons behind forming of BRICS

1. Not only do these communities have financial power but also having ability to face the challenges of economic development.
2. The BRICS have profoundly influenced the direction of world trade and investment.
3. BRICS represents one of the prominent institutional manifestations of emerging powers to assert their interests and worldviews.
4. BRICS countries are facing similar challenges, because these are big countries in both area and population.

5. The aim of these member countries to create alternative goal infrastructure in economic and financial fields.
6. Member countries want to make proper utilization of Natural Recourses and use of their untapped economy through collaboration.
7. Member countries want to expand the markets in their region as the countries are gateways into macro regions like South Africa for African region, Brazil for Latin American region

BRICS is an informal group of states comprising the Federative Republic of Brazil, the Russian Federation, the Republic of India, the People's Republic of China and the Republic of South Africa. It was the Russian side that initiated the creation of BRICS. On 20 September 2006, the first BRICS Ministerial Meeting was held at the proposal of Russian President Vladimir Putin on the margins of a UN General Assembly Session in New York. Foreign ministers of Russia, Brazil and China and the Indian Defence Minister took part in the meeting. They expressed their interest in expanding multilateral cooperation. On 16 May 2008, Yekaterinburg hosted Meeting of BRICS Foreign Ministers on the initiative of Russia. After the meeting, a Joint Committee was issued, reflecting common stances on topical global development issues. Another important step was taken on 9 July 2008, when Russian President Dmitry Medvedev met with Brazilian President LuizInacio Lula da Silva, Indian Prime Minister Manmohan Singh and Chinese President Hu Jintao on the margins of the G8 Summit in Toyako, Japan, on the Russian initiative. On the Russian initiative on 16 June 2009, Yekaterinburg hosted the first BRIC Summit. BRIC Leaders issued a joint statement after the Summit. The document set forth the goals of BRIC "to promote dialogue and cooperation among our countries in an incremental, proactive, pragmatic, open and transparent way. The dialogue and cooperation of the BRIC countries is conducive not only to serving common interests of emerging market economies and developing countries, but also to building a harmonious world of lasting peace and common prosperity." The document outlined a common perception of ways to cope with the global financial and economic crisis. BRICS is one

of the main driving forces of global economic development, their substantial population and abundant natural resources form the foundation of their influence on the international scene.[15]

In 2013, BRICS accounted for about 27 percent of the global GDP (in terms of the purchasing power parity of their national currencies). The total BRICS population is 2.88 billion (42 percent of the entire global population), and the five countries cover 26 percent of the planet's land. BRICS countries are influential members of leading international organisations and agencies, including the UN, the G20, the Non-Aligned Movement and the Group of 77. They are also members of various regional associations. The Russian Federation is a member of the Commonwealth of Independent States, the Collective Security Treaty Organisation and the Eurasian Economic Union. Russia and China are members of the Shanghai Cooperation Organisation and the Asia Pacific Economic Cooperation. Brazil is a member of the Union of South American Nations, MERCOSUR and the Community of Latin American and Caribbean States. The Republic of South Africa is a member of the African Union and the Southern African Development Community. India is a member of the South Asian Association for Regional Cooperation. Relations between BRICS partners are built on the UN Charter, generally recognised principles and norms of international law and the following principles, which were agreed by member countries at their 2011 Summit: openness, pragmatism, solidarity, non-bloc nature and neutrality with regard to third parties. BRICS work is based on action plans approved during annual summits since 2010. The system of cooperation formats between BRICS countries includes annual scheduled summits (2010 – Brazil; 2011 – China; 2012 – India; 2013 – South Africa; 2014 – Brazil; 2015 - Russia; 2016 - India), leaders' meetings on the side-lines of G20 summits, meetings between high representatives responsible for national security, foreign ministers (on the side-lines of the UN General Assembly), ministers of finance and governors of central banks (on the side-lines of autumn and spring meetings of the International Monetary Fund and World Bank boards of governors and also on the side-lines of meetings of G20 ministers of finance), ministers of agriculture and agrarian development, BRICS Sherpa's and sous-Sherpa's, heads of statistical and anti-monopoly departments, senior officials for science and technological and innovation cooperation, meetings of working cooperation groups

for agriculture and agrarian development, healthcare, information security, science and innovation, meetings of chairpersons of supreme (high) courts, heads of central election commissions, and representatives of municipal administrations and partner regions. Cooperation between national BRICS permanent missions at the UN Headquarters in New York, at international organisations in Geneva and Vienna and at UNESCO in Paris plays an important role in the mechanism of multilateral cooperation. Apart from joint events involving executive agencies and the judiciary branch, business organisations and research centres cooperate within the BRICS format. In 2009-2016 BRICS countries focused on the following joint priorities. They worked out a common stance on certain regional problems, including the Libyan, Syrian and Afghan problems and the Iranian nuclear programme. They also reached common agreement on financial and economic issues, including World Bank and IMF reforms, measures to ensure that sufficient resources can be mobilized to the IMF to strengthen its anti-crisis potential, the creation of BRICS Interbank Cooperation Mechanism which provides for Extending Credit Facility in Local Currency and the establishment of the BRICS Exchanges Alliance.

BRICS is successfully expanding its external relations that were established at the Durban meeting between the five BRICS leaders, the leaders of the African Union and the leaders of eight leading African integration associations. On 16 July 2014, Brasilia hosted the second meeting in this format involving South American heads of state and government.

This practice makes it possible to find important points of contact between BRICS and new leading centres of power that are emerging worldwide. The 6th BRICS Summit (Fortaleza and Brasilia, 15-16 July 2014) produced a highly important result. The sides signed the Agreement on the New Development Bank and the Treaty for the Establishment of a BRICS Contingent Reserve Arrangement. These institutions will possess a total of $200 billion. The Leaders also adopted a key decision on launching comprehensive talks regarding the BRICS Strategy for Economic Partnership and a draft BRICS Roadmap for BRICS Trade, Economic and Investment Cooperation. The sides also coordinated subsequent joint steps in topical areas of cooperation such as the resolution of conflicts, IMF reform, the fight against illicit drug trafficking, the use and

development of information and communications technologies on the basis of international cooperation and generally recognised principles and norms of international law and the creation of favourable conditions for barrier-free trade. During the VII Summit (Ufa, 8-9 July 2015) BRICS leaders signed Ufa Declaration, Ufa Plan of Actions and Strategy for BRICS Economic Partnership that confirmed the strategic character of BRICS countries partnership and determined the directions of five countries long-term cooperation. Within the framework of the summit a Memorandum of Understanding to establish BRICS joint website board and the Agreement between the BRICS Governments of cultural cooperation were signed. BRICS leaders reached an agreement to open a number of new spheres of cooperation, initiated by the Russian Presidency – in the field of youth, migration, industry, energy, peacekeeping, environment, fight against infectious diseases etc.

The Russian side also presented a Roadmap for trade-economic and investment cooperation between the BRICS countries up to 2020 year, which currently includes more than 60 proposals of cooperation from Russian companies. In 2016, India became the head of the Association. The culmination of its presidency was the eighth summit of BRICS, which was held in the Indian state of Goa on 15-16 October. Its motto was "The Formation of popular, inclusive and collective decisions". The leaders of five countries signed the Declaration of Goa, which expressed a coherent position on issues related to the development of the Association and critical issues. At the summit in Goa were discussed the issues of energy, trade, banking cooperation, agriculture, space utilization and other common spaces, health, education, development of humanitarian contacts and tourism, the fight against poverty and social inequality. In addition to the Declaration was signed a number of sectoral agreements. The BRICS presidency in 2017 were transferred to China, in 2018 - to South Africa, in 2019 - to Brazil and in 2020 - to Russia.[16]

Table No. 1 .3 Macro Economics Details of BRICS (*Average growth)

Country	GDP(US$ bn)		Real GDP Growth (%)		Population		Inflation (average consumer prices,%)		Exports (US$ bn)		Imports (US$ bn)		Current account balance (US$ bn)	
	2006	2015	2006	2015	2006	2015	2006	2015	2006	2015	2006	2015	2006	2015
Brazil	1,107.6	1,772.6	4.0	-3.8	1,314.5	1,374.6	4.2	9.0	137.8	191.1	91.3	171.4	13.0	-58.9
Russia	1,055.9	1,324.7	8.2	-3.7	142.8	146.3	9.7	15.5	301.6	343.9	137.8	182.8	92.3	65.8
India	949.1	2,090.7	9.3	7.6	187.3	204.5	5.7	4.9	121.2	264.4	178.2	390.7	-9.6	-26.2
China	2,751.9	10,982.8	12.7	6.9	1,130.0	1,292.7	1.5	1.4	968.9	2,281.9	791.5	1,681.7	231.8	293.2
South Africa	271.8	313.0	5.6	1.3	48.0	55.0	4.7	4.6	52.6	69.6	68.5	79.6	-12.2	-13.7
BRICS	**6,136.4**	**16,483.8**	**7.9***	**1.6***	**2,822.6**	**3,073.0**	**5.2**	**7.1**	**1,582.1**	**3,150.9**	**1,267.3**	**2,506.2**	**315.5**	**260.2**

Source: IMF, WorldEconomicOutlook, April2016andJuly2016Update;andEximBank Analysis

1.7.2 OBJECTIVES OF BRICS

The important objectives of BRICS include –

- Reforms of the Breton Woods institution and the international monetary system:
- The establishment and institutionalization of mechanisms to correct balance of trade imbalances between the North and South:
- Strengthening coordination and cooperation among states in the energy field, including amongst producers and consumers of energy and transit states:
- The facilitation of technology transfer and the promotion of endogenous technological development:
- To ensure global security - The extension of assistance to the least developed countries as well as the strengthening of mutual economic, trade, financial, science, and technological cooperation among the developing countries.

- The motivation behind these reform objectives of BRICS are two-fold; first, to correct the historically inherited disparities and second, to reduce global dependence on the US dollar.

- One of the major objectives of the grouping is broadening, deepening, and intensifying cooperation among the member countries for mutually beneficial, sustainable and equitable development.

- Every member's growth and development are considered to ensure that relations are built on the economic strengths of individual countries and eliminate competition wherever possible.
- Such diverse objectives allow BRICS to emerge as an innovative and encouraging Political-Diplomatic entity that was earlier formed just to resolve the global financial issues and reform institutions.

The BRICS countries encompass 30% of the world's area and about 42% of the total population. BRICS countries have become the largest producers and consumers of goods. They accounted for a total nominal GDP of Dollar 16.92 trillion (2011), equivalent to 23.1% of the world GDP. All of the "BRICS" nations have succeeded in increasing their Gross Domestic Product since 2000. Each nation has unique resources and attributes that make it an economic power house. China has greater potential in manufacturing, Russia having larger capacity oil and natural resources, India having power of information technology and competence of English language. Brazil is having many exportable resources and tourism sector and South Africa has a large amount of precious metals and produces approximately 45 percent of the continent of Africa's electricity.[17]

Cooperation in the BRICS is likely to be enhanced for the sake of competitive advantage in the context that the BRICS economies have great potential for economic growth and expansion to the next level. This case looks at areas where more cooperation in BRICS economics can be explored. It is important to note that all the proposals put forward in this case can contribute to the coordinating relationship between the BRICS economies. But while their political technical feasibility has not yet been determined, further discussions may be necessary for their implementation. The areas of cooperation listed

below should be seen as exploratory issues for further discussion and inclusion in the agenda of future meetings between policy makers.

1.7.3THE AREA OF COOPERATION

1. Cooperation in Food security
2. Cooperation in Energy security
3. Intra – BRICS trade and Investment cooperation
4. Cooperation in Transportation
5. Cooperation in Infrastructure Financing
6. Industrial Development and cooperation
7. International Development Bank
8. Cooperation in Technical Education
9. Cooperation in Research and Development
10. Cooperation in Financial Market Development
11. Cooperation in Area of Culture and Tourism
12. Cooperation in Build Effective Institution
13. Cooperation in International Issues

1. Cooperation in Food Security

1. By raising agricultural productivity and output

2.Promoting investment in the food supply chain

3.Developing a social safety net through conditional income transfer programs for the poorest

4. Taking initiative including the creation of the basic agricultural information exchange system of BRICS countries.

5. to reduce the negative impact of climate change on food security adapting agriculture to climate change and enhancing agricultural technology cooperation and innovation as well as through promotion of trade and investment in agriculture

6. Research capabilities and expertise are already available in BRICS economies to raise production through increasing yields and to extend cultivation to previously non – cultivable land.

2. Cooperation in Energy security

1. Research and cooperation in renewable energy sources like solar, wind, tidal, biomass and hydro-eclectic power would be important area of cooperation and would go a long way in increasing energy security among the BRICS and other emerging economies.

2. Better supervision of long-term exchange agreements to determine future oil supply prices, cooperation in oil exploration and refining, increasing supply of natural gas through pipelines and multilateral coordination for the establishment of liquefied natural gas (LNG) terminals, increasing the share of renewable energy in energy use and promoting conservation.

3. Intra BRICS Trade and Investment cooperation
1. In order to build trade and investment relations, BRICS countries should work together to identify areas, regions and markets that have the potential to expand trade and investment to drive productive sectors for mutual benefit, avoiding destructive competition. 2. The BRICS banking sector can play a key role in promoting trade and investment through innovative trade financing facilities, export credit arrangements and countermeasures that cannot cope with the downturn affecting trade-offs like the recent global crisis.

4. Cooperation in Transportation
1. There is room for collaboration in creating effective and efficient. Transport links in BRICS through initiatives like sharing of Transportation technology. The BRICS countries can also learn and Share experience of developing a Mass Rapid Transport System.

5.Cooperation in Infrastructure Financing
1. There is also Opportunity to find ways to increase compatibility between BRICS countries, to promote infrastructure development at the regional level. 2. There is scope for mutual cooperation to solve problems. 3. BRICS to increase the availability of infrastructure financing. 4. Tax benefits may also be provided for investing in infrastructure bonds, as is being done in India. 5. Public-private partnerships can help to build infrastructure. When BRICS economies need infrastructure, They can be encouraged 6. Bidding for road, railway, airport and port projects in BRICS, a Measure that will help create a BRICS-wide infrastructure market.

6. Industrial Development and cooperation
1. Sharing technology, skills and research in the industrial sector. This is another important area of cooperation in the BRICS. Exchange Experience on strategic measures undertaken by BRICS countries Promoting industrial development can be a valuable sector Cooperation with the promotion of industrial production Network in BRICS. 2. Also can contribute to improving cooperation in such areas In skills and technology, which will lead to higher growth of BRICS Economy

7. International Development Bank
1. To protect against emerging risks and uncertainties and to meet the challenges of development Countries. It is important for the BRICS countries in collaboration with other relevant partners, a establishment like International Development Bank for conservationEmerging markets and investments in developing countries. 2. The proposal for the International Development Bank to promote investment in emerging markets and even in developing countries, to mobilize resources to achieve their development objectives.

8. Cooperation in Technical Education
1.Cooperation between BRICS organizations through skill transfer and shared courses, and organized youth and professors exchange program 2.Help to improve the quality of BRICS technical education 2.The chain may also encourage the establishment of certain organizations 4.If local laws and rules allow, then to set up Campuses in other BRICS countries on a reciprocal basis

9. Cooperation in Research and Development
1. To improve cooperation between the BRICS countries, there is a need to conduct research studies at the inter-governmental level in the potential area of cooperation. 2. These studies can be done In existing research institutes by providing educational

assistance, In this Regard the existing collaboration between BRICS think tank organizations can be emphasized and Sanya can be an action plan suggestion Implemented until 2012.

10. Cooperation in Financial Market Development
1. To create a BRICs-wide market, should be targeting the BRICS investor base. 2. It will help to create a BRICS bond market.

11. Cooperation in Area of Culture and Tourism
1. There is remarkable diversity in culture, language, history, economy and institutions among the BRICS. To increase knowledge andunderstanding this diversity, Cooperation can be enhanced by Cultural exchange and tourism

12. Cooperation in Building Effective Institution
1. If one compares the BRICS economies with the most advanced economies in terms of governance indicators, there is still a long way to go Effectiveness. 2. The BRICS countries need to improve their governance and related organizational frameworks. Corporate reforms Governance, Accounting Standards and Regulatory Framework BRICS are needed to align standards in economies with excellence International practices. 4. Organizational soundness will increase Government's ability to effectively create and implement the right policies.

13. Cooperation in International Issues
1. The global economy is facing uncertainty. Euro zone, Debt crisis, high fiscal and sovereign debt levels and weak overallDemand is affecting the recovery potential in advanced economies, with attendant results for EMEs. 2. The BRICS can no longer co-operate with each other coordinated position in many international organizations like IMF, G-20, BIS, FSB, WTO, IOSCO, BCBS, etc. Given their size BRICS Cooperation and the role in the global economy, can be a coordinated approach for better synchronization of policies and improved results.[18]

1.7.4 BENEFITS /FACILITIES OF THE MEMBER COUNTRIES GIVING EACH OTHER TO INCRESE TRADE AMOUNG THEMSELVES

1. **Trade in Local Currency:**When member countries need money, it is important to supply it in local currency as well as to allow each other to trade in local currency and to start a joint bank called "South South Development Bank".

2. **Financial support:** If the BRICS group of entrepreneurs or a country in the group needs financial help, they will no longer have to change currency while providing this help. This will help them to get rid of the headaches of lowering the value of the change and the consequent increase in financing. This will directly benefit the BRICS group of entrepreneurs. This will be especially beneficial for enhancing bilateral trade between India and China.

3. **Tax deduction:** The tax rate has been reduced to boost the trade among BRICS countries.

4. **Benefits of Natural Resources and other:** All 5 countries having different types of natural resources, china and India has ability of purchasing power and productive grip, china's higher demand for raw material and various trade opportunities, brazil and south Africa emphasis of regional stability, India's has a chip skill base labour force.this will help among the BRICS countries to develop and increase trade.

5. **BRICS New Development Bank:** Its purpose is to provide infrastructure and sustainable funding in BRICS and other emerging market economies and development projects in developing countries.

6. **Climate Change:** climate change is a global problem. BRICS organization will work on this issue and find some solution to reduce/control it.

7. **Intra – BRICS corporation:** its especially focus on youth exchange program, disaster management, encourage small scale Industries etc.[19]

1.7.5 MAJOR CHALLENGES OF BRICS

Geographical, economic and political changes have taken place in the world after globalization. The BRICS organization plays a key role in the global economy: specialization, division of labour, production of goods and services, efficiency of capital, export of capital, labor market, use of natural resources and technology.The BRICS community has the potential to create a market for goods and services. Also they have large geographies area, large population size, consumer market dominance, regional market dominance. China's manufacturing success has boosted urban and middle class groups. India, Russia and Brazil are relatively more domestic demand-driven economies. South Africa's rich endowment natural resources place.

Also all the five members countries worst affected by the corona virus 2020 and Russia and Ukraine war 2022. In the future, both issues will make a difference in the economic, political and social relation of the BRICS organization.

Major Challenges of Five Countries (BRICS)

1. **Brazilian Economy**

a. Brazil's commodity market is smaller than China's commodity market.
b. Compare to India and China, the savings and investment rate in Brazil is low.
c. Need to improve public sector management
d. Need to increase the efficiency of the financial sector
e. Need to improve of structure of Financial sector which are providing long term loans

2. **Russian Economy**

a. Accelerating the implementation of structural reforms, especially in efficient and undercapitalized natural monopolies
b. Strengthening the investment climate change

3. **Indian Economy**

a. Need to development of agriculture sector
b. Need to improvement of physical infrastructure
c. Making the growth process more inclusive
d. Delivering essential public services such as education and health to large population

e. Diversifying its growth towards manufacturing while maintaining its service – led growth model

4. China Economy

a. To sustain rapid and stable economic growth which is driven by exports and domestic demand in a more balance way
b. Need to improve the investment structure, advance reforms in healthcare, pension and education system and provide more support to rural areas and less developed regions.
c. To facilitate restructuring of the economy
d. Financial sector reforms need to improve the intermediation of china's large private saving
e. The government also needs to increase social spending in the area of healthcare, education and pensions, which will serve to reduce precautionary saving and boost consumption over time.

5. South Africa Economy

a. Need to focus on expansion of infrastructure networks, skill development, interventions to raise youth employment, industrial policy that promotes higher value added exports and rural development.
b. To achieve higher level of inclusive growth that raise employment and reduce inequality
c. Need to improve low domestic saving, currency volatility, inadequate investment in productive sectors of the economy, skill shortages and inefficient government services delivery[20]

Though these countries facing these challenges as External affairs minister, Government of India Dr. S. Jaishankar said, "BRICS is based on the spirit of equality, mutual understanding, trust and respect. It offers inclusive and innovative solutions to many longstanding challenges."[21]

1.7.6 SUMMITS OF BRICS

The term BRIC was coined for the first time by the Goldman Sachs in 2001. Later on, this is expanded to BRICS in 2010. The BRICS comprises 5 developing nations i.e. Brazil, India, Russia, China, and South Africa. The BRICS annual summits started since 2009, with member countries taking turns to host. Prior to South Africa's admission, two BRIC summits were held, in 2009 and 2010. The first five-member BRICS summit was held in 2011. The most recent BRICS summit took place in Russia year 2020.India will host the BRICS 2021 summit at New Delhi & amid tensions with China; Xi Jinping had made a soft move by supporting India's Chairmanship in 2021.[22]

The various summits were hosted by member nations. The summits of BRICS are under.

Table No. 1.4 BRICS SUMMITS

Summits	Country/Place of Summits/ Chairmanship	Summits Date / Logo	Objectives/ Highlights	Theme
1	Russia Yekaterinburg  Dmirty Medvedev	16th June 2009 	• Financial and economic issues emerging from the 2008 Financial Crisis. • Reformations of International Financial Institutions • Move towards institutionalization • Aiming greater scientific cooperation • joint statement of Global food security • Climate change issues • International financial institutions mechanisms and promotion of intra-BRIC cooperation	"Zero poverty, Zero unemployment and Zero carbon"
2	Brazil Brasilia	16th April 2010	• Launch of multiple Intra-BRICS Cooperative Institutions. The summit also had a meeting of	"Inclusive growth: sustainable solutions"

	 Luizlnacio Lula da Silva		National Security Advisors and Think Tank Seminar • Agricultural development of respected countries related discussion between Ministers of Agriculture • The signing of Memorandum of Cooperation between development banks of each country.	
3	China Sanya  Hu Jintao	14th April 2011	• South Africa joins the association. • Pitching for UNSC Reforms • New Ventures in Africa	"Broad vision and share prosperity"
4	India, New Delhi  Dr. Manmohan Singh	29th March 2012	• Establishing the BRICS Bank to finance infrastructure requirements and sustainable development projects of BRICS in the third world as well as developing countries. • Additional foreign policies • India mooted the idea for a New Development Bank	"BRICS Partnership for Global Stability, Security and Prosperity"
5	South Africa Durban 	26 & 27th March 2013	• The BRICS Contingent Reserve Arrangement (CRA) with a total capital of $100 billion was introduced • BRICS Business Council was set up • BRICS Think Tank was set up	"Unlocking Africa's potential: BRICS and Africa Cooperation on Infrastructure"

	Jacob Zuma		• This was known as the eThekwini Declaration	
6	Brazil Fortaleza  DilmaRousseff	4 & 15th July 2014	• The theme was Inclusive Growth, Sustainable Solutions • Constitutive agreements to fund infrastructure and sustainable development projects in emerging markets were signed	"Inclusive Growth: Sustainable Solutions"
7	Russia Ufa  Vladimir Putin	8 & 9th July 2015	• Accepting constituting agreements of the CRA and the New Development Bank • Shanghai Cooperation Organization (SCO) and the Eurasian Economic Union (EAEU) joint summit • Expanding Intra- BRICS trade, Outer- space cooperation	"BRICS Partnership – a Powerful Factor of Global Developme nt"
8	India Goa  NarendraModi	15th& 16th October 2016	• The joint summit of BIMSTEC - Bay of Bengal Initiative for Multi-Sect oral Technical and Economic Corporation • Responsible, inclusive growth and sustainable development	"Building Responsive, Inclusive and Collective Solutions (BRICS)"
9	China Xiamen  Xi Jinping	3rd & 5th September 2017	• Discussion on EMDCD-Emerging Markets and Developing Countries Dialogue • Discussion of 2030 Peace, Security, Sustainable Development and Cooperation agenda	**"BRICS: Stronger Partnershi p for a Brighter Future"**
10	South Africa Johannesburg	25 & 27th January 2018	• Discussion on the 4th Industrial Revolution • Other discussions on	"BRICS in Africa: Collaboratio

	 Cyril Maphosa		• Sustainable development and climate change • Political and Soco - Economic cooperation	n for Inclusive Growth and Shared Prosperity in the 4th Industrial Revolution"
11	Brazil Brasilia  Jair Bolsonaro	13 & 14th November 2019	• strengthening of cooperation on science, technology and innovation • enhancement of cooperation on digital economy • invigoration of cooperation on the fight against transnational crime, especially against organized crime, money laundering and drug trafficking; and encouragement to the rapprochement between the New Development Bank (NDB) and the BRICS Business Council.	"BRICS: Economic Growth for an Innovative Future"
12	Russia Saint Petersburg  Vladimir Putin	17 Nov. 2020	• Videoconference • BRICS Science and Technology cooperation • During the virtual meeting, Science & Technology Union Minister Dr Harsh Vardhan also highlighted that the pandemic has come up as a test that demonstrates that multilateral cooperation	"BRICS Partnership for Global Stability, Shared Security and Innovative Growth"

			is the key to overcome such global challenges.	
13	India New Delhi  NarendraModi	9th sep. 2021	Three pillars of intra-BRICS cooperation in 2021 • Political and Security • Economic and Financial • Cultural and People to People	"BRICS@15: Intra-BRICS Cooperation "**for** Continuity, Consolidation and Consensus

Source: http://www.brics.utoronto.ca/

FIRST SUMMIT

The First Summit (Yekaterinburg, Russia, 2009) mostly focused on economic and financial issues arising out of the 2008 financial crisis, reform of International Financial Institutions, Sustainable Development and measures to combat climate change.

SECOND SUMMIT

The Second Summit (Brasilia, Brazil, 2010), focused on identifying intra-BRIC cooperation initiatives and also included input from civil society. The joint declaration from this summit focused on increasing the voting quotas of the BRICS within the IMF and fostering greater involvement in the choice of leaders for the IMF and the World Bank.

THIRD SUMMIT

With the admission of South Africa to the BRICs fold, the Third Summit (Sanya, Chaina, 2011) added strength to its geographical representation thus opening a new foray into the African continent. Apart from discussing UN reform, combating terrorism in line with the UN and economic cooperation, an Action Plan was formulated to deepen areas of cooperation in diverse fields such as health, science and technology, renewable energy, peaceful use of nuclear energy, eradication of hunger and poverty as well as re-emphasizing the UN Millennium Development Goals.

FOURTH SUMMIT

The Fourth Summit (New Delhi, India, 2012) was remarkable for enunciating financial cooperation with third countries through the establishment of the BRICS Bank for financing infrastructure needs and sustainable development projects of BRICS and other developing countries. TheAgreement was also signed to facilitate credit approval in local currencies for establishing and strengthening the economies of BRICS countries

FIFTH SUMMIT

The Fifth Summit (Durban, South Africa, 2013) laid the foundation for ushering Contingence Reserve Arrangement with an initial amount of USD $ 100 billion, adoption of thefeasibility report for setting up BRICS Development Bank and establishing two important centers, namely BRICS Business Council and BRICS Think Tanks Council for enhanced coordination and cooperation among member countries.

SIXTH SUMMIT

At the Sixth Summit (Fortaleza, Brazil, 2014) to fund infrastructure and sustainable development projects in emerging markets were signed. Furthermore, under Contingency Reserve Arrangement (CRA), an amount of USD$ 100 billion was allocated for forestalling short-term Balance of Payments pressures.The New Development Bank (NDB), that was decided at the Sixth Summit had astartup capital of USD$50 billion with the capital increased to USD$ 100 billion over time. With Pretoria, South Africa, being the regional hub and named as the 'New Development Bank Africa Regional Center', each of the constituent countries, Brazil, Russia, India, China and South Africa, made an initial contribution of USD$ 10 billion each to the fund with the primary focus of lending on infrastructure projects of up to an estimated lending of up to USD$ 34 billion annually

SEVENTH SUMMIT

The Seventh BRICS Summit (Ufa) Russia, 2015 underwent the process of ratification of constituting agreements of Contingency Reserve Arrangement as well as the New Development Bank. With the consent of the Bank's Council of Governors and Board of Directors, Contingent Reserve Arrangements became fully operational thus providing a

clear road map to strengthen, diversify and enhance trade and investment among the five BRICS countries; Council of Governors and Board of Directors, Contingent Reserve Arrangements became fully operational thus providing a clear road map to strengthen, diversify and enhance trade and investment among the five BRICS countries

EIGHTH SUMMIT

At the eighth Summit (Goa, India, 2016) member countries strongly condemned terrorism in all itsforms and manifestations, particularly attacks against its members.Agreements for establishment of BRICS Agricultural Research Platform, Mutual Cooperation between Diplomatic Academies and Regulations on Customs Cooperation Committee were signed. The summit deliberated on the possibility of setting up an independent BRICS Rating Agency based on market-oriented principles, in order to further strengthen the global governance architecture. The summit also forged new bridge between BRIC nations and BIMSTEC nations comprising India, Nepal, Bangladesh, Bhutan, Sri Lanka, Thailand and Myanmar.

NINTH SUMMIT

Ninth Summit (Xiamen, China 2017) of the BRICS was held in the city of Xiamen in China. This is the second time that the summit was hosted in China, the last one being in the year 2011. At the end of the BRICS summit, the leader's adopted the Xiamen declaration which contained various diplomatic and cooperative guidelines member countries strongly focused on Discussion on EMDCD- Emerging Markets and Developing Countries Dialogue. Ninth summit they discuss of 2030 Sustainable Development agenda.

TENTH SUMMIT

Ninth Summit (Johannesburg, South Africa 2018) of the BRICS was held in the city Johannesburg, South Africa.The 10th BRICS Summit, as a milestone in the history of BRICS, was held under the theme "BRICS in Africa: Collaboration for Inclusive Growth and Shared Prosperity in the 4th Industrial Revolution". Discussion on the 4^{th} summit was Industrial Revolution and other discussions on Sustainable development and climate change.

ELEVENTH SUMMIT

Eleventh Summit (Brasília, Brazil 2019) of the BRICS was held in the city Brasília, Brazil. The Brasilia Declaration was adopted by BRICS The 11th BRICS Summit will convene in Brasília, Brazil. The theme was eleventh summit was "Economic Growth for an Innovative Future." Discussions focus on spheres of political and socioeconomic coordination, in which member countries have identified business opportunities, economic complementarities and areas of cooperation. The new areas of BRICS cooperation spearheaded by Brazil are: strengthening of cooperation on science, technology and innovation; enhancement of cooperation on digital economy; invigoration of cooperation on the fight against transnational crime, especially against organized crime, money laundering and drug trafficking; and encouragement to the rapprochement between the New Development Bank (NDB) and the BRICS Business Council.

TWELVETH SUMMIT

The invitation of President Putin, Prime Minister Shri Narendra Modi will be attending the 12th BRICS Summit hosted by Russia, under the theme "Global Stability, Shared Security and Innovative Growth" on 17 November 2020. The meeting will be held in a virtual format.During the 12th Summit, held in the backdrop of the 75th Anniversary of UN and in the midst of the COVID-19 pandemic, leaders would be discussing intra-BRICS cooperation and key issues in the global context, including the reform of the multilateral system, measures to mitigate the impact of the ongoing COVID-19 pandemic, cooperation in Counter Terrorism, trade, health, energy and people to people exchanges.India will be taking over the Chairmanship of the BRICS, which would be the third BRICS Presidency for India since its inception (after 2012 and 2016) and will host the 13th BRICS Summit in 2021.

THIRTEENTH SUMMIT

The 13th BRICS Summit is going to be held under India's Chairmanship in 9th sep. 2021. Itwill be the third time that India will be hosting the BRICS Summit after 2012 and 2016. The theme for India's Chairmanship is **'BRICS @ 15: Intra-BRICS Cooperation for Continuity, Consolidation and Consensus'**. Objective of this summit will be to review the achievements and contributions of BRICS to the global agenda. It is a matter of great

pride that BRICS has been a beacon of multilateralism based on equality, mutual respect and trust. The theme reflects BRICS approach to strengthen the founding principles of BRICS cooperation based on continuity, consolidation and consensus. Summit based on three pillars of intra-BRICS cooperation in 2021.

1. **Political and Security: priority of this pillar is** Reform of the Multilateral System and Counter Terrorism Cooperation.

2. Economic and Financial: This pillar focus on –Implementation of the BRICS Economic Partnership Strategy 2020-25, operationalization of the BRICS Agriculture Research Platform, Cooperation on Disaster Resilience, Innovation Cooperation, Digital Health and Traditional Medic.

3. **Cultural and People to People:** Exchanges among Parliamentarians, young scientists, sports, business, youth, academic etc.[23]

1.7.7 NEW DEVELOPMENT BANK

New Development Bank (NDB) is a multilateral development bank established by BRICS countries, year 2015, which have a combined share of 24% of global GDP and 16% share in world trade.[24] The new development bank was set up to support BRICS infrastructure and sustainable development efforts, and to increase speed the growth of other underdeveloped countries through innovative and cutting-edge technologies.

OBJECTIVES OF THE NEW DEVELOPMENT BANK

1. Mobilize resources: The Bank's purpose will be to mobilize resources, to develop Infrastructure facilities, maintain sustainable projects and public or private projects. To Complementing the existing efforts of multilateral and regional financial Institutions for Global growth and development.

2. Technical Assistance: The NDB shall operate according to sound banking principles, providing support for infrastructure and sustainable development projects. Additionally the Bank will provide technical assistance for the preparation and implementation of projects to be supported by the Bank.

3. Financial Assistance: The Bank will provide support, in the form of loans, guarantees, equity participation and any other financial instrument to, public or private projects in member countries.

4. Emerging Markets: The Board of Governors may approve operations in nonmember emerging markets and developing countries.

5. Utilization of internal saving and investment: Romani, Stern and Stieglitz (2012) have argued that the NDB 'could play a strong role in rebalancing the world economy by channeling hard-earned savings in emerging markets and developing countries to more productive uses than funding bubbles in rich-country housing markets'.[25]

6. Climate change: All over the world facing Global warming problem, every countrywant solution. BRICS aim is that, How to keep zero carbon? Natural resourcedepletion has become a major threat to the overall environment as well as to theeconomies of several developing countries. Forcontrolling this situation environment protection is necessary. NDB takeninitiative to Assist and provide finance this situation.[26]

1.7.8 INDIA AND TRADE POLICIES WITH BRICS

Trade policy is formulated and implemented mainly by the Ministry of Commerce and Industry, along with other ministries and agencies including the Ministry of Finance, the Ministry of Agriculture and the Reserve Bank of India. The mandate of the Department of Commerce in the Ministry of Commerce and Industry is to formulate and implement India's international trade and commercial policy. In its 2004 09 Foreign Trade Policy (FTP), India highlighted the need to expand trade, setting two objectives - (i) to double India's share of global merchandise trade within five years, and (ii) to use trade expansion as a policy to promote economic growth and employment generation. In the context and aftermath of the global economic and financial crisis, India has sought to arrest and reverse the declining trend of exports and to provide additional support, especially to sectors hit badly by the global recession, as asserted in the 2009-14 FTP. India's short-term objective, according to the latest FTP, is to achieve annual export growth of 15%. The long-term objective is to accelerate the export growth rate to 25% per annum and double India's share in global trade by 2020. In order to meet these objectives, India implements a mix of policies including tax incentives and credit

facilitation. Although India aims to provide a stable trade policy regime to reach its long-term goals, it also uses trade policy to attain short-term goals such as containing inflation. Trade policy is also used as an instrument of industrial policy, for example, to protect the local industry through its applied tariff and the use of contingency measures.

India shares close economic and cultural ties with her BRICS partners. India attaches high importance to engagement with BRICS as a platform for coordination, consultation and cooperation on current issues. India's engagement with BRICS countries may be seen in the context of our pro-active and broad-based international engagement to contribute towards building a peaceful and prosperous world.[27]

1.7.9 INDIA'S CONTRIBUTION TO BRICS

India's trade with BRICS partners is about US$ 95 billion [2013-14 data from the Ministry of Commerce & Industry of India]. India's strengths lie in labour, services, generic pharmaceuticals, and information technology. There are significant synergies with other BRICS partners which may be tapped to further strengthen intra-BRICS linkages in these areas.

India's notable contribution to BRICS is proposal of the New Development Bank which was put on the BRICS agenda at the 4th Summit hosted by India in New Delhi in March 2012. Subsequently, India hosted the first Negotiation Meeting for taking this initiative forward in August 2012. After several rounds of negotiations and Finance Ministers' meetings, the Agreement for setting up the Bank has been signed at the 6th Summit in Brazil in July 2014. The Bank has headquarters in Shanghai, with a regional office in South Africa. The first President of the Bank is from India. Other Indian initiatives include a BRICS Report released at the Delhi Summit in March 2012focusing on synergies and complementarities between the BRICS economies and highlighting their role as growth drivers of the world economy.

India also added the Urbanization Forum to BRICS cooperation mechanisms to bring greater focus on intra-BRICS cooperation to learn from each other's experience in

tackling challenges of rapid urbanization faced by all BRICS members. India institutionalized the practice of holding BRICS Academic Forum meetings as preparatory meetings feeding into the Summit agenda by hosting the first such meeting in New Delhi in May 2009 before the first BRIC Summit held in Yekaterinburg, Russia in June 2009. At the 6th BRICS Summit in Brazil in July 2014, India has proposed important initiatives in order to strengthen intra-BRICS cooperation. These initiatives relate to online education, an affordable health care platform, a virtual BRICS university and BRICS language schools, cooperation in small and medium enterprises, tourism, youth exchanges, a Young Scientists Forum and disaster management.[28]

1.7.10 IMPORTANCE OF THE STUDY

BRICS member countries, home to 43 percent of the worlds' population, account for around 30 per cent of global GDP and 17 per cent share in the world trade. In other words, the BRICS countries are collectively the largest market in the world, and their cumulative GDP has more than tripled in the last ten years. However, despite these impressive figures and the institutional mechanism already in place, the volume of trade within the alliance, which in 2013 was estimated at $300 billion, accounts for a mere 6.5 percent of their total turnover of goods with the outside world. This can be explained by the fact that there are great distances separating the BRICS member countries and not just geographically. Member countries enjoy different rates of economic growth; direct air service exists only between a few of their very largest cities; their respective languages are not commonly studied at schools and universities, meaning that even educated people from the five countries have very little understanding of their respective histories and cultures; and their societies are made up of different ethnic and religious groups. For the success of this forum and to face the existing global challenges BRICS member countries will have to realize on its full potential and resources by involving the rest of the world.

BRICS is the term for an association of five major emerging national economies, i.e., Brazil, Russia, India, China and South Africa. Originally the first four nations were grouped as 'BRIC' in 2010 South Africa included in this group. In 2001 Goldman Sachs identified Brazil, Russia, India and China the major potential market of the world.Most of the study shown that the BRICS countries will be becomes global superpowers. Member nations in BRICS occupy a very dominant place in the global economy in terms of international trade. India and China individually have very diverse political and economic structures. Both are at different levels of economic growth with different various compositions. Therefore, BRICS have been milestone for the strong economy of Brazil, Russia, India, China and South Africa. The present status of these countries is facing the new challenges of trade and polices. Considering this challenges various new initiatives are being implemented by India like open the door for Foreign Direct Investment (FDI) and Make in India. The opportunities of trade exist in BRICS member nations and in the Indian perspective there is much scope to global economic growth and sustainable development.

It has also been observed that there are so many researches focusing on the positives impact of BRICS, challenges of BRICS and growth stories of member nations. There is much scope to study the various dimension of BRICS contribution to international trends. The present study also focuses on the international trade of India among the BRICS countries. So, the present study will be helpful in showing the growing importance of BRICS. As well as it becomes important to study trends in trade of some important commodities among the BRICS countries.

It is learnt that intra-regional trade relation within countries in BRICS upholds this sense of economic regionalism reducing the chance of conflict among member countries. This is done by accelerating cooperation, sustainable development among member countries through institutional structures. The study points out that India's political and economic gains in using the group as a platform to safeguard its interests. The work also provides an excellent understanding of the BRICS with suggestions to strengthen its institutional architecture which will help to strengthen and safeguard its position in a multilateral global system.

1.8 CONCLUSION

In this chapter, researcher studied about India's foreign trade, advantages of international trade, taken brief review of other organization which established before forming the BRICS and also studied about overview of BRICS, Objective, features, major challenges, benefits, summits of BRICS etc.

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Chapter-2

REVIEW OF LITERATURE

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CHAPTER – 2 REVIEW OF LITERATURE

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CHAPTER 2 - REVIEW OF LITERATURE

2.1 INTRODUCTION

This chapter of the thesis presents the detailed account of the literature reviewed during the course of this research. It has always been goal of researchers to search for facts related to topic and knowing and analyzing the truth. The literature review was carried out to identify the previous research efforts and directions related to our area. The specific objective of the review was to identify existing research gaps and highlight the research motivations. The discussion pertaining to various studies (cited in this chapter) is presented in chronological order, so that it also indicates the underlying pattern of evolution of thoughts and ideas in that domain. Similarly, to the extent possible, care was taken to reproduce the original terminology used by the authors (to preserve originality of the views). The critical issues identified in this review were used as a basis for addressing the study objectives. The review is presented hereunder.

In this chapter an attempt has been made to overview the literature on the international trade of India among the BRICS countries. Brazil, Russia, India, China and South Africa these countries involved in BRICS. One of the important preconditions for this research was the existence of data of trade among the BRICS countries and also important to focus on reports, reviews and other literature. In this chapter a review of books, articles and the research papers related to the subject of this research has been given. Besides, research papers related to WTO, agreement on agriculture and trade relation among developing and developed countries have been reviewed. The critical issues identified in this review were used as a basis for formulating objectives of the present research.

2.2 REVIEW OF LITERATURE

2.2.1 REVIEW OF BOOKS: VARIOUS PRESPECTIVES

1. Cohen Stephen (2001) has written a book entitled "Emerging Power India". In this book author focused on India's strategic, political power since it became a declared nuclear weapons state. This book helps to understand the emerging reality in the Indian subcontinent. The book examines the proposition that India is becoming a regional power, a major power in Asia. It says that India is always a great power for its smaller neighbors' and had a strong impact on their culture, economy, social and political systems and even their identities. This book provides a theoretical explanation of events which are working towards making India more powerful. The book also examines relevant issues like India's inner and outer ring, India – china as strategic rivals and whether china is a model, rival or ally.[1]

2. Lo, and Hiscock, (2014), edited a book, The Rise of the BRICS in the Global Political Economy: changing paradigms? It examined the Growth and development of the individual countries and political and economical condition of the BRICS economies. In this book, authors mention that BRICS economy is the richest economy. BRICS countries have potential to bring about changing paradigms in the global political economy.This book highlighted that, the economic success of the BRICS depends not only on economic growth and trade, but also the future relations with the developed world and domestic reforms.[2]

3. Coning, Mandrup, and Odgaard (2015), (ed.) The BRICS's and coexistence an alternative vision of the world order. This book explains the BRICS vision for a new world order as ' coexistence'. BRICS group rejected the dominant behavior of world system; therefore they create New Development Bank. This book focuses on political dimension of the emergence and influence of BRICS in the World system.[3]

4. Andrew F. Cooper, (2016), BRICS: A Very Short Introduction, in this book the author's opinion is that BRICS is having power to fight the Developed Countries like America. This book provides an informative, analytical and comprehensive overview of the BRICS countries. Addresses a wide range of issues concerning the BRICS in our contemporary political landscape offers an explanation of what the BRICS have been able to accomplish as a hybrid club, forum, and lobby group in global politics. Andrew Cooper discusses the BRICS as a concept and its practice in global politics.[4]

5. Oliver Stuenkels, (2016),The BRICS and the Future of Global Order, Oliver Stuenkels analysis shows that cooperation among the BRICS seeks to foster the gradual emergence of a legitimate and rule-based multiple order, and to press the United States and its allies to follow existing global rules more consistently. This nuanced and clearly-written book offers an illuminating glimpse into the future of global politics.[5]

6. Gu, **Jing**, **Shankland**, **Alex**, **Chenoy**, **Anuradha (2016**), written the book "The BRICS in International Development". In this book, it is mentioned that five countries are actors in International Development. The authors review the historical, political and economical background of BRICS. They focus on BRICS Trade and trade patterns.In conclusion they highlighted that, forsustainable development trade and manufacturing are more effective instruments.This study is more relevant during post global financial crisis as the BRICS financial policies became a major influential factor to overcome crisis impact and how strong economic interdependence among the BRICS accelerated international development. However it failed to explain how BRICS can resist Western financial hegemony.[6]

7. Patrick Bond and Ana Garcia edited, (2016), Brics an Anti-capitalist critique, Author aims to fill a gap in studies of the BRICS grouping of Countries. It is providing a critical analysis of their geographical, political, economical and social strategies within the outline of a global capitalism that is increasingly predatory, unequal and ecologically self – destructive. Various contributors wrote on different issues relating to BRICS.[7]

2:2:2 RESERCH PAPER'S/JOURNALAS ARTICLES

1. Ramesh Chand (2005) has explored in his study "Post WTO Agriculture Trade and Agenda for Negotiation on Agriculture" that the trade performance of India's agriculture in the post WTO period and negotiation of India in WTO forum for the rights of developing countries farm trade and demand for immediate stop of domestic support which developed countries gave to farmers. As a developing county India stand in WTO is very strong and support rights of developing countries and negotiate very strongly and put pressure to reduce export subsidies by developed countries so that they compete in international market. Further examined export and import trends of price of agricultural product it is due to fall in price of commodities in international markets. It had been noticed that the export of oil meals, traditional commodities like tea, coffee and marine product adversely affected by WTO provision and increased in import of edible oil, vegetable oil and different pulses in India.[8]

2. Ramphul (2006) has explored in his study "WTO and India's AgriculturalTrade" about the impact of WTO in India's agricultural trade. It is found thatthe average annual growth rate of India's agriculture exports and importsdecreased in post WTO era under AOA provision and India share of export inworld agriculture export increased but less then import. Net agricultural trade aspercentage of GDP declined under WTO regime, net terms of trade ofagriculture also declined in post WTO era. In conclusion its mention that, Indian agriculture cannot survive in free import regime.[9]

3. Judith L. Goldstein, Douglas Rivers and Michael Tomz (2007) has explored intheir study "Institutions in International Relations: understanding the Effects ofthe GATT and the WTO on the World Trade" this paper evaluates the effect of WTO and GAAT and other trade agreements As a institution WTO play vital role in the development of the world trade. The study basedon two-part, institutional standing and institutional embeddedness. Both member countries and non- member countries had right and obligations, also right to reach the GATT/WTO. The concept of institutional embeddednessalso has extensive implications for other areas of international relations. In a world where countries enter multiple agreements, we must observe agreements in context, rather than studying each agreement in separation. The findings in this article

show that such an approach can pay valuable dividend for understanding international relations.[10]

4. Peter Gammeltoft, (2008) written research paper entitled "Emerging multinationals: Outward FDI from the BRICS countries", in this paper, concentrate on patterns of outward FDI from rising economies, also focus on a group of five countries which are becoming increasingly economically and politically influential, viz. the 'BRICS' countries.Author studied about the connection with FDI and monetary development of the five countries. In the conclusion he mentions that, foreign investments have become an increasingly important component in the economic strategies of firms and countries. Out of the five BRICS countries Russia has become the largest outward investor in terms of stock, followed/trailed by Brazil and China.[11]

5. S. Davenport, R. Chadha, and R. Gale (2009) had explored in their study"Competition Policy Reform in Agriculture: A comparison of the BRICsCountries." In this paper researcher highlights about BRICS nation competition policy and development policy with Non-OECD countries. Agriculture sector production and productivities increased in BRICS countries because of their microeconomics and macroeconomic policy which helps to reduce poverty, maintained sustainable development and self-sufficient in food products. In this paper each BRICS countries policy was separately analysed and development of different government competition policies. It's was observed that internal processes required more policies and transparency so that it will push to increase production capacity, employment, infrastructure, R&D and rural development.The researcher conclude that, The agricultural sectors of the BRICs countries have generally responded positively to policy reform efforts to date with clear trends in most countries toward production specialization and international trade. Nevertheless, continuing sensitivities around farm incomes and food security, particularly in countries where agriculture accounts for a significant proportion of the population, present significant challenges to further agricultural policy reform.[12]

6. Braz Baracuhy (2012) had explored in his study "The Geopolitics of multilateralism: The WTO Doha round negotiations and international relations and geopolitical changes WTO Doha Round Deadlock, the BRICs, and the Challenges of Institutionalised Power Transitions" about the international trade relations, negotiations in WTO forum and from unipolar to multipolar. Economic power was earlier bipolar between Europe and America centred now slowly its changing after emerge of BRICS nation it is new economic pole of power which change the world politics. At present approximate 15% of the world export comes from BRICs countries out of that China share 9.6%, which shows that China play an important role to represent BRICs in world markets and boost trade. These five countries have growing capacity, labour efficiency, emerging market and competitive to become most powerful group and its macro policies have potential to shape global economic order.[13]

7. Jelena Birovljev and Biljana Cetkovie (2013) had explored in their study "The Impact of The WTO Agreement on Agriculture on Food Security in Developing Countries" that for the WTO's agreement on agriculture there is special provision for food security. Market access, domestic support and export subsidy are the 3 pillars of AOA negatively affect the food security of developing countries. After implementations of AOA trade distortion in developing country and poverty increases because reduction in subsidies under AOA provision and adversely affect rural development and small farmers and inequality increases and farmers can't compete in world market. Agreement of Agriculture (AOA) is the burning topic of WTO concerning about food security of developing countries and they in group negotiate for fair competitive market trade among member countries.[14]

8. Rajashri S Gudaganavar and Nagaraj V. Guaganavar (2014) had explored in their study "Structural Dimensions of India's Agricultural Export– An analysis" about the competition India face from south Asia countries after WTO era it was increased. Any change in India's production and export of its product, it's directly affecting the economy if country weather it is by economic policy and political disturbances. The traditional export commodities like tea, coffee, oil cakes, tobacco share in trade insignificant, it's clear from composition and compound annual growth rate of agricultural commodities and structural change with diversification in export. The main cause that, the percentage

share of commercial crop was surged. The percentage share of India total export plummeted, it is because surged in percentage share of service sector and manufacturing sector and world share of India plummeted after implication of Agreement of Agriculture (AOA) provision.[15]

9. Chakraborty Tridib and Dr. Chakraborty Mohor(2015) had explored their study on "BRICS: the new platform for global economic restructuring "The study focuses on background of BRICS, discuses about forth BRICS Summit, and BRICS New development Bank it's an option to World Bank. It was concluded that, "NDB shall serve as a powerful instrument for financing infrastructure investment and sustainable development projects in the BRICS and other developing countries and emerging market economies and for enhancing economic cooperation between our countries". The BRICS bank is heralded as an alternative to the World Bank – International Monetary fund-led international economic architecture. However, it remains to be testified whether the BRICS bank can evolve as a pulsating alternative to the WB-IMF led financial system, tough there is no way denying its establishment as a stepping stone for providing a predominantly South-South economic cooperative mechanism.[16]

10. Jyrki Kakonen (2015) had focused "BRICS as a new constellation in International relations" In this research paper researcher studied about the role of BRICS in International relation. The aim of the paper is to evaluate the possible role of the BRICS as an organization in international relations. The major question is whether emerging states, fast economic growth and interest for a multipolar international system and antipathy against the US lead unipolar international system are factors enough to make BRICS a coherent and relevant international actor. It seems to be clear that all BRICS members have their own national interests and they have realized that BRICS is a useful idea for advancing those interests. On the other hand the five BRICS countries make a diverse combination of countries with different civilization and cultural backgrounds. Therefore it is not easy to assume that BRICS would be an organization for changing the international system while BRICS members have different kind of expectations what comes to the future world order. In this respect the most important BRICS countries are China and India, which also have contradictory interest and expectations about the future Asian as well as world.[17]

11. Anil Kamboj (2017) had explored in his study, "Regional Diplomacy: SAARC, ASIAN, BRICS and SCO" Researcher discuss about SAARC, ASIAN, BRICS and SCO regional management with international relation. International trade of south Asia is relatively low compare to other regional blocs. India has the power and leadership quality to reduce trade barriers.The group's success is mainly due to the establishment of the New Development Bank in response to the lack of reforms in the outdated Breton woods institutions and norms. All these grouping gave a strong platform to the member countries to have a better cooperation and understanding amongst themselves. He mentions that, BRICS New development bank is an alternative of financial institution to provide financial help to underdeveloped countries.[18]

12. Sunita Thakur (2014) written paper on "BRICS countries and role of India" In this research paper researcher studied about India's role in BRICS organization. Researcher mentions that India's role is very much important in BRICS organization, under various sectors like Education, Health, environment and small scale and medium scale Industries.[19]

13. Kartik Narayanswami (2013) written paper on, BRIC economy and Foreign policy – an analytical study, in this research paper researcher studied about establishment of BRIC, overview of BRIC, comparative study about BRIC economy, US trade relation, political and economic relation. He focuses and compares on US trade and BRIC trade. While studying this trade relation between US and BRIC, he mentions that trade is affected by political and economic climate and other factors.[20]

2:2:3 REPORTS / WORKING PAPERS

1. Jim O'Neil (2001), Building Better Global Economic BRICS. In this paper, heis the one who mention about 5 emerging countries (BRICS). He discusses the state of the globe economy as we approach year-end, with particular emphasis on the relationship between the G7 and some of the larger rising market economies. He showed that their latest forecasts for 2001 and 2002 suggest a healthier outlook in some of the larger emerging market economies compared to the G7. They were forecasting 1.7% world GDP growth in 2002 with Brazil, Russia, India and China (BRICs) each set to grow again by more than the G7. Whilst the different degree of the 2001/2002 relative outlook is

unlikely to be sustained over the next decade, a healthier environment for the BRICs seems likely to remain, and as a result, their share of world GDP is set to rise. On a Purchasing Power Parity basis, the aggregate size of the BRICs was about 23.3% of world GDP at the end of 2000, somewhat higher than both Euro land and Japan. Whilst on a current GDP basis, the size of the BRICs is just under 8%, this is also set to rise. Some of these countries are already bigger thansomeindividualG7economies; China, at 3.6% of world GDP (using current US$ prices), was slightly bigger than Italy at the end of 2000, and notably larger than Canada. They were considering four different scenarios for the next decade based on various nominal GDP assumptions for 11 countries (the G7 and BRICs), and differentassumptions about exchange-rate conversion. The nominal GDP assumptions reflect our best guess about the likely trend rate of real GDP growth and inflation.[21]

2. International Monetary Fund (2011) "New Growth Drivers for Low- Income Countries: The Role of BRICS" The study imparts following objectives the emergence of the BRICS (Brazil, Russia, India, China and South Africa) have changed the landscape of Low – income countries (LICs) engagement with the rest of the world. The role of BRICS and LICs economic development is likely to become more prominent in the post-crisis era. The aim of the study was to depend the understanding the role of the BRICS in LICs development and to discuss how to deal with the ensuing challenges. In this Study it was concluded that Economic Relations between LICs and BRICS have strengthened remarkable over the past decade. BRICS engagement with LICs is broad – based, encompassing trade, FDI and development financing. Embracing policy reforms to meet these challenges will place LICs in a stronger position to reap the long – term benefits of global integration.[22]

3. The BRICS report, A Study of Brazil, Russia, India, China, and South Africa with special focus on synergies and complementarities (2012), this report highlighted the overview of BRICS Major challenges of BRICS, impact of financial crises of BRICS, BRICS cooperation also highlighting the role as a growth drivers of the global economy. To conclude, although BRICS has adopted different avenues of growth with different macroeconomic parameters and different institutional strengths, the world seems to be

optimistic about their emergence based on their respective sustainable comparative advantages. The rapid recovery of these economies from the global financial crisis confirms the growing role of BRICS, which indicates that an optimal global economic policy cannot be formulated without the inclusion of BRICS economies at the highest levels.[23]

4. BRICS in the World Trade Organization: Comparative Trade Policies Brazil, Russia, India, China and South Africa (2014), Edited by Vera Thorstensen& Ivan Tiago Machado Oliv, in this working paper researcher evaluates the political articulation of the BRICS countries and focus on the role of the general agreement on tariffs and trade and of the WTO in the trade policies of the BRICS countries.[24]

5. Export Import bank of India (Working paper No. 56) (2016) Intra Brics trade an Indian Perspective,in this paperoverview of the BRICS highlighted and Export – Import of the BRICS countries, intra BRICS trade and global trade of BRICS.[25]

6. Directorate–General for external policies of the union Directorate B Policy Department focuses the paper on "The role of BRICS in the developing world". This paper examines the role of Brazil, Russia, India, China and South Africa (BRICS) as emerging protagonists in international development cooperation. Also highlights the challenges facing BRICS countries. In Conclusion, BRICS countries having power to become a super power, but they need to be addressed in different ways.[26]

2:2:4 PHD THESES

1. A.S.Prasad, (2010), completed research for Ph.D. degree on the topic of "A comparative study of location attractiveness of BRIC nations for O & G Engineering services outsourcing (O & G ESO) and strategic growth options for India's O & G ESO Industry". This study has identified the ten elements to compare Location Attractiveness of BRIC nations for O & G ESO industry and have ascertained the following using a complementary approach of comparative case study based on secondary data as well as from the statistical analysis of primary data surveyed too. Researcher conclude that, India has marginal lead from its nearest competitor China among the block of BRIC nations as service provider destination for the O & G ESO industry that has been ascertained by the

Higher Median and Lowest standard deviation. India takes a commanding lead in the overall outsourcing business as compared to other BRIC counterparts in general owing to its long relation of over two decades with IT/ITeS and BPO industry. In addition, India also has established several ESO companies operating in the Automotive, Aerospace, Hi-Tech and Utilities domain.[27]

2. Karuna Chauhan (2012), had explored in her study, Determinants of foreign direct investment in developing countries a comparative analysis of Brics countries. The study has been conducted about comparative analysis about foreign direct investment of BRICS and factors available in developing countries. He studied about the casual relationship between increase FDI and Economic Growth in five emerging countries. Compare to global FDI, Brics contribution on FDI is much faster. Industry production, Market size, openers and investment in infrastructure are most important part for determination of FDI. Researcher suggest that, to attract more and more foreign capital in various sector of the economy, there is a need to adopt comprehensive policies and good corporate governance.[28]

3. V. B. Mathipurani (2013) had explored in his study "FDI in BRIC Countries and the Competitive Status of India in FDI Attraction and Its Growth". In this thesis researcher presented as a broad overview on the study of the FDI inflows in BRIC countries and an analysis on the competitive status of FDI inflows in India. This study reflects Foreign Direct Investment and Competition between BRIC countries to attract foreign direct investment. It also highlights India's Growth in foreign Direct Investment. The research also focus on the factors determining FDI attraction into BRIC countries also evaluates the trend, composition and industrial pattern of FDI inflows to BRIC countries. And studied about progress of FDI inflow into India, in terms of total investment: entry route wise, sector-wise and investing country -wise. Researcher finds out that, economic efficiencies and business environmental factors strongly influences as the determinant of FDI attraction into all the four BRIC countries with a few variations in its significance.[29]

4. Mohamed Nazeer S. (2014) completed Ph.D. research on "A Study of BRICS Countries With Reference To Trade and Its Impact on Growth". In this researchresearcher mainly focus on BRICS international trade and its impact on Growth.

This study investigates the question of how international and internal trade affects GDP. Objective of his research is to analyze the Growth of trade after grouping of BRICS Countries, to study the contribution of international trade to GDP of BRICS Countries, to study the contribution of internal trade to GDP of BRICS Countries. To analyze the data researcher took the period of 1994 to 2014. He uses some indicators such as merchandise Export, Merchandise Import, Exports of goods and services, Imports of goods and services, Area, Population, etc. in the conclusion, its highlighted that, international trade positively influenced GDP.

This study investigates that, internal trade increase income and International trade positively influence GDP. But the actual results suggest that import raises income because most of the developing countries they imported developmental products and they exported raw materials to other countries. That is the reason export of these BRICS countries negatively influenced GDP.[30]

5. Sebastian-Andrei Labeş (2015) completed Ph.D. research on "The Rise of the BRICS Challenges and Perspectives". The study reflects that the main components of economic growth in the BRICS countries in the past 20 years and provide elements for building projections on economic developments in the next 10 years. To check the main issues which they have to be overcome from the developed countries and the challenges, the requirements that must be met under the current global financial and economic competition. The research concluded that, the impact of BRICS countries is and will continue to be important. They will face major issues, Brazil is struggling with high rates of crime and political scandals, in Russia admiration for oligarchs slowly develops into envy and hatred, India is a democratic country where politics is often overwhelmed by corruption and an extremely low standard of living among its population, considered to be unimaginable for any citizen of Europe, China is still an undemocratic state that imposes many restrictions on his young generations under an increasingly globalized world and South Africa does not have the population or economic potential the other four states have.[31]

6. Kiranjot Kaur (2016) had completed Ph.D. research entitled "International Trade between India and BRIC Nations: A Post Economic Reforms Analysis". In this research

researcher expressed his finding that, the change in India's trade structure, rising number of products and growing product volume, made it essential to do intrinsic study of India's export pattern. An examination of instability, comparative advantage of BRIC and competitiveness revealed that India's exports being stable in terms of value and quantity and instable in terms of price, there is not much similarity in India and the other BRIC nations exports, as the selected top exports by India does not hold much share in other nations exports. This obviously means that a wide range of commodities are dissimilar as far as their exports are concerned indicating differences in resource endowments and specialization in each nation. This finding was crucial as it concluded that India is not much competitive with other BRIC nations in global and BRICs market. This indicated a possibility of high potentiality of trade between India and other BRIC nations and laid foundation for analysis of their trade complementarities.[32]

7. Kiran Bala Das (2016), had completed Ph.D. research entitled "The Impact of WTO Agreement on Agriculture: A Comparison of the BRIC's Countries"The study mainly focuses on thecomposition of BRIC's (Brazil, Russia, India and China) countries major agricultural and allied product trade whichcoves their more than 60% trade from pre and post WTO era. The researchers point out that, The Agreement on Agriculture (AOA) of WTO has a positive impact on BRIC, s countries in post WTO regime. To continue this agreement to increase international trade from BRICS countries. In the post WTO period, it is also clear that import of major agricultural product grown faster than export of major agriculture product from BRIC's countries. In the conclusion, Due to liberalization under the WTO and the gap between export and import narrowing after WTO regime started. BRIC's countries have various economic development experience they come very tuff and hard way from last thirty years, so knowledge of economic development play a strong role in the shape of the world economic order and world economic transition period. After post WTO phase Brazil, Russia, India and South Africa's export growth rate was increased.[33]

8. Arunhari P (2016), Completed Ph.D. research entitled "Trade in Goods and Trade in Services of BRICS Countries – An Econometric Analysis" in this research researchers conclude that, in the modern world, there is mutual interdependence of the various

national economies. Today it is hard to find the example of a closed economy. All economies of the world have become open. But the degree of openness varies from one country to another. Thus, in the modern world no country iscompletely self-sufficient. Self-sufficiency in the sense that proportion of the goods and services consumed to their total output produced with in a country. But the degree of self-sufficiency varies from one country to another. BRICS countries increasing contribution to world trade has changed dramatically. Trade between BRICS can be highly complementary. Brazil and Russia are strong in the commodity and natural resources sectors while China and India are net importers in these areas. India and China have cheap labour. China dominates the manufacturing sector. India's strength lies in generic pharmaceuticals, software engineering, textiles and business process outsourcing.[34]

9. Maheta Krunal Rameshbhai (2016), had explored in his study "A Comparative Analysis of The Major Stock Market Indices of BRICS Countries" study attempts to examine researches related to stock exchanges of BRICS countries, for a clear understanding of the market movements of selected Indian stock market index and selected other stock market indices of rest of the countries. This study has been carried out and bifurcated into three categories. First in which the stock market return of S&P Sensex is compared with each of the major stock market index of rest of the countries. Secondly the co-movement of all the selected major stock market indices of the BRICS countries. The last part is the impact of the exchange rate of each country's currency (in USD) in the stock market. Here researcher compared the exchange of each country with their stock market index. On that basis conclusion can be derived that there is a significant impact of exchange rate is found on the stock market indices of BRICS countries.[35]

10. Jacira Werle Rodrigues (2016) had explored in his M.Phil. research on "An Analysis of BRIC's Performance: Economic Growth, Social Development and Future Challenges" The study sought to identify and share insights into the performance of the BRIC countries, to explore their cooperation as a cluster, to understand the nature of their economic and social achievements and the extent of their success, and to understand the challenges and constraints they have confronted. The study also sought to predict further

challenges to be addressed and suggest future directions for research. The research provided an opportunity to engage in an exploratory study in a relatively new and highly relevant research area and identify areas for more in-depth investigation.[36]

11. Stephen Prathipati (2017), A Conceptual Brief on India in BRICS (A Study on India's role in BRICS with reference to GOA Declaration 2016 and the Sustainable Development Goals, this study focus on main problems of the BRICS nation like Climate change, poverty, unemployment, Lack of quality education and inequality etc. also to understand this issue, collectively and individually each country should find some constructive solutions. India's role in BRICS and highlights of GOA declaration and sustainable development goals and change in India's foreign policy is the objective of this research. In the conclusion, researcher mention that, India play a Vitol role in GOA declaration 2016 and the Sustainable Development Goals for building collective, responsive and inclusive solutions for the issues and problems of present and future world.[37]

12. Shameem C. C. (2018) completed PhD on, Intra regional trade relations and economic regionalism a study with reference to BRICS.In this thesis researcher presented the role of intra-regional trade in the promotion of economic regionalism with regard to BRICS. In the context of India's trade growth, examine the intra-regional trade relations within the BRICS. The study examines that, is there any influence of intra regional trade after formation of BRICS? The study concludes that intra-regional trade relations can positively contribute to economic integration and interdependence. It is also understood that intra-regional trade within BRICS countries uphold the essence of economic regionalism. The BRICS intra-regional trade has found to have positively influenced its economic growth and interdependence among countries. Intra-regional trade relation among BRICS countries helps in reducing political distraction among member states.[38]

13. Javeria Maryam (2018) completed PhD on "India's Trade and investment with BRICS". In this research analyze the pattern and composition of revealed comparative advantage for trade in goods for BRICS countries. Also he covered the Bilateral Revealed Comparative Advantage (BRCA) analysis for India with each individual country of BRICS at the aggregate level. The analysis shows that with each of these countries India

holds comparative advantage in products namely, silk, coffee, tea, mate and spices, carpets and other flooring materials, gums, resins and other vegetable saps ad extracts, articles of apparel and clothing accessories, raw hides and 7 skins, cotton, cereals, other vegetable textile fibers, paper yarn and woven fabrics of paper etc.

Analysis shows that the intra-industry trade increased significantly over the period 2001 to 2015 at the HS-two digits and HS-four digits level of classification. The chapter identified main products for trade (export and import) possibilities between India and Brazil in products like silk, ceramic products, footwear, cork, and articles of stones, electrical machinery, minerals and others. The study revealed the changing dimensions of intra-industry trade between India and Brazil during 2001 to 2015. With this he studied about the FDI inflows and outflows trend of BRICS countries is discussed and investigated the role of selected macro-economic variables in promoting the inflows in BRICS for the period 1994-2015.[39]

14. Venkatesh Murthy, K. (2018),Brics economies status prospects and challenges in this PhD thesis, he examined /analyzed the importance of BRICS as compared to major Trade Blocs, Customs Union, Common Market, Economic Unions and Integrations.He had discussed the need of establishment of the NDB and purpose and advantages of Contingency Reserve Arrangement by BRICS. In his conclusion he highlighted that five BRICS countries is positively causing to grow individually as well as group. New Development bank is a better option of World Bank and International Monetary Fund.[40]

15. Raghutla Chandrashear (2019), had completed Ph.D. research entitled "An Empirical Investigation of Financial Development on Sustainable Economic Development and Environmental Quality in BRICS Countries"main objective of the study is to determine economic output in BRICS.Another objective is to find out the relationship between financial development and economic growth. In the conclusion, it's highlighted that, developed financial sector having positive relation with economic growth.[41]

2.3 RESEARCH GAP

While analyzing review of literature, it was observed that there is a lot of research work done on the various groups Like SAARC, OPEC, NAFTA, G-7 etc. but very few studies have been done on BRICS. The present study focuses on "A comparative study of international trade of India among the BRICS countries (2006- 2017)" there is no systematic study on this particular topic. This gap was identified by researcher. In order to fulfill this gap, the present topic was undertaken.

In the 21st century, as a leading group BRICS gets more importance in the world economic growth and developmental economy. Many studies are focused on BRIC, BRICS Performance, BRICS challenges, Foreign Direct Investment of BRICS and role of BRICS, Performance of BRICS etc. It has been studied by many analysts of international studies, eminent economists, academicians, and policy makers.

"A comparative study of International Trade of India among the BRICS countries (2006-2017)" researcher mainly focuses on India's Trade. This study highlighted what is the Change in India's International trade after the formation of BRICS.

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Chapter-3

RESEARCH METHODOLOGY

CONTENT

CHAPTER – 3 RESEARCH METHODOLOGY

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CHAPTER 3 - RESEARCH METHODOLOGY

3.1 INTRODUCTION

Research Methodology is a crucial step in Research. Research Methodology can be defined as the step by step procedure that will be designed and followed for the purpose of doing research work. This chapter deals with the applied research methodology for the present research.

Research is a careful and detailed study into a specific problem, concern, or issue using the scientific method. Research in common parlance refers to a search for knowledge. Other than that research is a scientific and systematic search for pertinent information on a specific topic. In fact, research is an art of scientific investigation.

The Advanced Learner's Dictionary of Current English lays down the meaning of research as "A careful investigation or inquiry especially through search for new facts in any branch of knowledge."[1]

In this chapter are highlighted some important research frame work tools i.e. objectives of study, hypotheses, Relevance of the study, Data Collection, Period of Study, Scope and limitation of study, Theoretical framework Data Analysis & Processing, Exports and Imports of goods and services and plan of the study.

Trade has an important role for relationship between countries. International trade and economic development are the two side of one coin. In the same sense the traditional theories of trade emphasize and examine how growth in production and good trade relation capabilities can affect international trade. A review of global position found that most of developed, developing and underdeveloped countries making their organizations sustainable for growth in their production. After the LPG-The Liberalization, Privatization and Globalization era the developing countries have significant bearing on growth and structure of economies.

The present study focuses on the International Trade of India among the BRICS countries. Brazil, Russia, India, China and South Africa these countries involved in BRICS. One of the important preconditions for research is existence of data of trade

among the BRICS countries and also important to focus on reports, reviews and other literature.

3.2 STATMENT OF THE PROBLEM

The present topic of research is **A comparative study of International Trade of India among the BRICS countries** and the period of study is **2006 to 2017.**

BRICS as an organization for International Cooperation became functional from 2006. One of its major objectives is extension/ promotion of trade between member countries. This research aims to find out whether the formation of BRICS has had any effect on trade between member countries. It is necessary to examine firstly, if there is any change in the Composition and Direction of Trade between member countries after its formation. Secondly, with particular reference to India, whether the composition and direction of India's trade with other BRICS countries shows any change after its formation need to be studied.

3.2 OBJECTIVES OF THE STUDY

On the background of India's International trade given in chapter no. one, the present study aims to suggest important tips to increase the International Trade of India among the BRICS countries and other objectives of study are as follows -

1. To explore the Reason behind forming BRICS.
2. To evaluate the role of BRICS in the context of India's International trade.
3. To study the Direction of International trade between India and the other BRICS Countries between 2006 and 2017.
4. To analyze the composition of India's International trade with BRICS Countries between 2006 and 2017.
5. To give the constructive suggestions for the growth of India's International Trade with BRICS countries.

3.3 HYPOTHESES

1. The International trade of India among the BRICS countries has increased after forming BRICS.
2. Direction of India's International Trade with the other BRICS countries has not changed during the study period (2006 -2017).
3. Composition of India's International Trade with the other BRICS countries has changed during the study period (2006 – 2017).

3.5 RELEVANCE OF THE STUDY

The study has national and international relevance because it will analyze the growth and development of international trade among the BRICS countries in general and analysis of India's International Trade among BRICS countries in particular. This will benefit in selecting the needed products and services for international trade by India with other BRICS countries. Outcome –

1. The study will form the guidance to the policy maker to redesign trade policy that will maintain balance of trade.

2. It will make availability of data for further research work, papers and books.

3.6 CONCEPTUAL/THEORETICAL FRAMEWORK

This research will attempt a fairly comprehensive and rigorous presentation and examination of theories of international trade relevant to the proposed study.

1. Adam Smith's Absolute Advantage theory of International Trade

In 1776, Adam Smith questioned the leading mercantile theory of the time in The Wealth of Nations. (Adam Smith, an Inquiry into the Nature and Causes of the Wealth of Nations London: W. Strahan and T. Cadell, 1776). Recent versions have been edited by scholars and economists. Smith offered a new trade theory called absolute advantage, which focused on the ability of a country to produce a good more efficiently than another nation. Smith reasoned that trade between countries should not be regulated or restricted by government policy or intervention. He stated that trade should flow naturally. [2]

Theory of absolute advantage states that the basis of trade between the nations is the absolute advantage a country has in producing a commodity over the other countries. Two countries are able to trade their products between them because each one of them is able to produce at least one commodity, at a lower cost. It may be possible for all the countries to produce all the commodities they need, in spite of resource constraints but the cost of production is higher in a country which is deficient in resources therefore it is beneficial to import such goods rather than producing them. Therefore, most of the countries tend to specialise in producing commodities in which they have absolute advantage in cost of production. They will import what they can produce at a

higher price, and they will export goods which they can produce at a lower price. Logic behind this theory is International division of labour suggested by Adam Smith.[3]

We can apply above theory into the context of India and BRICS. If China could produce one product which is as cheaper as or faster than India, (For Example Manufacture product) then China had the advantage and could focus on specializing on producing that product. Similarly, if India was better at producing another product, (For example agriculture product – Rice) it could focus on specialization as well. By specialization, countries would generate efficiencies, because their labour force would become more skilled by doing the same tasks. Production would also become more efficient, because there would be an incentive to create faster and better production methods to increase the specialization. Smith's theory reasoned that with increased efficiencies, people in both countries would benefit and trade should be encouraged. His theory stated that a nation's wealth shouldn't be judged by how much gold and silver it had but rather by the living standards of its people.

2. David Ricardo's Theory Of comparative cost Advantage

According to David Ricardo, it is not the absolute but the comparative differences in costs that determine trade relations between two countries. The comparative cost theory was first systematically formulated by the English economist David Ricardo in his book "Principles of Political Economy and Taxation", published in 1817. It was later refined by J. S. Mill, Marshall, Taussig and others. According to Ricardo, differences in comparative costs form the basis of international trade.

This theory states that,

"International trade takes place because different countries have different advantage (efficiency) in the production (specialization) of different commodities. A country will specialize in the production of that commodity in which it has a greater advantage or its comparative disadvantage is the least. It follows thus that the country would export the commodity in which it has comparative advantage and import the commodity in which its advantage is less or in which it has a comparative disadvantage."[4]

It means that International Trade plays a vital role in redistribution of the resource of a country e.g. labour to produce of goods and services. A country possesses a comparative advantage from production of goods and services in which it has a labour productivity and lower cost. Therefore, according to David Ricardo, the difference in comparative advantage in labor productivity predicts trade patterns. It also determines resources utilization, even if not explicitly stated by Ricardo.

It's important to consider the assumptions that the Ricardian theory is founded on, in order to light on the principles of the theory. Assumption is as follows:

1. There are only two countries trading two commodities.
2. Labour all over the world is homogeneous. Labour is deemed to be 'the' factor of production i.e. there are no other factor of production, or if there are, they can be expressed in the form of labour. This is because Ricardo follows Adam Smith's 'Labour theory of Value'.
3. The Ricardian theory considers cost of production in real terms, following the labor theory of value, i.e. the theory is founded on the labour cost principle alone.
4. There is perfect mobility of the factors of production within the country but imperfect mobility between two countries.
5. Production is subject to constant return to scale.
6. There exists full employment of all the factors of production in the two countries considered.
7. It is assumed in the theory that there exists free trade i.e. no barriers in the form of tariffs or controls between the two countries.
8. It is implied that transport cost are ignored.
9. Supply of labour is constant.

Comparative advantage theory is a dynamic concept i.e. it is not restricted to labour productivity only as initially offered in the classical theory of Ricardo.

A critical analysis of the Ricardian Theory will suggest that the theory is incapable to measure up to the condition of international trade in the light of present day conditions, especially in developing economies. Researcher would like to clearly point out that the degree of development of South Africa and India differs in many respects so that 'developing India' is the fore front whereas 'Developing South Africa' is trailing behind in the 'development Race'.[5]

The study intends to test the above theory into the context of India and BRICS.this theory is relevant to the current study only in one aspect.

This theory supports free trade for efficient production which is viable in countries of the same level of development. Therefore it will suggest that the trade between BRICS countries will be beneficial. India is having advantage and benefits through several economic sectors like information technology, labour outsourcing and pharmaceuticals and textile and China having power to produce manufacturing goods at large level. So there will be benefits resulting from trading between both the developing countries due to the lines of comparative advantage provided they have free trade.

3. Heckscher – Ohlin Theory of International Trade

One of the main drawbacks of Ricardian theory of comparative cost was that it did not explain why differences in comparative costs exist. In 1919, Eli Heckscher propounded the idea that trade results from differences in factor endowments in different countries. The idea was further carried forward and developed by Bertil Ohlin in 1933 in his famous book "Inter-regional and International Trade". This book forms the basis for what is known as Heckscher – Ohlin theory or modern theory of international trade.

As generally accepted, the Heckscher- Ohlin Theorem is one that is concerned with general equilibrium of international trade. It considers comparative advantage taking into account two factors of production, say labour and capital, whereas Ricardo's Theory takes only one factor of production - labour.

According to this theory:

"The immediate cause of international trade is the difference in the relative prices of commodities between the countries and these differences in the commodity prices arise on the account of the difference in the factor supplies in the two countries."[6]

The researcher therefore is of the opinion that the Heckscher- Ohlin Theorem is also relevant to the current study considering that:

Among the BRICS Countries if we take example of Brazil and India or India and South Africa differ in factor endowments which create the foundation for the source of comparative advantage in trade. This results in disparity in the prices of products

on account of comparative advantage or factor endowment as well as a variance in Factor proportion in question for the manufacture of the different products.

On one hand India has a larger labour force which is likely to make labour abundant and at the same time capital is largely used specially in large industries. This has been made possible because of the policy of keeping interest rates lower than otherwise is the case in banks and financial institutions. On the other hand Russia is relatively capital abundant, Consequently India should export products that are intensive in the factor which is abundant. India should import products that use relatively scarce factors of production which is reflective of its comparative advantage.[7]

4. **Leontief Paradox**

Wassily Leontief was a Russian-American economist who made several contributions to the world of economics. Leontief won the Nobel Prize in 1973 for his research on input-output analysis. Leontief was also credited with the Leontief Paradox and the Composite Commodity Theorem. The trade pattern can be counted as the number one question in International Economics. Ricardo found the first trade pattern of comparative advantage sourced from productivities different across countries. Heckscher and Ohlin illustrated another trade pattern of comparative advantage from different factor endowments under the same technologies across countries. The Leontief trade described in the Leontief paradox is a new trade pattern when countries have different productivities. It is also a trade pattern of comparative advantage. The evidence of factor intensity reversals from the empirical studies is direct support for the Leontief trade. [8]

Leontief found that (1947) the capital – labour ratio embodied in US export is smaller than the capital – labour ratio embodied in US competitive Import replacement. In theory a country will tend to export those commodities which use its abundant factors of production intensively and import those which use its scarce factor intensively.[9]

In 1954 and 1956 Leontief ran two tests of Heckscher-Ohlin-Samuelson theory In the first test (1954) he used American data from the 1947 input-output tables with 200 industries aggregated in 50 sectors He computed direct and indirect requirements of labour and capital for the production of 1 million dollars worth of USA export and for the production of 1 million dollars worth of competitive imports (import replacement) Then he computed the capital/labour ratio of USA import and export in order to test

the H-O-S theory under the hypothesis that the USA is a "Capital Abundant" country. Expected results: USA should export capital intensive goods and should import labour intensive goods Results: just the opposite! The USA exports labour intensive goods.[10] According to him, when exports are reduced, labor and capital are released. Similarly the production of imported goods is increased. Labour and capital are both factors. According to the assumptions, relatively more capital will be released from the export industry and relatively more labor will be required in the import industry.

According to him, the US export industry employs more workers than the import industry, which means that the US exports labour-intensive goods and imports capital-intensive goods.

While Studying BRICS countries this trade theory is applicable. For example although India is Labour abundant country and agriculture is the largest sector, it is seen that the share of Labour intensive agricultural exports to BRICS countries has reduced and the share of capital intensive Manufacturing exports has increased during the study period.

5. **New Trade Theory**

New Trade theory was developed in the late 1970s and early 1980s. New Trade Theory (NTT) is a collection of economic models in international trade which focuses on the role of increasing returns to scale and decreasing return to scale. In NTT, economics of scale can be either Internal Economies of scale or external Economies of scale. Internal Economies lead to the relatively common market structure called monopolistic competition. New trade theorists relaxed the assumption of constant returns to scale, and some argue that using protectionist measures to build up a huge industrial base in certain industries will then allow those sectors to dominate the world market. In an oligopoly, a handful of firms produce the entire market output. New trade theory takes a different approach from the Ricardian and the Heckscher-Ohlin models on why countries engage in international trade. Both Ricardo and Heckscher assumed constant returns to scale where to them if all factors of production are doubled then output will also double. But a firm or industry may have increasing returns to scale or economies of scale in way that when all factors of production are doubled, output more than doubles which will necessitate a bigger market and thus forcing firms to engage in international trade where there is a larger market.[11]

The New Trade Theorist noted that the existence of economies of scale makes large firms to be more efficient than small firms and the industry may consist of a

monopoly or a few large firms. Production may be imperfectly competitive in the sense that excess or monopoly profits are captured by large firms. In other words New Trade Theory on why countries engage in international trade is opposed to the assumption made in the Ricardian and Heckscher models that there is perfect competition in the market in that all income from production is paid to owners of factors of production and there is no "excess" or existence of monopoly profits. To New Trade Theorists, countries engage in international trade because of the notion of economies of scale. To them the presence of scale economies leads to a breakdown of a perfect competition and creates more efficient firms which continue to expand on the markets because of increased outputs. The New Trade Theorists explained that because engaging in international trade increases market size, this decreases the average cost in an industry described by monopolistic competition. In short, New Trade theory mentioned economies of scale and stated that when countries engage in international trade variety of goods those consumers can buy also increases thus increasing their welfare. As average costs decrease consumers also benefit from a decreased price. This theory also relate to research topic. China has a dominant economy. China has captured India's market because China produces manufacturing goods and sales out in Indian market at lower cost. This is the example of oligopoly.[12]

3.7 DATA COLLECTION

The present study exclusively based on the secondary data. The data are collected from various secondary data sources, like UNCTAD statistics report, BRICS reports, various studies and survey, International Financial Statistics reports and books, Reports of World Trade Organization, International Monetary fund report and Export-Import Bank of India report and working paper. In the same sense the data of BRICS countries Export and Import has been taken from Trade statistics and Trade Maps, a website of the International Trade centre.

The study seeks to analyze the international trade of India among the BRICS countries and study of the contribution of BRICS in global trade trends. To keeping the objectives of the study the related review of literature taken from various database. As well as; books on BRICS, Related websites, Published data on BRICS, Government reports on international trade and various journals, thesis, dissertations, periodicals and magazines etc. are used for this research. The secondary data for

analysis consists of imports and exports in India and other BRICS countries. Along with that, various Reports of World Bank, WTO, ITC, and BRICS summits, Ministry of Trade and Commerce, Government of India were used.

3.8 PERIOD OF STUDY

The numeric data collected for the period from 2006 to 2017 had been used. This period has been selected because BRIC was formed in 2006 and the researcher selected topic in 2017. The data used here pertain to India's import and exports of major products or commodities, GDP of member countries of BRICS, HDI Of member countries of BRICS and trends of trade in the same period.

3.9 SCOPE OF THE STUDY

1. This study is based on five Countries Brazil, Russia, India, China and South Africa. Name as BRICS countries.
2. Time period of the study is 2006 – 2017.
3. This study especially focuses on Balance of Trade (Trade in Goods of BRICS countries). It has not studied about Balance of Payment (Services and Money Flow) and terms of trade (the ratio of an index of a country's export prices to an index of its import prices.) because this topic is vast. Researcher just focused on trade in goods.
4. All commodities exported and imported by India to BRICS countries have been taken for this study. However since many of the products are small in value, only the top 9 products are given separately and all other products have been combined and shown as 'Others'
5. This study only focused on India's International Trade with BRICS countries. Present research does not consider the trade of the other BRICS countries with each other.
6. The data on exports and imports of India to BRICS countries used in this research has been taken only in terms of their value (in dollars). The data on actual physical quantities or units of the products exported and imported by India has not been used.

3.10 LIMITATION OF THE STUDY

1. The major limitation of the study is that the BRICS came into functioning since 2006 which makes it too early to predict every possible outcome. However the study was carried out on the basis of deep examination of trends and patterns within the group until the year early 2017.

2. The study is depends on the secondary data sources like books and periodicals, journals, websites, reports etc.

3. The study covers the interpretation and analysis regarding the international trade especially in the context of India's International trade among the BRICS countries for the period 2006 to 2017. The trade of the other BRICS countries with each other is not taken for study.

4. The data on Exports and Imports has been taken in terms of their value and not in units. Since value = price × quantity, the increase in value in some cases could be only because of an increases in price and not in the actual quantity of the products being exported and imported by India.

3.11 DATA ANALYSIS AND PROCESSING

The following steps were undertaken so as to process and analyze the data.

A. Data Editing and Tabulation

The raw data collected by the researcher was tabulated so as to note down missing entries if any and the irrelevant questions/data was omitted from the scope of the study.

B. Statistical Techniques

To identify the trends in the GDP and HDI of BRICS countries statistical tools such as tables, graphs, mean, standard deviation, coefficient variation and trend analysis, forecast, ANOVA have been used. The direction and composition of India's trade, Balance of trade with other BRICS countries has been analyzed using trend analysis, percentage, Compound Annual Growth Rate, annual Growth Rate, correlation analysis and regression coefficient (R- squared) etc.

Descriptive statistics influence of international trade and internal trade on the GDP of BRICS countries and major Export – Import products of BRICS countries were used for this research. To test the nature of the data between variable the central tendency and dispersion used in this research; i.e.,

1. Mean/Average – It is the simplest but most useful measure of central tendency. Describing mean as the average in a distribution is very common in everyday life. Here arithmetic mean means 'average value' it is the total sum of all the scores divided by the number of scores. While calculating Gross domestic product and Human Development Index of BRICS countries from 2006 – 2019, researcher use this method.[13]

2. Standard Deviation – standard deviation of a set of scores is defined as the square root of the average of the squares of the deviation of each from the mean. SD is regarded as a most stable and reliable measures of variability as it employs mean for it s computation. It is often called as root-mean square deviation.[14]

Standard Deviation formula –

$$\sigma = \sqrt{\frac{\sum (X - \mu)^2}{N}}$$

- σ = population standard deviation
- $\sum$ = sum of…
- X = each value
- μ = population mean
- N = number of values in the population[15]

3. Coefficient of variation - The coefficient of variation (CV) is a statistical measure of the relative dispersion of data points in a data series around the mean. In finance, the coefficient of variation allows investors to determine how much volatility or risk is assumed in comparison to the amount of return expected from investments.

The coefficient of variation (CV) is a measure of relative variability. It is the ratio of the standard deviation to the mean (average). The CV is particularly useful when you want to compare results from two different surveys or tests that have different measures or values. For example, if you are comparing the results from two tests that

have different scoring mechanisms. If sample A has a CV of 12% and sample B has a CV of 25%, you would say that sample B has more variation, relative to its mean.

The **formula for the coefficient of variation** is:

Coefficient of Variation = (Standard Deviation/Mean) * 100.
In symbols: CV = (SD/$\bar{x}$) * 100.

Multiplying the coefficient by 100 is an optional step to get a percentage, as opposed to a decimal.[16]

4. Compound Annual Growth Rate - CAGR stands for the Compound Annual Growth Rate. It is the measure of an investment's annual growth rate over time, with the effect of compounding taken into account. It is often used to measure and compare the past performance of investments or to project their expected future returns.[17]

Compound Annual Growth rate the formula is CAGR= [(End value/Present value) ^ (1/Number of year)]-1)]*100

5. Growth Rate -
Growth rate = [(Present year value - Past year value)/Past year value]*100. This was used for export and import to determine annual growth which may be positive or negative.

6. Correlation - The Correlation is a statistical tool used to measure the relationship between two or more variables, i.e. the degree to which the variables are associated with each other, such that the change in one is accompanied by the change in another. In this study we use two variables name as Export and Import.
Researcher use Bivariate Correlations. When the correlation is positive, the variables tend to go together in the same manner and When the correlation is negative, we tend to see an inverse or opposite direction in the relationship.[18]

7. R-squared - is the percentage of the response variable variation that is explained by a linear model. It is always between 0 and 100%. R-squared is a statistical measure of how close the data are to the fitted regression line. It is also known as the coefficient of determination, or the coefficient of multiple determinations for multiple regressions.[19] In this study while highlighting Gross Domestic product

Human Development Index and Export and import of India to BRICS countries this is used.

8. Trend analysis

Trend Analysis is a statistical technique that tries to determine future movements of a given variable by analyzing historical trends. In other words, it is a method that aims to predict future behaviors by examining past ones. Trend analysis quantifies and explains trends and patterns in a "noisy" data over time. A "trend" is an upwards or downwards shift in a data set over time.[20] Fitting a trend line helps in identifying the general direction in which the variable is moving.

9. Forecast

Forecasting is a technique that uses historical data as inputs to make informed estimates that are predictive in determining the direction of future trends.[21]

10. Analysis of Variance (ANOVA)

An ANOVA, which stands for analysis of Variance, is a statistical test used to analyze the difference between the means of more than two groups. A one – way ANOVA used one independent variable while a two – way ANOVA uses two independent variables.[22]

11. Data Analysis

In this data analysis chapter, researchers collected the secondary data from different authentic sources and mentioned it below the data table computed for the further research purpose. Also represent the information in tabular format and done graphical representation to see the nature of the data. To find out the export and import trend about BRICS countries the researcher used the trend analysis followed by R-Square statistics which says the fitted trend line is suitable for forecasting the future trend of exports and imports of the BRICS countries.

3.12 EXPORTS AND IMPORTS OF GOODS AND SERVICES

The present study-based on the Imports and Exports are of major commodities of BRICS countries. Exports of goods and services represent the value of all goods and other market services provided to the rest of the world. Imports of goods and services represent the value of all goods and other market services received from the rest of the world.

3.13 PLAN OF THE STUDY

The research is divided in five chapters. The first chapter deals with introduction about International Trade and BRICS, Importance of International trade, Rising of BRICS, over view of the Brazil, Russia, India, China and South Africa (BRICS), Summits of BRICS, objective of BRICS, Major Challenges of BRICS, policy of BRICS countries about International Trade.

The second chapter, Review of related literature**,** critically examines the various studies, reports, books, journals, articles, research paper and thesis and gives the overview of the considered subject. This is useful to study the research problem and analyze the features of international trade of each BRICS country. In this chapter an attempt has been made to take a review related to the BRICS Countries trade. In this chapter the gap of the topic and prior studies are mentioned.

In the third chapter, research design and the methodology in it, nature, aims and objectives of the study, hypothesis and relevance of the study, scope and limitation, selection of period, research methodology, theoretical and conceptual framework are described. Overall this chapter is mirror of present study to explore the whole study.

The fourth chapter is the main pillar of this study which deals with interpretation and Analysis of direction and composition of trade among the BRICS countries in the period considered, which includes comparative study of trends of import and export, pattern of imports and exports, target sectors for BRICS trade. The data is analyzed taking into account the aims, objectives and hypothesis of the research.

The last chapter of this study is major findings, recommendations and conclusion based on secondary data.

3.14 CONCLUSION

This chapter gives the methodology used for collection and analysis of data. The data analysis and interpretation is given in next chapter.

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Chapter - 4

DATA ANALYSIS AND INTERPRETATION

CONTENT

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CHPATER 4 - DATA ANALYSIS AND INTERPRETATION

4.1 INTRODUCTION

On the global platform five countries have come together to form a group known as BRICS. The BRICS countries included Brazil, Russia, India, China and South Africa. These countries are speedily growing economies and have growing international influence with over 41 % of the world's total population. The cumulative output of these countries is at present more than 24 % of the global Gross Domestic Product (GDP).[1] Most economists have forecast that Brazil, Russia, India, China and South Africa will be the five largest economies in the world in 2050.

In this chapter, trends in GDP, Imports and Exports and other trends from the study period of the year 2006 to 2019 have been discussed. For checking the trend of the export, import or GDP, trend analysis has been used to fit the suitable trend line to the given secondary data accessed by different authentic sources. Also the trend equation of the fitted trend line has been extended for the purpose of giving a forecast for the next five years. Based on this trend equation, a forecast or prediction of the future exports and imports of India to other BRICS Countries has been worked out. By using the volatility analysis, the consistency and variation in the GDP of the BRICS countries has been shown. In volatility analysis, the Mean, Standard deviation (SD) and coefficient variation (CV) of the given data are calculated and the results interpreted based on the percentage of C.V. The larger the C.V then greater the variation and lower the consistency and lower the C.V then smaller the variation or greater the consistency in the values of the variable being studied. Also based on R-square value, it can be known whether the fitted trend line is statistically best fitted or not.

This chapter has been arranged as follows:

In sections 4.2 and 4.3 the trends in the GDP and HDI of all BRICS countries have been discussed. In the remaining chapter, data regarding International trade of India with the other BRICS countries has been presented and analyzed.

The directions and composition of India's trade with other BRICS countries have been worked out along with the balance of trade and the share of BRICS trade in the total International trade of India.

In the final section, the hypotheses of the study have been tested.

4.2 GROSS DOMESTIC PRODUCT OF BRICS COUNTRIES

Gross domestic product (GDP) is the standard measure of the value of final goods and services produced by a country during a period.[2] Basically GDP is used to calculate a country's economic performance and comparison with other countries worldwide. Business investments, Consumer spending, Government spending and net exports are the major components while determining GDP of any country. Over the past few years, BRICS countries have changed into dynamic participants in the world order, constituting 41 percent of the world's population, 24 percentof world GDP and 16 percent of world trade. The BRICS countries have laidstrong ties with each other through various initiatives in many fields,to set a strong example for socio-economic cooperation.[3]

Total National Output (GDP) is the absolute financial or market worth of the relative multitude of completed labor and products delivered inside a nation's boundaries in a particular time span. Although GDP is regularly determined on a yearly premise, it is here and there determined on a quarterly premise also. In the U.S., for instance, the public authority delivers an annualized GDP gauge for each financial quarter and further more for the schedule year. The individual informational collections remembered for this report are given in genuine terms, so the information is adapted to value changes. In the U.S., the Bureau of Economic Analysis (BEA) computes the GDP utilizing information discovered through reviews of retailers, producers, and manufacturers, and by seeing exchange streams.

In the following table, the GDP of BRICS countries from the year 2006 to 2019 (in billion U.S dollars) has been shown. For this GDP data the volatility analysis was done and it was seen that the BRICS countries showed the lower C.V and greater consistency in growth of the GDP in selected study period.

Table No. 4.1 Gross Domestic Product (GDP) of the BRICS countries from 2006 to 2019 (in billion U.S. dollars)

Sr. No.	Year	Brazil	Russia	India	China	South Africa
1	2006	1,107.64	989.93	940.26	2,752.53	271.64
2	2007	1,397.08	1,299.71	1,216.74	3,550.34	299.42
3	2008	1,695.82	1,660.85	1,198.9	4,594.31	286.77
4	2009	1,667.02	1,222.64	1,341.89	5,101.70	295.94
5	2010	2,208.87	1,524.92	1,675.62	6,087.16	375.35
6	2011	2,616.2	2,045.93	1,823.05	7,551.50	416.42
7	2012	2,465.19	2,208.3	1,827.64	8,532.23	396.33
8	2013	2,472.81	2,292.47	1,856.72	9,570.41	366.83
9	2014	2,455.99	2,059.24	2,039.13	10,475.68	350.9
10	2015	1,802.21	1,363.48	2,103.59	11,061.55	317.62
11	2016	1,795.7	1,276.79	2,294.80	11,233.28	296.36
12	2017	2,062.83	1,274.2	2,652.75	12,310.41	349.55
13	2018	1,885.48	1,669.58	2,713.16	13,894.82	368.29
14	2019	1,839.76	1,699.88	2,868.93	14,342.90	351.43
Total		**27,472.6**	**22,587.9**	**26,553.2**	**1,21,058.8**	**4,742.85**
Mean		**1962.33**	**1613.42**	**1896.66**	**8647.059**	**338.775**
SD		**441.863**	**406.887**	**597.273**	**3798.779**	**44.378**
C.V		**22.52%**	**25.22%**	**31.49%**	**43.93%**	**13.10%**

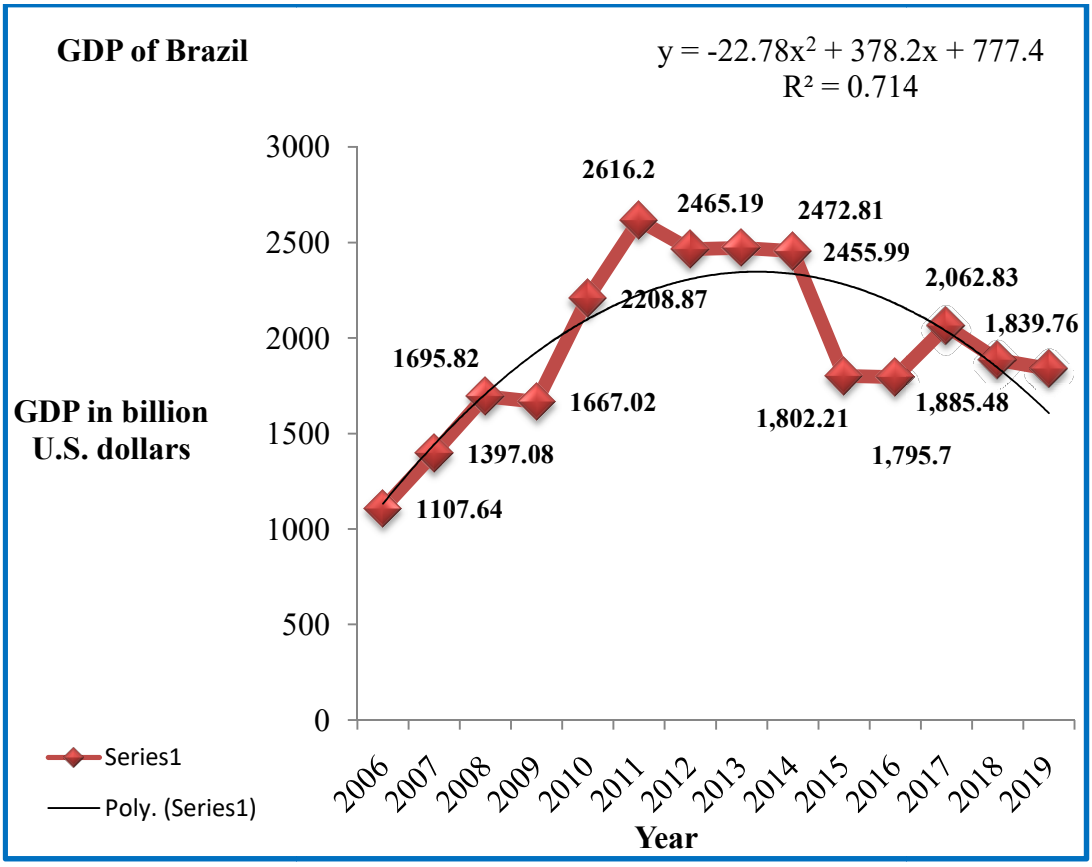
Source: (https://www.theglobaleconomy.com/rankings/GDP_current_USD/, Accessed on 27th March 2021, 09.32 pm

Interpretation

The above table shows the volatility analysis of Gross domestic product (GDP) of the BRICS countries from 2006 to 2019 (in billion U.S. dollars).The Mean, Standard deviation and coefficient of variation of the Gross domestic product (GDP) of the BRICS countries has been calculated. The Average GDP of Brazil is 1962.33 billion U.S. dollars. The Average GDP of Russia is 1613.42 billion U.S. dollars. The Average GDP of India is 1896.66 billion U.S. dollars. The Average GDP of China is 8647.059

billion U.S. dollars and The Average GDP of South Africa is 338.775 billion U.S. dollars. China and India show the highest standard deviation of GDP i.e. 3798.779 and 597.273 respectively which shows that there is more variation in the GDP of these countries. If lower the coefficient of variation then higher the consistency and higher the coefficient of variation lower the consistency. Here researcher noticed that the coefficient of variation is higher in China and India i.e. 43.93% and 31.49% respectively. The highest average GDP is china and it is 8647.06 billion U.S. dollars. The lowest average GDP is South Africa and it is 338.78 billion U.S. dollars.

Graph 4.1 Gross Domestic Product of Brazil



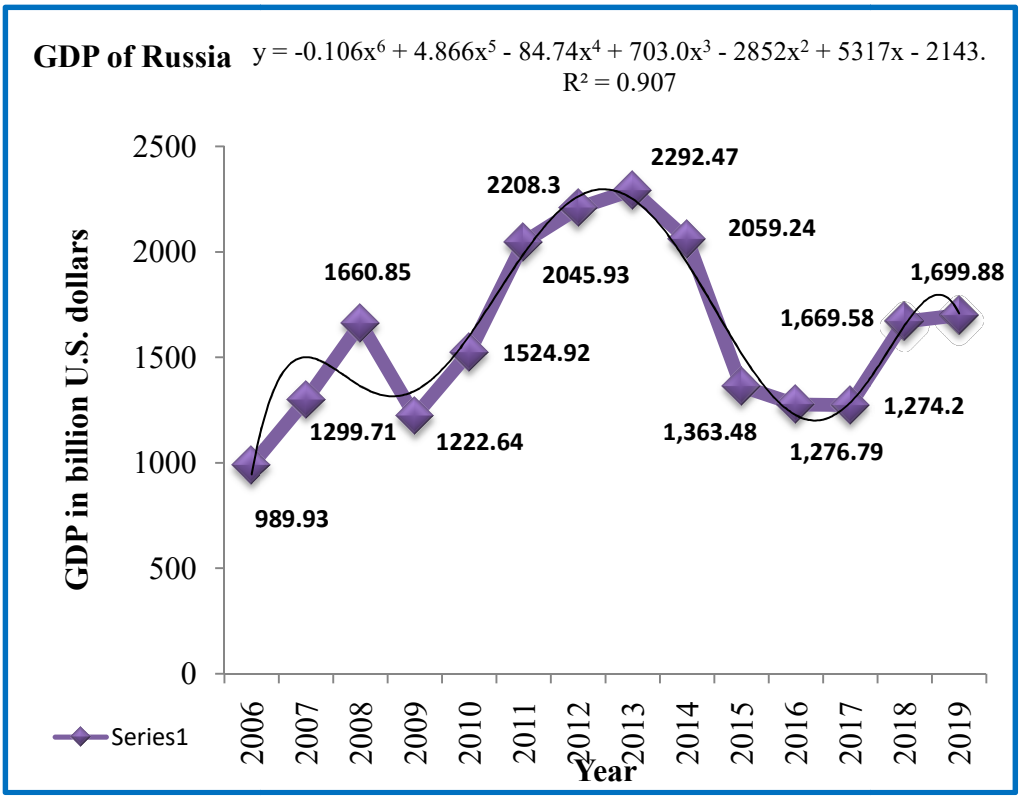
Source: Table No. 4.1

Interpretation

In the above graph GDP of Brazilis shown,with the suitable trend line. Brazil is one of the quickest developing economies on the planet and the biggest among all Latin American nations. Brazil is likewise a member of various monetary associations like the G20 just as one of the five nations in the BRICS economies, which comprise of Brazil, Russia, India, China and South Africa. In spite of having one of the lower populaces out of the five nations, Brazil kept a somewhat steady dollar worth.

GDP of Brazil showed faster growth between the years 2006 to 2011. GDP remain more or less table between years 2011 to 2014. A sharp fall in GDP in the year 2015 to 2016 was followed by recovery from 2017. If R-Square value is greater than 0.7 then we can say that the given trend line is statistically accepted and best fitted to the data and this data or trend equation can used the forecast the future trend of GDP. In the above trend analysis researcher noticed that the R-square value is 0.7149 which is greater than the 0.7 and because of the fluctuation in GDP the second order polynomial trend line is fitted to the GDP of Brazil.

Graph 4.2 Gross Domestic Product of Russia



Source: Table No. 4.1

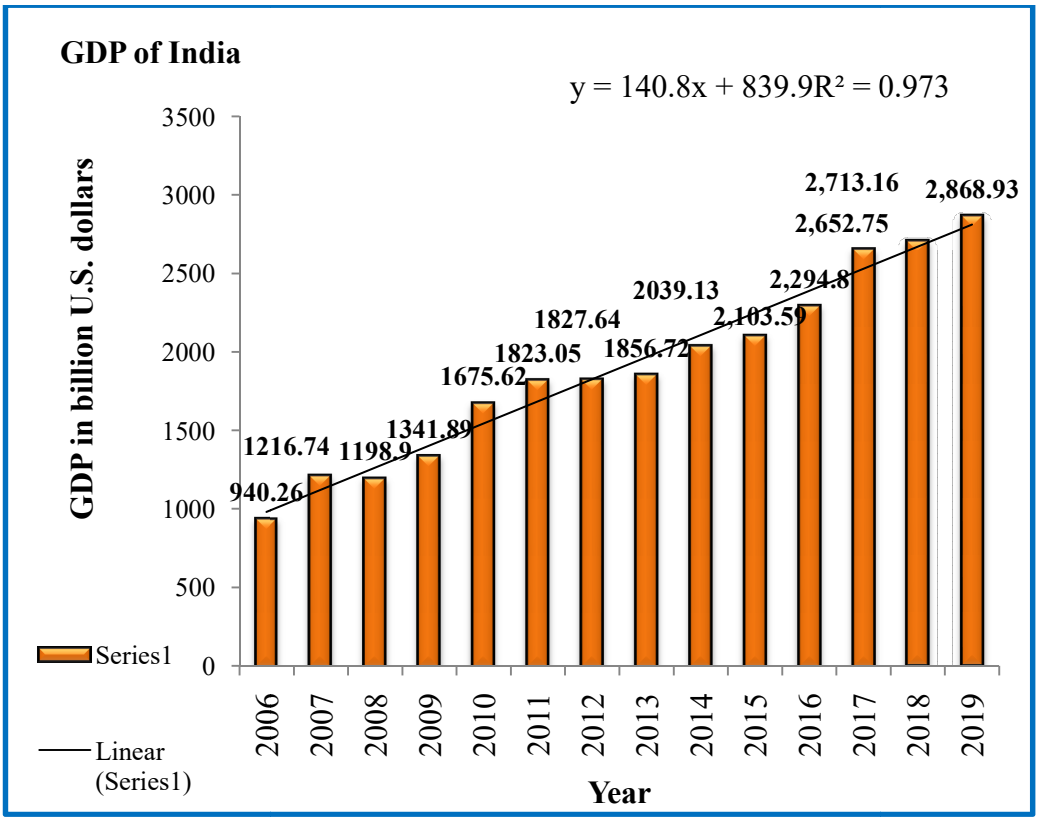
Interpretation

The Russian economy is principally coordinated by both the private area and the state. As an individual from the BRICS, Russia is at present encountering a sped up development inside the economy with a shot at procuring a spot in the G7 economies. As of the 1990s, a lot of the nation's modern and agrarian areas were privatized, not with standing energy and military creation stayed with the state generally. Thus, most of Russian trade comprised of energy items as well as innovative military gear.

The impact of the worldwide monetary emergency of 2008 negatively affected the Russian economy, but just had transient impact. Russia recuperated in the following 2 years and has since experienced dramatic prudent development and usefulness because of forceful and brief activities from the public authority, giving Russia quite possibly the most vibrant economy on the globe. Based on purchasingPower parity (PPP)Russia is the sixth largest economy in the world by GDP. Today considered by IMF and World Bank Russian economy is as aDeveloping economy. Russia has abundant Natural resources of Fossil Fuels (Oil, Natural gasand Coal) and precious metals.

GDP of Russia increased between in the year 2006 to 2008. A slight fall in 2009 because of the global recession was followed by growth up to 2013. 2014 to 2017 GDP showed declining trend there is a slight increases in GDP after 2018.In this graph GDP of Russia drawn, the R-square value is 0.9018 which is greater than 0.7 and 0.8. It means that the 6^{th} order polynomial trend line is best fitted to the given data of GDP. The fluctuations are higher than Brazil so researcher fitted the sixth order polynomial trend line to the GDP of Russia.

Graph 4.3 Gross Domestic Product of India

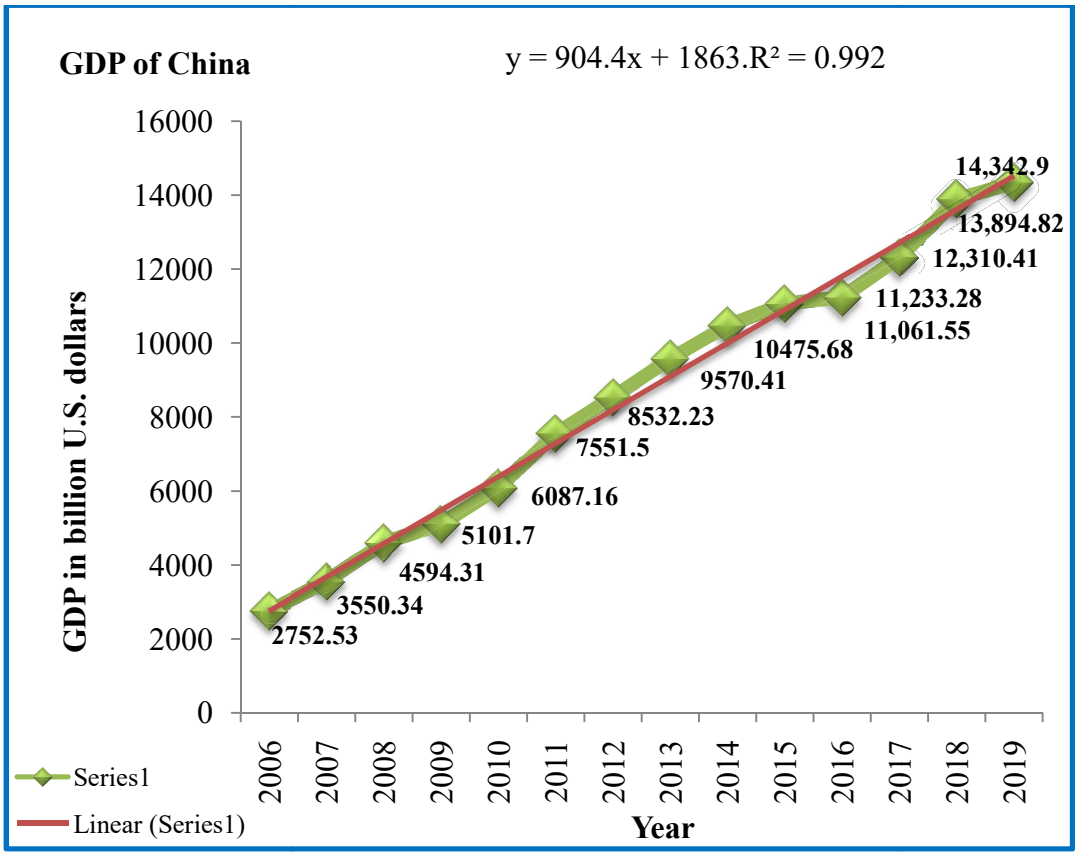


Source: Table No. 4.1

Interpretation

India shows the very less variation or deviation in GDP as compared to the other associated countries of BRICS. The trend of Indian GDP is consistently increasing after the year 2006. In the above GDP of India, it's noticed that R-square value is 0.9738 which is the best fitted linear trend line to the given data of Indian GDP and by using the estimated trend equation, can forecast the future GDP of next few years based on the trend equation.

Graph 4.4 Gross Domestic Product of China



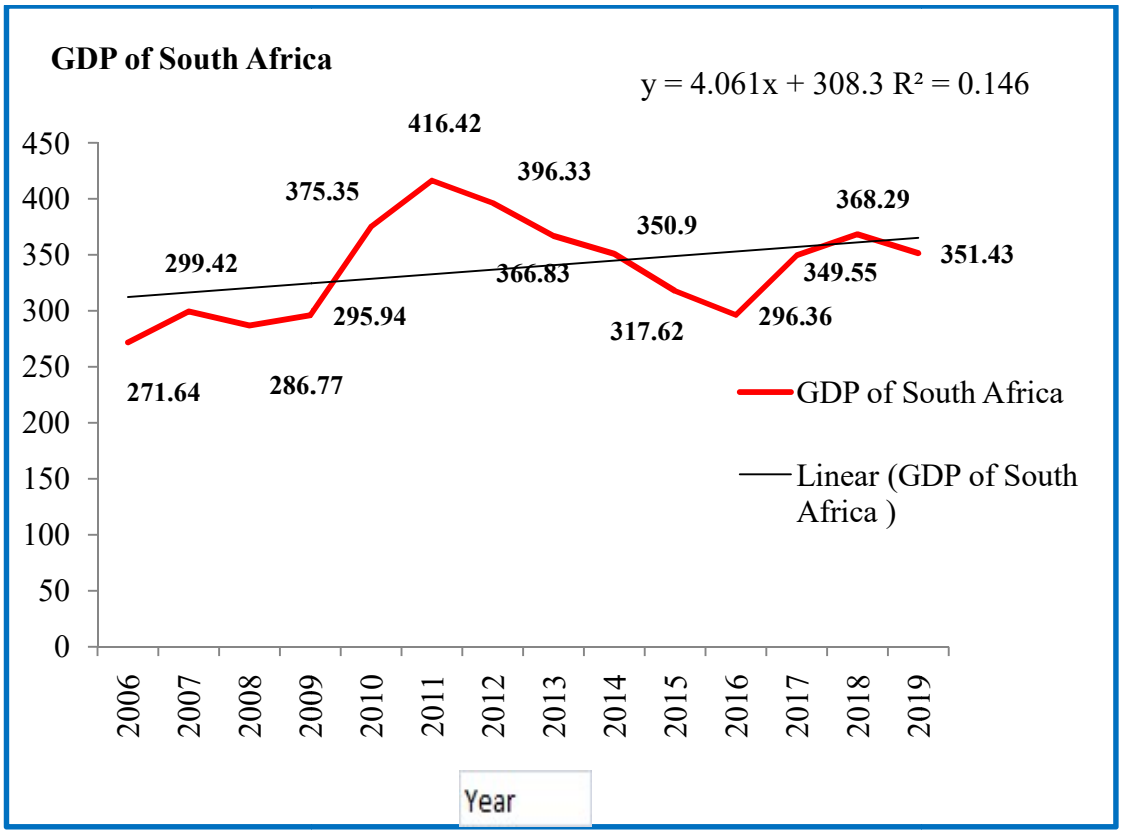
Source: Table No. 4.1

Interpretation

As per the current projections, the Chinese economy will keep a consistent development force. Despite the fact that the development pace of China's genuine GDP steadily eased back down as of late, year-on-year GDP development actually arrived at 6.1 percent 2019 and is estimate to run at around 5.6 percent after the covid19. Since 2010, China has been the world's second-biggest economy, outperforming Japan. China's development on the planet's economy has a great deal to do with its status as the 'world's plant'. Since 2013, China is the biggest trading partner of most of the countries because sChina now has one of the lowest manufacturing costs in the world. This has been enabled by the large scale infrastructure. Electricity is cheaper in China than anywhere else in the world. Also, Chinese carriers can transport goods across continents cheaply. This has made China the largest exporter and the second largest economy in the world

In the above GDP of China, it has been clearly inferred that R-square value is 0.992 and it is greater than 0.8 so it is best fitted trend line which is linear trend line is fitted on the GDP of China. Also China shows the very less fluctuations in growth of GDP as compared to other BRICS countries.

Graph 4.5 Gross Domestic Product of South Africa



Source: Table No. 4.1

Interpretation

South Africa enjoys a benefit in the creation of agribusiness, mining and assembling items identifying with these sectors. South Africa has moved from a primary economy during the 20th century to an economy driven principally by the tertiary area in the current day which represents an expected 65% of GDP or $230 billion in ostensible GDP terms.The country's economy is supported by key sectorssuch as mining, farming and fisheries, vehicle assembling and get together, food handling, dress and materials, media transmission, energy, monetary and business administrations, land, the travel industry, fabricating, IT, transportation, and discount and retail exchange.

GDP of South Africa peaked in 2011 after which there was a fall up to2016; GDP is again showing increases from 2017. In the above GDP of South Africa, the trend line equation and R-square value on the GDP of South Africa and observed that the R-square value is 0.7831 and trend line is fitted which is fifth order polynomial trend line. It indicates that the South Africa has shown more fluctuations as compared to the other countries associated in BRICS. Also researcher noticed that the average GDP of South Africa is significantly low as compare to the other BRICS countries.

4.3 HUMAN DEVELOPMENT INDEX OF BRICS COUNTRIES

In any country people are the real wealth of that country. The main goal of Economic Development is to expand the people's liberty and standard of living. One of the measuring tools of people's standard of living or welfare is Human Development Index (HDI). The Human Development Index (HDI) was introduced by the United Nations Development Program (UNDP) in its first report prepared under the supervision of Late Pakistani economist Mahaboob–Ul-Haq in the year 1990. HDI mainly measures three basic dimensions for Human development. They are Life Expectancy at Birth, Literacy Rate and GDP Per capita. Life expectancy at birth measures a long and healthy life. The second dimension of HDI is Literacy rate. In this dimension, the knowledge as measured by the adult literacy rate with two-third weight and the combined primary, secondary and tertiary gross enrolment ratio with one- third weight are taken into account in calculating the index.

The third dimension of HDI is GDP Per capita as measured on Purchasing Power Parity basis. In this dimension, standard of living and quality of life are measured.[4] The BRICS countries achieved significant gains in both an economic and a political sense.

Table No. 4.2 HUMAN DEVELOPMENT INDEX OF BRICS COUNTRIES

Sr. No	HDI of BRICS Countries					
	Country	**Brazil**	**Russia**	**India**	**China**	**South Africa**
1	2006	0.702	0.76	0.546	0.653	0.626
2	2007	0.706	0.769	0.555	0.667	0.632
3	2008	0.717	0.775	0.563	0.678	0.646
4	2009	0.719	0.773	0.569	0.687	0.655
5	2010	0.727	0.781	0.579	0.699	0.664
6	2011	0.731	0.79	0.588	0.707	0.665
7	2012	0.735	0.798	0.597	0.716	0.675
8	2013	0.753	0.802	0.604	0.724	0.685
9	2014	0.756	0.807	0.616	0.731	0.693
10	2015	0.756	0.809	0.624	0.739	0.701
11	2016	0.758	0.815	0.630	0.746	0.703
12	2017	0.761	0.820	0.640	0.75	0.705
13	2018	0.762	0.823	0.642	0.755	0.707
14	2019	0.765	0.824	0.645	0.761	0.709
	Average	**0.739**	**0.796**	**0.599**	**0.715**	**0.676**
	SD	**0.022**	**0.021**	**0.033**	**0.034**	**0.028**
	C.V	**3.00%**	**2.71%**	**5.66%**	**4.82%**	**4.23%**

Source: http://hdr.undp.org/en/indicators/137506, Accessed on 18th June 2021, 9.47 PM

Interpretation:

In the above table, researcher did the volatility analysis of Human development Index (HDI) of Brazil, Russia, India, China and South Africa. The HDI values for the BRICS, just as their paces of development, contrast well and the worldwide average, aside from India whose HDI is well underneath this benchmark and South Africa whose pace of development of its HDI, just as its worth, is likewise beneath that of the world normal.

The average HDI of Brazil is 0.739, Russia is 0.796, India is 0.599, China is 0.715 and South Africa is 0.676. Researcher calculates the Standard Deviation (SD) and

Coefficient of variation (C.V) of BRICS countries. A decision criterion for interpreting the C.V has explained. In the BRICS gathering, Russia was ranked 52 in the human development index, Brazil 84, and China 85. Russia placed at first position and India at placed last position within the BRICS countries.

"India's HDI for 2019 is 0.645, which put the country in the medium human development classification, situating it at 131 out of 189 nations and domains. Somewhere in the range of 1990 and 2019, India's HDI expanded from 0.429 to 0.645, an expansion of 50.3%," human development report 2019 said. "HDI is a synopsis measure for surveying long haul progress in three essential components of human turn of events: a long and healthy life, admittance to information, and a respectable way of life," it said. "Somewhere in the range of 1990 and 2019, India's future upon entering the world expanded by 11.8 years, mean long stretches of tutoring expanded by 3.5 years, and expected long periods of tutoring expanded by 4.5 years. India's GNI per capita expanded by about 273.9% somewhere in the range of 1990 and 2019," Human Development Report 2019 said.[5]

For Economic Growth All these three factors are important to measure Economic Growth.International Trade, Gross Domestic Product and Human Development Index are inter-related to each other. If International Trade Increase, GDP also increase and If GDP increase HDI also Change.

1. **International Trade (Export – Import)**

The Balance of Trade is important in the calculation of a country's GDP. GDP increases when the total value of goods and services that domestic producers sell to foreign markets exceeds the total value of foreign goods and services that domestic consumers buy. When this happens a country has a trade surplus.[6]

2. **Gross Domestic Product**

Through GDP country know about the level of Economic Growth. The total trade activity, measured as the combined level of exports and imports, impacts economic growth, measured as changes in GDP per capita.International trade enlarges the market for a country’s output. Exports may lead to increase in national output and may become

an engine of growth. Expansion of a country's foreign trade may energies an otherwise stagnant economy and may lead it onto the path of economic growth and prosperity.[7]

3. Human Development Index

Human Development Index (HDI) is one of a variable that can influence the Gross Domestic Product (GDP). Human Development Index can help to measure the country achievements in different areas and what we took is from health, education and standard of living.Human development is a social, economic and political process by its nature and human beings are its object and tools, and at the same time, its objective. This process of development allows human beings to renew, create and innovate. It is one of the most important processes because it generates unlimited energy, through education, health, nutrition and the improvement of the standard of living. Therefore, human development considers economic growth to be a necessary condition, but not a sufficient one.[8]

The relationship between what is known as human development and economic development is a two-way relationship, as each of them is reflected negatively and positively on the other, that economic growth takes place through improving human capabilities, and achieving the desired growth reflected in human development as it expands options in front of human resources in particular for individuals in general.[9]

The GDP and HDI values of the five BRICS countries give a fairly good idea of the current level of economic and social development achieved by them. Against this background, India's Trade with the other BRICS countries is analyzed in the next section.

4.4 DIRECTION OF INDIA'S INTERNATIONAL TRADE WITH BRICS COUNTRIES

Direction of trade means a study of the countries to whom the exports are made and from whom the imports are made.

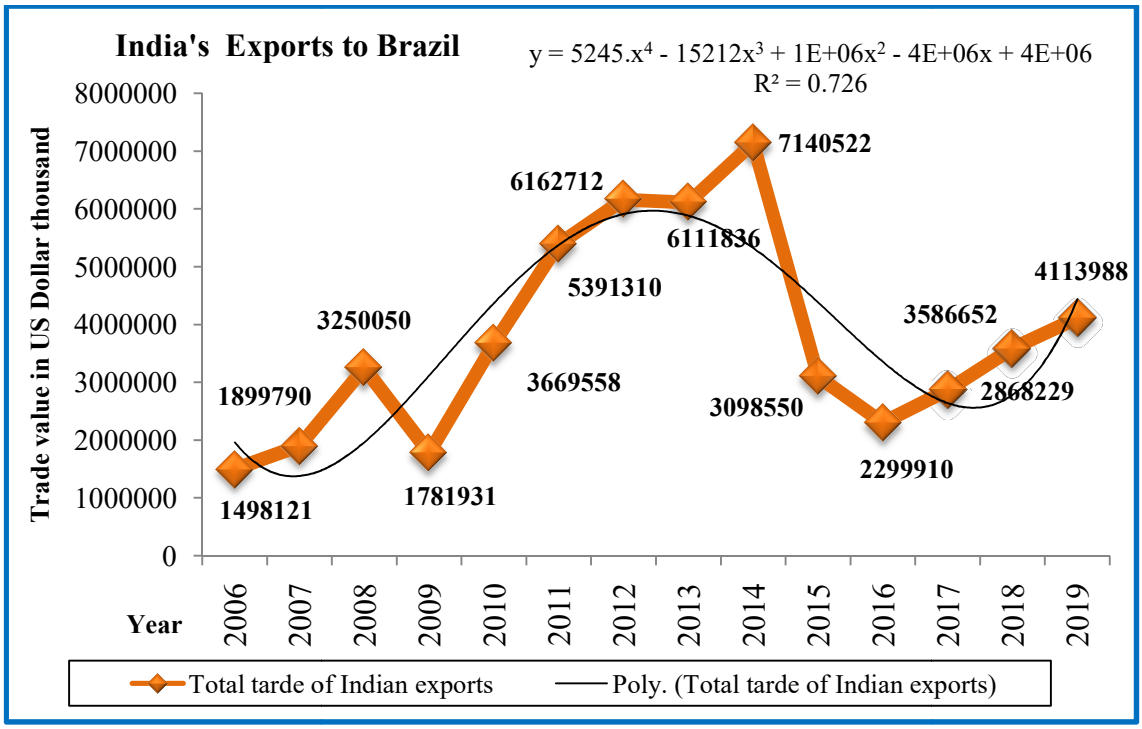
4.4.1 INDIA'S EXPORT TO BRICS COUNTRIES

Table No. 4.3 India's Exports to Brazil (Value in US Dollar thousand)

Sr. No.	Year	Total Value of Indian Exports	Growth Rate %	Estimate
1	2006	14,98,121	-	720,352.16
2	2007	18,99,790	26.81%	906,102.52
3	2008	32,50,050	71.07%	1,108,451.32
4	2009	17,81,931	-45.17%	1,316,601.52
5	2010	36,69,558	105.93%	1,518,468.44
6	2011	53,91,310	46.92%	1,703,359.69
7	2012	6,162,712	14.31%	1,864,040.95
8	2013	61,11,836	-0.83%	1,997,433.11
9	2014	71,40,522	16.83%	2,104,025.19
10	2015	30,98,550	-56.61%	2,186,634.33
11	2016	22,99,910	-25.77%	2,249,150.86
12	2017	28,68,229	24.71%	2,295,614.90
13	2018	35,86,652	25.05%	2,329,686.70
14	2019	41,13,988	14.70%	2,354,425.59
15	2020	Forecast	-	4,777,393.49
16	2021	Forecast	-	4,945,811.46
17	2022	Forecast	-	5,115,529.19
18	2023	Forecast	-	5,286,245.99
19	2024	Forecast	-	5,457,653.93
CAGR – Year 2006 – 2019 – 7.48%				

Source:https://www.trademap.org/Bilateral_TS.aspx?nvpm=1%7c699%7c%7c076%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c2%7c2%7c1%7c1%7c1%7c1%7c1, Accessed on 15 March 2021, 2.55 PM.

Graph 4.6 India's Exports to Brazil



Source: Table No. 4.3

Interpretation

In the above graph trend analysis, of Indian Export to Brazil, Its notice that the trend shows that 4th order polynomial trend and R-squared value is 0.726 showed the fitted trend line is statistically accepted trend line because the R-square value is greater than the 0.7.Trend line is statistically accepted and by using trend equation it can estimate or forecast the future few years' exports statistics which is shown in the above table. Also it's noticed that, Indian export to Brazil was increasing up to the year 2014. In the year 2014 the Indian trade of exports is highest as compared to the other years. After the year 2016 the trade of Indian exports is exponentially increasing.

For calculating the growth rate and Compound Annual Growth Rate, the following formula was used

Growth rate = [(Present year export value-Past year export value)/Past year export value]*100.

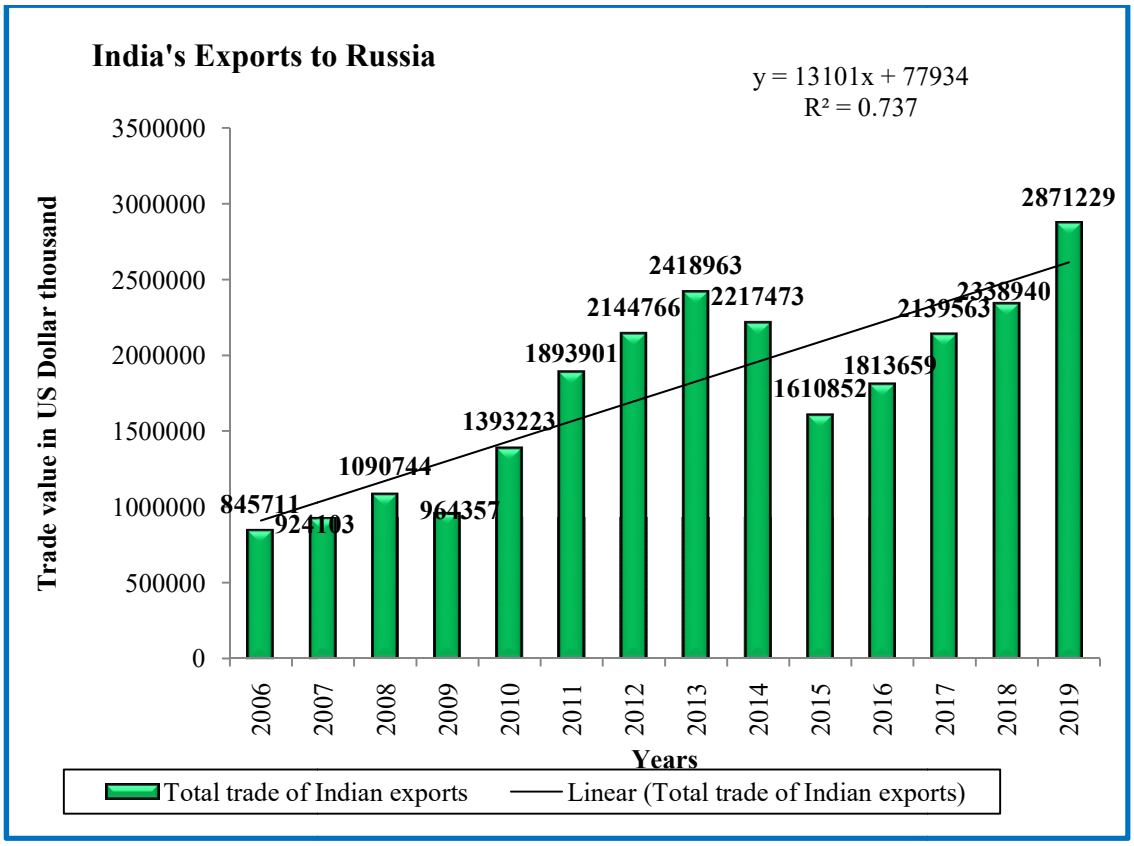
Compound Annual Growth rate the formula is CAGR= [((End value/Present value) ^ (1/Number of years)]-1)]*10

Table No. 4.4 India's Exports to Russia (Value in US Dollar thousand)

Sr. No	Year	Total value of Indian Exports	Growth Rate	Estimate
1	2006	8,45,711	-	7,20,352.16
2	2007	9,24,103	9.27%	9,06,102.52
3	2008	10,90,744	18.03%	11,08,451.32
4	2009	9,64,357	-11.59%	13,16,601.52
5	2010	13,93,223	44.47%	15,18,468.44
6	2011	18,93,901	35.94%	17,03,359.69
7	2012	21,44,766	13.25%	18,64,040.95
8	2013	2418963	12.78%	19,97,433.11
9	2014	22,17,473	-8.33%	21,04,025.19
10	2015	16,10,852	-27.36%	21,86,634.33
11	2016	18,13,659	12.59%	22,49,150.86
12	2017	21,39,563	17.97%	22,95,614.90
13	2018	23,38,940	9.32%	23,29,686.70
14	2019	28,71,229	22.76%	23,54,425.59
15	2020	Forecast	-	23,72,259.40
16	2021	Forecast	-	23,85,048.96
17	2022	Forecast	-	23,94,186.95
18	2023	Forecast	-	2,400,698.59
19	2024	Forecast	-	2,405,329.92
CAGR – Year 2006 to 2019 - 9.12%				

Source:https://www.trademap.org/Bilateral_TS.aspx?nvpm=1%7c699%7c%7c643%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c2%7c2%7c1%7c1%7c1%7c1%7c1, Accessed on 18 March 2021, 03.14PM

Graph No. 4.7 India's Exports to Russia



Source: Table No. 4.5

Interpretation

As seen in Graph no. 4.7 the trend of Indian exports to the Russia shows the linear trend line and the R-square value is 0.737 indicate that the fitted linear trend line is best fitted trend line and using the trend equation researcher can easily interpret or forecast the future trend of Indian exports to the Russia. Also linear trend line shows that the Indian exports to Russia have less variation or fluctuations as compared to the Indian exports to china. The Indian exports to Russia in the year 2015 were 16, 10,852 US dollar thousand and it significantly increased up to the year 2019 in which they reached 28, 71,229 US dollar thousand which is highest export value from the year 2006 to 2019. After establishment of BRICS the export trend of India to Russia is more consistent and less change are observed as compared to China.

Table No. 4.5 India's Exports to China (Value in US Dollar thousand)

Sr. No	Year	Total value of Indian exports	Growth Rate	Estimate
1	2006	78,29,168	-	70,57,953.31
2	2007	94,91,978	21.24%	95,96,060.43
3	2008	1,00,93,927	6.34%	1,15,57,879.88
4	2009	1,03,70,052	2.74%	1,27,92,304.39
5	2010	1,74,39,991	68.18%	1,34,71,429.42
6	2011	1,67,17,786	-4.14%	1,38,17,676.13
7	2012	1,47,29,317	-11.89%	1,39,87,366.66
8	2013	1,64,16,825	11.46%	1,40,68,918.36
9	2014	1,34,34,251	-18.17%	1,41,07,742.72
10	2015	9,53,95,17	-28.99%	1,41,26,142.68
11	2016	89,14,967	-6.55%	1,41,34,844.30
12	2017	1,25,00,767	40.22%	1,41,38,955.26
13	2018	1,65,03,442	32.02%	1,41,40,896.50
14	2019	1,72,78,833	4.70%	1,41,41,812.97
15	2020	Forecast	-	1,41,42,245.59
16	2021	Forecast	-	1,41,42,449.80
17	2022	Forecast	-	14,142,546.19
18	2023	Forecast	-	14,142,591.68
19	2024	Forecast	-	14,142,613.16
CAGR – Year 2006 – 2017 – 5.82%				

Source:https://www.trademap.org/Bilateral_TS.aspx?nvpm=1%7c699%7c%7c156%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c2%7c2%7c1%7c1%7c1%7c1%7c1 Accessed on 19 March 2021, 2.13PM

Graph: 4.8 India's Exports to China



Source: Table No. 4.4

Interpretation

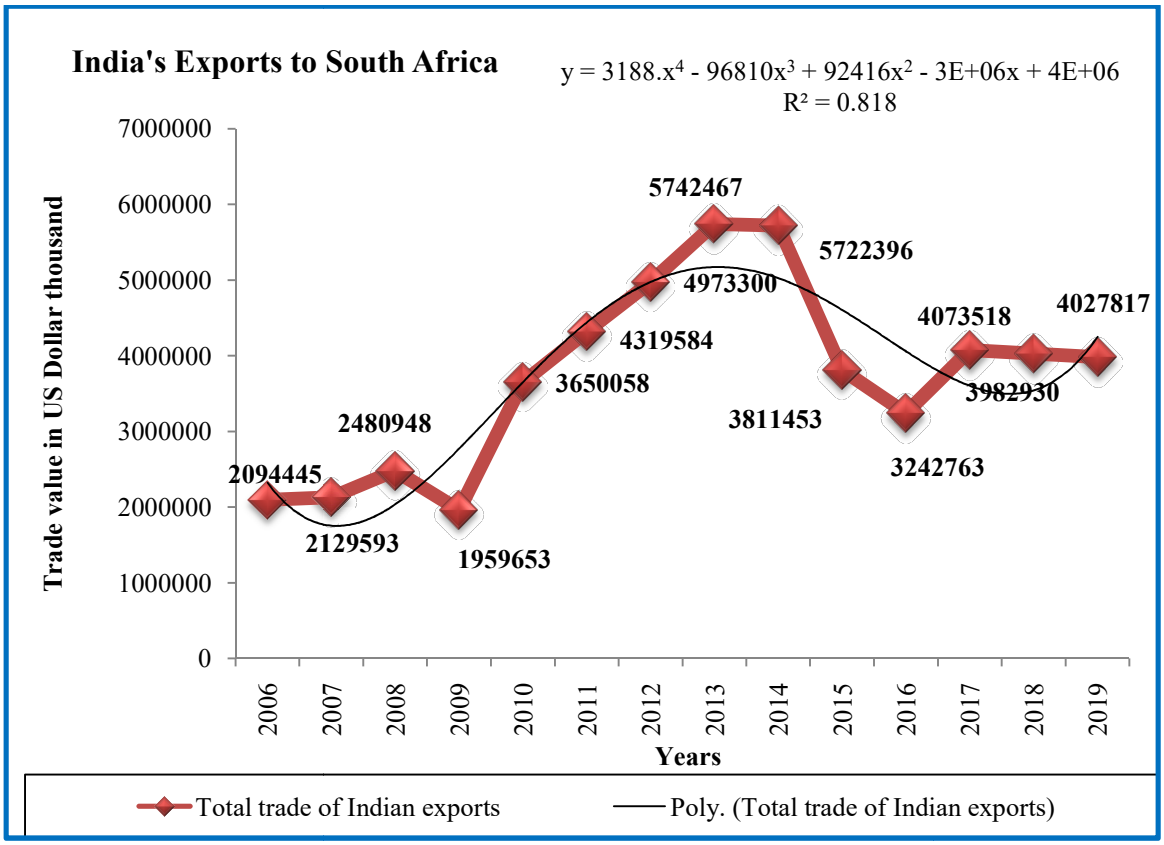
The trend of Indian exports to the China has an extreme variation and fluctuations are present as shown in Graph no. 4.7. The R-square value of Indian exports to China is 0.72 and the fitted trend line in 4th order polynomial trend line which indicate that the fluctuations in Indian exports to china. Researcher seen that after the year 2016 the Indian exports to china is going to increasing exponentially which will shows the good sign of growing economy or export trend of BRICS countries. The year 2010 the export value is 17439991 US dollar thousands which highest export value but after the year 2010 the export trend goes decreasing up to the year 2016 but after the 2016 it grows the considerably.

Table No. 4.6 India's Exports to South Africa (Value in US Dollar thousand)

Sr. No	Year	Total value of Indian exports	Growth Rate	Estimate
1	2006	20,94,445	-	45,799.26
2	2007	21,29,593	1.68%	62,406.56
3	2008	24,80,948	16.50%	84,898.03
4	2009	19,59,653	-21.01%	1,15,242.54
5	2010	36,50,058	86.26%	1,55,972.02
6	2011	43,19,584	18.34%	2,10,264.82
7	2012	49,73,300	15.13%	2,81,976.11
8	2013	57,42,467	15.47%	3,75,553.92
9	2014	57,22,396	-0.35%	4,95,754.60
10	2015	38,11,453	-33.39%	6,47,061.99
11	2016	32,42,763	-14.92%	8,32,752.11
12	2017	40,73,518	25.62%	10,53,667.60
13	2018	40,27,817	-1.12%	13,06,981.85
14	2019	39,82,930	-1.11%	1,85,459.85
15	2020	Forecast	-	18,77,769.58
16	2021	Forecast	-	21,70,079.31
17	2022	Forecast	-	24,48,557.31
18	2023	Forecast	-	27,01,871.57
19	2024	Forecast	-	29,22,787.06
CAGR – Year 2006 to 2019 – 4.70%				

Source:https://www.trademap.org/Bilateral_TS.aspx?nvpm=1%7c699%7c%7c710%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c2%7c2%7c1%7c1%7c1%7c1%7c1, Accessed on the 01 April 202, 12.46 PM

Graph No. 4.9 India's Exports to South Africa



Source: Table No. 4.6

Interpretation

In Graph no. 4.9, the trend of Indian exports to the South Africa. India's exports to South Africa has an large variations so that the 4th order polynomial trend line is fitted on the above export data and the R-squared value is 0.8184 shows the fitted trend line of 4th order polynomial is best fitted to the given data of exports. The South Africa is entered in the BRICS from the year 2010. Before that the export trend is very low but after entering to group of BRICS the exports trend is drastically increasing from the year 2009 to the year 2014. The highest export of India to South Africa is in the year 2013 was 57, 42,467 US dollar thousand. It is good sign when South Africa entered in BRICS, export have increased.

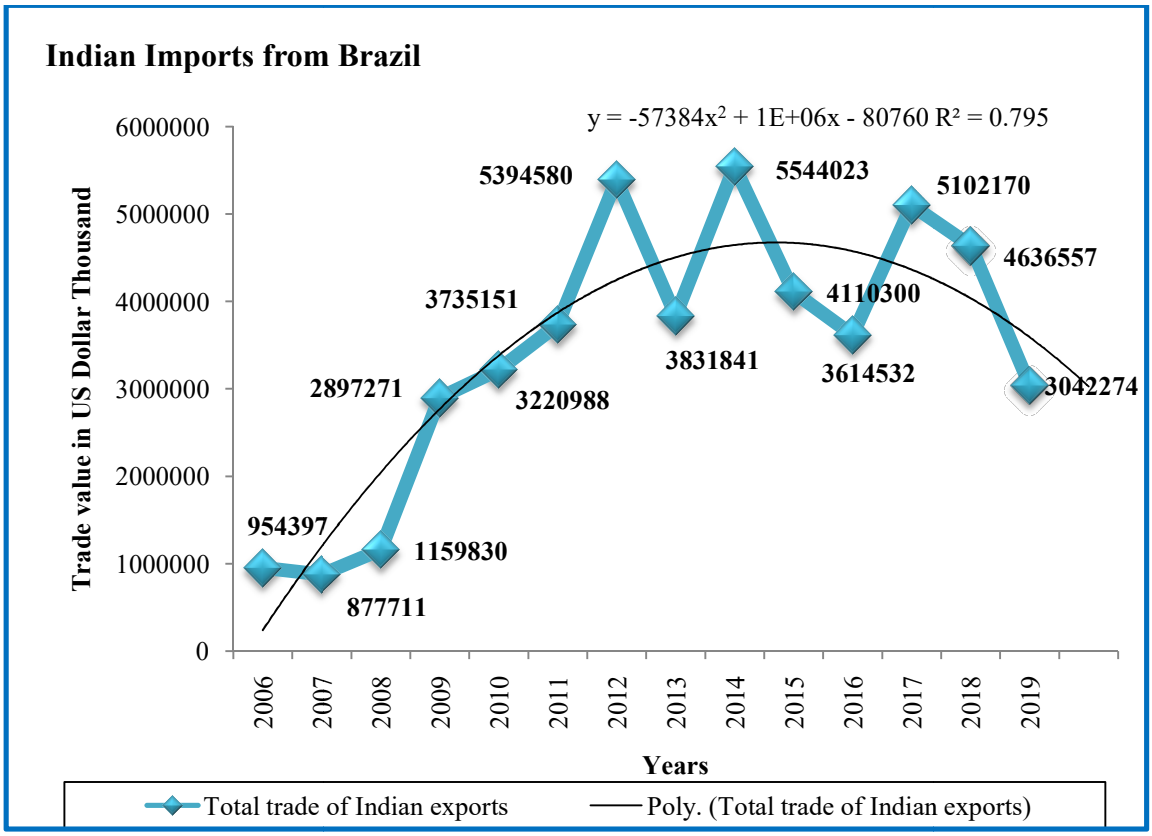
4.4.2. INDIA'S IMPORTS FROM BRICS COUNTRIES

Table No. 4.7 India's Imports from Brazil (Value in US Dollar Thousand)

Sr. No	Year	Total value of India's imports	Growth Rate %	Estimate
1	2006	9,54,397	-	10,828.76
2	2007	8,77,711	-8.04%	14,755.39
3	2008	11,59,830	32.14%	20,073.26
4	2009	28,97,271	149.80%	27,247.91
5	2010	32,20,988	11.17%	36,877.97
6	2011	37,35,151	15.96%	49,714.94
7	2012	53,94,580	44.43%	66,670.34
8	2013	38,31,841	-28.97%	88,795.84
9	2014	55,44,023	44.68%	117,216.05
10	2015	41,10,300	-25.86%	152,991.12
11	2016	36,14,532	-12.06%	196,895.63
12	2017	51,02,170	41.16%	249,128.81
13	2018	46,36,557	-9.13%	309,022.35
14	2019	30,42,274	-34.39%	374,865.59
15	2020	Forecast	-	443,979.21
16	2021	Forecast	-	513,092.82
17	2022	Forecast	-	578,936.07
18	2023	Forecast	-	638,829.60
19	2024	Forecast	-	691,062.79
CAGR – Year 2006 – 2019 – 9.01%				

Source:https://www.trademap.org/Bilateral_TS.aspx?nvpm=1%7c699%7c%7c076%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c1%7c2%7c1%7c1%7c1%7c1%7c1, accessed on 30th Jan 2022, 1.25PM, (data compiled by Researcher)

Graph No. 4.10 India's Imports from Brazil



Source: Table No. 4.7

Interpretation

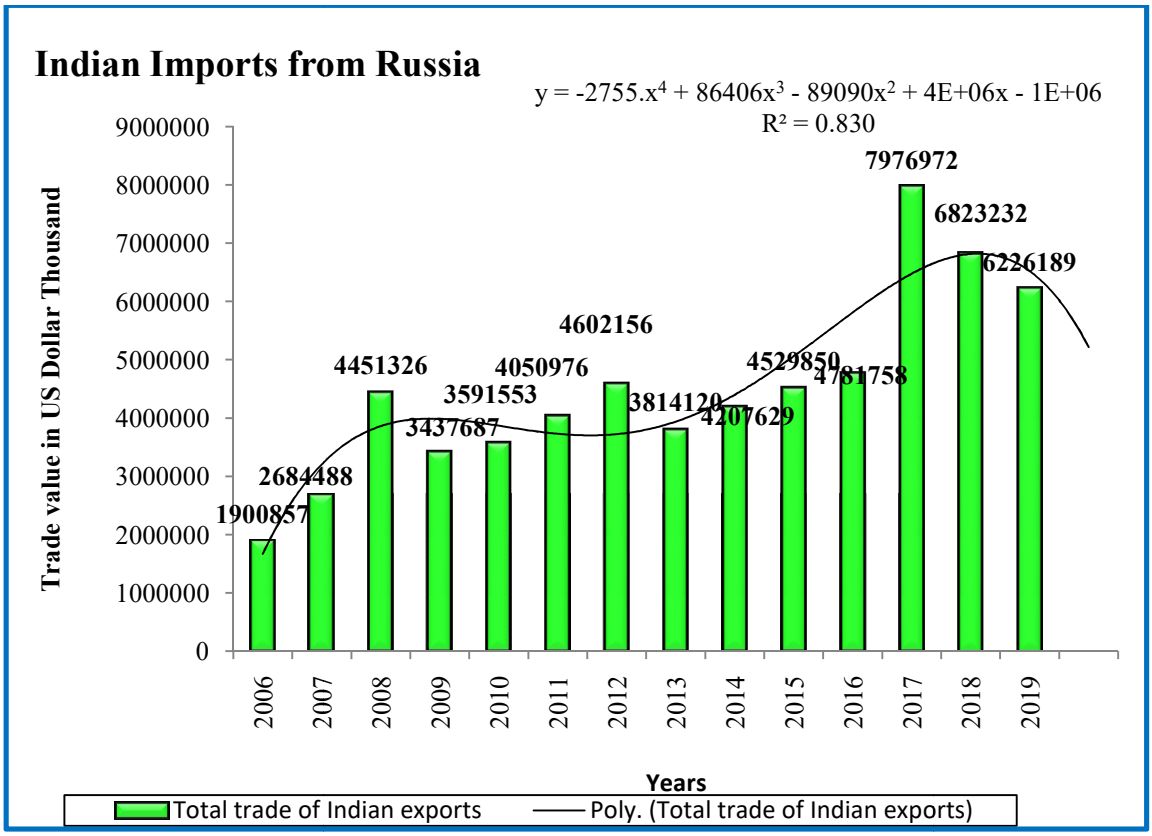
The Imports from Brazil is comparatively very low at the year 2006, 2007 and 2008 i.e. 9, 54,397, 8, 77,711and11, 59,830US dollar thousands respectively (Table No.4.7). After the year 2008 the imports trend is suddenly increasing in the year 2009. From the year 2017 the imports trend was reducing to 2020. The Indian imports from Brazil shows the large variations or fluctuations in the imports trend and shows the 2nd order polynomial trend line to the above import data. The R-square value i.e. 0.795 indicate that the fitted trend line is best fitted trend line to the Indian imports from the Brazil.

Table No. 4.8 India's Imports from Russia (Value in US Dollar Thousand)

Sr. No.	Year	Total value of India's imports	Growth Rate %	Estimate
1	2006	19,00,857	-	40,810.24
2	2007	26,84,488	41.23%	55,608.47
3	2008	44,51,326	65.82%	75,649.90
4	2009	34,37,687	-22.77%	1,02,688.91
5	2010	35,91,553	4.48%	1,38,981.63
6	2011	40,50,976	12.79%	1,87,360.20
7	2012	46,02,156	13.61%	2,51,259.81
8	2013	38,14,120	-17.12%	3,34,643.97
9	2014	42,07,629	10.32%	4,41,750.92
10	2015	45,29,850	7.66%	5,76,576.05
11	2016	47,81,758	5.56%	7,42,038.52
12	2017	79,76,972	66.82%	9,38,889.18
13	2018	68,23,232	-14.46%	11,64,609.34
14	2019	62,26,189	-8.75%	14,12,752.09
15	2020	Forecast	-	16,73,219.86
16	2021	Forecast	-	19,33,687.62
17	2022	Forecast	-	21,81,830.38
18	2023	Forecast	-	24,07,550.53
19	2024	Forecast	-	26,04,401.19
CAGR – Year 2006 – 2019 – 8.48%				

Source:https://www.trademap.org/Bilateral_TS.aspx?nvpm=1%7c699%7c%7c643%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c1%7c2%7c1%7c1%7c1%7c1%7c1, accessed on 12th March 2022, 1.29PM, (data compiled by Researcher)

Graph No. 4.11India's Imports from Russia



Source: Table No. 4.8

Interpretation

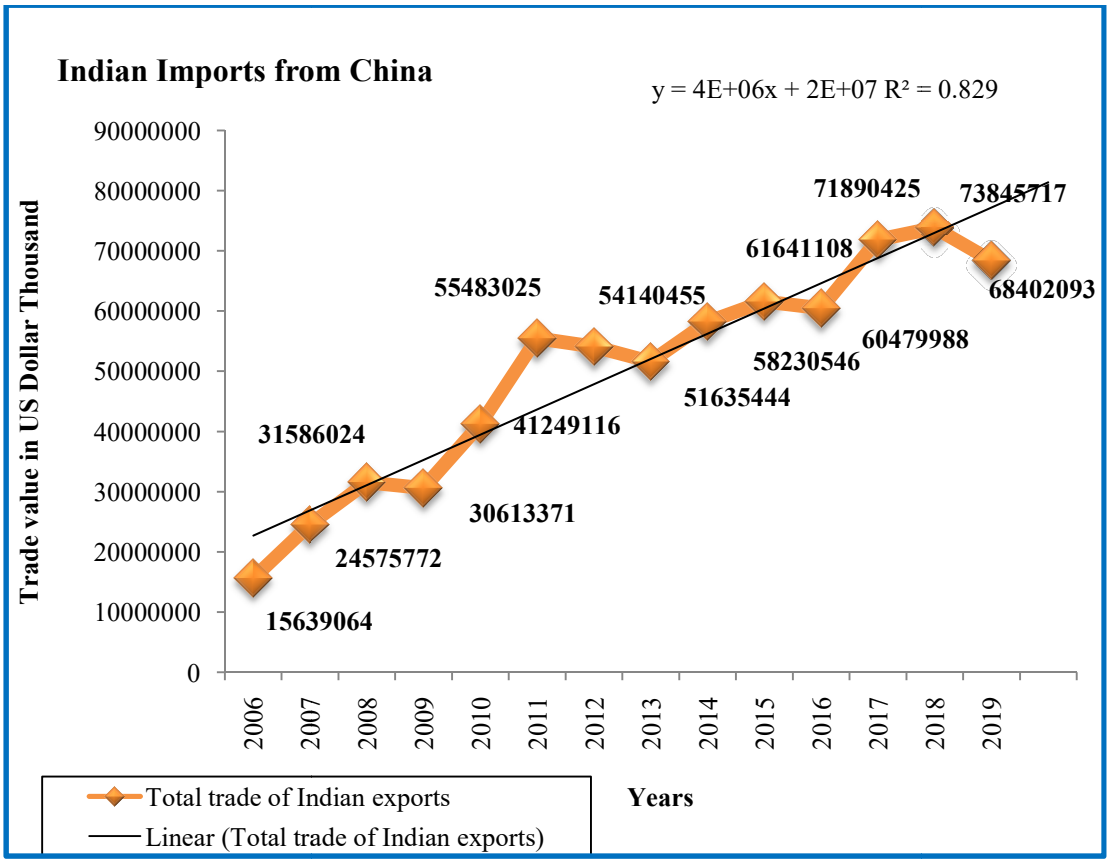
From the table no. 4.8, the trend of Indian imports from the Russia is shown in the above graph. The Imports from Russia from the year 2006 to 2006 are consistent but after the year 2016 the imports from Russia is rapidly increasing in the year 2017 was 79,76,972 US dollar thousand. It was the highest imports from Russia as compared to the above stated years. The imports trend shows the large amount of variation so the 4^{th} order polynomial trend line is fitted with good R-square value i.e. 0.837 will indicate that the fitted trend line is appropriate to the given dataset of Indian imports from Russia.

Table No. 4.9 India's Imports from China (Value in US Dollar Thousand)

Sr. No	Year	Total value of India's imports	Growth Rate %	Estimate
1	2006	1,56,39,064	-	998,733.50
2	2007	2,45,75,772	57.14%	1,358,679.43
3	2008	3,15,86,024	28.53%	1,844,302.72
4	2009	3,06,13,371	-3.08%	2,496,123.51
5	2010	4,12,49,116	34.74%	3,365,007.20
6	2011	5,54,83,025	34.51%	4,512,650.46
7	2012	5,41,40,455	-2.42%	6,010,238.03
8	2013	5,16,35,444	-4.63%	7,933,889.10
9	2014	5,82,30,546	12.77%	10,355,361.56
10	2015	6,16,41,108	5.86%	13,327,083.48
11	2016	6,04,79,988	-1.88%	16,862,540.36
12	2017	7,18,90,425	18.87%	20,916,496.10
13	2018	7,38,45,717	2.72%	25,373,163.94
14	2019	6,84,02,093	-7.37%	30,051,190.15
15	2020	Forecast	-	34,729,216.37
16	2021	Forecast	-	39,185,884.21
17	2022	Forecast	-	43,239,839.94
18	2023	Forecast	-	46,775,296.83
19	2024	Forecast	-	48,695,645.30
CAGR – Year 2006 – 2019 – 9.92%				

Source:https://www.trademap.org/Bilateral_TS.aspx?nvpm=1%7c699%7c%7c156%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c1%7c2%7c1%7c1%7c1%7c1%7c1, on 11th March 2022, 2.23PM, (data compiled by Researcher)

Graph No. 4.12 India's Imports from China



Source: Table No. 4.9

Interpretation

Table no. 4.9 the trend of Indian imports from the China. It is noticed that the Indian imports from china shows the linear trend line means that the Indian imports from china is linearly increasing from the year 2006 to 2020. The R-square value i.e. 0.88295 shows the fitted trend line is best fitted to the given data of Indian imports from China. In the year 2017 the imports from china is comparatively higher than the given study period. After construction of BRICS in 2006. The Indian import from China is speedily increasing and it shows the positive impact of establishment of BRICS. The Growth rates in 2007 was 57. 14% which was highest, but after 2009 to 2019 there was negative growth in several years. This is because of impact of Global crises on the real sector of the economy through capital and trade flow channels. But the estimates are higher compare to 2006 – 2007.

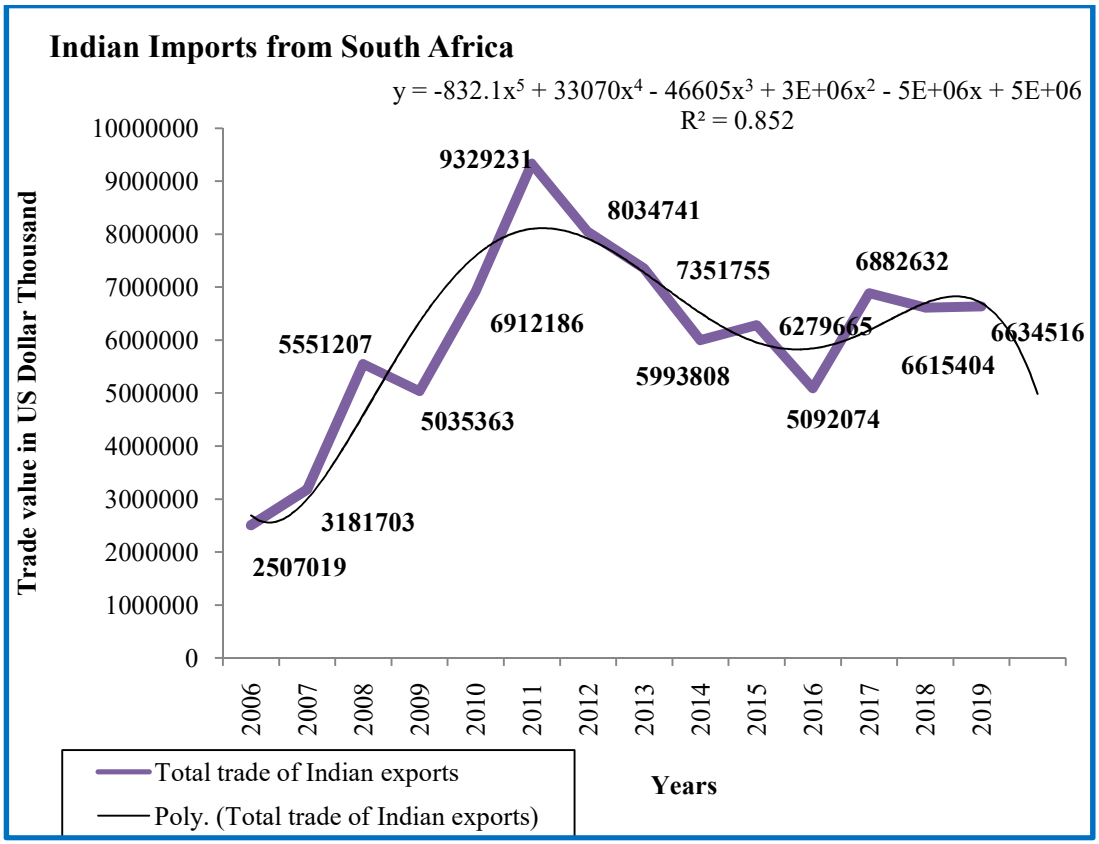
India and China is good trading partners. India always depends upon china for capital goods as well as consumer goods. India's relation with china was going through a very difficult time in year 2020, because of corona virus situation. At that time India banned some chinese products, but still if we observe table no. 4.9 forecast for 2020 to 2023 estimates will be higher as evaluate to 2006 to 2019.

Table No. 4.10 India's Imports from South Africa (Value in US Dollar Thousand)

Sr. No	Year	Total Value of India's Imports	Growth Rate %	Estimate
1	2006	25,07,019	-	73,523.51
2	2007	31,81,703	26.91%	100,183.92
3	2008	55,51,207	74.47%	136,290.45
4	2009	50,35,363	-9.29%	185,003.79
5	2010	69,12,186	37.27%	250,388.56
6	2011	93,29,231	34.97%	337,547.12
7	2012	80,34,741	-13.88%	452,668.33
8	2013	73,51,755	-8.50%	602,892.79
9	2014	59,93,808	-18.47%	795,856.08
10	2015	62,79,665	4.77%	10,38,756.33
11	2016	50,92,074	-18.91%	13,36,852.62
12	2017	68,82,632	35.16%	16,91,497.72
13	2018	66,15,404	-3.88%	20,98,153.94
14	2019	66,34,516	0.29%	25,45,206.60
15	2020	Forecast	-	30,14,463.93
16	2021	Forecast	-	34,83,721.26
17	2022	Forecast	-	39,30,773.92
18	2023	Forecast	-	43,37,430.13
19	2024	Forecast	-	46,92,075.23
CAGR – Year 2006 to 2019 - 7. 24%				

Source:https://www.trademap.org/Bilateral_TS.aspx?nvpm=1%7c699%7c%7c710%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c1%7c2%7c1%7c1%7c1%7c1%7c1, accessed on 12th March 2022, 1.23PM, (data compiled by Researcher)

Graph No. 4.13 India's Imports from South Africa



Source: Table No. 4.10

Graph No. 4.13 shows that, the trend of Indian imports from the South Africa. The South Africa entered in BRICS from the year 2010. After that the Indian imports from South Africa is increased. In the year 2011 the Indian imports from South Africa is highest i.e. 10,971.76 US Dollar Million. From the 2013 to 2020-21 the Indian imports from South Africa is consistent and shows the less fluctuations. The fitted trend line is 5th order polynomial trend line indicate that the variation in Indian imports from South Africa has large fluctuations and the R-square value is 0.8486 is indicate the fitted trend line is statistically best fitted trend line.

4.4.3 SHARE OF EACH COUNTRY IN INDIA'S EXPORT AND IMPORT TO BRICS COUNTRIES (Value and Percentage Share)

Table No. 4.11 Value of Total Exports and percentage share of each country in India's Exports to BRICS countries value in US Dollar thousand (2006 – 2019)

Period	Unit	Brazil	Russia	China	South Africa	Total
2006	Value	14,98,121	8,45,711	78,29,168	20,94,445	1,22,67,445
	%	12%	7%	64%	17%	100%
2007	Value	18,99,790	9,24,103	94,91,978	21,29,593	1,44,45,464
	%	13%	6%	66%	15%	100%
2008	Value	32,50,050	10,90,744	1,00,93,927	24,80,948	1,69,15,669
	%	19%	6%	60%	15%	100%
2009	Value	17,81,931	9,64,357	1,03,70,052	19,59,653	1,50,75,993
	%	12%	6%	**69%**	13%	100%
2010	Value	36,69,558	13,93,223	1,74,39,991	36,50,058	2,61,52,830
	%	14%	5%	67%	14%	100%
2011	Value	53,91,310	18,93,901	1,67,17,786	43,19,584	2,83,22,581
	%	19%	7%	59%	15%	100%
2012	Value	61,62,712	21,44,766	1,47,29,317	49,73,300	2,80,10,095
	%	22%	8%	53%	18%	100%
2013	Value	61,11,836	24,18,963	1,64,16,825	57,42,467	3,06,90,091
	%	20%	8%	53%	19%	100%
2014	Value	71,40,522	22,17,473	1,34,34,251	57,22,396	2,85,14,642
	%	**25%**	8%	47%	20%	100%
2015	Value	30,98,550	16,10,852	95,39,517	38,11,453	1,80,60,372
	%	17%	9%	53%	**21%**	100%
2016	Value	22,99,910	18,13,659	89,14,967	32,42,763	1,62,71,299
	%	14%	**11%**	55%	20%	100%
2017	Value	28,68,229	21,39,563	1,25,00,767	40,73,518	2,15,82,077
	%	13%	10%	58%	19%	100%
2018	Value	35,86,652	23,38,940	1,65,03,442	40,27,817	2,64,56,851
	%	14%	9%	62%	15%	100%
2019	Value	41,13,988	28,71,229	1,72,78,833	39,82,930	2,82,46,980
	%	15%	10%	61%	14%	100%
Average Percentage		**16%**	**8%**	**59%**	**17%**	**100%**

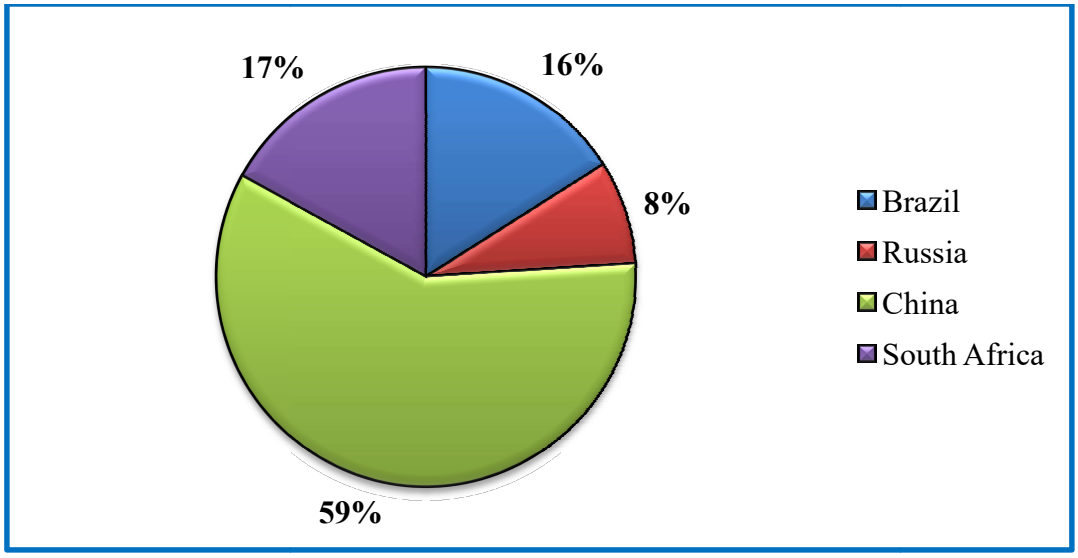
Source:https://www.trademap.org/Bilateral_TS.aspx?nvpm=1%7c699%7c%7c076%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c1%7c2%7c1%7c1%7c1%7c1%7c1, accessed on 20th Jan 2022, 3.25PM, (data compiled by Researcher)

Interpretation

A comparison of the percentageshares of each country shows the Direction of India's exports to other BRICS countries. Share of India's Exports to China is the highest during the entire period compared to other BRICS countries. China is the largest economy among the BRICS countries with the largest GDP (average 8,647.059 US dollar thousand) in 2006 – 2019 (Table No.4.1). Since 2006, India's Export to China has consistently been the largest among the BRICS countries and its share of exports within the bloc has increased significantly.

Table no. 4.11 shows that, India's Export to BRICS countries has not shown any drastic change**.** China's share was in-between 47% and 69%, Brazil's share was in-between 12% and 25%, and South Africa's share was in-between 13% and 21%, and Russia's share was between 5% and 11% respectively. As stated earlier India's biggest trade partner is china. When it comes to India's Export it also shows encouraging sign. Russia's intra trade relation with India was very close.

Graph No. 4.14 Average Percentage Share of Total Exports to each BRICS country in India's Exports to BRICS countries



Source: Table No. 4. 11

Interpretation

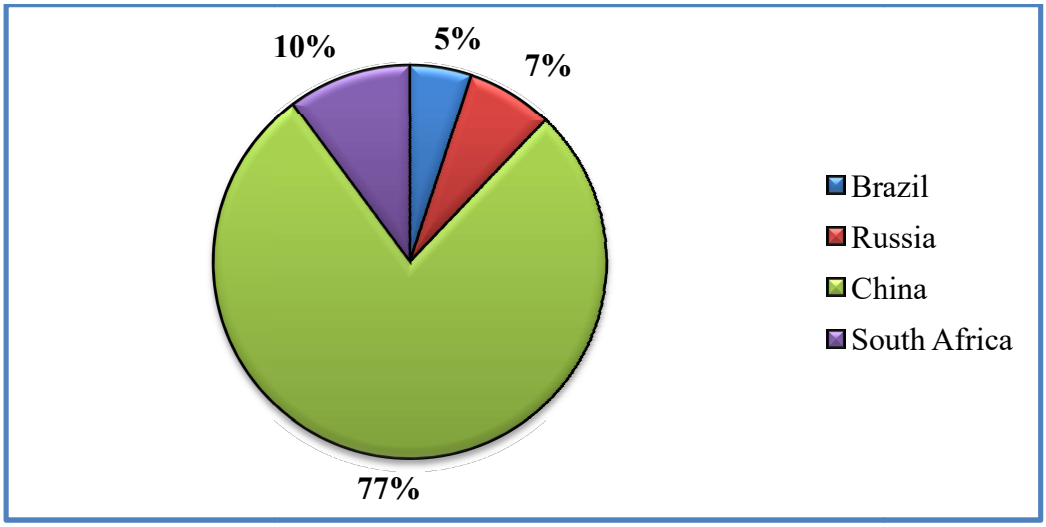
During the entire period of the study the average share of each country is shown in the above pie chart. Average percentage of China is the highest 59%, follow by South Africa 17%, Brazil16% and Russia 8%.

Table no. 4.12 Value of Total Imports and percentage share of each country in India's Imports from BRICS countries value in US Dollar thousand (2006 – 2019)

Period	Unit	Brazil	Russia	China	South Africa	Total
2006	Value	9,54,397	19,00,857	1,56,39,064	25,07,019	2,10,01,337
	%	5%	9%	74%	12%	100%
2007	Value	8,77,711	26,8 4,488	2,45,75,772	31,81,703	3,13,19,674
	%	3%	9%	78%	10%	100%
2008	Value	11,59,830	44,51,326	3,15,86,024	55,51,207	4,27,48,387
	%	3%	**10%**	74%	**13%**	100%
2009	Value	28,97,271	34,37,687	3,06,13,371	50,35,363	4,19,83,692
	%	**7%**	8%	73%	12%	100%
2010	Value	32,20,988	35,91,553	4,12,49,116	69,12,186	5,49,73,843
	%	6%	7%	75%	13%	100%
2011	Value	37,35,151	40,50,976	5,54,83,025	93,29,231	7,25,98,383
	%	5%	6%	76%	13%	100%
2012	Value	53,94,580	46,02,156	5,41,40,455	80,34,741	7,21,71,932
	%	7%	6%	75%	11%	100%
2013	Value	38,31,841	38,14,120	5,16,35,444	73,51,755	6,66,33,160
	%	6%	6%	77%	11%	100%
2014	Value	55,44,023	42,07,629	5,82,30,546	59,93,808	7,39,76,006
	%	7%	6%	79%	8%	100%
2015	Value	41,10,300	45,29,850	6,16,41,108	62,79,665	7,65,60,923
	%	5%	6%	81%	8%	100%
2016	Value	36,14,532	47,81,758	6,04,79,988	50,92,074	7,39,68,352
	%	5%	6%	**82%**	7%	100%
2017	Value	51,02,170	79,76,972	7,18,90,425	68,82,632	9,18,52,199
	%	6%	9%	78%	7%	100%
2018	Value	46,36,557	68,23,232	7,38,45,717	66,15,404	9,19,20,910
	%	5%	7%	80%	7%	100%
2019	Value	30,42,274	62,26,189	6,84,02,093	66,34,516	8,43,05,072
	%	4%	7%	81%	8%	100%
Average Percentage		**5%**	**7%**	**77%**	**10%**	**100%**

Source:https://www.trademap.org/Bilateral_TS.aspx?nvpm=1%7c699%7c%7c076%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c1%7c2%7c1%7c1%7c1%7c1%7c1, accessed on 20th Jan 2022, 3.25PM, (data compiled by Researcher)

Graph No. 4.15 Average percentage Share of Total Imports to each BRICS country in India's Imports from BRICS countries



Source: Table no. 4.12

Interpretation

A comparison of the average percentage shows the Direction of India's imports from other BRICS countries.China is the top country for importing more commodities to India among the BRICS countries. In the year 2016 China's share of import is 82% which is highest compared to other years. Table no. 4.12 showing, India's import to BRICS countries has changed slightly (2006 to 2019). China's share was in-between 73% and 82%, South Africa's share was in-between 7% and13%, and Russia's Share was in between 6% and 9%, and Brazil's share was in-between 3% and 7%, respectively. Bilateral trade between BRICS countries remained stable during the study period. Indo Russian Strategic partnership has been built on five major components, Nuclear Energy, Anti Terrorism, space cooperation, Science and technology and defense. Russia always helped India for making Nuclear energy. But as seen in table no. 4.12 Russia's Share was very less compared to other BRICS countries. For boosting the economy all these five member countries offer Financial Package as well as some trade facilities to increase International Trade. But as shown on the table after forming the BRICS overall trade is not increase as expected.

4.5 BALANCE OF TRADE

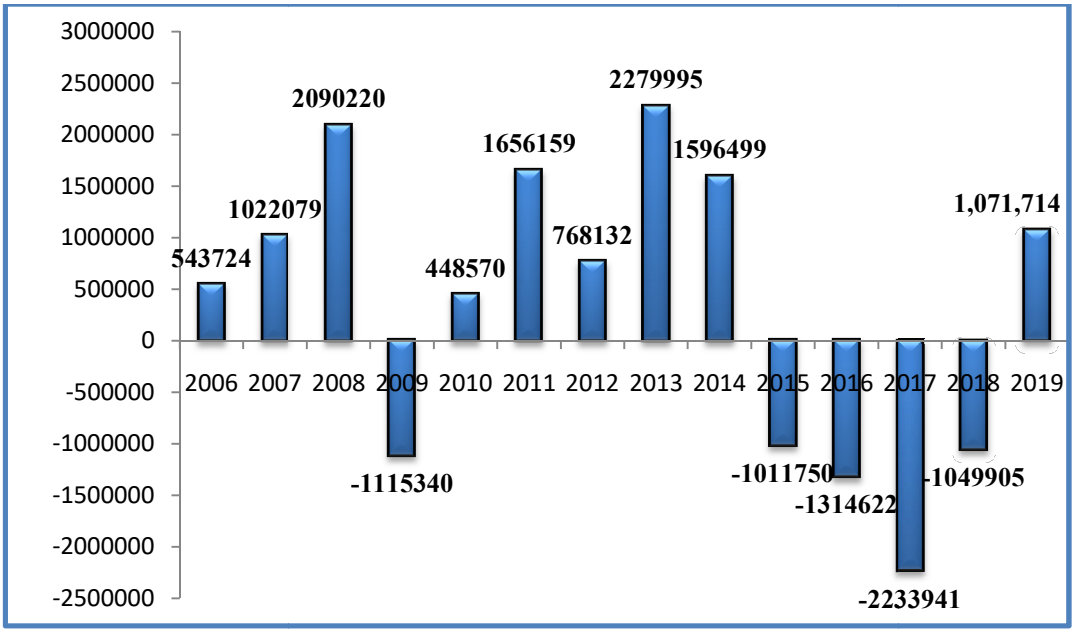
Table No. 4.13 Balance of trade between India and Brazil 2006 to 2019

(Values in US Dollar Thousand)

Sr. No	Year	Total Exports to Brazil	Total Imports from Brazil	Net Exports
1	2006	14,98,121	9,54,397	5,43,724
2	2007	18,99,790	8,77,711	10,22,079
3	2008	32,50,050	11,59,830	20,90,220
4	2009	17,81,931	28,97,271	-11,15,340
5	2010	36,69,558	32,20,988	4,48,570
6	2011	53,91,310	37,35,151	16,56,159
7	2012	61,62,712	53,94,580	7,68,132
8	2013	61,11,836	38,31,841	22,79,995
9	2014	71,40,522	55,44,023	15,96,499
10	2015	30,98,550	41,10,300	-10,11,750
11	2016	22,99,910	36,14,532	-13,14,622
12	2017	28,68,229	51,02,170	-22,33,941
13	2018	35,86,652	46,36,557	-10,49,905
14	2019	41,13,988	30,42,274	1,071,714
	Total	**5,28,73,159**	**48,121,625**	**4751534**

Source:https://www.trademap.org/Bilateral_TS.aspx?nvpm=1%7c699%7c%7c076%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c1%7c2%7c1%7c1%7c1%7c1%7c1, Accessed on March 20, 2022, 12.16 AM

Graph No. 4.16 Balance of trade between India and Brazil 2006 to 2019



Source: Table No. 4.13

Interpretation

In above table 4.13 it's observed that 2006 to 2008 net export of India and Brazil Increase, but in 2009 it's negative. It's because of in 2008, the great economic recession (financial Crises) that was precipitated in the United States and quickly spread to other countries. Various banks In United states had enabled banks to issue mortgage loans at lower interest rates to millions of customers who normally would not have capable to repay the loan. (Subprime Effect) again economy grow till 2013, net export increases. 2017 net exports decrease (negative) in larger amount. In year 2019 it's increasing rapidly.

Above table shows that the Balance of trade was favorable and therefore arrives at a conclusion that over all during this period India gained from trade partnership with Brazil. For the purpose of the study researcher used Balance of trade as a measure for gains from trade between India to Brazil.

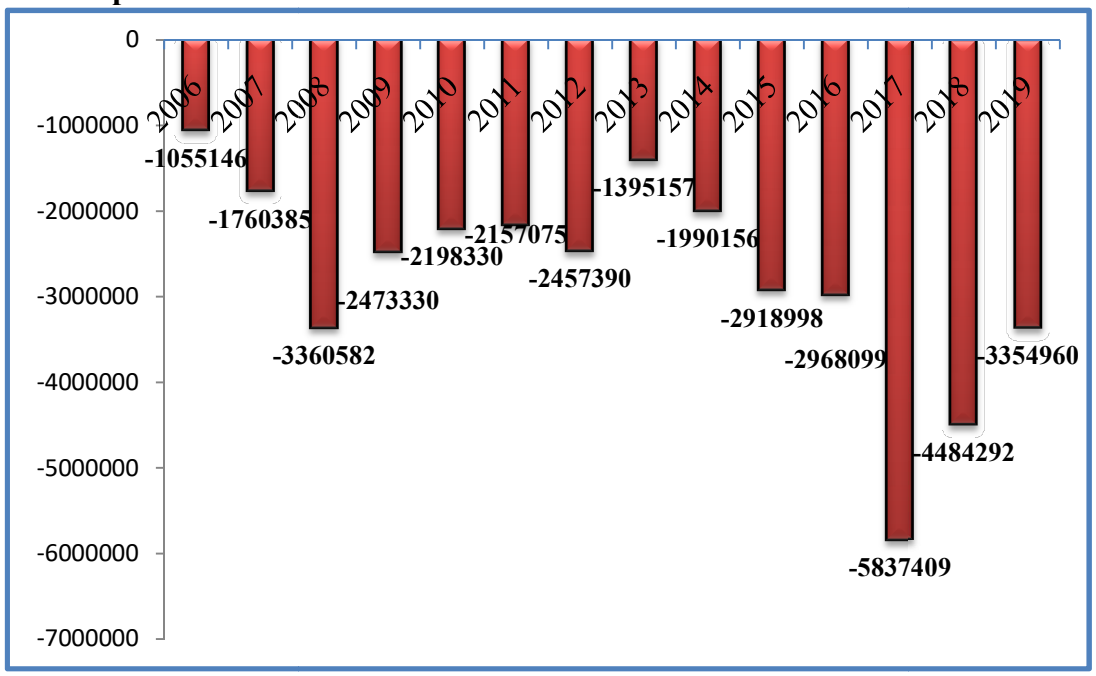
Table No. 4.14 Balance of trade between India and Russia 2006 to 2019

(Values in US Dollar Thousand)

Sr. No	Year	Total exports to Russia	Total Imports from Russia	Net exports
1	2006	8,45,711	19,00,857	-10,55,146
2	2007	9,24,103	26,84,488	-1,76,0385
3	2008	10,90,744	44,51,326	-33,60,582
4	2009	9,64,357	34,37,687	-24,73,330
5	2010	13,93,223	35,91,553	-21,98,330
6	2011	18,93,901	40,50,976	-21,57,075
7	2012	21,44,766	46,02,156	-24,57,390
8	2013	24,18,963	38,14,120	-13,95,157
9	2014	22,17,473	42,07,629	-19,90,156
10	2015	16,10,852	45,29,850	-29,18,998
11	2016	18,13,659	47,81,758	-29,68,099
12	2017	21,39,563	79,76,972	-5,837,409
13	2018	23,38,940	68,23,232	-4,48,292
14	2019	28,71,229	62,26,189	-33,54,960
	Total	**2,46,67,484**	**63,078,793.00**	**-3,84,11,309**

Source:https://www.trademap.org/Bilateral_TS.aspx?nvpm=1%7c699%7c%7c710%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c1%7c2%7c1%7c1%7c1%7c1%7c1, Accessed on March 20, 2022, 12.18 AM

Graph No. 4.17 Balance of trade between India and Russia 2006 to 2019



Source: Table No. 4.14

Interpretation

The above data clearly represents the balance of trade between Russia and India. During 2006 to 2019 India's total net export with Russia is totally negative. (-). India's export with Russia increasing in year 2006 to 2019, but compare to India's import with Russia its less. Its means India runs trade deficit with Russia. Defense product and Oil forms a major part of our imports basket from Russia. India sees Russia has played a significant role in its economic development and security, as a longstanding and time-tested friend. Table No. 4.14 Shows that India's total export to Russia and import from Russia was increasing but as compare to Import, export ratio is less.

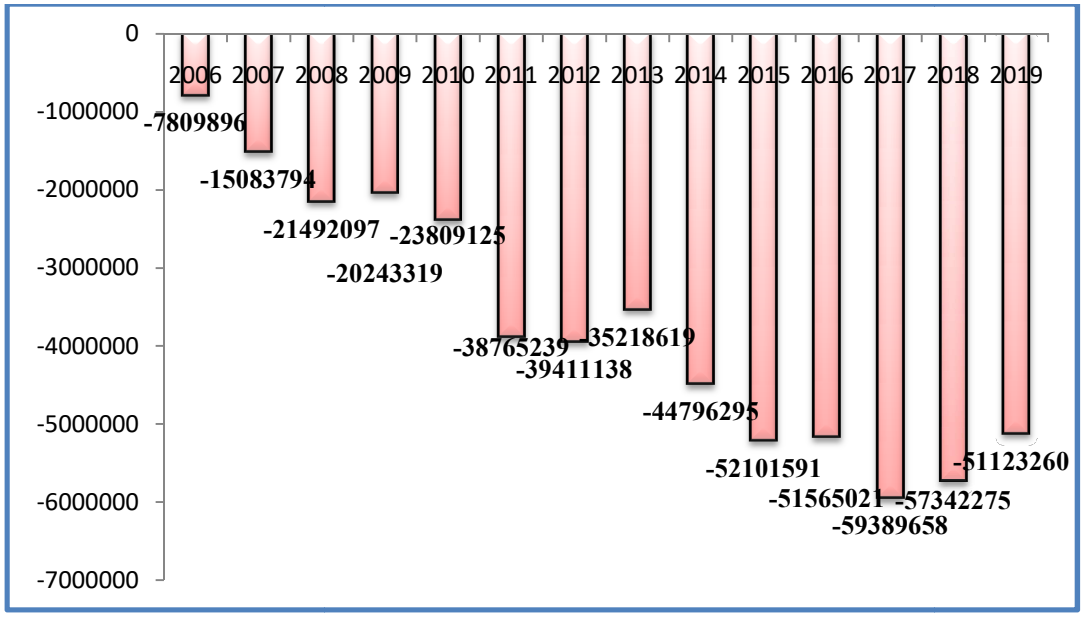
Table No.4.15 Balance of trade between India and China 2006 to 2019

(Values in US Dollar Thousand)

Sr. No	Year	Total exports to China	Total Imports from China	Net exports
1	2006	78,29,168	15,63,9064	-78,09,896
2	2007	94,91,978	2,45,75,772	-1,50,83,794
3	2008	1,00,93,927	3,15,86,024	-2,14,92,097
4	2009	1,03,70,052	3,06,13,371	-2,02,43,319
5	2010	1,74,39,991	4,12,49,116	-2,38,09,125
6	2011	1,67,17,786	5,54,83,025	-3,87,65,239
7	2012	1,47,29,317	5,41,40,455	-3,94,11,138
8	2013	1,64,16,825	5,16,35,444	-3,52,18,619
9	2014	1,34,34,251	5,82,30,546	-4,47,96,295
10	2015	95,39,517	6,16,41,108	-5,21,01,591
11	2016	89,14,967	6,04,79,988	-5,15,65,021
12	2017	1,25,00,767	7,18,90,425	-5,93,89,658
13	2018	1,65,03,442	7,38,45,717	-5,73,42,275
14	2019	1,72,78,833	6,84,02,093	-5,11,23,260
	Total	**18,12,60,821**	**69,94,12,148**	**-51,81,51,327**

Source:https://www.trademap.org/Bilateral_TS.aspx?nvpm=1%7c699%7c%7c710%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c1%7c2%7c1%7c1%7c1%7c1%7c1, Accessed on March 20, 2022, 12.22 AM

Graph No. 4.18 Balance of trade between India and China 2006 to 2019



Source: Table No. 4.15

Interpretation

At this juncture, researcher focuses on the balance of trade between India and china for the period 2006 to 2019. At present the above Table No. 4.15, Imports from china began expanding quite rapidly from 2008 to 2019. Because China became India's largest trading partner in 2008.Table no. 4.15 shows that after 2008 India’s export to china and Import from china values increases, India Depends on china for the supply of a wide range of products, from the simplest of products like electronic, telecom and pharmaceutical intermediates. India’s Export to china also grew but neither consistently not rapidly. The table shows that India’s net export with china is negative. The value of imports is 4 times higher than exports.

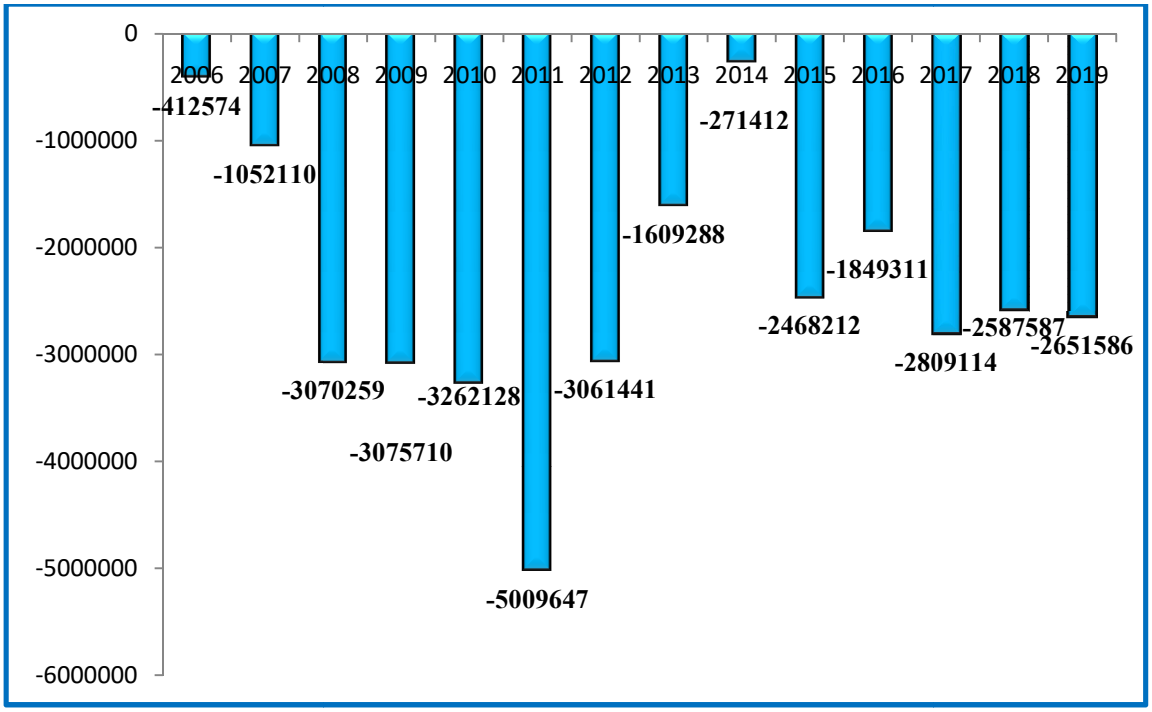
Table No. 4.16 Balance of trade between India and South Africa 2006 to 2019

(Values in US Dollar Thousand)

Sr. No	Year	Total Exports to South Africa	Total Imports from South Africa	Net Exports
1	2006	20,94,445	25,07,019	-4,12,574
2	2007	21,29,593	31,81,703	-10,52,110
3	2008	24,80,948	55,51,207	-30,70,259
4	2009	19,59,653	50,35,363	-30,75,710
5	2010	36,50,058	69,12,186	-32,62,128
6	2011	43,19,584	93,29,231	-50,09,647
7	2012	49,73,300	80,34,741	-30,61,441
8	2013	57,42,467	73,51,755	-16,09,288
9	2014	57,22,396	59,93,808	-2,71,412
10	2015	38,11,453	62,79,665	-24,68,212
11	2016	32,42,763	50,92,074	-18,49,311
12	2017	40,73,518	68,82,632	-28,09,114
13	2018	40,27,817	66,15,404	-25,87,587
14	2019	39,82,930	66,34,516	-26,51,586
	Total	**5,22,10,925**	**8,54,01,304.00**	**-3,31,90,379.00**

Source:https://www.trademap.org/Bilateral_TS.aspx?nvpm=1%7c699%7c%7c710%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c1%7c2%7c1%7c1%7c1%7c1%7c1, Accessed on March 20, 2022, 12.28 AM

Graph No.4.19 Balance of trade between India and South Africa 2006 to 2019



Source: Table No. 4.16

Interpretation

Table No.4.16 shows that, India has a negative trade balance with South Africa. Half of the period India's Export between South Africa rapidly increases (2006 to 2014). At the same time India's Import from South Africa also Increases. A total net export of India was **-33,190,379.00** US Dollar Thousand. South Africa has own massive natural resources. Top commodities India imports from South Africaare Pearls, metals, precious stones, Mineral fuels, oil. Despite the vast difference between India's Export and Import to South Africa, Both the countries maintain trade relation with each other.

4.6 COMPOSITION OF INDIA'S INTERNATIONAL TRADE WITH OTHER BRICS COUNTRIES

Table No. 4.17 India's Exports to Brazil in US Dollar thousand (R – Rank)

Sr. No	Product label	Value in 2006	Value in 2007	Value in 2008	Value in 2009	Value in 2010	Value in 2011	Value in 2012	Value in 2013	Value in 2014	Value in 2015	Value in 2016	Value in 2017	Value in 2018	Value in 2019	Mean	SD	CV
1	Organic chemicals	1,30,301 (R1)	1,46,456 (R1)	1,95,951 (R1)	1,70,243 (R1)	2,19,693 (R1)	3,09,431 (R1)	3,14,753 (R1)	3,58,738 (R1)	3,58,993 (R1)	3,34,028 (R1)	3,27,872 (R1)	3,87,259 (R1)	5,70,107 (R1)	5,08,491 (R1)	3,09,451.1	1,29,628.9	41.89 %
2	Pharmaceutical products	87,109 (R2)	84,869 (R3)	1,17,352	1,14,043 (R2)	96,666	1,10,903	1,58,961	1,70,034	2,12,355	2,18,079	1,95,045	2,12,078	2,58,101	2,78,679	1,65,305.3	64,914.79	39.27 %
3	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television	17,112	79,461	194,542 (R2)	1,11,752 (R3)	83,829	1,56,182	1,43,847	1,64,312	93,294	62,025	45,786	58,520	93,439	1,09,204	1,00,950.4	49,696.79	49.23 %
4	Miscellaneous chemical products	31,652	74,066	1,22,276	93,242	1,17,394 (R3)	1,65,866	2,92,647 (R2)	3,55,285 (R2)	3,33,193 (R2)	2,53,444 (R2)	3,55,921 (R2)	3,93,998 (R2)	5,83,526 (R2)	7,22,912 (R2)	2,78,244.4	1,99,939.6	71.86 %
5	Tanning or dyeing extractstannins and their derivatives dyes, pigments and other colouring	24,584	34,637	49,984	55,895	71,133	72,051	94,084	1,14,257	1,38,367	95,640	1,05,860	1,13,395	1,32,586	1,41,431	88,850.29	38,232.29	43.03 %

6	Machinery, mechanical appliances, nuclearreactors, boilers;parts there of	38,865 (R3)	90,345 (R2)	1,34,550 (R3)	81,522	2,18,927 (R2)	2,64,040 (R2)	2,60,929	2,21,700	2,20,993	2,03,536	2,02,696	2,61,952	2,40,131	3,31,070 (R3)	1,97,946.9	82,266.63	41.56%
7	Vehicles other than railway or tramway rollingstock, and parts and accessories there of	10,700	20,862	49,972	42,798	98,129	1,19,610	1,59,668	2,43,191	2,35,181	1,97,486	1,56,448	2,44,057	3,07,197	3,21,566	1,57,633.2	1,04,403.2	66.23%
8	Plasticsandarticles there of	20,643	39,998	48,737	25,507	60,233	1,37,289	1,02,565	1,27,710	88,771	45,988	46,210	59,687	58,020	62,874	66,016.57	35,469.93	53.73%
9	Articles of apparel and clothing accessories, not knitted or crocheted	25,575	12,606	27,764	34,578	32,581	88,461	1,13,585	1,57,338	1,48,199	1,21,908	68,581	73,483	66,889	58,779	73,594.79	46,701.31	63.46%
10	**Other Products**	11,11,580	1,31,6,490	2,30,8,922	10,52,351	26,70,973	39,67,477	45,21,673	41,99,271	53,11,176	15,66,416	7,95,491	10,63,800	12,76,656	1578982	23,38,661	15,27,712	65.32%
	Total	**14,98,121**	**18,99,790**	**32,50,050**	**17,81,931**	**36,69,558**	**53,91,310**	**61,62,712**	**61,11,836**	**71,40,522**	**30,98,550**	**22,99,910**	**28,68,229**	**35,86,652**	**41,13,988**	**37,76,654**	**17,90,291**	**47.40%**

Source:https://www.trademap.org/Bilateral_TS.aspx?nvpm=1%7c699%7c%7c076%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c1%7c2%7c1%7c1%7c1%7c1%7c1 , Accessed on March 20, 2022, 12.16 AM

Interpretation

In the above table, researcher did the volatility analysis and calculate the mean, standard deviation (S.D) and coefficient variation (C.V) of the India‘s exports to Brazil in US Dollar thousand. If more the C.V then more variation is present or researcher can interpret that there is less consistency is present in India‘s exports to Brazil and If less the C.V then less variation is present or researcher can interpret that there is more consistency is present in India‘s exports to Brazil. By using this decision criteria, researcher notice that Miscellaneous chemical products, Articles of apparel and clothing accessories, not knitted or crocheted and Other Products shows the C.V. like 71.86 %, 63.46% and 65.32% respectively. These product shows the more variation means very less consistence to India‘s exports to Brazil during the study period.

Considering India’s major Exports products to Brazil, it is clearly observed that there were different types of products that were exported from India to Brazil during the period under study. For the purpose of the study, top 9 products are considered and 10^{th} category is total of all other products. In Table no. 4.17, it’s observed that Year 2006 Organic chemicals was the top product of India’s Export to Brazil, till 2015 it’s continuously increasing. If we observe in 2006 to 2016 India’s Export to Brazil show Steady growth till 2017 but in 2018 its jump (3, 87,259 to 5, and 70,107).Year 2015 to 2019 miscellaneous chemical products was on top. Exactly opposite 2006 to 2015 miscellaneous chemical products was on second rank and 2015 to 2019 Organic chemicals was on second rank. Also for other product like Pharmaceutical products, Machinery, mechanical appliances, nuclear reactors, boilers; parts are rank no. 3.

Table No. 4.18 India's Exports to Russia in US Dollar thousand(R Means Rank)

Sr. No	Product label	Value in 2006	Value in 2007	Value in 2008	Value in 2009	Value in 2010	Value in 2011	Value in 2012	Value in 2013	Value in 2014	Value in 2015	Value in 2016	Value in 2017	Value in 2018	Value in 2019	Mean	SD	CV
1	Articles of apparel and clothing accessories,knitted orcrocheted	52,637 (R3)	59,054 (R2)	32,945	19,873	8,429	18,864	22,207	40,121	45,243	30,778	37,358	38,828	38,481	35,312	34,295	13,664.09	39.84%
2	Coffee,tea, maté and spics	73,555 (R2)	72,769	90,291 (R2)	97,101	1,17,162	1,40,820	1,34,689	1,30,919	1,10,663	1,12,620	1,19,304	1,36,334	1,28,433	1,18,316	1,13,069.7	22,156.59	19.60%
3	Articles of apparel and clothingaccessories,not knitted or crocheted	4,715	9,479	8,636	5,792	8,370	15,402	21,531	42,375	48,862	34,234	28,507	45,746	38,036	39,958	25,117.36	16,320.25	64.98%
4	Pharmaceutical products	2,73,280 (R1)	2,78,253 (R1)	3,36,316 (R1)	2,62,025 (R1)	2,93,109 (R1)	5,31,457 (R1)	4,88,527 (R1)	6,26,140 (R1)	4,45,491 (R1)	3,56,311 (R1)	3,35,634 (R1)	4,05,591 (R1)	4,10,385 (R1)	4,71,649 (R1)	3,93,869.1	1,09,024.9	27.68%
5	Miscellaneousediblepreparations	44,294	37,421	39,470	53,8119 (R3)	53,679 (R3)	78,873 (R3)	79,259 (R3)	47,860 (R3)	52,173 (R3)	59,360 (R3)	64,802 (R3)	70,051 (R3)	47,162 (R3)	63,669 (R3)	56,563.71	13,385.77	23.66%
6	Cotton	28,047	43,3444 (R3)	39,003	38,926	30,341	4,578	12,003	10,141	6,472	4,843	6,019	5,391	5,521	4,199	17,059.14	15,177.91	88.97%

7	Tobacco and manufactured tobacco substitutes	31,871	31,083	36,946	48,502	45,201	31,068	46,505	48,352	33,738	33,663	41,954	25,433	22,353	27,588	36,018.36	8,704.631	24.17%
8	Electrical machinery and equipment and parts thereof; sound recorders and reproducers,television	24,639	31,004	32,612	36,985	75,394	2,04,509 (R2)	2,61,086 (R2)	2,10,013 (R2)	68,250 (R2)	55,835 (R2)	74,228 (R2)	64,113 (R2)	2,38,827 (R2)	5,42,846 (R2)	1,37,167.2	1,43,978.5	104.97%
9	Articles of leather; saddlery andharness; travel goods, handbags and similar containers;articles	1,155	2,325	3,119	1,915	3,895	10,474	10,033	14,156	14,045	8,634	10,737	10,843	16,390	19,091	9,058	5,785.667	63.87%
10	**Other Products**	3,11,518	3,59,371	4,71,406	3,99,419	7,57,643	8,57,856	10,68,926	12,48,886	13,92,536	9,14,574	10,95,116	13 37,233	13,93,352	15,48,601	9,39,745.5	4,25,998.8	45.33%
	Total	**8,45,711**	**9,24,103**	**10,90,744**	**9,64,357**	**13,93,223**	**18,93,901**	**21,44,766**	**24,18,963**	**22,17,473**	**16,10,852**	**18,13,659**	**21,39,563**	**23,38,940**	**28,71,229**	**17,61,963**	**6,38,432.8**	**36.23%**

Source:https://www.trademap.org/Bilateral_TS.aspx?nvpm=1%7c699%7c%7c710%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c1%7c2%7c1%7c1%7c1%7c1%7c1, Accessed on March 20, 2022, 12.18 AM

Interpretation

India's major export on the top 9 products to Russia's was Pharmaceutical products, Coffee, tea, mate and spices and Cotton, Tobacco and manufacture tobacco. Russia demanded more pharmaceutical product's seen table no. 4.18**.** There was more demand for agricultural products**.** Russia stands to gain with increased import of such commodities from India. It means India has potential in high value –added and manufacturing products with an increasing import demand for these commodities. This would help in future strengthening bilateral trade with Russia.In the pharmaceutical sector, India has emerged as a consistent supplier of excellence generic drugs to Russia. Russia Gets quality, Safety and efficiency of medicine from India, that's the reason demand for this is higher. Second Highest demand was for Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television, year 2010 to 2019. Coffee, Tobacco and Miscellaneous product was at no. 3. From 2008 to 2019 continuous demand increased for miscellaneousproducts.

Table no. 4.19 India's Exports to China in US Dollar thousand

Sr. No	Product label	Value in 2006	Value in 2007	Value in 2008	Value in 2009	Value in 2010	Value in 2011	Value in 2012	Value in 2013	Value in 2014	Value in 2015	Value in 2016	Value in 2017	Value in 2018	Value in 2019	Mean	SD	CV
1	Ores, slag and ash	36,14,646 (R1)	49,09,132 (R1)	58,29,160 (R1)	47,16,192 (R1)	63,47,289 (R1)	42,95,269 (R1)	26,15,130 (R1)	17,42,643 (R1)	7,82,134 (R3)	4,37,517	11,66,050	15,17,511 (R2)	11,32,598 (R3)	21,45,262	29,46,467	19,76,929	67.09%
2	Plastics and articles thereof	4,03,473	2,77,432	1,65,967	2,03,791	3,70,692	6,18,099	6,08,027	6,87,614	4,05,528	3,18,676	2,67,206	4,26,493	10,63,386	9,70,802	4,84,799	2,73,570.6	56.43%
3	Organic chemicals	5,18,519 (R3)	6,11,300 (R3)	4,56,051 (R3)	4,56,615 (R3)	7,57,977 (R3)	8,60,628 (R3)	10,22,934 (R3)	10,46,732 (R3)	9,56,720 (R2)	8,55,226 (R3)	7,85,493 (R3)	16,90,756 (R1)	30,82,429 (R1)	31,11,026 (R1)	11,58,029	8,78,988.7	75.90%
4	Fish and crustaceans, molluscs and other aquatic invertebrates	1,36,359	1,31,315	83,019	89,525	2,45,868	2,13,005	1,69,702	2,17,652	1,24,800	1,48,114	1,29,022	1,41,561	5,81,789	13,78,029 (R2)	2,70,697.1	3,41,771.6	126.26%
5	Cotton	7,04,236 (R2)	9,35,689 (R2)	7,79,630 (R2)	6,18,342 (R2)	21,06,887 (R2)	27,99,828 (R2)	36,13,268 (R2)	48,43,088 (R2)	28,08,942 (R1)	19,84,852 (R1)	12,63,134 (R1)	11,54,205 (R2)	14,68,698 (R2)	10,43,236 (R2)	18,66,003	12,52,881	67.14%
6	Salt; sculpture; earths and stone; plastering materials, lime and cement	1,54,642	2,39,208	2,94,174	2,56,059	3,13,084	4,74,776	5,73,853	7,08,520	6,59,894	5,62,842	5,11,653	6,51,398	7,01,180	6,32,930	4,81,015.2	1,92,020.6	39.92%
7	Iron and steel	4,04,940	3,40,300	2,05,600	4,20,599	7,39,791	6,45,338	3,28,217	3,73,030	1,63,413	1,58,445	2,21,943	3,97,036	3,00,657	5,68,785	3,76,292.4	17,53,80.3	46.61%

8	Pharmaceuticalproducts	21,522	30,219	27,111	20,780	26,601	43,656	65,422	55,820	36,280	24,471	25,741	33,805	46,769	44,324	35,894.36	13,551.33	37.75%
9	Optical, photographic,cinematographic, measuring,checkingprecision,medical orsurgical	37,847	40,061	49,543	1,03,759	79,960	1,11,861	1,36,532	1,59,073	1,14,547	1,22,918	1,48,280	1,55,732	1,51,885	1,61,268	1,12,376.1	44,598.66	39.69%
10	Other Products	18,32,984	19,77,322	22,03,672	34,84,390	64,51,842	66,55,326	55,96,232	65,82,653	73,81,993	49,26,456	43,96,445	63,32,270	79,74,051	72,23,171	52,15,629	2,11,125,9	40.48%
	Total	**78,29,168**	**9,4,91,978**	**1,00,93,927**	**1,03,70,052**	**1,74,39,991**	**1,67,17,786**	**1,47,29,317**	**1,64,16,825**	**1,34,34,251**	**95,39,517**	**8,9,14,967**	**1,25,00,767**	**1,65,03,442**	**1,72,78,833**	**1,29,47,202**	**35,32,814**	**27.29%**

Source:https://www.trademap.org/Bilateral_TS.aspx?nvpm=1%7c699%7c%7c710%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c1%7c2%7c1%7c1%7c1%7c1%7c1, Accessed on March 20, 2022, 12.22 AM

Interpretation

Table no. 4.19 shows that Organic chemicals, CottonandOres, slag and ash, not knitted or crocheted and Other Products shows the C.V. like 75.90% %, 67.14% and 67.09% respectively. These product shows the more variation means very less consistence to India's exports to China during the study period. India was having a comparative advantage of cotton and ores, slag and ash. Based on the table no. 4.19 potential items of export to china include cotton and ores, slag and ash, organic chemicals, pharmaceutical products and iron and steels etc. China is the one who Imported more from India.

China is an important member of BRICS countries especially when it comes to intra BRICS countries trading above table is an example of this.

Table No. 4.20 India‘s Exports to South Africa in US Dollar thousand

Sr. No	Product label	Value in 2006	Value in 2007	Value in 2008	Value in 2009	Value in 2010	Value in 2011	Value in 2012	Value in 2013	Value in 2014	Value in 2015	Value in 2016	Value in 2017	Value in 2018	Value in 2019	Mean	SD	CV
1	Articles ofapparel and clothing accessories, not knitted or crocheted	32,470	30,616	32,225	34,721	37,802	53,545	50,092	70,302	55,015	75,379	63,685	67,122	63,183	69,808	52,568.93	16,241.97	30.90%
2	Cotton	13,590	10,857	7,852	15,818	14,152	19,416	20,276	15,837	14,110	13,380	11,922	19,902	18,825	14,233	15,012.14	3,635.398	24.22%
3	Cereals	92,034 (R3)	95,631 (R3)	18,933	8,720	12,675	68,471	1,62,837	2,03,881	1,45,116	1,08,335	1,05,285	75,960	72,989	75,889	89,054	55,946.56	62.82%
4	Iron and steel	1,40,599 (R2)	58,640	67,162	34,735	67,671	81,371	56,952	1,18,727	48,474	36,214	26,739	73,677	34,549	30,797	62,593.36	33,466.13	53.47%
5	Vehicles other than railway ortramwayrollingstock,andpartsand accessoriesthereof	3,32,713 (R1)	2,27,240 (R1)	2,07,161 (R1)	1,66,639 (R1)	4,67,111 (R1)	6,90,931 (R1)	9,74,872 (R1)	10,67,538 (R1)	8,89,246 (R1)	7,66,538 (R1)	6,31,118 (R1)	8,51,428 (R1)	8,50,779 (R1)	9,91,229 (R1)	6,51,038.8	3,15,329.9	48.43%
6	Machinery,mechanical appliances, nuclear reactors, boilers; parts thereof	71,181	76,079	1,02,723 (R3)	69,455	1,18,768	1,52,321 (R3)	1441818 (R3)	2,09,832 (R3)	2,00,708 (R3)	1,62,269 (R3)	1,38,389 (R3)	1,67,383 (R3)	2,08,835 (R3)	2,26,551 (R3)	1,46,329.4	53,555.47	36.60%
7	Natural orcultured pearls,	2,4,68	2,6,93	74,729	43,996	46,142	84,179	76,845	74,827	93,878	69,328	58,061	54,543	57,722	60,881	60,481	20,315	33.5

	precious or semi-precious stones, precious metals, metals clad	1	0													.57	.55	9%
8	Pharmaceutical products	68,508	1,09,331 (R2)	1,92,159 (R1)	1,89,965 (R2)	2,53,950 (R2)	3,17,588 (R2)	3,19,835 (R2)	5,10,258 (R2)	4,59,283 (R2)	4,91,130 (R2)	4,17,821 (R2)	4,94,859 (R2)	5,39,659 (R2)	5,15,756 (R2)	3,48,578.7	1,63,004.1	46.76%
9	Raw hides and skins(otherthanfur skins)and leather	15,232	15,652	10,454	8,086	12,482	16382	14431	17894	17654	21892	11874	12872	10728	5,803	13,674	4,233.204	30.96%
10	**Other Products**	13,03,437	14,78,617	17,67,550	13,87,518	26,19,305	28,35,380	31,53,042	34,53,371	7,98,912	20,66,988	17,77,869	22,55,772	21,70,548	19,91,983	22,90,021	7,80,350.7	34.08%
	Total	**2,094,445**	**21,29,593**	**24,80,948**	**19,59,653**	**36,50,058**	**43,19,584**	**49,73,300**	**57,42,467**	**5,722,396**	**38,11,453**	**32,42,763**	**40,73,518**	**40,27,817**	**39,82,930**	**37,29,352**	**12,51,607**	**33.56%**

Source:https://www.trademap.org/Bilateral_TS.aspx?nvpm=1%7c699%7c%7c710%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c1%7c2%7c1%7c1%7c1%7c1%7c1, Accessed on March 20, 2022, 12.28 AM

Interpretation

Table no. 4.20 shows the relationship between India and South Africa in export term of top 9 products. Since South Africa Join BRIC in 2009, it's become BRICS. India want to established or improve international trade with South Africa. Its showing positive outcome. India has comparative advantage of Vehicles other than railway or tramway rolling stock, and parts and accessories thereof was the no. 1 product; which South Africa demanded more. Pharmaceuticals product also necessary for South Africa, demands for this is also higher. Compare to other products these top 9 products are very much important for South Africa. According to table no. 4.20 highest CV cereals was 62.82 % it means more fluctuation. For vehicle other than railway or tramway rolling stock, and parts and accessories thereof CV was 48.43%.

Table no. 4.21 India's Imports from Brazil in US Dollar thousand

Sr. No	Product label	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Mean	SD	C.V
1	Ores, slag and ash	1,86,847 (R1)	2,45,860 (R1)	3,30,547 (R1)	2,26,629 (R2)	3,39,010 (R2)	4,69,747 (R2)	2,94,472 (R3)	5,30,580	3,94,403 (R2)	4,31,852 (R2)	87,443	5,89,344	4,09,700	1,16,257	332335.1	1498563	45.09%
2	Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral ...	1,21,987 (R2)	1,295	48,849	9,33,489 (R1)	12,93,586 (R1)	21,86,817 (R1)	35,18,730 (R1)	17,88,346 (R1)	30,51,096 (R1)	13,35,309 (R1)	10,13,732 (R1)	17,23,527 (R1)	14,95,067 (R1)	10,02,417 (R1)	1393875	1039746	74.59%
3	Machinery, mechanical appliances, nuclear reactors, boilers; parts thereof	1,07,305 (R2)	92,126 (R3)	1,18,922 (R2)	74,594	1,14,654	1,10,753	91,389	75,869	67,151	62,755	68,928	79,532	1,61,796	1,71,939 (R3)	99,836.64	33911.58	33.97%
4	Iron and	10,55	79,81	80,72	2,26,1	2,38,6	3,01,4	3,04,7	1,49,1	1,87,4	2,63,8	2,02,6	1,98,0	1,23,6	1,00,170	18	7825	42.7

	steel	83	1	0	28	72 (R3)	04 (R3)	30	76 (R3)	13	70 (R3	43 (R3)	66 (R3)	42		3002	0.17	6%
5	Animal or vegetable fats and oils and their cleavage products;prepared edible fats; animal	105348	1391 79 (R2)	99674 (R3)	151622 (R3)	65212	172473	315806 (R2)	162015 (R2)	373120 (R2)	533978 (R3)	487653 (R2)	387287 (R3)	543494	226175 (R3)	26878 8.3	16 8843	62.82%
6	Organic chemicals	52699	62093	69915	68293	63736	61769	57153	76540	105174	133953	95533	109900	154550	89652	85782.86	30757.41	35.85%
7	Nickel and articles thereof	38276	60633	13680	8774	10651	3351	4265	9927	9996	10703	13772	12696	5366	4708	14771.29	15710.27	106.36%
8	Commodities not elsewhere specified	30886	8613	22427	56076	52865	26819	13452	31131	52246	1054	888	886	228	6992	21754.5	20560.1	94.51%
9	Rubber and articles thereof	24601	13054	14651	16927	15269	15944	29851	14611	22835	17335	11002	26562	17329	10708	17905.64	5841.617	32.62%

10	**Other**	1808 65	1750 47	3604 45	1134 739	1027 333	3860 74	7647 32	9936 46	1280 589	1319 491	1632 938	1974 370	1725 385	131325 6	1019 208	5792 38.1	56.83 %
	Total	**9,54,397**	**8,77,711**	**11,59,830**	**28,97,271**	**32209888**	**37351511**	**53945800**	**38318841**	**55440223**	**41103000**	**36145532**	**51021700**	**46365574**	**30422744**	**34372599**	**15592300**	**45.36 %**

Source:https://www.trademap.org/Bilateral_TS.aspx?nvpm=1%7c699%7c%7c710%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c1%7c2%7c1%7c1%7c1%7c1%7c1, Accessed on March 20, 2022, 12.46 AM

Interpretation

Table no. 4.21 shows that, India's imports from Brazilwith these top products, was higher in 2006, total of all the product was 9, 54,397 US $ thousand as compare to 2019, its 30, 42,274US $ thousand it's higher. In the year 2009 to 2019 Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineralswere top products of India's importsfrom Brazil which have grown.From 2006 to 2009 Ores, slag and ash was the top product, later the demand for this product decreased.

Table no. 4.22 India's imports from Russia in US Dollar thousand

Sr. No	Product label	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Mean	SD	C.V
1	Iron and steel	4459 85 (R1)	5337 01 (R1)	5324 26 (R2)	5238 84 (R3)	5473 70 (R2)	4857 10 (R2)	6764 53 (R1)	2677 26	2433 41	3584 14	2456 85	2236 48	1721 06	1483 50	386057.1	168611.4	43.68%
2	Fertilizers	3298 35	2441 09	1601 119 (R1)	9061 13 (R1)	8325 38 (R1)	5715 56 (R1)	5406 26	3870 54 (R1)	3898 28 (R1)	6541 97 (R1)	3874 91 (R1)	3464 49 (R2)	3788 61 (R2)	4565 87 (R2)	573311.6	352507.7	61.49%
3	Cereals	1557 48 (R3)	5360 45 (R3)	6202 0	0	4678	0	0	7	0	285	1138 0	9955 3	9968	7465	63367.79	143968.2	227.19%
4	Nickel and articles thereof	1504 12	2453 82	1875 78	9303 9	1777 84	2277 96	3389 50	3357 82	8746 6	7203 2	7768 0	5735 1	3610 1	1504 6	150171.4	105897.1	70.52%
5	Rubber and articles thereof	1100 32	1062 96	2018 72	1046 83	1927 60	2155 03	1856 47	1797 32	1652 64	1081 33	1056 75	1442 22	1370 86	9146 0	146311.8	42888.73	29.31%
6	Paper and paperboard; articles of paper pulp, of paper or of paperboard	1074 20	6629 4	1407 14	9272 9	1381 95	1474 95	1594 53	1308 97	1669 85	1794 57	2263 82	2806 13	2584 55	2732 92	169170.1	67170.6	39.71%
7	Mineral fuels, mineral oils and products of their	1031 91	2179 34	4606 14 (R3)	8366 32 (R2)	4672 53 (R3)	2594 76 (R3)	4424 79 (R3)	3129 82 (R3)	6151 75 (R3)	4092 28 (R3)	5822 11 (R3)	1989 173 (R1)	2210 776 (R1)	2872 958 (R1)	841434.4	860259.3	102.24%

	distillation; bituminous substances; mineral ...																	
8	Copper and articles thereof	74952	101415	10445959	644480	71268	2155532	26536767	3195518	41702424	26981818	8256567	97960	24249	920	142823.5	130992.4	91.72%
9	Machinery, mechanical appliances, nuclear reactors, boilers; parts thereof	64000	78562	8809090	574500	4894428	7952828	1381143	8490505	6340949	6799966	1099996	1146448	8019898	694441	81807.71	24474.31	29.92%
10	Other	3592882	5547550	10724334	7586777	11107765	18483800	18550388	17955177	20591377	24102900	29526911	47115555	35372322	22906700	1951173	1205905	61.80%
	Total	**190085748**	**268448876**	**445132687**	**343768753**	**359155976**	**405021560**	**460215120**	**381412069**	**420762850**	**452985878**	**478175972**	**791769232**	**682323189**	**622618**	**4505628**	**1601011**	**35.53%**

Source:https://www.trademap.org/Bilateral_TS.aspx?nvpm=1%7c699%7c%7c710%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c1%7c2%7c1%7c1%7c1%7c1%7c1, Accessed on March 20, 2022, 12.46 AM

Interpretation

The above data indicates that 2006 to 2019 India's demand for these top 9 products are varied, for example table no. 4.22 in 2006 and 2007, India give more demand for Iron and steel but 2008 to 2019 India import more fertilizers. For cereals 2009, 2011, 2012 and 2014 there was no import for this product. It means that India's import from Russia was varied or there are more fluctuations. India's Dependency on Russia natural resources is shown in the import table. Copper and articles thereof this product was significant up to 2016 and then decline during the remaining period.

Table no. 4.23 India's Imports from China in US Dollar thousand

Sr. No	Product label	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Mean	SD	C.V
1	Organicchmicals	1620752 (R3)	2187469 (R3)	2857476 (R3)	2775758 (R3)	3741420 (R3)	4080427 (R3)	4622128 (R3)	5259011 (R3)	6256627 (R3)	6165496 (R3)	5585265 (R3)	6563388 (R3)	8550705 (R3)	8232332 (R3)	4892732	2150589	43.95%
2	Mineralfuels,mineral oils and products of their distillation; bituminous substances; mineral ...	1164795	1231204	1498495	2773666	6375587	1442079	8276997	5537537	8283277	7125427	6204987	8082977	1142115	5474087	8780097	3633713	41.39%
3	Machinery, mechanical appliances,nuclear reactors,boilers;partsthereof	3091619 (R2)	4122975 (R2)	6075822 (R2)	5880975 (R2)	7219613 (R2)	9791615 (R2)	1023401 (R2)	9768293 (R2)	9770035 (R2)	1059069 9 (R2)	1072751 1 (R2)	1279889 8 (R2)	1366605 0 (R2)	1387301 3 (R2)	9115080	3382705	37.11%
4	Electrical machinerya nd equipment and parts thereof;sound recorders and reproducers, television	37,66,614 (R1)	70,25,673 (R1)	84,77,315 (R1)	1,05,03,967 (R1)	1,12,74,108 (R1)	132,40,759 (R1)	1,31,14,008 (R1)	1,44,44,086 (R1)	1,59,77,001 (R1)	1,93,64,565 (R1)	2,08,70,118 (R1)	2,75,08,737 (R1)	2,33,17,673 (R1)	1,99,66,001 (R1)	1,49,17,902	66,68,312	44.70%
5	Silk	3391 02	3819 21	3676 78	3798 48	3531 65	3147 01	3022 33	2282 20	2049 37	1786 89	1707 35	1954 66	1361 10	1321 39	,263,2	9400	35

																10.3	2.72	.71%
6	Natural or culturedpearls,precious or semiprecious stones,precious metals, metals clad ...	63,804	3,02,957	3,82,824	6,52,613	5,23,873	18,09,021	12,63,265	8,70,332	12,54,107	5,41,099	4,80,366	6,35,597	4,26,900	2,05,388	6,72,296.1	4,77,623.4	71.04%
7	Salt; sulphur;earths and stone; plasteringmaterials, lime and cement	46,254	66,562	1,37,177	87,090	82,322	1,71,987	1,11,349	73,013	87,670	75,324	71,155	95,327	1,53,363	1,57,283	101134	38861.71	38.43%
8	Inorganic chemicals;organic orinorganic compounds ofprecious metals, of -earth metals,	2,61,048	3,62,282	5,60,003	4,49,245	5,15,247	7,40,900	7,00,810	6,89,987	7,29,986	6,56,281	5,55,710	5,77,278	10,70,367	7,91,044	61,85,84.9	19,93,20.1	32.22%
9	Optical, photographic, cinematographic, measuring, checking,precision, medical or surgical ...	1,83,183	2,99,113	3,30,363	6,27,136	6,41,739	9,21,063	10,96,210	10,46,610	11,89,551	12,52,940	13,12,391	15,96,695	16,14,916	14,60,614	9,69,466	4,82,195.3	49.74%

10	Other	5101893	859561 6	10898871	8979373	1,62,60,071	2,29,70,473	2,18,68,752	1,87,02,139	2,19,32,305	2,21,03,473	2,00,86,239	2,11,10,742	2,37,67,518	2,30,36,871	1,75,29,595	6,3,95,080	36.48%
	Total	**1,56,39,064**	**2,45,75,772**	**3,15,86,024**	**3,06,13,371**	**4,12,49,116**	**5,54,83,025**	**5,41,40,455**	**5,16,35,444**	**5,82,30,546**	**6,16,41,108**	**6,04,79,988**	**7,18,90,425**	**7,38,45,717**	**6,84,02,093**	**4,99,58,011**	**1,83,30,197**	**36.69%**

Source:https://www.trademap.org/Bilateral_TS.aspx?nvpm=1%7c699%7c%7c710%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c1%7c2%7c1%7c1%7c1%7c1%7c1, Accessed on March 20, 2022, 12.46 AM

Interpretation

Table no. 4.23 shows that India give more demand for these top ten products, but more demand from 2006 to 2019 was for Electrical machinery and equipment, Organic chemicals, Machinery, mechanical appliances, nuclear reactors, boilers; parts respectively. There was a continuous import of these products every year during study period. Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral andElectrical machinery and equipment and parts thereof; sound recorders and reproducers, television respectively**.** It means that India give more demand for capital goods and raw materials**.** India was not only importsfrom china but also exporting more products to China.

Table no. 4.24 India's Imports from South Africa in US Dollar thousand

Sr. No	Product label	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Mean	SD	C.V
1	Natural or cultured pearls, precious or semi-precious stones precious metals metals clad.	16,39,395 (R1)	16,91,749 (R1)	28,54,849 (R1)	28,07,417 (R1)	42,86,095 (R1)	62,68,338 (R1)	46,43,708 (R1)	38,26,901 (R1)	18,04,625 (R2)	19,67,046 (R2)	17,00,866 (R2)	24,06,561 (R2)	15,51,282 (R2)	21,89,829 (R2)	28,31,333	**14,20,597**	**50.17%**
2	Inorganic chemicals;organic or inorganic compounds of precious metals, of rareearth metals	2,05,830 (R2)	2,19,587 (R3)	6,63,344 (R3)	2,64,092 (R2)	1,89,862	2,42,261	1,12,086	1,02,977	45,427	37,705	56,246	91,044	75,936	55,295	1,68,692.3	**1,62,580.7**	**96.38%**
3	Iron an	1,47,0	15,53,	2,63,6	1,92,9	2,41,6	3,94,4	6,12,4	4,92,1	4,92,6	4,41,7	1,66,0	1,79,3	2,33,7	2,22,606	3,0	**1,5**	**50**

	dsteel	14 (R3)	09	68	89 (R3)	00	02 (R2)	36 (R3)	30 (R3)	82 (R3)	53	10	39 (R3)	69	(R3)	**2,550.5**	**2,915.8**	**.54%**
4	Mineral fuels, mineralo ils and products of the irdistillation;	1,42,986	6,29,461 (R2)	9,52,574 (R2)	11,58,009	13,94,872 (R2)	14,60,694	17,36,614 (R2)	19,78,636 (R2)	23,08,384 (R1)	24,30,873 (R1)	20,54,583 (R1)	27,29,582 (R1)	30,93,880 (R1)	27,85,005 (R1)	**17,75,440**	**8,67,473.4**	**48.86%**
5	Ores, slag and ash	1,34,894	1,08,422	3,28,940	2,43,036	3,33,616 (R3)	2,38,611 (R3)	3,69,703	3,23,425	6,75,106	6,16,342 (R3)	3,26,940	6,51,349	7,50,231 (R3)	4,20,641	**3,94,375.4**	**2,03,028.5**	**51.48%**
6	Organicchemicals	45,432	61,197	64,955	53,202	67,487	76,485	73,529	86,872	98,271	65,875	53,492	53,999	74,799	75,433	**6,79,30.57**	**14,335.53**	**21.10%**
7	Nickel and articlesthereof	35,987	23,172	15,284	5,553	16,815	31,827	23,313	11,795	18,213	42,924	35,737	45,463	55,541	56,729	**29,882.36**	**16,159.24**	**54.08%**
8	Aluminium and articlesthereof	27,327	1,17,256	1,48,402	73,025	75,609	99,128	1,05,496	1,46,506	85,227	1,05,819	91,492	65,053	76,232	62,364	**91,352.57**	**32720.86**	**35.82%**
9	Pulp of wood or of other fibrous cellulosic materi	24,268	42,765	44,498	30,812	34,035	71,753	64,705	88,033	59,672	1,48,471	2,020,24	2,60,106	1,93,780	1,37,401	**1,00,165.9**	**75,257.82**	**75.13%**

	al; recovered (waste and scrap) paper or .																	
10	**Other**	1,03,886	1,32,785	2,14,693	2,07,228	2,72,195	4,45,732	2,93,151	2,94,480	4,06,201	4,22,857	4,04,684	4,00,136	5,09,954	6,29,213	**3,38,371.1**	**1,47,700.7**	**43.65%**
	Total	**25,07,019**	**31,81,703**	**55,51,207**	**50,35,363**	**69,12,186**	**93,29,231**	**80,34,741**	**73,51,755**	**59,93,808**	**62,79,665**	**50,92,074**	**68,82,632**	**66,15,404**	**66,34,516**	**61,00,093**	**17,86,307**	**29.28%**

Source:https://www.trademap.org/Bilateral_TS.aspx?nvpm=1%7c699%7c%7c710%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c1%7c2%7c1%7c1%7c1%7c1%7c1, Accessed on March 20, 2022, 12.46 AM

Interpretation

According to table no. 4.24 Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad, Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral are top most products which India imports to South Africa. Organic chemicals also has a top most product but during study period more variations and fluctuations seen on table no. 4.24.

Table No. 4.25 India's Top Exports Products to BRICS countries

Sr. No.	Country	Year	Products
1	Brazil	2006 - 2019	Organic chemicals
2	Russia	2006 – 2019	Pharmaceutical
3	China	2006 – 2013	Ores, slag and ash
		2014 – 2016	Cotton
		2017 - 2019	Organic chemicals
4	South Africa	2006 – 2019	Vehicles other than railway or tramway rolling stock, and parts and accessories

Source: Table no. 4.17, 4.18, 4.19, 4.20

Table No. 4.26 India's Top Imports Products from BRICS countries

Sr. No.	Country	Year	Products
1	Brazil	2006 – 2008	Ores, slag and ash
		2009 – 2019	Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral
2	Russia	2006 – 2012	Iron and steel
		2013 – 2016	Fertilizers
		2017 – 2019	Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral
3	China	2006 – 2019	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television
4	South Africa	2006 – 2013	Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad
		2014 – 2019	Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral

Source: Table no. 4.21, 4.22, 4.23, 4.24

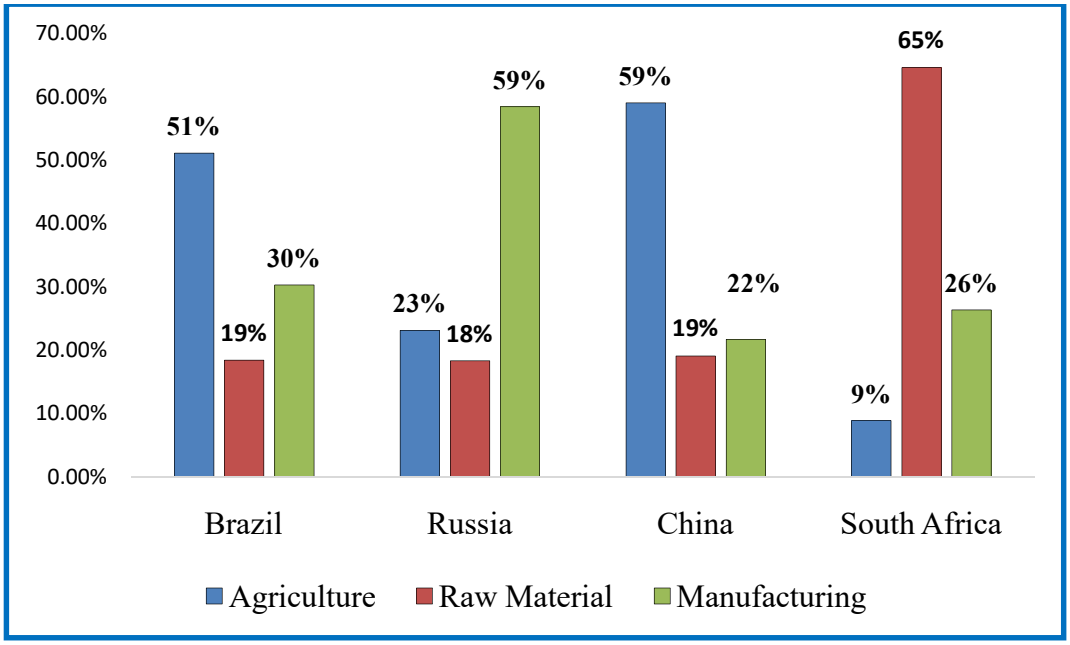
4.6.1 SECTORWISE COMPOSITION OF INDIA'S EXPORTS TO AND IMPORTS FROM BRICS COUNTRIES (2006 to 2019)

Table No. 4.27 India's Exports to BRICS (US Dollar thousand)

Sr. No	Sectors	Brazil	Russia	China	South Africa
1	Agriculture	2,70,52,197	57,16,230	10,70,64,653	46,66,247
	Percentage	**51%**	23%	**59%**	9%
2	Raw Material	97,80,141	45,28,481	3,46,97,384	3,37,52,588
	Percentage	19%	18%	19%	**65%**
3	Manufacturing	1,60,40,821	1,44,22,773	3,94,98,784	1,37,92,090
	Percentage	30%	**59%**	22%	26%
	Total	5,28,73,159	2,46,67,484	18,12,60,821	5,22,10,925
	Percentage	**100.00%**	**100.00%**	**100.00%**	**100.00%**

Source:https://www.trademap.org/Bilateral_TS.aspx?nvpm=1%7c699%7c%7c710%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c1%7c2%7c1%7c1%7c1%7c1%7c1, Accessed on May 2, 2022, 12.46 AM

Graph No. 4.20 India's Exports to BRICS in US Dollar thousand



Source: Table No. 4.27

Interpretation

The above table gives the total sector wise exports to BRICS countries during the entire period 2006 to 2019.

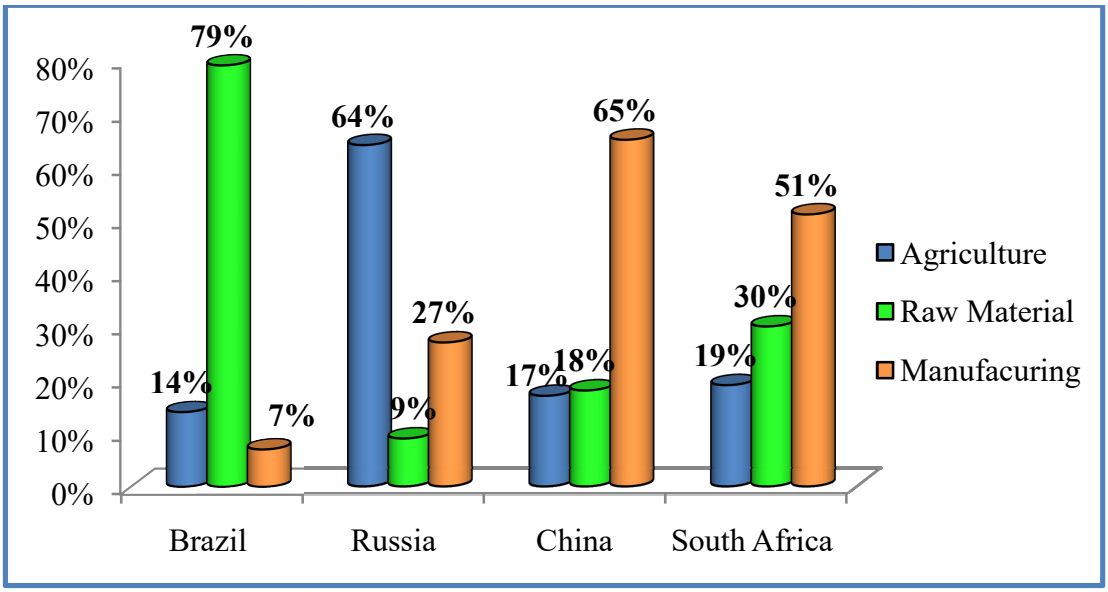
Comparing the sector wise trade with individual countries it is seen that agricultural products from more than half (51%) of India's exports to Brazil. The largest share of India's exports to Russia is from the manufacturing sector (59%), India's exports to china in agriculture sector was (59%) and in raw material sector (65%) share of India's exports to South Africa. Overall, the largest share of India's exports to BRICS in seen to come from the Manufacturing sector.

Table No. 4.28 India's Imports from BRICS value in US Dollar thousand

Sr. No	Sectors	Brazil	Russia	China	South Africa
1	Agriculture	67,40,881	4,05,65,447	12,18,88,901	1,61,03,975
	Percentage	14%	**64%**	17%	19%
2	Raw Material	3,81,27,247	55,46,239	12,19,72,706	2,53,28,975
	Percentage	**79%**	9%	18%	30%
3	Manufacturing	32,53,497	1,69,67,107	45,55,50,541	4,39,68,354
	Percentage	7%	27%	**65%**	**51%**
	Total	**4,81,21,625**	**63,078,793**	**69,94,12,148**	**8,54,01,304**
	Percentage	**100%**	**100%**	**100%**	**100%**

Source:https://www.trademap.org/Bilateral_TS.aspx?nvpm=1%7c699%7c%7c076%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c1%7c2%7c1%7c1%7c1%7c1%7c1, accessed on MAY 2, 2022, 3.25PM, (data compiled by Researcher)

Graph No. 4.21 India's Imports from BRICS in US Dollar thousand (2006 to 2019)



Source: Table No. 4.28

Interpretation

Table No.4.28 shows the sector wise imports from BRICS countries during the period 2006 to 2019. In terms of value, China is India's largest trading partner with the highest exports and imports from all the 3 sectors i.e. Agriculture, Raw Material and Manufacturing.

Comparing the sector wise trade with individual countries it is seen that India's imports from Brazil consist mainly of raw materials which are as high as 79% of total imports from Brazil and the largest imports from Russia come from the agricultural sector, which make up 64% of total imports from Russia. Imports from China, however, are mostly of manufactured products (65%). Similarly, India imports mainly manufactured products (51%) from South Africa. Overall, the largest share of India's imports to BRICS in seen to come from the Manufacturing sector.

4.6.2 COUNTRYWISE AND SECTORWISE COMPOSITION OF INDIA'S EXPORTS TO AND IMPORTS FROM BRICS COUNTRIES 2006 AND 2017 (Value in thousand US Dollar and Percentage Share)

Table No. 4.29 Country wise and Sector wise Composition of India's Exports to BRICS Countries 2006 and 2017 (Value in thousand US Dollar) and %

Year	Country	Agriculture	Raw Material	Manufacturing	Total
2006	Brazil	10,25,899	2,02,375	2,68,933	14,97,207
	Percentage	**68.52%**	13.52%	17.96%	100.00%
	Russia	2,24,522	1,53,301	4,67,888	8,45,711
	Percentage	26.55%	18.13%	**55.32%**	100.00%
	China	51,79,820	11,22,698	15,26,646	78,29,164
	Percentage	66.16%	14.34%	19.50%	100.00%
	South Africa	2,33,647	14,17,323	4,43,476	20,94,446
	Percentage	11.16%	**67.67%**	21.17%	100.00%
2017	Brazil	5,16,836	8,83,350	14,45,804	28,45,990
	Percentage	18.16%	31.04%	50.80%	100.00%
	Russia	5,85,003	4,27,449	11,27,111	21,39,563
	Percentage	27.34%	19.98%	**52.68%**	100.00%
	China	63,58,338	27,63,434	33,79,000	1,25,00,772
	Percentage	**50.86%**	22.11%	27.03%	100.00%
	South Africa	3,74,734	25,85,558	11,13,226	40,73,518
	Percentage	9.20%	**63.47%**	27.33%	100.00%

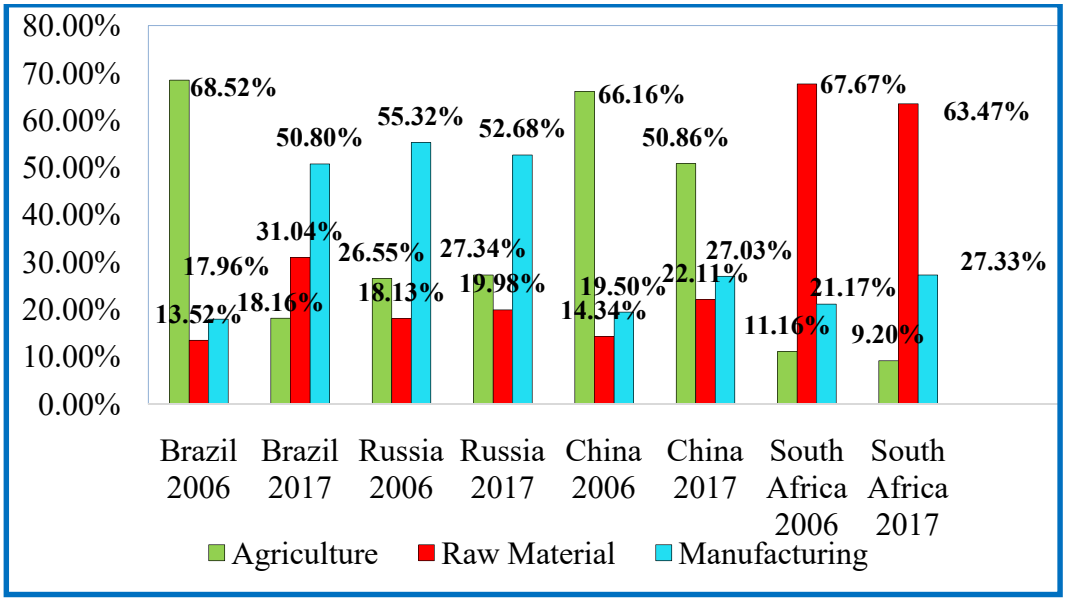
Source:https://www.trademap.org/Bilateral_TS.aspx?nvpm=1%7c699%7c%7c076%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c2%7c2%7c1%7c1%7c1%7c1%7c1, Accessed on 15 March 2021, 2.55 PM., (data compiled by Researcher)

Table No. 4.30 Change in Country and Sector wise composition of India's Export's to BRICS countries (2006 and 2017) in (%)

Country	Agriculture		Raw Material		Manufacturing	
	2006	**2017**	**2006**	**2017**	**2006**	**2017**
Brazil	**68.52%**	18.16%	13.52%	31.04%	17.96%	50.80%
Russia	26.55%	27.34%	18.13%	19.98%	**55.32%**	**52.68%**
China	66.16%	**50.86%**	14.34%	22.11%	19.50%	27.03%
South Africa	11.16%	9.20%	**67.67%**	**63.47%**	21.17%	27.33%

Source: Table No. 4.29

Graph No. 4.22 Country and Sector wise Composition of India's Exports to BRICS Countries 2006 and 2017



Source: Table No. 4.30

Interpretation:

Export of Agricultural Sector: India's Agricultural exports to Brazil fell sharply from 68.52% in 2006 to 18.16% in 2017. China also showed a substantial decrease from 66.16% to 50.86%. South Africa's share fell slightly from 11.16% to 9.20% respectively. Agricultural export to Russia increased marginally from 26.55% to 27.34%.

Export of Raw Material Sector: India's Raw material export to Brazil considerably increased from 13.52% in 2006 to 31.04% in 2017, Russia 18.13% in 2006 to 19.98% in 2017, China 14.34% in 2006 22.11% in 2017 respectively. Raw material export to South Africa slightly decreased from 67.67 % to 63.47%.

Export of Manufacturing Sector: India's manufacturing export to Brazil significantly increased from 17.96% to 50.80%, China 19.50% to 27.03%, South Africa 21.17% to 27.33% respectively. Manufacturing export to Russia fall a little from 55.32% to 52.68%.

It can be seen that the sector wise composition of exports to Brazil and China changed considerably between 2006 and 2017 whereas the composition of exports to Russia and South Africa remained almost the same.

Table No. 4.31 country and Sector wise Composition of India's Imports from BRICS Countries 2006 and 2017 (Value in thousand US Dollar) and %

Year	Country and Percentage (%)	Agriculture	Raw Material	Manufacturing	Total
2006	Brazil	1,45,406	4,48,093	68,953	6,62,452
	Percentage	21.95%	**67.64%**	10.41%	100.00%
	Russia	4,03,166	98,991	7,12,888	12,15,045
	Percentage	**33.18%**	8.15%	**58.67%**	100.00%
	China	15,50,731	13,34,051	31,56,949	60,41,731
	Percentage	25.67%	22.08%	52.25%	100.00%
	South Africa	20,099	66,867	41,584	1,28,550
	Percentage	15.64%	52.02%	32.35%	100.00%
2017	Brazil	5,59,240	32,96,178	2,54,880	4,110,298
	Percentage	13.61%	**80.19%**	6.20%	100.00%
	Russia	28,36,779	3,98,276	12,94,683	45,29,738
	Percentage	**62.63%**	8.79%	28.58%	100.00%
	China	1,16,24,806	95,06,052	4,05,00,632	6,16,31,490
	Percentage	18.86%	15.42%	**65.71%**	100.00%
	South Africa	19,699	2,30,767	88,915	3,39,381
	Percentage	**5.80%**	**68.00%**	**26.20%**	**100.00%**

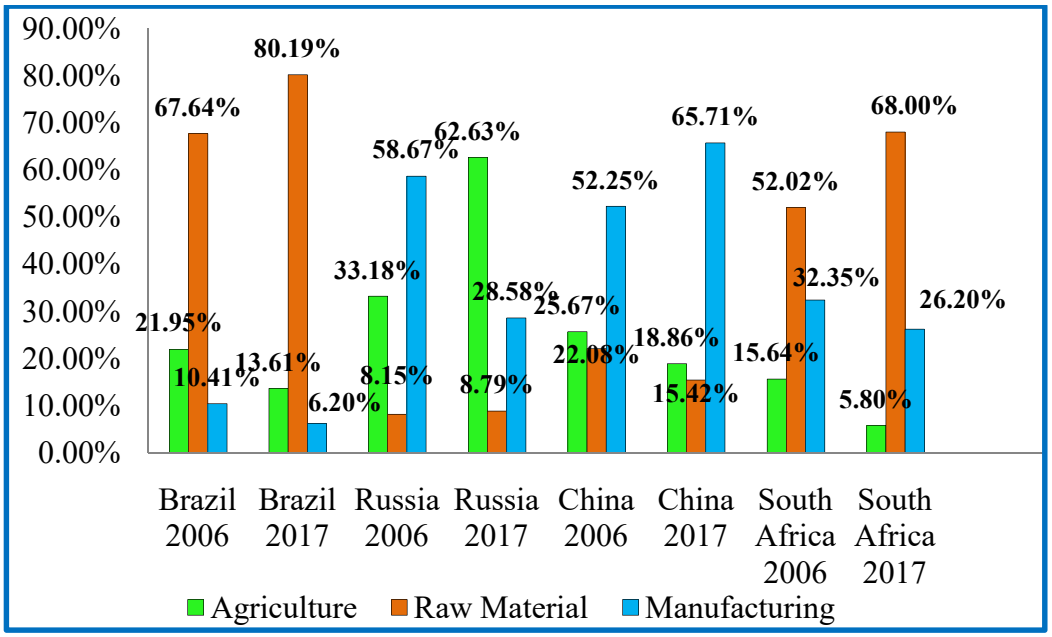
Source:https://www.trademap.org/Bilateral_TS.aspx?nvpm=1%7c699%7c%7c076%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c2%7c2%7c1%7c1%7c1%7c1%7c1, Accessed on 15 March 2021, 2.55 PM., (data compiled by Researcher)

Table No. 4. 32 Change in country and Sector wise composition of India's Import's from BRICS countries (2006 and 2017) in (%)

Country	Agriculture		Raw Material		Manufacturing	
	2006	2017	2006	2017	2006	2017
Brazil	21.95%	13.61%	**67.64%**	**80.19%**	10.41%	6.20%
Russia	**33.18%**	**62.63%**	8.15%	8.79%	**58.67%**	28.58%
China	25.67%	18.86%	22.08%	15.42%	52.25%	**65.71%**
South Africa	15.64%	5.80%	52.02%	68.00%	32.35%	26.20%

Source: Table No. 4. 31

Graph No. 4.23 India's Imports from BRICS Countries 2006 and 2017



Source: Table No. 4.32

Interpretation

Imports from Agricultural sector: India's Agricultural imports from Brazil reducefrom21.95% in 2006 to13.61% in 2017, China 25.67% in 2006 to 18.86% in 2017, South Africa 15.64% in 2006 to 5.80% in 2017 respectively.Agricultural importfrom Russia significantly changed 33.18% in 2006 to 62.63% in 2017.

Imports from Raw Material Sector: India's Raw Material imports from Brazil increase from 67.64% in 2006 to 80.19% in 2017, Russia 8.15% in 2006 to 8.79% in 2017, South Africa 52.02% in 2006 to 68.00% in 2017 respectively. Raw Material imports from China falls slightly 22.08% in 2006 to 15.42% n 2017.

Imports from Manufacturing Sector: India's manufacturing imports from Brazilreduced to some extent10.41% in 2006 to 6.20% in 2017, Russia 58.67% in 2006 to 28.58% in 2017, South Africa 32.35% in 2006 to 26.20% in 2017 respectively.Manufacturing imports from China appreciably 52.22% in 2006 to 65.71% in 2017.

The sector wise imports from all four countries showed a significant difference between 2006 and 2017. The biggest difference can be observed in imports from Russia where the share of imports from the agriculture sector increased and share of manufacturing sector decreased by a large margin.

India's exports to and imports from to BRICS countries of all 3 sectors increased in value terms but the percentage share of all the 3 sectors may have increased or decreased.

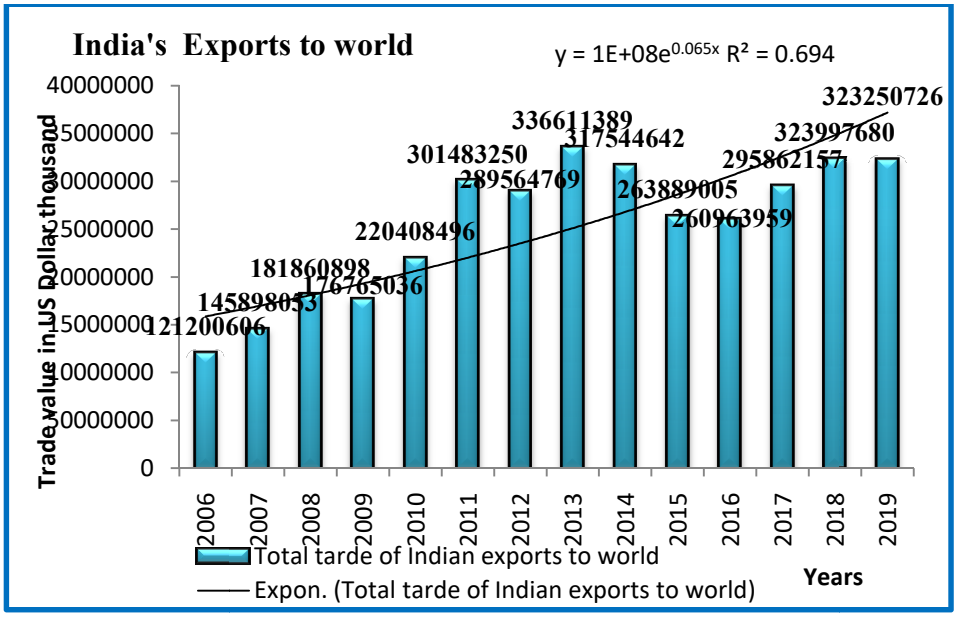
4.7 TOTAL TRADE OF INDIA'S EXPORTS TO AND IMPORTS FROM WORLD

Table No.4.33 Exports to World (Value in US Dollar thousand)

Sr. No	Year	Indian exports to world	Growth Rate %
1	2006	12,12,00,606	-
2	2007	14,58,98,053	20.38%
3	2008	18,18,60,898	24.65%
4	2009	17,67,65,036	-2.80%
5	2010	22,04,08,496	24.69%
6	2011	30,14,83,250	36.78%
7	2012	28,95,64,769	-3.95%
8	2013	33,66,11,389	16.25%
9	2014	31,75,44,642	-5.66%
10	2015	26,38,89,005	-16.90%
11	2016	26,09,63,959	-1.11%
12	2017	29,58,62,157	13.37%
13	2018	32,39,97,680	9.51%
14	2019	32,32,50,726	-0.23%
CAGR – Year 2006 – 2019 – 7.26%			

Source:https://www.trademap.org/Bilateral_TS.aspx?nvpm=1%7c699%7c%7c076%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c2%7c2%7c1%7c1%7c1%7c1%7c1, Accessed on 15 March 2021, 2.55 PM.

Graph No. 4.24 India's Exports to World



Source: Table no. 4.33

Interpretation

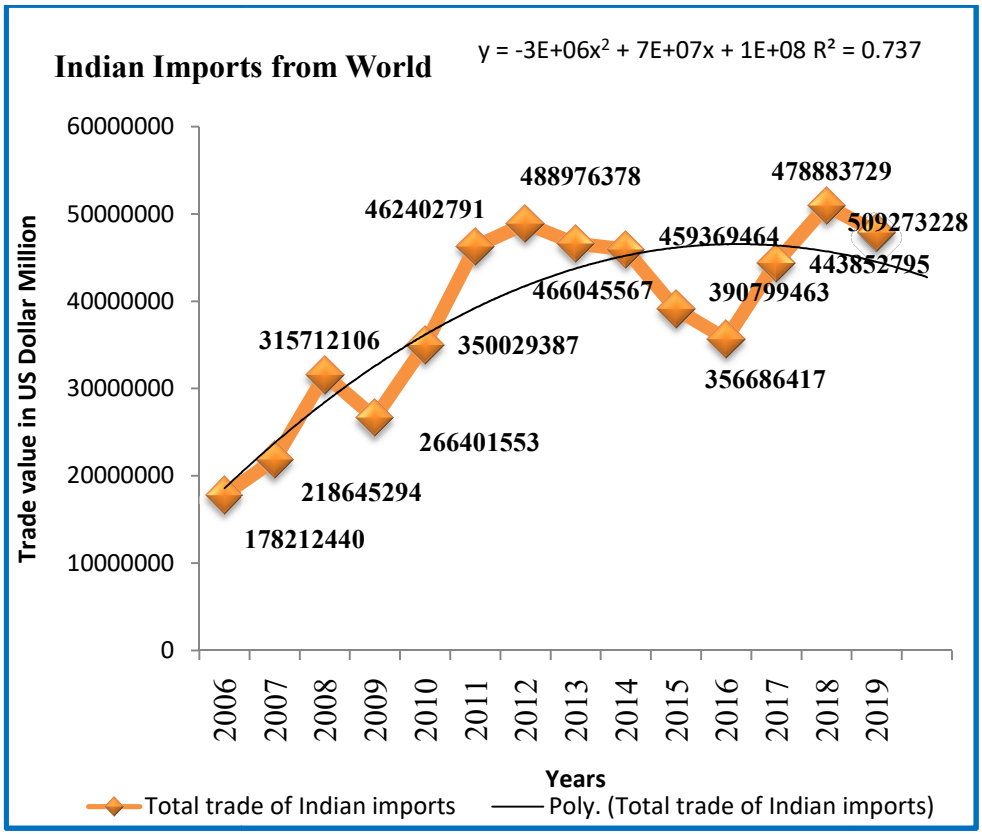
In this above table and bar diagram, Researcher observed that the trend of Indian exports to world has been exponentially increasing from the year 2006.The R-square value is 0.694 means that the given trend line is best fitted to the given data of Indian exports to the world. The last four years means 2016 to 2019 the Indian export to world is significantly increasing and shows the noteworthy growth in the India's world export trend. Trade line was upward sloping; it means India's Export to world was continually escalating.

Table No. 4.34 India's Imports from World (Value in US Dollar thousand)

Sr. No.	Year	Indian imports to world	Growth Rate %
1	2006	17,82,12,440	-
2	2007	21,86,45,294	22.69%
3	2008	31,57,12,106	44.39%
4	2009	26,64,01,553	-15.62%
5	2010	35,00,29,387	31.39%
6	2011	46,24,02,791	32.10%
7	2012	48,89,76,378	5.75%
8	2013	46,60,45,567	-4.69%
9	2014	45,93,69,464	-1.43%
10	2015	39,07,99,463	-14.93%
11	2016	35,66,86,417	-8.73%
12	2017	44,38,52,795	24.44%
13	2018	50,92,73,228	14.74%
14	2019	47,88,83,729	-5.97%
CAGR – Year 2006 – 2019 – 5.32 %			

Source:https://www.trademap.org/Bilateral_TS.aspx?nvpm=1%7c699%7c%7c076%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c2%7c2%7c1%7c1%7c1%7c1%7c1, Accessed on 15 March 2021, 2.55 PM., (data compiled by Researcher)

Graph No. 4.25 Indian Imports from World



Source: Table no. 4.34

Interpretation

In this above trend analysis, it is observed that the R-squared value is greater than 0.7 i.e. 0.737. It means that the fitted trend line is statistically accepted and best fitted to the above dataset of Indian imports from world. The BRICS are formed in the year 2006 and after that the Indian imports from the world has significantly increased from the year 2006 to 2012. The variations in India's imports from the world are less as compared to the individual countries included in BRICS group (Table No. 4.28). The fitted trend line is the 2nd order polynomial trend line which indicates some fluctuations in the Indian imports from world. In the year 2018 the Indian imports from world is highest as compared to the other corresponding years. In 2019 and 2020the CORONA pandemic which was all over the world may have affected the Indian imports from world and the import trend shows the downward direction.

4.8 SHARE OF BRICS IN INDIA'S TOTAL EXPORTS AND IMPORTS (Value in US dollar thousand)

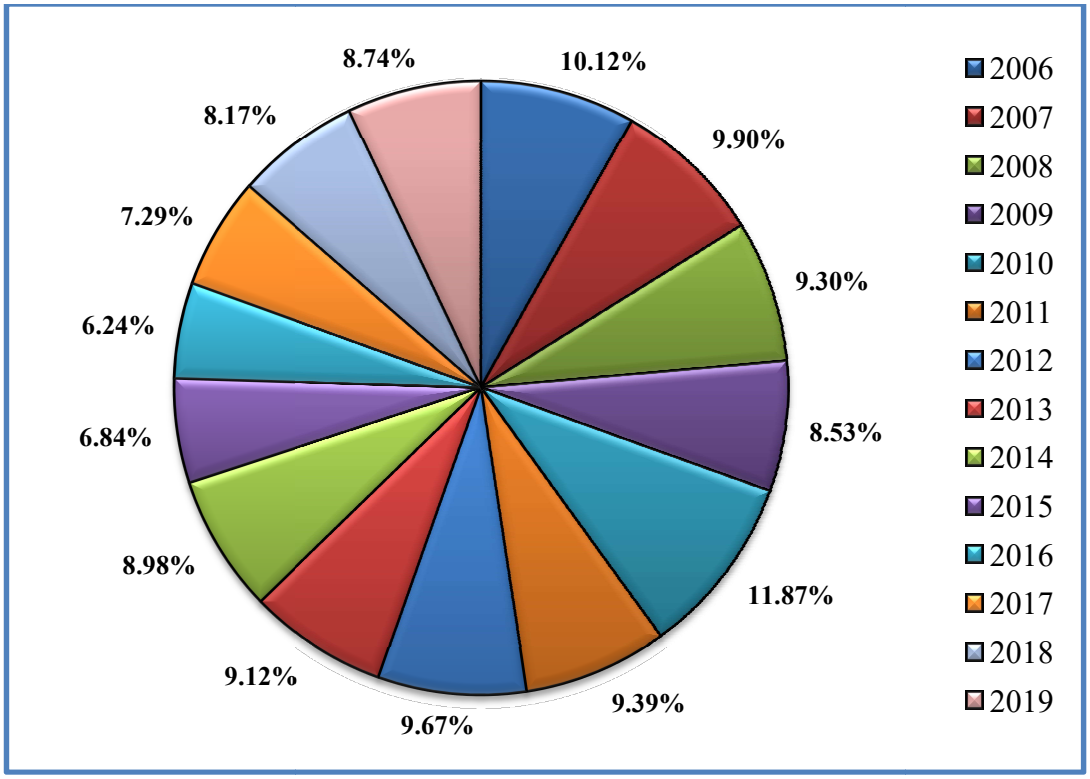
Table No. 4.35 Share of BRICS in Total Exports

Period	India's Total Export to world	India's Total Export to BRICS	Share of BRICS trade in %
2006	12,12,00,606	1,22,67,445	10.12%
2007	14,58,98,053	1,44,45,464	9.90%
2008	18,18,60,898	1,69,15,669	9.30%
2009	17,67,65,036	1,50,75,993	8.53%
2010	22,04,08,496	2,61,52,830	**11.87%**
2011	30,14,83,250	2,83,22,581	9.39%
2012	28,95,64,769	2,80,10,095	9.67%
2013	33,66,11,389	3,06,90,091	9.12%
2014	31,75,44,642	2,85,14,642	8.98%
2015	26,38,89,005	1,80,60,372	6.84%
2016	26,09,63,959	1,62,71,299	6.24%
2017	29,58,62,157	2,15,82,077	7.29%
2018	32,39,97,680	2,64,56,851	8.17%
2019	32,32,50,726	2,82,46,980	8.74%

Source: Table no. 4.33 and Table no. 4.11 (data compiled by Researcher)

- Percentage calculated by India's Total Export to BRICS divided by India's Total Export to world multiply by 100

Graph No. 4.26 Share of BRICS in Total Exports



Source: Table No. 4.35

Interpretation

Table No. 4.35 indicates that, the percentage share of intra BRICS trade to its world is 11.87% in 2010 which is the highest during this period. In 2006 Share of BRICS trade was 10.12 %, from 2007 to 2009 it decline. From year 2011 to 2016 its decline (9.39% to 6.24%).Then from 2017 to 2019 its goes up (7.29% to 8.74%). But this is only a slight growth. The reason behind the low trade between India and Other BRICS countries can be accredited to their geographical distance which is turn into high trade costs. Geographical distance not only increases the time to export, which is neither favorable to the exporting countries nor the country importing the goods. China's dominance in intra BRICS trade is another reason. Restrictive trade environment is another major reason for low trade within BRICS countries. After formation of BRICS, BRICS economies have drastically reduced tariff rates. But that did not have a favorable effect on their intra trade.

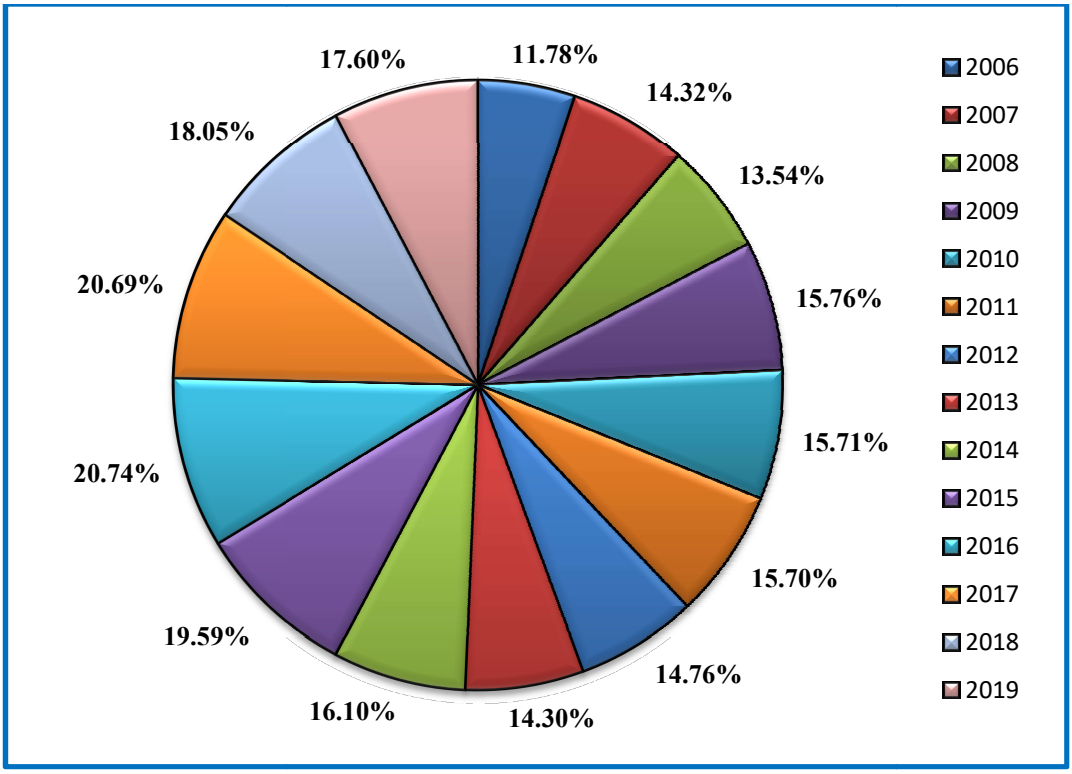
Table No. 4.36 Share of BRICS in Total Imports

Period	India's Total Import from world	India's Total Import from BRICS	Share of BRICS trade in %
2006	17,82,12,440	2,10,01,337	11.78%
2007	21,86,45,294	3,13,19,674	14.32%
2008	31,57,12,106	4,27,48,387	13.54%
2009	26,64,01,553	4,19,83,692	15.76%
2010	35,00,29,387	5,49,73,843	15.71%
2011	46,24,02,791	7,25,98,383	15.70%
2012	48,89,76,378	7,21,71,932	14.76%
2013	46,60,45,567	6,66,33,160	14.30%
2014	45,93,69,464	7,39,76,006	16.10%
2015	39,07,99,463	7,65,60,923	19.59%
2016	35,66,86,417	7,39,68,352	**20.74%**
2017	44,38,52,795	9,18,52,199	20.69%
2018	50,92,73,228	9,19,20,910	18.05%
2019	47,88,83,729	8,43,05,072	17.60%

Source: Table no.4.34 and Table no. 4.12 (data compiled by Researcher)

- Percentage calculated by India's Total Import to BRICS divided by India's Total Import to world multiply by 100

Graph No. 4.27 Share of BRICS in Total Imports



Source: Table No. 4.36

Interpretation

According to Table No. 4.32 Share of BRICS trade in 2016 was 20.74% which is highest during the study period. 2006 to 2010 import share in % increases, after South Africa Join the BRICS group in 2009.It means over all Total intra BRICS Trade increased. But after 2011 to 2015 more ups and down in import percentage. This is because import restriction in terms of non – tariff barriers exist. India's imports far more than its exports.

4.9 HYPOTHESIS TESTING

4.9.1 HYPOTHESIS NO. 1.

The International trade of India among the BRICS countries has increased after Forming the BRICS

1) BY USING PERCENTAGE (%)

Table no. 4. 37 India's Exports to BRICS 2006 and 2017 (Value in US $ thousands)

Country	2006	2017	Percentage Increased (%)	CAGR
Brazil	14,98,121	28,68,229	91.46%	7.48%
Russia	8,45,711	21,39,563	**152.99%**	**9.12%**
China	**78,29,168**	**1,25,00,767**	59.67%	5.83%
South Africa	20,94,445	40,73,518	94.49%	4.70%
Total	**1,22,67,445**	**2,15,82,077**	**175.93%**	**4.12%**

Source: Table no. 4.3, 4.4, 4.5, 4.6

Interpretation

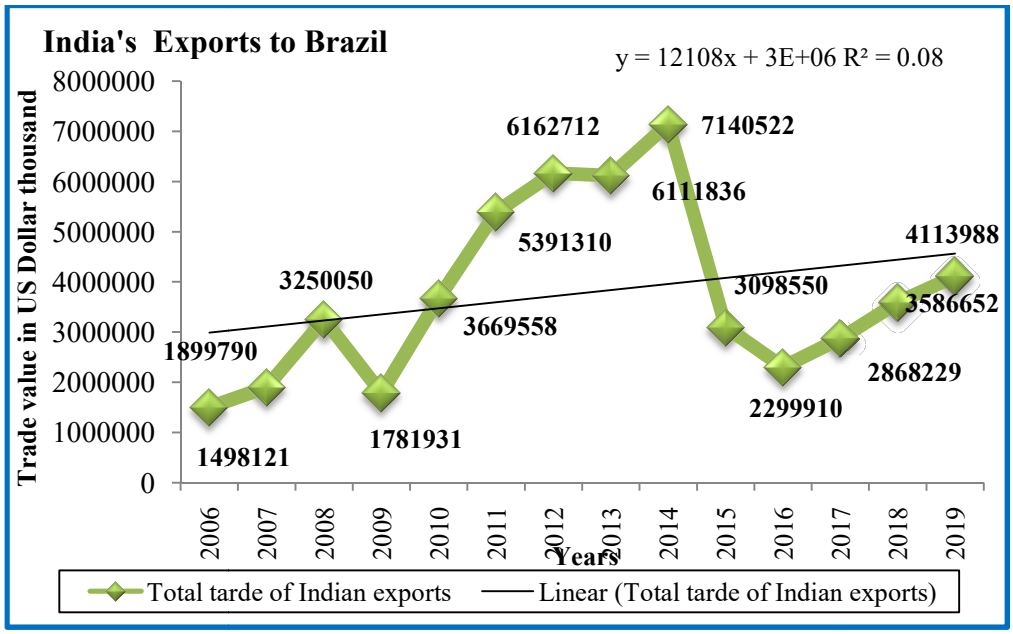
In the above table, for calculating the increase percentage from 2006 to 2017, used the following formula, the formula = (new value-old value)/old value into 100. This formula can quickly calculate the percentage change between two numbers. According to above table, it is found that, India's total Export to other Countries of BRICS has increased during the study period. Also it's observed that India's Export to China in value terms it is drastically changed compared to other BRICS countries.

- **Total export increased 175. 93% during the study period.**
- **During the study period India's total exports to BRICS countries showed CAGR of 4.12**

2) BY USING TREND ANALYSIS

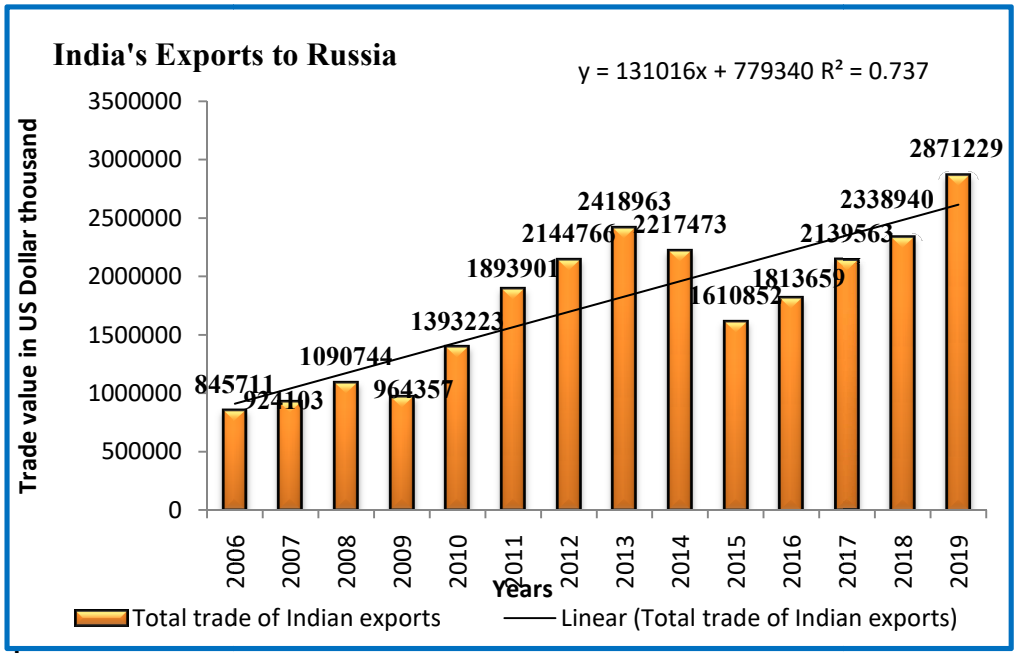
The increases in Exports and Imports can also be shown with the help of trend line

Graph 4.28 India's Exports to Brazil



Source: Table No. 4.3

Graph No. 4.29 India's Exports to Russia



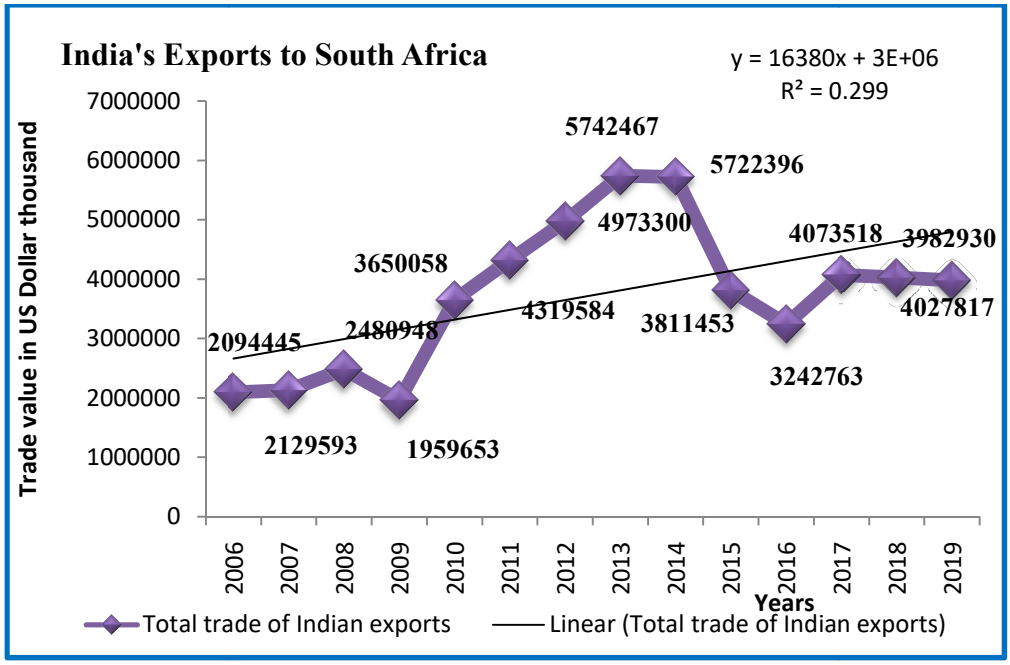
Source: Table No. 4.4

Graph: 4.30 India's Exports to China



Source: Table No. 4.5

Graph No. 4.31 India's Exports to South Africa



Source: Table No. 4.6

Interpretation:

India's Export to all BRICS countries show a fairly similar pattern with export reaching a maximum around 2013/2014 followed by a slight fall for a few years and a period of recovery after 2016. However, in spite of these ups and downs the overall trend shown an increase in the exports to these countries as shown by the upward sloping trend lines for all the four countries.

Table no. 4. 38 India's Imports from BRICS 2006 and 2017 (Value in US $ thousands)

Country	2006	2017	Percentage increased (%)	CAGR
Brazil	9,54,397	51,02,170	**434.60%**	8.63%
Russia	19,00,857	79,76,972	319.65%	8.84%
China	**1,56,39,064**	**6,04,79,988**	286.72%	11.12%
South Africa	25,07,019	68,82,632	174.53%	26.36%
Total	**2,10,01,337**	**8,04,41,762**	**283.03%**	**10.07%**

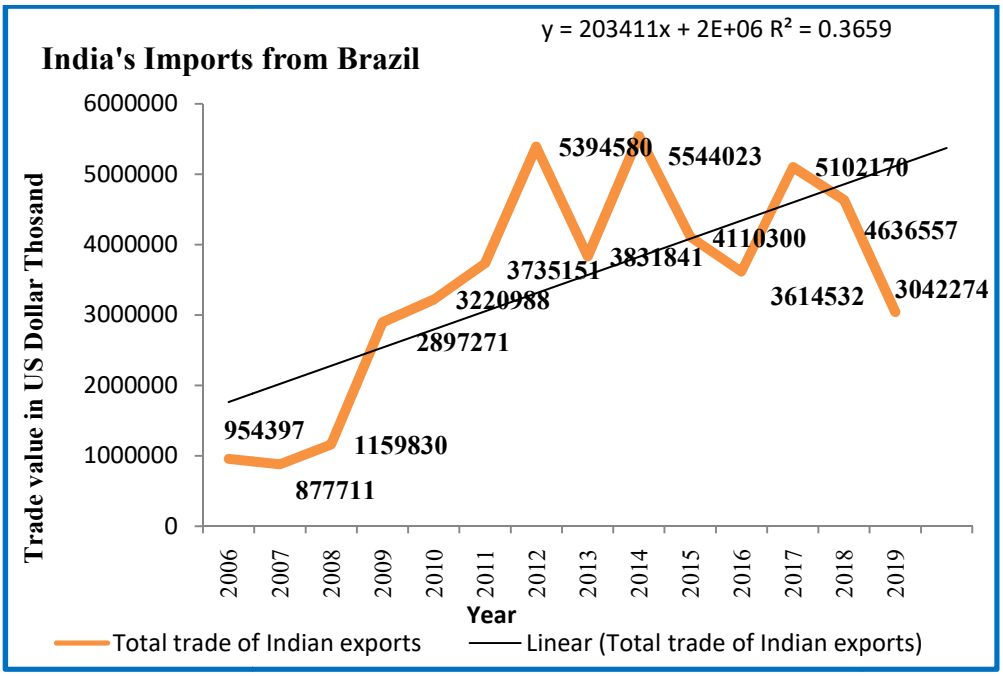
Source: Table no. 4.7, 4.8, 4.9, 4.10

Interpretation

Table No. 4.32**,** its shows that, not only Export increase, but also India's total Imports from other BRICS countries has increased during the study period.

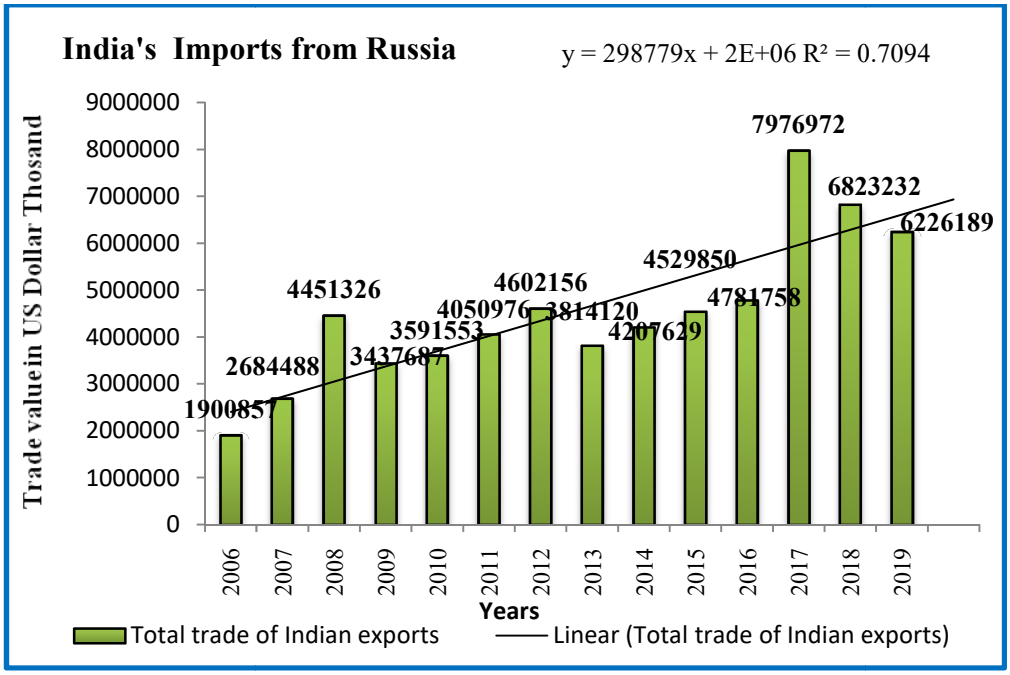
- **Total Import increased 283.03% during the study period.**
- **During the study period India's total imports from BRICS countries showed CAGR of 10.07%**

Graph No. 4.32 India's Imports from Brazil



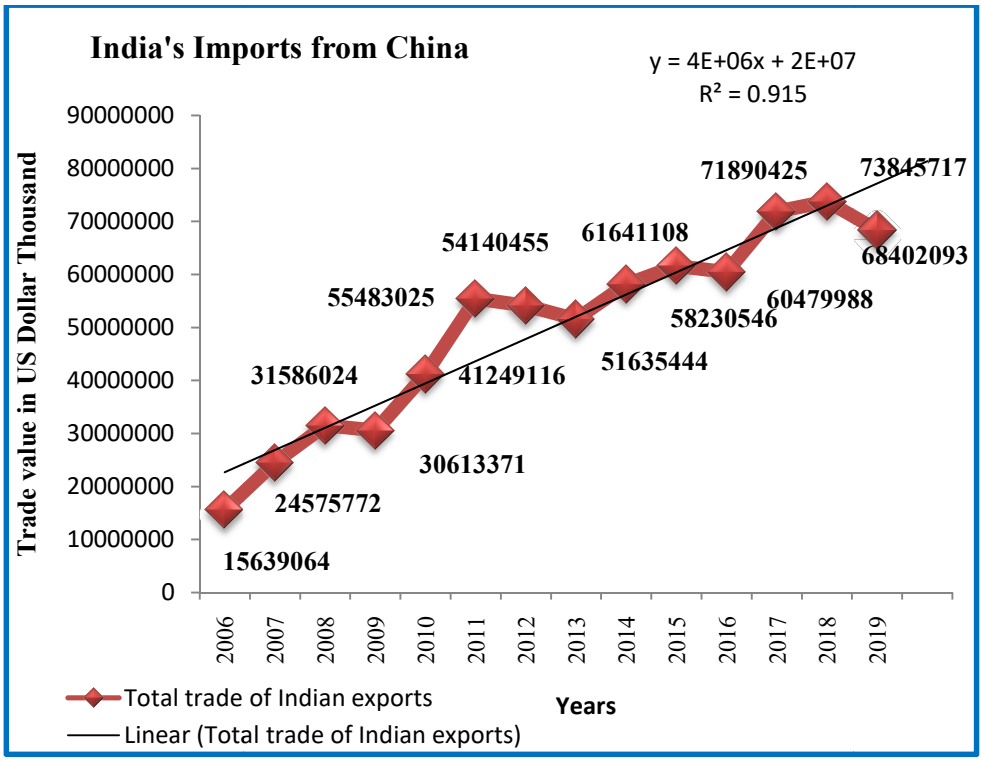
Source: Table No. 4.7

Graph No. 4.33 India's Imports from Russia



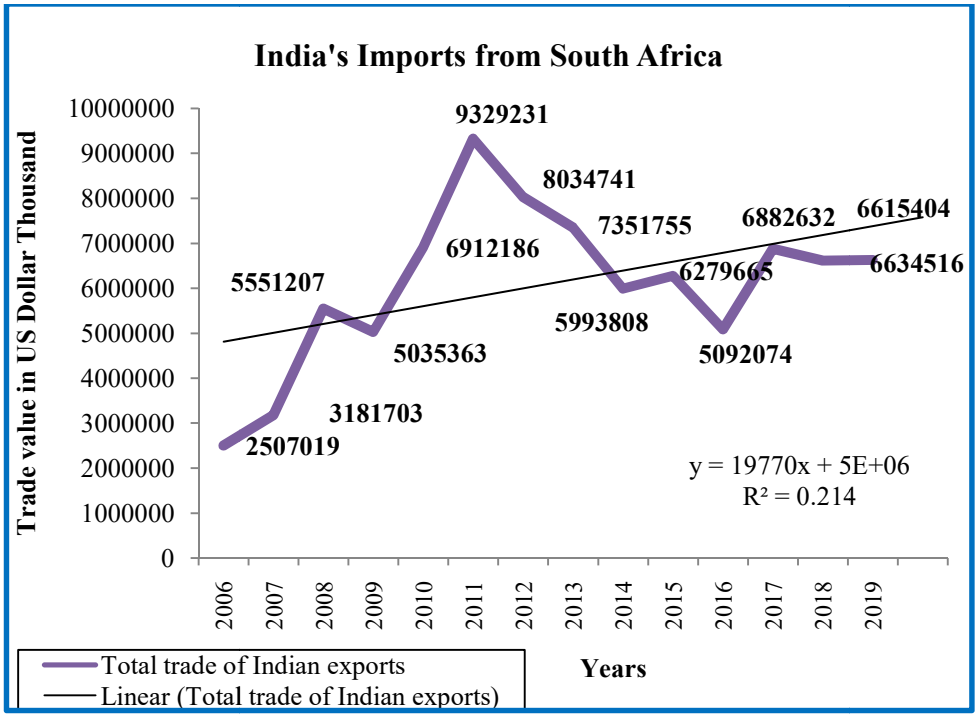
Source: Table No. 4.8

Graph No. 4.34 India's Imports from China



Source: Table No. 4.9

Graph No. 4.35 India's Imports from South Africa



Source: Table No. 4.10

Interpretation

India's Import from all BRICS countries shows more ups and down compare to export. According to graphs it's observed that India's import from all the BRICS countries the Linear trend line is upward sloping, but the slop is very high. India's imports from china are highest in 2019 compare to 2006. As per in the graph shows china, Russia, Brazil and South Africa are the trading partner of India. Over all trade of India's export and import has increased during the study period. But Growth of import is higher than export.

3) BY USING CORRELATION ANALYSIS

This hypothesis has also been tested by using correlation analysis

Table no. 4.39 Descriptive Statistics

	Mean	Std. Deviation	N.
Export among the BRICS	5553792.6607	4837283.54927	56
Import among the BRICS	16000247.6786	21763073.96182	56

Table no. 4.40 Correlations

		Export among the BRICS	Import among the BRICS
Export among the BRICS	Pearson Correlation	1	.895**
	Sig. (2-tailed)		.000
	N	56	56
Import among the BRICS	Pearson Correlation	.895**	1
	Sig. (2-tailed)	.000	
	N	56	56

**. Correlation is significant at the 0.01 level (2-tailed).

Interpretation:

In the above table, researcher used Bivariate correlation for testing the significant correlation or relationship between the Export and Import among the BRICS countries. Here it's noticed that the correlations between Export and Import among the BRICS countries are 0.895 which shows the high degree positive correlation. It means that the export and import among the BRICS countries are positively increasing. The decision criteria is if the Sig. (2- tailed) is less than or equal to 0.05 or 0.01 then researcher may accept the above hypothesis at 5% or 1% level of significance. Here the Sig. (2- tailed) value is 0.000 shows that, the hypothesis can be accepted at 1% level of significance. It means that, The International trade of India among the BRICS countries has increased after forming the BRICS.

According to the percentage tables, graphs, trend lines and correlation given above the hypothesis is proved that, The International trade of India among the BRICS countries has increased after forming the BRICS.

4.9.2 HYPOTHESIS NO. 2.

The direction of India's International Trade with the other BRICS countries has not changed during the study period. (2006 -2017)

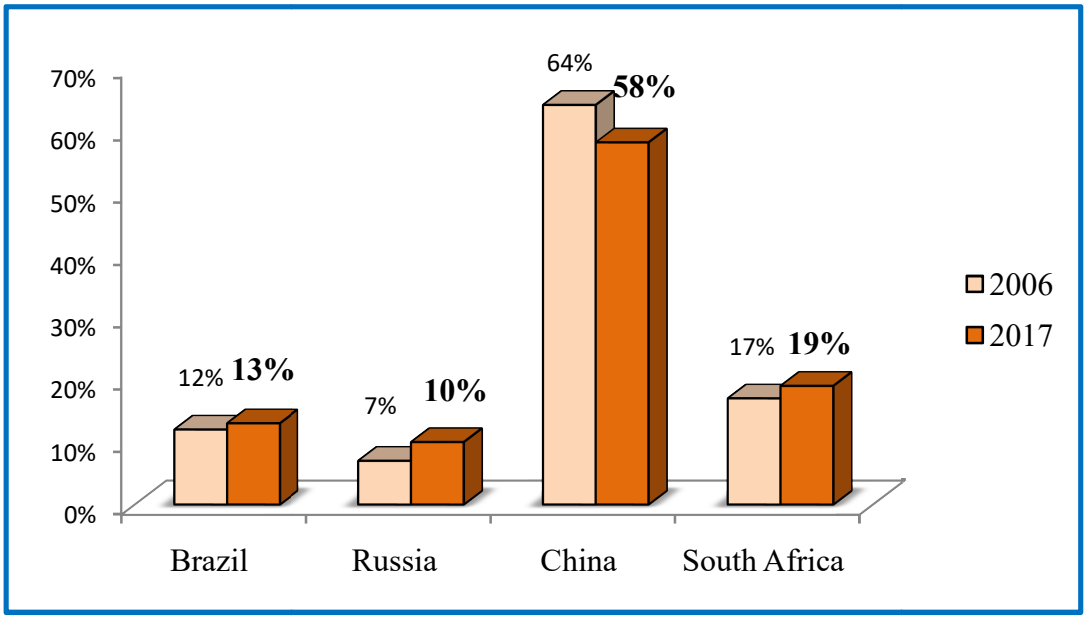
1) BY USING PERCENTAGE (%)

Table No.4.41 Percentage share of Exports to each country in India's Exports to BRICS countries 2006 and 2017

Year	Brazil	Russia	China	South Africa
2006	12%	7%	**64%**	17%
2017	13%	10%	**58%**	19%

Source: Table No. 4.25

Graph No. 4.36 Percentage share of Exports to each country in India's Exports to BRICS countries 2006 and 2017



Source: Table No. 4.41

Interpretation

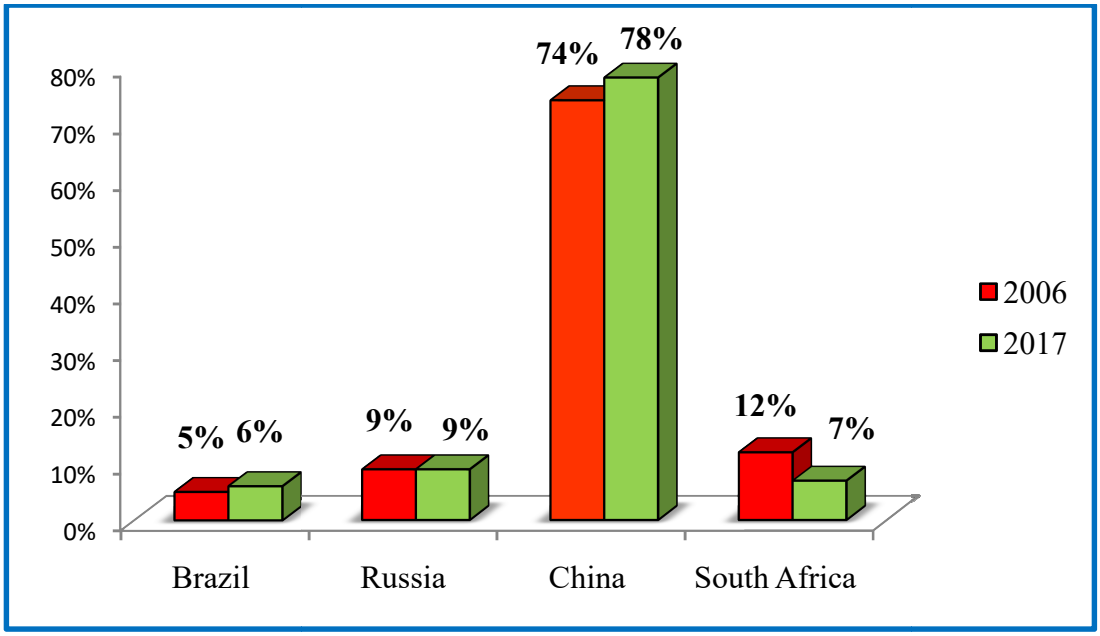
According to table no. 4.41 percentage share in total exports of Brazil, Russia and South Africa has increased in between range of 1 – 3 % and between 2006 to 2017 china's share decreased 6%. China share of total exports is the largest followed by South Africa, Brazil and Russia in both 2006 and 2017. The position of each country remains the same during the study period. Hence there is no change in the Direction of India's Export trade with other BRICS countries.

Table No.4.42 Percentage share of Imports from each country in India's Imports to BRICS countries 2006 and 2017

Year	Brazil	Russia	China	South Africa
2006	5%	9%	**74%**	12%
2017	6%	9%	**78%**	7%

Source: Table No. 4.26

Graph No. 4.37 Percentage share of Imports from each country in India's Imports to BRICS countries 2006 and 2017



Source: Table No. 4. 42

Interpretation

According to the table no. 4.42 the share of China in total imports has increased and share of South Africa has decreased. Share of Brazil and Russia has remained almost the same. However China's share is still largest and Brazil share is the least in 2006 and 2017. Therefore there is not much change in the direction of India's Imports from other BRICS countries.

China's dominance is clearly seen in India's Export and Import trade with other BRICS countries.

2) BY USING ANALYSIS OF VARIANCE (ANOVA)

Table No. 4.43 ANOVA on Export data (df - degrees of freedom , F statistics)

		Sum of Squares	df	Mean Square	F	Sig.
Brazil Exports	Between Groups	9676253564.170	1	9676253564.170	1.452	**.230**
	Within Groups	1279132196758.206	192	6662146858.116		
	Total	1288808450322.376	193			
China Exports	Between Groups	112494439719.918	1	112494439719.918	.912	**.341**
	Within Groups	23688034052474.540	192	123375177356.638		
	Total	23800528492194.457	193			
Russia Exports	Between Groups	8629139164.454	1	8629139164.454	4.892	**.128**
	Within Groups	338649156037.526	192	1763797687.695		
	Total	347278295201.979	193			
South Africa Exports	Between Groups	20189309181.361	1	20189309181.361	1.412	**.236**
	Within Groups	2745111524795.918	192	14297455858.312		
	Total	2765300833977.279	193			

Source: Table No. 4.35

Table No. 4.44 ANOVA on IMPORT Data (df - degrees of freedom , F statistics)

		Sum of Squares	df	Mean Square	F	Sig.
Brazil Imports	Between Groups	88680562655.031	1	88680562655.031	3.757	**.054**
	Within Groups	4531471457308.599	192	23601413840.149		
	Total	4620152019963.630	193			
China Imports	Between Groups	16310390924524.582	1	16310390924524.582	3.260	**.073**
	Within Groups	960523866435356.000	192	5002728471017.480		
	Total	976834257359880.600	193			
Russia Imports	Between Groups	190305018006.314	1	190305018006.314	2.079	**.151**
	Within Groups	17578946727045.217	192	91557014203.361		
	Total	17769251745051.530	193			
South Africa Imports	Between Groups	98690485159.180	1	98690485159.180	1.180	**.279**
	Within Groups	16053958198236.414	192	83614365615.815		
	Total	16152648683395.594	193			

Source: Table No. 4.36

Interpretation:

Above table shows that the output of the ANOVA analysis and whether there is a statistically significant difference between our group means. Researcher can see that the significance values of Brazil, China, Russia and South Africa imports are 0.54, 0.74, 0.151 and 0.279, which are greater than 0.05 and, therefore, there is a statistically not significant difference in the mean imports of BRCS countries.

In the second ANOVA table, researcher observed that, significance values of Brazil, China, Russia and South Africa exports are 0.230, 0.341, 0.128 and 0.236, which are greater than 0.05 and, therefore, there is a statistically not significant difference in the mean exports of BRCS countries

According to percentage and ANOVA the above hypothesis that, the Direction of India's International Trade with the other BRICS countries has not changed during the study period. (2006 -2017) is proved.

4.9.3 HYPOTHESIS NO. 3.

3) The composition of India's International Trade with the other BRICS countries has changed during the study period. (2006 – 2017)

Table no. 4. 45 Sector wise Composition of India's Exports to BRICS Countries 2006 and 2017 (Value in thousand US Dollar) and %

Sector	Total of all Four Countries (BRCS) (2006)	Total of all Four Countries (BRCS) (2017)
Agriculture	66,64805	6942322
Percentage	**54%**	**32%**
Raw Material	28,95,697	8467202
Percentage	**24%**	**39%**
Manufacturing	27,06,943	6172553
Percentage	**22%**	**29%**
Total	**122,67,445**	**2,15,82,077**
% Total	**100%**	**100%**

Source: Table No. 4.35

Table No. 4.46 Sector wise Composition of India's Imports from BRICS Countries 2006 and 2017 (Value in thousand US Dollar) and %

Sector	Total of all Four Countries (BRCS) (2006)	Total of all Four Countries (BRCS) (2017)
Agriculture	64,37,255	2,21,20,955
Percentage	**31%**	**24%**
Raw Material	62,65,855	2,05,11,704
Percentage	**29%**	**22%**
Manufacturing	82,98,227	4,92,19,540
Percentage	**40%**	**54%**
Total	**2,10,01,337**	**9,18,52,199**
% Total	**100%**	**100%**

Source: Table No. 36

Interpretation

Overall both exports and imports have increased in value terms for all 3 sectors. Compared to exports, imports are increased drastically during the study period.

Exports – The sector wise composition of India's exports to BRICS countries during the period 2006 to 2017 shows a significant change. The share of agricultural products has fallen sharply by 22% and the share of Raw Material increased by 15%. Thus in 2017 the Raw Material Sector was the largest in terms of its percentage share in exports to BRICS countries. Manufacturing sectors remain the smallest in both 2006 to 2017 although its share increased by 7%.

Imports – Although the manufacturing sector is seen to be largest in terms of its percentage share of India's imports from BRICS countries, Its share has increased by 14% which shows that India in importing more of manufacturing products. Over half of India's imports from BRICS countries are manufactured Products. Simultaneously, the share of agriculture and raw material sectors reduces by 7% each.

The hypothesis that, the composition of India's International Trade with the other BRICS countries has changed during the study period (2006 – 2017) is proved.

4.10 COUNCLUSION

From the forgone analysis, the researcher concludes that BRICS countries have had a long lasting relationship with each other. Considering the period of the Study 2006 to 2017, the Total trade between the BRICS countries was rapidly increasing. Balance of Trade was not favorable for India, especially with China, Russia and South Africa. Only with Brazil Balance of trade was favorable for India.

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[1]https://rbidocs.rbi.org.in/rdocs/Publications/PDFs/BRICSE20216DF8FA9335C0495893F0087A8729D73B.PDF, access on 5th May 2020

[2]https://www.oecd.org/berlin/44681640.pdf, access on 7th August 2020

[3]https://rbidocs.rbi.org.in/rdocs/Publications/PDFs/BRICSE20216DF8FA9335C0495893F0087A8729D73B.PDF, access on 18 Nov. 2021

[4]https://www.academia.edu/19279675/HUMAN_DEVELOPMENT_INDEX_A_SPECIAL_FOCUS_ON_BRICS_COUNTRIES, access on 9th Jan. 2021

[5] https://hdr.undp.org/content/human-development-report-2019?c_src=CENTRAL&c_src2=GSR&gclid=EAIaIQobChMI9fG9xaWv-AIVJDNyCh2QDAJlEAAYASAAEgLiAvD_BwE&utm_source=EN&utm_medium=GSR&utm_content=US_UNDP_PaidSearch_Brand_English&utm_campaign=CENTRAL, access on 12th June 2020

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[7]https://www.pcbusa.com/post/international-trade-gross-domestic-product#:~:text=The%20Balance%20of%20Trade%20is,country%20has%20a%20trade%20surplus.access on 6th may 2021

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Chapter-5

FINDINGS, RECOMMENDATIONS AND CONCLUSION

CONTENT

CHAPTER - 5 FINDINGS RECOMMENDATIONS AND CONCLUSION

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CHAPTER 5 - FINDINGS, RECOMMENDATIONS AND CONCLUSION

5.1 INTRODUCTION

The previous chapter was in detail analysis of the interpretation of data. This chapter presents the major findings of the study, highlights some of the constructive suggestions for the growth of India's International Trade and gives the conclusions.

This Study is about what is the change in India's International trade after forming the BRICS, the period 2006 - 2017. The Main reason why the researcher saw a need to conduct this study is because after going through various literatures related some other organizations, did not find any study made on 'A comparative study of International trade of India among the BRICS countries (2006 – 2017). Considering that the world is changing fast with global issues like Covid 19, Russia – Ukraine war, Recession, Global warming, Developing countries facing Dominance of World Bank, IMF for Finance, while trading with other country, countries use dollar for Exchange and globalization become more important, it is important for study to be made to be find out how this five countries can assert them in global world. All the Five countries have economic power and ability to fight with these problems. After forming BRICS, BRICS countries have taken up many economic and social activities for their own development and for assisting developing countries.

Therefore the study sheds light on the economies of BRICS countries by studying in depth the composition of trade, direction of trade and balance of trade of India and Other BRICS countries.

5.2 SUMMARY OF THE CHPATERS

This study divided in five chapters, this is the Fifth chapter. Each chapter is written with an aim/purpose, objectives and hypothesis of the study. Following is summary of each chapter.

CHAPTER 1

Chapter one gave the Introduction of the study. In this chapter Researcher highlighted the meaning and importance of international trade, types of International trade, Global Commercial policy and types, India's foreign trade policy, value of composition and direction of trade, India's Regional Cooperation and rising of BRICS under this the reason behind formation of BRICS, objectives of BRICS, The area of Cooperation, Benefits/Facilities the Member countries are giving each other to increase trade among themselves, Major challenges of BRICS, Summits of BRICS, glimpse of New Development Bank and objective of NDB, India and Trade policies with BRICS, India's Contribution to BRICS, Importance of the Study.

CHAPTER 2

This chapter consists of the review of literature, which observes various books, Research journals/Articles, PhD thesis related to the study. Different topics focus on BRICS study, but not a single study focus on comparative study of International Trade of India among the BRICS countries (2006-2017). At the end of this chapter the Research gap is mentioned.

CHAPTER 3

Chapter 3 pointed out the Research Methodology and research Design. Under research design Objectives of the study, Hypothesis, Scope and Limitation of the study, data collection and data analysis and plan of the study. The theoretical framework has been laid down in order to show/point out the theoretical foundation of the study. Various International Trade theories were explicated.

Following theories researcher studied in this chapter.

1. Adam Smith's Absolute Advantage theory
2. David Ricardo's Comparative cost theory
3. Heckscher - Ohlin theory of International Trade
4. Leontief Paradox Theory
5. New trade Theory

These theories found more significant in the case of Trade among the BRICS countries.

CHAPTER 4

This chapter highlights the Gross Domestic Product, Human Development Index, Export and import of the BRICS countries, Balance of trade, Direction of India's International trade with other BRICS countries (Export and Import of the BRICS countries) and Composition of India's International Trade with other BRICS countries (Product wise), Sector wise Composition of India's Exports to and Imports from BRICS Countries between 2006 – 2019, Balance of trade and Share of each Country in India's Export and Import to BRICS Countries. With the help of tables and Graphs, this chapter gives a better understanding of International Trade of India. At the end of the Chapter the status of BRICS trade and the current scenario of India's International trade and balance of trade with BRICS countries and the hypotheses of the study have been discussed.

5.3 MAJOR FINDINGS OF THE STUDY

1) Review of Literature

BRICS books conclude that the economic success of the BRICS depends not only on economic growth and trade, but also the future relations with the developed world and domestic reforms. The Research paper and Journals conclude that, foreign investments have become an increasingly important component in the economic strategies of BRICS. "NDB shall serve as a powerful instrument for financing infrastructure investment and sustainable development projects in the BRICS. The examination of various theories, models and empirical research studies has given an elegant importance to BRICS in the global economic growth and its present and future role as a leading emerging economy of the 21st century.

International trade is a turning point for every economy to extend its economic relation with the rest of the world to unlock its potentiality and fill the gaps of scarcity of Natural resources.

2) Positive and significant change in GDP

It's found that BRICS Countries have a positive and significant change in GDP after Joining BRICS organization during the study period. According to Table no. 4.1 average GDP of China is highest (8647.059 in billion US Dollar) compare to other BRICS countries and South Africa's Average GDP is Lowest (338.775 in billion US Dollar).India's Gross domestic product continuously linearly increasing, there are no fluctuations compare to other BRICS countries.

3) Human Development of BRICS Countries

The third dimension of HDI is GDP per capita as measured on purchasing power parity basis. In this dimension, standard of living and quality of life are measured. Standard of the living of the People of BRICS countries has Increase. It's seen in Table no. 4.2

Although China's GDP is the largest among the BRICS countries. Russia's HDI is the Highest during the study period. India's HDI is the lowest.

4) Direction of India's International Trade with other BRICS countries

1. India's Exports to Brazil

As seen in Table No. 4.3 India's Export o Brazil show several up and downs such as a big increase of 105.93% in 2010 an fall of -56.61% in 2015. However, there was a fall in Export in only 4 years and increased in 10 years of the study period. Thus, overall India's export to Brazil has shown an increasing trend as shown in Graph no.4.6. The forecast for the period 2020 to 2024 also shows an increasing trend.

2. India's Exports to Russia

India and Russia have had a close relationship for decades. While observing table no 4.4 as compare to china, India's export to Russia have a less variation or fluctuations. From year 2015 to 2019 there was a significant increase in trend with Russia. It is 16, 10,852

(US dollar thousand) to 28, 71,229 (US dollar thousand). CAGR of Russia was the highest (9.12%) in Exports compared to other BRICS countries.

3. India's Exports to China

China alone has a 68.18% growth rate in 2010 which the highest one, 40.22% in 2017 and 32.02% in 2018 respectively. India's Exports to China show a negative growth rate in only 5 years as shown in table no. 4.5. Polynomial trend line indicates that more fluctuations have occurred while trading with china. China becomes the undoubted leader among the BRICS countries in terms of the size of economy, according to an evaluation of GDP and its sectoral components china known for manufacturing products. China's Forecast for the period 2020 to 2024 shows slight change in trend.

4. India's Exports to South Africa

Till 2009 South Africa's growth rate is very low. Increase 86.26%, in 2010 after joining BRICS. The highest export of India to South Africa is in the year 2013 was 57, 42,467 US dollar thousand as shown in table no. 4.6.

1. India's Imports from Brazil

The growth rate of imports from Brazil as shown in table no. 4.7 is seen to be negative in the beginning and end of the period (2019). Between 2008 and 2012 growth rate was positive but in 2009 it is highest with 149.80%. After 2012 imports shows large variation.

2. India's Imports from Russia

India's imports from Russia show a high growth in 2008 (65.82%) and in 2017 (66.82%). Remaining year growth rate was low.

3. India's Imports from China

The Growth rate of India's imports from China was high in the beginning of the study period after the formation of BRICS. In the year 2019 it was negative. Imports from china show very less fluctuation as shown in graph no. 4.12. CAGR of China's was the highest (9.19%) in imports compared to other BRICS countries.

4. India's imports from South Africa

The import from South Africa was highest in 2011 in value. Growth rate of imports has been fluctuating throughout the study period.

5) Share of Each Country in India's Exports and Imports to BRICS Countries

1. Exports - China's percentage share in exports was 69% (2009) which is highest compared to other BRICS countries. 2009 was the year when these countries came together and form the BRICS organization. Researcher Notice that, 2006 to 2019, china was the one who imported more form India. China has played a significant role in the trade with India. Average share of china was 59%, South Africa 17%, Brazil 16% and Russia 8% in exports from India during the year 2006 to 2019.

2. Imports - China accounted for over 82% of India's total Imports in 2016, in 2019 81% and in 2015 81% respectively. Average share of china was 77%, South Africa 10%, Russia 7% and Brazil 5% in imports from India during the year 2006 to 2019.

According to the above conclusions, China's dominance in India's trade with BRICS countries is clearly seen. China's average share of Imports is more than exports.

6) India's Balance of Trade with other BRICS countries

As a part of the study Import and Export were examined. The data indicated that India Imported more commodities then export. Graph no. 4.16, 4.17, 4.18 and 4.19 shows that total net export with Russia, china and South Africa was negative. It means there was a trade imbalance between Russia – India, China – India and South Africa – India. But with Brazil India's net export was positive. While trading with Brazil, India benefits from trade surplus. India's total net export with Brazil's is 47, 51,534 US $ thousand, 2006 to 2019. Its shows a positive effect of trade between India and Brazil. Whereas Russia, China and South Africa be inclined to be affecting the reverse way. India has a trade deficit while trading with Russia, China and South Africa.

7) Composition of India's International Trade

1. Exports

India's Exports to other BRICS countries (Brazil, Russia, China and South Africa) was Organic chemicals, Pharmaceutical products, Ores, slag and ash and Vehicles other than railway or tramway rolling stock, and parts and accessories respectively. These are the top products which are exported by India to other Brics countries.

2. Imports

India's Imports from other BRICS countries (Brazil, Russia, China and South Africa) was Ores, slag and ash, Iron and steel, Electrical machinery and equipment and parts, Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad respectively. These are the top products which are imported from other BRICS countries. India's top Export and Import partner is china, Russia, Brazil and South Africa correspondingly.

8) Sector wise composition of India's Exports to and Imports from BRICS countries (2006 – 2019)

Out of India's total Exports to BRICS countries China was the highest in agriculture sector (59%), South Africa (65%) in Raw Material, Russia (59%) in Manufacturing Sector.

Out of India's total imports to BRICS countries Russia was the highest in Agriculture sector (64%), in Raw Material Brazil (79%), in Manufacturing Sector (65%).

9) Country wise and Sector wise Composition of India's Exports to BRICS Countries 2006 and 2017 (Value in thousand US Dollar) and %

1. India's Exports to Brazil - In 2006 agricultural sector is the largest sector of Brazil whereas 2017 Manufacturing sector is largest.

2. India's Exports to Russia – In both 2006 and 2017 the largest percentage share of exports to Russia consisted of manufactured products.

3. India's Exports to China - In both 2006 and 2017 the largest percentage share of exports to China consisted of agricultural products.

4. India's Exports to South Africa - In both 2006 and 2017 the largest percentage share of exports to South Africa consisted of Raw Material products.

1. India's Imports from Brazil – In both 2006 and 2017 the largest percentage share of imports from Brazil were from Raw Material sector and the share of the this sector considerably increased.

2. India's Imports from Russia - In 2006 the percentage share of manufacturing sector was the highest and in 2017 percentage share of Agricultural sector was highest.

3. India's Imports from China - In both 2006 and 2017 the largest percentage share of imports from China were from manufacturing sector and the share of the this sector noticeably increased.

4. India's Imports from South Africa - In both 2006 and 2017 the largest percentage share of imports from South Africa were from Raw Material sector and the share of the this sector significantly increased.

10) Total Trade of Indian Exports to and Imports from World

1. Exports

2016 to 2019 the Indian export to world is significantly increasing and shows the noteworthy growth in the India's world export trend. Trade line was upward sloping; it means India's Export to world continually escalating.

2. Imports

In the year 2018 the Indian imports from world is highest as compared to the other corresponding years. In 2019 and 2020 due to CORONA pandemic which was all over the world, may have affected the Indian imports from world and the import trend went in the downward direction.

11) Share of BRICS in Total Exports and Imports

During this time period India's share of Exports to BRICS countries was between 6 and 11% of India's total exports. Share of India's imports from BRICS countries was between 11 and 20 percent of India's total Imports which was significant.

Share of India to BRICS countries shows that India is a better position to continue trade with China, South Africa, Russia and Brazil Respectively. BRICS countries made worth progress in integrating with the world economy. The comparative differences in the India – Brazil, India – Russia, India – China and India – South Africa's trade policies have affected trade between two countries. The trade between BRICS countries was beneficial. For example China Produce manufacturing goods at large level and India produce pharmaceutical and textile product at large level both the country get comparative cost advantage. Trade agreements and MOU s signed among the BRICS countries help them to make stronger trade and economic relations between BRICS countries.

12) Hypothesis Testing

1. The International trade of India among the BRICS countries has increased after forming the BRICS.

By using percentage, trend line and correlation this hypothesis was tested and proved. This is proved by testing the growth in trade between India and other BRICS countries. The correlation between Export and Import among the BRICS countries is 0.895 as shown Table no. 4.37 which shows the high degree positive correlation. It means that the export and import among the BRICS countries are positively increasing. Here India has comparative advantage in exporting to other BRICS countries.

2. The direction of India's International Trade with the other BRICS countries has not changed during the study period. (2006 -2017)

The position of each country remains the same during the study period. Hence there is no change in the Direction of India's Export and Import trade with other BRICS countries.

3. The composition of India's International Trade with the other BRICS countries has changed during the study period. (2006 – 2017)

Over all India's Exports from Agriculture Sector reduced and Raw Material and Manufacturing sector increased.

India's Imports from Agriculture and Raw material Sector reduced and Manufacturing sectors increased.

13) Difference in each country's endowments.

Foreign policy adopted by BRICS countries differed mainly due to difference in each Country's endowments.

5.4 RECOMMENDATIONS

If policy makers make some changes in Export and import policy to increase trade with BRICS members, both India's exports to and imports from BRICS countries would grow. This will benefit the society in various ways.

1) TO INCREASE EXPORT

1. New and potential exporters - To reach out to the new and potential exporters including exporters from Micro, Small & Medium Enterprises (MSMEs) and mentor them through orientation programmes, counseling sessions, individual facilitation, etc., on various aspects of foreign trade for enabling them to get into international trade and boost exports from India. For example Niryat Bandhu Scheme

2. Focus on Market Research - MAI scheme provides financial advice to such agencies who directly or indirectly are involved with marketing activities like market research, capacity building, branding, and compliances in importing markets. For example Market Access Initiative (MAI) scheme

3. To encourage export activities abroad - help the export promotion councils to promote their products and to take such other measures to market internationally. For example Marketing Development Assistance (MDA) scheme

4. To support domestic industry - through various banking and financial sector relief measures, especially for MSMEs, which constitute a major share in exports and to Identify growth sectors in the International Market for our products.

5. **Take advantage of trade agreement -** Trade agreements help companies to enter and compete more simply in new market.

6. **Arrange trade fairs** - to attract foreign consumers

7. **To understand the demand** - for product it will help to increase export.

2) TO DECREASE IMPORTS

1. Substitute products - Government or policy maker check the availability of substitute product or give help and support for substitute product. Like for vehicles we required petrol, which is necessary as India don't have these natural resources. But making electrical bike is the option for petrol. We have abundance solar energy and nuclear energy. So government should provide subsidies for company and consumer to increase demand for electric bike, car or flying drones. Metro is another example. India has a to large population to travel by road; we cannot make simply wider roads everywhere. Compare to private vehicles metro cost is very less. To make more public transport and use nuclear energy to drive trains. Use trains to ship goods instead of trucks. It can only be done when these things come into government policy and there is widespread awareness.

2. Make in India – Government should work with full force to build a robust manufacturing base. Make in India means manufacturing of goods and services in India and exporting them to the worldwide market. Make in India is the need of the hour in sectors such as electric vehicles, specialty steel, and medical equipment, opening up of coal, mining and defense sectors have opened up huge opportunities for industries. To promote make in India government should use young talent and skilled manpower as it is abundant in India. Industry should advertise and promote 'vocal for local' and 'Make in India' on the product. People also support "be swadeshi and buy swadeshi'

3. Make for India - what is made for India means manufacturing of goods and services in India and also sell them in the Indian market only. No export to another country but it will be beneficial for country's economic growth and it will provide employment and makes us 'Aatmanirbhar'.

4. Self Reliance – Means reducing dependence on imports of those goods which can be produced within the country itself. With a large pool of highly educated and ambitious youngsters, India has an advantage in the rapidly increasing number of start-ups and independent enterprises promoting original talent. The spread of the internet and changing consumer habits have given a push to the domestic market, supporting budding

entrepreneurs and start-ups. A classic example of this is the success of Reliance Jio which has managed to reach the milestone of 400 million subscribers in a single country market.

5. Balance of payments - India's **balance of payments** was under stress due to the growing current account deficit, so the government should take **proactive measures to cut costs** and increase investment through development projects and build investor confidence.

6. **Focus on Growth of tourism sector - between** BRICS countries.

7. Proper Implementation of Cultural Exchange program - BRICS already form Cultural exchange and exchange of ideas program, only the main thing is proper implementation of these programs which will also be beneficial to society.

8. To reduce conflict and promote peace - Growth of trade may help to reduce conflict and promote peace between these countries which is essential for well being of the society.

9. Imposing anti dumping duties - on non essential goods.

10. Proper use of Natural recourses and redesign trade policy - maintain balance of trade through redesign trade policy. It will benefit to policy makers to look beyond short term benefits and adopt a vision for the future that ensures efficiency at all levels of supply chain and an increase in efficiency.

11. Speedy improvement of infrastructure sectors - The study will guide policy makers to push for the speedy improvement of infrastructure sectors development and to increase the employment and income.

12. Open the door - Government should open the door for Multinational companies for in the export area.

13. Focus on 3 'E's'- Government and policy makers should focus on 3 'E's' – Efficiency, Effectiveness and Economy

14. Foreign Direct Investment - Government should attract larger amount of Foreign Direct Investment

15. Social, Structural and Economic factors - For the foundation of all the development efforts, Government should encourage investment in infrastructure Projects, technology projects and skill base program. With the help of these 3 factors - social, structural and economic factors India will reduce Imports.

5.5 CONCLUSION

5.5.1 INDIA'S TRADE WITH BRICS COUNTRIES

The study is an attempt to examine whether The International trade of India among the BIRCS countries has increased after forming BRICS and to observe the composition and direction of India's International trade among the BRICS countries Period 2006 – 2017.

In this perspective, the study concludes that India's International Trade has increased positively among the BRICS countries. India's composition of trade indicates the structure and the level of economic development of a country. Economic development has taken place in India during the study period.

Not only trade increase but also because of trade increase, growth rate increase, National Income goes up, Gross Domestic Product was higher, Per capita Income Increases, people change their standard of living, more opportunity available for employment, government spending money on Infrastructural Development.

Economic development was not only because of joining BRICS, but it increased because of some activities, cultural exchange programs, Idea exchange programs, trade promotion activity, trade relations within BRICS organization.

India's Exports and Imports divided in to 3 parts Agriculture, raw materials and manufacturing sectors India Imports Agriculture products like Cereals, cotton, fertilizer etc. raw materials like chemicals, crude oil, Iron, copper, metals etc. Manufacturing goods like electrical equipments and machines and equipments and consumer goods etc. During the study period India imported these good. The result suggests that most of the time India imported developmental products and exported raw materials to other BRICS

countries. That is the reason export of India negatively influenced on India's Balance of Trade. Because India imported large amount form these countries and export fewer amounts to these countries. Balance of Trade was not favorable for India, especially with China, Russia and South Africa. Only with Brazil Balance of trade was favorable for India. Over all India's Exports from Agriculture Sector reduced and Raw Material and Manufacturing sector increased. India's Imports from Agriculture and Raw material Sector reduced and Manufacturing sectors increased during the study period.

The role of BRICS is important not only in India's international trade but also in other aspects. India can benefit from the collective strength of the BRICS through consultation and cooperation on economic issues as well as through contemporary global issues such as international terrorism, climate change, food and energy security, reform of international institutions, etc.

The BRICS New Development Bank will help India to build infrastructure facilities and proper use of natural resources as well as generate profits for sustainable development projects. For example, The BRICS New Development Bank has approved India's first loan of 250 million $ for a multi financing facility under Renewable Energy Financing for India. India's participation in the New Development Bank is important in terms of sustainable development. In the first decade, BRICS has succeeded in identifying issues of interest to all members and providing a forum for resolving their issues. BRICS has established the BRICS Energy Alliance and the Energy Policy Institute to promote to reduce climate change and increase sustainable development. This will definitely help India to reduce global warming.

Starting with the economic problems of the five countries, the BRICS agenda is growing day by day. Annual BRICS summits address new global issues, such as foreign trade policy, Foreign Relations, Finance, Trade, Business, Health, Science, New Technologies and also emphasis is being placed on issues such as climate change and zero un-employment, and measures are being taken.

With the help of BRICS, India has set up a BRICS credit rating agency against Western agencies such as Standard & Poor's and Moody's. Through BRICS, not only India but also other BRICS countries have been exposed to a wide range of exchanges in addition to economic investment and trade in real estate. Contingent Reserve Arrangement – To reduce the burden of cash availability on global level, Brics set up the CRA.

The BRICS countries came together for the purpose of non-alignment, equality and mutual benefit. To boost International trade with other BRICS countries they have allowed the use of their own currency for trade against dollar. As India is at the forefront of technology, India will get benefit of comparative and absolute cost advantage while trading with other BRICS countries. The BRICS is an important organization for overall development and is the first step on the path to India's supremacy/super power.

BRICS organization set the example for other organization that they came together on the basis of mutual understanding; mutual economic and political interest and concerns are required factors. Factor endowments, comparative advantage, and economic interdependence with each other made strong inter-regional trade arrangements. It is possible in this organization. This trade arrangement helps to reduce stress to boost the economic growth and development of oneself and the members of this organization. BRICS organizations create National interest combined with common interest.
Though they are facing major challenges but still with the help of Summits, BRICS New development bank, various cooperation and facilities which they provide to each other, BRICS organization made a powerful image in the world.

5.5.2 FUTURE PROSPECTS OF BRICS

Although the BRICS organization is made up of a number of powerful countries, the major ones are China, India and Russia. The ongoing conflict between China and India over the last few years is over Galwan, then Doklam. The reason why this conflict is happening is the geography here. The Himalayan Mountains stretch across the India-China border. The one who owns the most part here will get the maximum benefit. Due to the Himalayan range on the Indo-China border, there is no definite boundary in this

area. Both countries know the geographical importance of the Himalayan range. Therefore, both India and China are making efforts to ensure that no area in the region goes to the enemy's country.

In addition, the Corona epidemic in 2020 has had a global impact. This has created a rift in India-China relations. China's role in the epidemic seems to have had a negative impact on Sino-Indian relations. If China had remained transparent, the epidemic could have been tackled more efficiently and this is clear to all, including India. China has not only shown transparency about the level of spread in the country and the problems of human infection, but more importantly, calmed the World Health Organization and other international organizations from expressing concern about the Wuhan virus during this time.

The Indian government has imposed restrictions on foreign direct investment from countries that share a land border with India - this is clearly directed against China. Considering such type of misconduct from China the Government of India appealed to the people for self-reliance and to reduce dependency on import especially from China.

Already, India-China relations are not so good, with the ongoing Russia-Ukraine war affecting India-Russia and Sino-Russian relations. India is a strategic partner in both Russia and Ukraine. So China has openly shown its support to Russia.

Over the past decade, Russia and India have developed close military manufacturing ties. For nearly two decades, the two countries have co-produced the highly versatile BrahMos missile, which can be fired from ships, aircraft, or land. India recently received its first export order for the missile, from the Philippines. This defense link with Russia could be severed only at considerable financial and strategic cost to India. The Russian-Ukraine war puts India in a difficult position. On the one hand, India wants to avoid antagonizing the U.S., a long-time partner with which it has multifaceted and deepening ties. On the other, ongoing tensions with Pakistan and China require India to preserve its relationship with Russia, which is one of New Delhi’s leading suppliers of weapons and defense equipment. In recent years, India has been bolstering ties with the EU to ward off threats from China. However, India’s stance towards Russia on the Ukraine war is not new. Even

in 2014, when Russia annexed Crimea, India had maintained neutrality at the UN. Such volatile circumstances are influencing the international relationships of developing countries like BRICS alliance. If this situation is not improved in the short run then definitely there could be a remarkable impact on the BRICS.

China, India and Russia are the countries that play an important role in considering the BRICS organization, which has the largest share of land, population and gross national product. Relations between the three countries are not so good. Brazil and South Africa are less influential members among the BRICS countries. So, like the SAARC and Brexit, the relationship between the three countries should not affect the BRICS.

There is so much potential and power in India, China and Russia that they can show all the existing regional organization that it is possible to stay together and cooperate in various areas in spite of conflict between themselves. BRICS can set an example before the world by creating an organization with its own unique identity.

5.6 FURTHER SCOPE OF THE STUDY

The scope for further research work is recognized as follows on different topics which Are listed below:

- BRICS trade policies or foreign policies
- The role of BRICS New Development Bank
- Post Covid Effect on BRICS countries
- Effect of Russia – Ukraine war on BRICS countries
- Performance and trading strategies of BRICS for BRICS Development
- Detail study on BRICS summits
- BRICS cooperation

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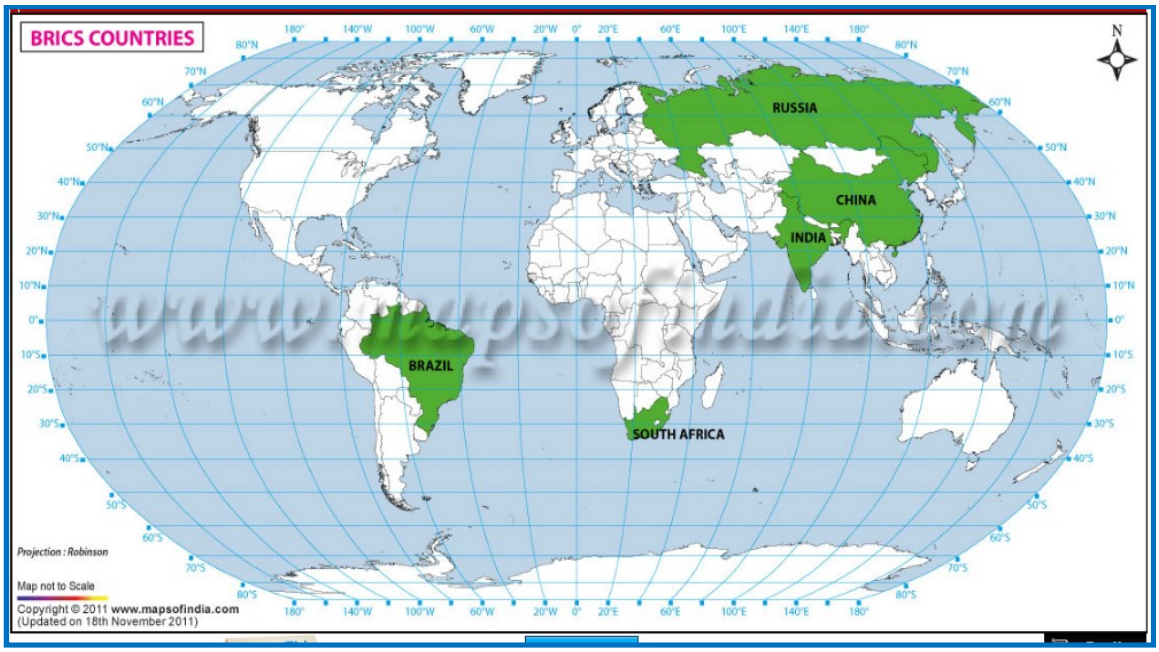
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ANNEXURE

MAPS OF BRICS

Brazil, Russia, India, China and South Africa Countries



Source: https://www.mapsofindia.com/maps/india-and-the-world/large-brics-countries.html Access on 1st April 2021 @2.42

General Information of BRICS Countries - 2019

Country	Capital	Currency	Area of territory (1000km2)	Mid - year Population (Million Persons)	Population Density (Person Per Km2)	Gross Domestic Product (current Prices billion US $)	Per capita GDP (current prices/US$)
BRAZIL	Brasília	Real (R$) 	8516 (1)	2102	24.7	1840	8754
RUSSIA	Moscow	Rouble (Rub) 	17,125	147	8.6	1700	11,584
INDIA	New Delhi	Rupee (₹) 	3287	1338(3)	407(3)	2713	2045
CHINA	Beijing	Renminbi (RMB) 	9600	1398	146	14363	10,276(P)
SOUTH AFRICA	Pretoria	Rand (ZAR) 	1221	59	48.1	351	5979

Source: 1323459.pdf (brics-russia2020.ru) BRICS Joint Statistical Publication 2020

MAJOR RESORSES OF BRICS COUNTRIES

BRAZIL	Nickel,Bauxite, iron ore, platinum, tin, rare earth elements , manganese, phosphates, uranium, petroleum, hydropower,gold and timber.
RUSSIA	Reserves of rare earth elements, coal, major deposits of oil, natural gas, and many strategic minerals and timber.
INDIA	Natural gas, diamonds, petroleum, Coal (fourth-largest reserves in the world), iron ore, manganese, titanium ore, chromites, limestone, and arable land, mica, bauxite, rare earth elements,
CHINA	Vanadium, magnetite, aluminum, lead, zinc, rare earth elements, coal, iron ore, petroleum, natural gas, mercury, tin, tungsten, antimony, hydropower potential (world's largest), and arable land, manganese, molybdenum, uranium,
SOUTH AFRICA	Uranium, gem diamonds, platinum, copper, vanadium, salt, and natural gas, Gold, chromium, antimony, coal, iron ore, manganese, nickel, phosphates, tin, rare earth elements

Source:https://www.eximbankofindia.in

MAJOR INDUSTRIES IN BRICS COUNTRIES

BRAZIL	Iron ore, tin, steel, aircraft, motor vehicles and parts, and other machinery and equipment. Textiles, shoes, chemicals, cement, lumber and Oil, gas, chemicals, and metals , Mining and extractive industries producing coal, all forms of machine building from rolling mills to high-performance aircraft and space vehicles; defense
RUSSIA	Agricultural machinery, tractors, and construction equipment; electric power generating and transmitting equipment; shipbuilding; road and rail transportation equipment; communications equipment; medical and scientific instruments; consumer durables, textiles, foodstuffs, and handicrafts and

	industries (including radar, missile production, advanced electronic components)
INDIA	Textiles, chemicals, food processing, steel, transportation equipment, cement, mining, petroleum, machinery, software, and pharmaceuticals
CHINA	Machine building; armaments; textiles and apparel; petroleum; cement; chemicals; fertilizers; consumer products(including footwear, toys, and electronics); and Mining and ore processing, iron, steel, aluminum, and other metals, coal, food processing; transportation equipment, including Automobiles, rail cars and locomotives, ships, aircraft; telecommunications equipment, commercial space launches vehicles, and satellites.
SOUTH AFRICA	automobile assembly, machinery, textiles, iron and steel, chemicals, fertilizer, Mining (world's largest producer of platinum, gold, chromium), foodstuffs, and commercial ship repair

Source: https://www.eximbankindia.in

BRAZILIAN FEDRATION



Source: https://www.mapsofworld.com/brazil/ Access on 1st April 2021 @2.44

Features of BRAZILIYAN Economy 	1. fifth largest country in the world 2. Brazil is one of the world giants of mining, agriculture, and manufacturing, and it has a strong and rapidly growing service sector 3. It is a leading producer of a host of minerals, including iron ore, tin, bauxite (the ore of aluminum), manganese, gold, quartz, and diamonds and other gems, and it exports vast quantities of steel, automobiles, electronics, and consumer goods. 4. Brazil is the world's primary source of coffee, oranges, and cassava (manioc) and a major producer of sugar, soy, and beef 5. Brazil has some of the world's most abundant renewable and nonrenewable resources. (iron ore, tin, copper, pyrochlore 6. Forests cover about three-fifths of Brazil's land area, representing between one-sixth and one-seventh of the world's forest coverage. 7. Brazil, with its extensive river systems and plentiful rainfall, has one of the largest hydroelectric potentials in the world. 8. Brazil is the world's leading producer of coffee

Source: Brazil | History, Map, Culture, Population, & Facts | Britannica

https://www.britannica.com

RUSSIAN FEDRATION



Source: https://www.mapsofworld.com/russia/ Access on 1st April 2021 @2.46

Features of RUSSIAN Economy	1. Russia is the world's largest country by area, with great variety in its land and people. 2. Russia has enormous energy resources and significant deposits of many different minerals. 3. Russia is among the world's leading producers of oil, extracting about one-fifth of the global total. 4. Russia also produces large quantities of iron ore, mainly from the Kursk Magnetic Anomaly (Central Black Earth region), Kola Peninsula, Urals, and Siberia. 5. It also is responsible for more than one-fourth of the world's total natural gas output.



Source: https://www.britannica.com

INDIAN FEDRATION



Source: https://www.mapsofworld.com/india/ Access on 1st April 2021 @2.48

Featurs of INDIAN Economy	
	1. India has one of the largest, most highly diversified economies in the world. 2. India's strengths lie in labour, services, generic pharmaceuticals, and information technology. 3. India produces a wide variety of agricultural products and is a major global producer of grains (wheat, rice and corn), dairy, fruits and vegetables and livestock.

Source: BRICS trade policies and area of depending corporation center of WTO studies (P.N. 74 to 109)

CHINA's FEDRATION



Source: https://www.mapsofworld.com/china/ Access on 1st April 2021 @2.50

Featurs of CHINESE Economy	
	1. Second largest economy in the world 2. Largest population 3. Manufacturing industry 4. Chinese economy was dynamically growing and showed high GDP growth rates of 14% in its maximum point. 5. redistribution of the resources by the party-state and control over cheap labor force 6. China's emergence as a market economy

Source:https://www.oecd.org/china/47408845.pdf

SOUTH AFRICA FEDRATION



Source: https://www.mapsofworld.com/southafrica/ Access on 1st April 2021 @2.52

Featurs of SOUTH AFRICA Economy	
	1. Mining, transport, energy, manufacturing, tourism and agriculture are the key economic sector 2. Having potential to create sustainable, resilient and inclusive economy

Source: https://www.gov.za/about-sa/south-africa-glance