**PROJECT ON ANALYSIS OF TERMS OF TRADE OF BRICS (BRAZIL, RUSSIA, INDIA, CHINA, SOUTH AFRICA)**

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**INTRODUCTION**

**HISTORY**

Initially, BRIC was 4 nation collaboration. The BRIC grouping's [first formal summit](https://en.wikipedia.org/wiki/1st_BRIC_summit) commenced on 16 June 2009, with [Luiz Inácio Lula da Silva](https://en.wikipedia.org/wiki/Luiz_In%C3%A1cio_Lula_da_Silva), [Dmitry Medvedev](https://en.wikipedia.org/wiki/Dmitry_Medvedev), [Manmohan Singh](https://en.wikipedia.org/wiki/Manmohan_Singh), and [Hu Jintao](https://en.wikipedia.org/wiki/Hu_Jintao), the respective leaders of Brazil, Russia, India and China.

In 2010, South Africa began efforts to join the BRIC grouping. South Africa officially became a member nation on 24 December 2010, after being formally invited by China to join.

**OBJECTIVES**

* To form New Development Bank, an Alternative bank to World Bank and IMF, to challenge US supremacy.
* Act as a bridge between developed and developing nations.
* Promote a fair order regarding agricultural policies
* Form an information-sharing and exchange platform that expands beyond economic cooperation to also involve educational, cultural, and environmental engagement.

**INDIA’s Trade Relations with BRICS Nations**

**Source**- https://wits.worldbank.org

**CHINA**

In 1985, India’s trade relations with China amounted to for $45483.804 in terms of exports and $95334.056 in terms of imports. It was in 1992 that the India and China got involved in a full-fledged bilateral trade relation. The year 1994 marked the beginning of a new era in the India- China economic relations. Bilateral trade between the two countries reached US$73 billion in 2011, making China India's largest trade partner, but slipped to US$68 billion in 2012. Bilateral trade between China and India touched US$89.6 billion in 2017–18, with the trade deficit widening to US$62.9 billion in China's favour. In 2019, the volume of bilateral trade between India & China stands at US$106.76 billion.

**RUSSIA**

Enhancing trade and economic cooperation between India and Russia is a key priority for the political leadership of both the countries. The Bilateral trade between two countries amounted to USD .961 billion in 1992 which continued to increase over the years and amounted to USD 6.4 billion in 2014 wherein Indian exports were USD 2.2 billion and Russian exports were USD 4.2 billion. In 2018 bilateral trade between India and Russia amounted to USD 10.83 billion, with Indian exports to Russia worth USD 2.33 billion and Indian imports from Russia USD 8.55 billion.

**BRAZIL**

India-Brazil bilateral trade has increased substantially in the last two decades. However, the global drop in commodity prices and the economic recession in Brazil started in 2015 affected Brazil’s overall trade. Consequently, the negative impact was felt in bilateral trade as well when it came down to USD 7.2 Billion and USD 5.94 Billion in years 2015 and 2016 respectively. However, with slight recovery in Brazilian economy in year 2017, the bilateral trade between India and Brazil rose to USD 7.97 Billion with growth of 34.17%, the highest growth among the top 10 trading partners of Brazil. Indian exports to Brazil and imports from Brazil stood at US$ 2.87 Billion and US$ 5.10 billion respectively. In 2018 the bilateral trade between the two countries amounted to US$ 9.19 Billion.

**SOUTH AFRICA**

 India is South Africa’s fifth-largest export destination and fourth-largest import origin and is the second-largest trading partner in Asia. Both countries are working to boost trade volumes in the coming years. In 1988 the Bilateral trade between two countries amounted to USD 4827 Thousand which continued to increase over the years. The Bilateral trade between India and South Africa currently stands at $12.26 billion.

**NET BARTER TERMS OF TRADE OF BRICS NATIONS**

**Source**- https://data.worldbank.org/indicator/TT.PRI.MRCH.XD.WD

**BRAZIL:** Brazil's N-TOT has been increasing slowly and steadily with a few small fluctuations. It was the lowest (57.66) in 1983 and the highest (134.15) in 2011.

**CHINA:** China on the other hand has been seeing decline NTOT. It has declined from 120.23 in 1981 to 84.62 in 2018 (latest reading)

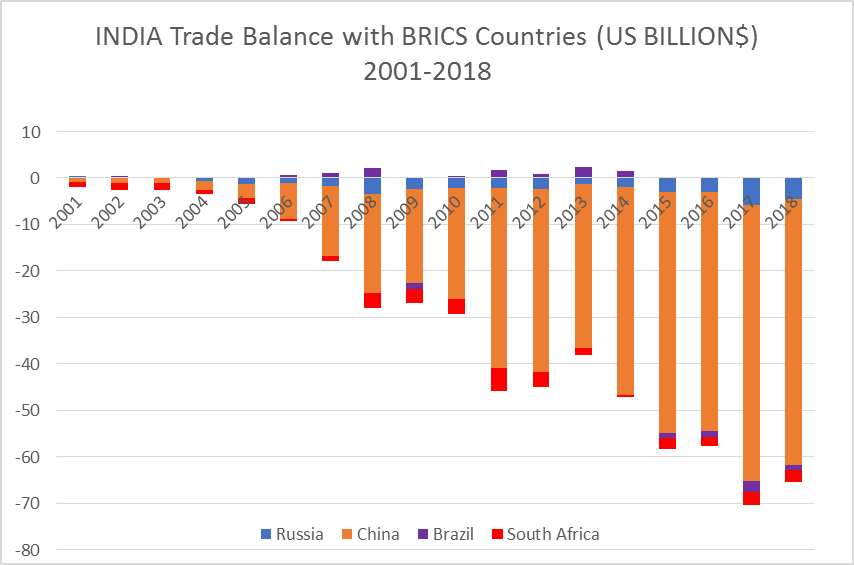
**INDIA:** India's NTOT has more or less remained constant. The lowest it has been in 65.46 in 1981, and the highest was 118.75 in 1994.

**RUSSIA:** Russia's Index experiences major fluctuation. The least it has been is 93.34 in 2002 if we don't look at the previous years before 2000 where it was 0. Even though it experiences major fluctuations, it has never been below 100 any time after 2002 the highest being 203.09 in2012 and the recent reading being 168.86 in 2018.

**SOUTH AFRICA:** South Africa's NTOT has reduced from 1980 to 2000 and since then has been steadily growing until today. The least it has been was 97.32 in 1983 and the highest was 151.26 in 2017 and the recent 2018 reading is 149.49

**INDIA**

**TRADE BALANCE**

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**CHINA-**India's import from China continued to rise in the last two decades. India's trade balance with China was USD .9050 Billion in 2001 in favour of China which continued to rise over the years with small dips in between (visible from the graph). Trade balance in 2018 amounted to USD 57.33 Billion.

**BRAZIL-**India's trade balance with showed both positive and negative trends over the years. Trade balance between two countries was USD .0404 Billion in 2001 in Brazil's favour and USD 1.056 Billion in 2018.

**RUSSIA-**Initially India' trade balance with Russia was USD .361 Billion in India's favour. But over the India's Import from Russia rose more than its export. In 2018 Trade Balance between the two nations amounted to USD 4.51 Billion in favour of Russia.

**SOUTH AFRICA-**Trade Deficit of India with South Africa was USD 1.076 Billion in 2001 which showed both positive and negative dips over the years.

**Source-** <https://m.trademap.org/#/main>

**GROSS TERMS OF TRADE**

|  |  |  |
| --- | --- | --- |
| Source : | ​https://wits.worldbank.org/ | for Export and Import data |
| Source : | https://data.worldbank.org/ | for Index data |

**CHINA :**India’s exports to China in 2017 increased by 45.29% on year-year basis to USD 5.57 billion while India’s imports from China saw a year--year growth of 14.48 % to USD 20.45 billion. This is evident from the GTOT values given in the table.

**BRAZIL :** The value of bilateral trade in 2018 between the two nations was USD 8.2 billion which included USD 3.8 billion worth of Indian exports to Brazil and USD 4.4 million as imports by India. More value of Imports as compared to exports suggest higher GTOT value. But this value dropeed considerably as India's trade with Brazil lowere from 2010-2015 due to economic recession in Brazil.

**SOUTH AFRICA** India's imports from South Africa peaked in 2014 at nearly US$3.8bn but fell by 22% to 2015 due to the economic slowdown in South Africa associated with the commodity price slump effect. Also India's export to South Africa reached its highest value somewhere in the 2013 at nearly 5.4 billion USD and then fell around 35% in 2015. Whilst India's imports from South Africa are relatively concentrated, its exports are far less so. This is the reason for higher GTOT value barring 2014 where trade between two nations fell due to economic slowdown in South Africa.

**RUSSIA :** Bilateral trade between India and Russia in 2002 stood at $1.5 billion and increased by over 7 times to $11 billion in 2012  with both governments setting a bilateral trade target of $30 billion by 2025. India imported 5176 shipments valued of USD 608734976.74 from Russia during the year 2016 .India Exported 17052 Shipments valued of USD 168041433.21999913 to Russia during the year 2016. As the shipments imported are considerably higher than shipments exported, GTOT values are higher.

**INCOME TERMS OF TRADE**

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| Source : | ​https://wits.worldbank.org/ | for Export data |
| Source : | https://data.worldbank.org/ | for index data |

**RUSSIA :** The Income TOT with Russia has been fairly stable. India and Russia have stepped up to increase the trade to US $30 Billion by 2030.

**CHINA :** China is India's largest trading partner. Till 2003 there was a negligible Income TOT with China.They entered into a open trade agreement in 2003 followed by formation of BRICS in 2006 which resulted in a high growth rate of Income TOT. The Income TOT spiked between 2008-2010, but returned to its level of 2008 in 2016 but is now rising rapidly.

**SOUTH AFRICA :** The Income TOT with South Africa was negligible untill 2010. After the Inclusion of South Africa in BRICS, the income TOT rised rapidly, peaking in 2014. In 2016, both countries set a target of increasing bilateral trade and agreement to US $20 Billion.

**BRAZIL :** Income TOT with Brazil had a steady growth from 2004 after which it started rising rapidly with the formation of BRICS in 2006. However it decreased in 2015 due to an economic recession in Brazil. Since then the Income TOT has started recovering.

**DOUBLE FACTORIAL TERMS OF TRADE**

**Source-**  <https://fred.stlouisfed.org/series/CTFPPPINA669NRUG>

**BRAZIL**-India has been doing well with Brazil because of its increasing productivity and decline in productivity of Brazilians. India’s productivity increased by 160% between 1980- 2016.

**RUSSIA**-Russia’s productivity increased in more or less at the same rate as India’s, however the decline near 2007-08 was due to economic recession.

**CHINA**- India has done well with china due to its increasing productivity and deteriorating NTOT of China.

**SOUTH AFRICA**- South Africa was also not able to increase its productivity instead it also suffered a decline in productivity hence DTOT of India with respect to south Africa also increased

**BRAZIL**

**TRADE BALANCE**

**INDIA-**Brazil's trade relations with India has shown both positive and negative trends. Trade Balance between two nations was USD 1.49 Billions in 2019 in favour of India.

**CHINA -**Brazil has been a prime exporters to China in the past decade. Trade Balance between the two nations was USD 24.40 Billions in Brazil's favour in 2019.

**SOUTH AFRICA-**Trade Balance between the two nations has been in Brazil's favour from last two decades which is also visible from the graph.

**RUSSIA-**Brazil's trade balance with russia was USD .068 Billions in 2001 and it amounted to USD 2.07 Billions in 2019 in Russia's favour.

**Source-** https://m.trademap.org/#/main

**GROSS TERMS OF TRADE**

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| Source : | ​https://wits.worldbank.org/ | for Export and Import data |
| Source : | https://data.worldbank.org/ | for Index data |

**SOUTH AFRICA :** GTOT values for Brazil's trade with South Africa are less than 100 in 2000s which could be a result of more quantity of exports as compared to import. Brazil has been a net exporter of goods to South Africa. In 2016, Brazil's exports to South Africa in the year 2016 reached US$1.4 billion, while the nation's imports of South African goods only totalled US$379 million.

**INDIA, RUSSIA, CHINA :** Similar, is the case with the other three nations which is evident from the fact that Brazil became the second largest intra-BRICS exporter (17.8 per cent) after China which has a 56.3% share in the intra-BRICS exports.

**INCOME TERMS OF TRADE**

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| Source : | ​https://wits.worldbank.org/ | for Export data |
| Source : | https://data.worldbank.org/ | for index data |

**RUSSIA :** Russia is one of the Brazil's largest trading partner. In 2002, the relations between both were elevated to a strategic partnership. The Income TOT with Russia plummeted in 2015 due to an economic recession in Brazil.

**INDIA :** The Income TOT with India started increasing with the signing of PTA of MERCOSUR with India in 2004 and formation of BRICS in 2006. It remained fairly stable even during the recession in 2015.

**CHINA :** Brazillian exports to China started rising in 2000 causing an increase in Income TOT. After the formation of BRICS, the Income TOT saw a high growth rate with China becoming Brazil's largest trading partner in 2009. The Income TOT stagnated between 2010-2015 but started rising rapidly afterwards.

**SOUTH AFRICA:** The Income TOT has remained fairly stable before and after theinclusion of South Africa in BRICS in 2010.

**DOUBLE FACTORIAL TERMS OF TRADE**

**Source**- <https://fred.stlouisfed.org/series/CTFPPPBRA669NRUG>

Brazil displayed more or less the same pattern with other countries. However the "big hump" in 1995-2000 was because of “The Plano Real" which sought to break inflation expectations by pegging the real to the US dollar. Inflation was brought down to single digit annual figures, but not fast enough to avoid substantial real exchange rate appreciation during the transition phase of the Plano Real. This appreciation meant that Brazilian goods were now more expensive relative to goods from other countries.

**CHINA**

**TRADE BALANCE**

**INDIA -**China Trade Balance with India in 2001 was USD .196 Billion with in China's favour wich continously rose over the year ( visible from the graph) with some dips . Trade balance between two nations amounted to USD 56.95 Billion in 2019 in China' favour.

**RUSSIA-** China and Russia's trade trade relations haven't seen a constant trend over the years (visible from the graph). Trade balance was USD 5.24 Billions in 2001 in favour of Russia and it amounted to USD 10.77 in Russia's favour.

**SOUTH AFRICA-**China's trade balance with South Africa was USD .124 Billion in 2001 in South Africa's favour which showed irrergular trend over the years . Trade balance between two nations was USD 10.90 and 9.37 Billions in the year 2018 and 2019 respectively.

**BRAZIL-**China has been a prime importers from Brazil which is shown by negative trade deficits over the years. Trade balance between two nations amounted to USD 43.72 Billions in Brazil's favour in 2019.

**Source-** https://m.trademap.org/#/main

**GROSS TERMS OF TRADE**

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| Source : | ​https://wits.worldbank.org/ | for Export and Import data |
| Source : | https://data.worldbank.org/ | for Index data |

**BRAZIL, RUSSIA, SOUTH AFRICA :** GTOT values for China's trade with Brazil, Russian Federation and South Africa can be termed as stable. The reason could be that China has registered the fastest growth in intra-BRICS exports, with a CAGR of 13.5 per cent during 2006-2015. Furthermore, China is also the largest importer from the rest of the BRICS countries. China accounts for 40.8 per cent of the intra-BRICS imports. As a result, China stood as the largest trading country both in terms of imports and exports among BRICS nations . Thus, our point is justified.

**INDIA :** Also, the GTOT values are less for China's trade with India. This could be due to more imports as compared to exports. India-China trade in the first four months of 2017 increased by 19.92% year-on-year to US$ 26.02 billion. India’s exports to China increased by 45.29% year-on-year to US$ 5.57 billion while India’s imports from China saw a year-on-year growth of 14.48 % to US$ 20.45 billion.

**INCOME TERMS OF TRADE**

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| Source : | ​https://wits.worldbank.org/ | for Export data |
| Source : | https://data.worldbank.org/ | for index data |

**BRAZIL :** China Became Brazil's largest trading partner in 2009. From 2006, with the formation of BRICS in 2006, the income TOT had been rising rapidly. But it plummeted in 2015 due to the economic recession in Brazil. It had started recovering since then.

**INDIA :** India had been China's largest trading partner. With the signing of an Open Trade Agreement in 2003 and formation of BRICS in 2006, the Income TOT with India has been rising rapidly with no signs of slowing down.

**RUSSIA :** China had been Russia's largest trading partner. The Income TOT with China started increasing in 2002 and was given a boost in 2006 with the formation of BRICS. The Income TOT plummeted in 2015 due to decrease in oil prices but has started recovering since then.

**SOUTH AFRICA :** China is South Africa's largest trading partner. With the inclusion of South Africa in BRICS in 2010, the Income TOT with South Africa has started rising rapidly.

**DOUBLE FACTORIAL TERMS OF TRADE**

**Source-**https://fred.stlouisfed.org/series/CTFPPPCNA669NRUG

**BRAZIL and SOUTH AFRICA** - The DTOT of China with these 2 nations were almost constant over time because increase in productivity of china with respect to these nations was compensated by decline in NTOT.

**INDIA and RUSSIA**- China’s DTOT declined with respect to these nations because of decline in NTOT which was because China was manufacturing Goods at much lower cost and selling large quantities of it.

**RUSSIA**

**TRADE BALANCE**

**INDIA-**Russia's trade balnce with India has been in Russia's favour from past 2 decades. Trade balance between two nations was USD 5.81 Billion in 2019.

**CHINA-**Trade balance between these two nations has seen some irregular trends .

Trade Balance between two nations was USD 9.23 Billions in 2007 in China's favour while it was USD 2.66 Billions in 2019 in Russia's favour

**SOUTH AFRICA-**Russia's trade balance with South Africa has been in South Africa's favour from past 2 decades.

**BRAZIL-**Russia's trade balance with Brazil was USD .731 Billions in 2001 and it amounted to USD .30 Billions in 2019 in Russia's favour.

**Source-** https://m.trademap.org/#/main

**GROSS TERMS OF TRADE**

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| Source : | ​https://wits.worldbank.org/ | for Export and Import data |
| Source : | https://data.worldbank.org/ | for Index data |

**INDA :** Russia's export to India rose to USD 4782 million in 2016 from 2015’s USD 4527 million. The values have been almost similar since 2012 except in the year 2013. Moreover, India’s exports to Russia have seen fluctuations since 2012. This could justify low GTOT value for Russia's trade with India.

**CHINA, BRAZIL :** The two-sided trade between Russia and China has grown swiftly as both the countries have vowed to boost economic cooperation. After dissolution of the Soviet Union(USSR) in 1991, the relations between Russia and China have dramatically improved.Total Russia’s imports from China amounted to USD 38086 million in 2016. Since 2012, Russia has been reducing its imports from China as the import value has been declining rapidly so GTOT value also falls after 2012. From 2012 onwards USD 51767 million, the import value decreased to USD 38086 million in 2016. And total Russia’s exports to China amounted to USD 28081 million in 2016, which also declined greatly from 2012’s USD 35766 million.Similar is the situation for Russia-Brazil trade.

**SOUTH AFRICA :** A trade surplus was recorded for South Africa with Russia from 2010 to 2012, rising from USD 178.7 million to USD 208.8 million. Russia's import from South Africa amounted to USD 412.3 million in 2012, compared to exports valued at approximately USD 204 million leading to higher GTOT value.

**INCOME TERMS OF TRADE**

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| Source : | ​https://wits.worldbank.org/ | for Export data |
| Source : | https://data.worldbank.org/ | for index data |

**BRAZIL :** In 2002 Russia signed a pact elevating the relations with Brazil to a startegic partnership. The Income TOT started increasing after the BRICS formation in 2006 and remained stable even in the economic recession of Brazil in 2015.

**INDIA :** India and Russia had always been in good trade relations even before and after BRICS. The Income TOT had remained fairly stable between 2000 and 2018.

**CHINA :** China has been one of the Russia's largest trade partner. In 2001, they signed a treaty of good neighbourliness and friendly cooperation. The Income TOT rose rapidly from 2006 with the formation of BRICS and had been increasing with a high growth rate since then.

**SOUTH AFRICA:** The Income TOT with South Africa has remained negligible.

**DOUBLE FACTORIAL TERMS OF TRADE**

Source- https://fred.stlouisfed.org/series/CTFPPPRUA669NRUG

Russia's trend was similar with respect to each country. The sharp increase in 2008 can be attributed to the GREAT RECESSION in Russia.

**SOUTH AFRICA**

**TRADE BALANCE**

**INDIA-**SA's Trade balance with has not been regular in past 2 decades . Trade balance between two nations was USD .01 Billions in 2008 is SA's favour while it was USD .20 Billions on 2019 in India's favour .

**CHINA-**Trade balance between two nations has been in China's favour from past two decades . Trade Balance between two nations was USD 6.63 Billions in 2019.

**RUSSIA -**South Africa's trade balance with Russia in 2001 was USD 0.01 Billions in Russia's favour and USD .15 Billions in 2019.

**BRAZIL-**Trade Balance between the two nations has been in Brazil's favour from last two decades which is also visible from the graph.

**Source-** https://m.trademap.org/#/main

**GROSS TERMS OF TRADE**

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| Source : | ​https://wits.worldbank.org/ | for Export and Import data |
| Source : | https://data.worldbank.org/ | for Index data |

**INDIA, BRAZIL, RUSSIA :** The GTOT value are very low in case of Russia in 1990s and then increased considerably in 2010s, particularly from 2015 onwards. The values are comparatively higher for Brazil as compared to other three. Brazil has been a net exporter of goods to South Africa. Brazil's exports in 2016 to South Africa reached US$1.4 billion, while its imports of South African goods only totalled US$379 million. As a result, trade deficit of South Africa with Brazil enlarged from USD 637 million in 2010 to USD 882 million in 2012, with exports totalling USD 790 million compared to an imports from Brazil whichis valued at almost USD 1.7 billion. A trade surplus was also recorded with Russia from the time period 2010 to 2012, rising from USD 178.7 million to USD 208.8 million. Exports of South Africa to Russia amounted to USD 412.3 million in 2012, compared to imports which are valued at approximately USD 204 million. South Africa has also recorded trade surpluses with India over the time period 2008 to 2010 due to which a deficit emerged in 2011 which further widened in 2012 to almost USD 923 million. South Africa’s exports to India rose to USD 3.7 billion in 2012 yet these fell short of the higher import demand from India which amount to USD 4.6 billion.

**CHINA :** China has become South Africa’s key export destination at the individual country level and is the most important market for South Africa amongst the BRICS nation . China was the destination for almost 84% of South Africa’s exports to other BRICS economies in 2012(i.e. USD 44.7 billion out of USD 54.3 billion), followed by India (which has around 15% share, or USD 8 billion), while the shares claimed by Brazil and Russia were very small and can be considered negligible.

**INCOME TERMS OF TRADE**

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| Source : | ​https://wits.worldbank.org/ | for Export data |
| Source : | https://data.worldbank.org/ | for index data |

**BRAZIL :** The Income TOT with Brazil has remained fairly stable both before and after the inclusion of South Africa in BRICS in 2010.

**RUSSIA :** The Income TOT with Russia has remained negligible even after the inclusion in BRICS

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**INDIA :** The Income TOT with India has been increasing since 2004 which was further boosted in 2010 by inclusion of South Africa in BRICS. It decreased after 2012 due to economic slowdowns but recovered in 2014 and had been increasing since then.

**CHINA :** China had been South Africa's largest trading partner. The Income TOT had been rising rapidly since the establishment of relations in 1998. It had been rising rapidly since then and was given a boost in 2010 with the inclusion of South Africa in BRICS.

**DOUBLE FACTORIAL TERMS OF TRADE**

**Source** - https://fred.stlouisfed.org/series/CTFPPPZAA669NRUG

Like many other countries, South Africa also suffered from a decline in productivity which shows a decline with respect to India, were productivity increased and not much decline with respect to China, were productivity also constant and almost same as with Brazil, were productivity declined. However after 2000 due to increase in its NTOT the decline rate reduced with India and it even improved with China, Russia and Brazil.

**PRODUCT BASKET of INDIA**

Majority of import of India from BRICS nations has been from China, in 2018 almost 80 % of imports from BRICS nations had been from China alone.

**Source-** https://wits.worldbank.org

Majority of exports from India to BRICS nations has been mainly to China, in 2018 accounts for more than 70% of exports of India to BRICS.

Exports to Brazil show increasing trends. However, in 2015 there was a significant drop in the exports.

**Source-** https://wits.worldbank.org

Export Basket: Over the years, India's Major export to brazil remains as chemicals and continues to grow. The second and the third place is tied between machines and textiles and minerals with almost negligible contribution.

**Source-** https://wits.worldbank.org

Import Basket from Brazil: India's trade with brazil has been very limited untilaround 2005 where it starts to pick up the pace with food products playing a major rolefollowed by Minerals, metals and animal products in that order.

**Source-** https://wits.worldbank.org

Export basket to China: The major export to China up until 2011 was minerals. It is then overtaken by textiles until 2016 and from then, the major export is chemicals. The contribution of metals remains fairly constant with an exception in 2010 where it is substantially more than the previous years but is diminished gradually in the coming years.

**Source-** https://wits.worldbank.org

Import Basket from China: The Major import from China is machines and electronics to this date followed by Chemicals whereas metals and textiles stay almost constant.

**Source-** https://wits.worldbank.org

Export Basket to Russia: Until 2005, textile was the major export which gets taken over by Machinery and Chemicals bith equal parts. According to the latest data, vegetables rank third in the group followed by textiles which contribute the least.

**Source-** https://wits.worldbank.org

Import Basket from Russia: The major import has been metals except in 2010 where it was Chemicals. Machines and Minerals stay almost constant throughout.

**Source-** https://wits.worldbank.org

India's Export to South Africa: The major Export is Transportation. The chemical export increases every year and according to the latest data it is almost equal to the Transportation export. Mechanical and electrical export increases gradually but not by a great margin and the contribution of minerals is minute.

**Source-** https://wits.worldbank.org

India's import from South Africa: The major import until 2016 is metals with the exceptopn in 2008 where it was chemicals. In the years 2017 and 2018, int majort import is Minerals followed by metals, chemicals and machinery in that order.

**Source-** https://wits.worldbank.org

**APPENDIX**

**India’s Trade Relations Data (in USD billion)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Year | China | Russian Federation | South Africa | Brazil |
| 1988 | 0.14081786 | 0 | 0.004827006 | 0.248760728 |
| 1989 | 0.064171344 | 0 | 0.005191956 | 0.242946246 |
| 1990 | 0.050821952 | 0 | 0.005411376 | 0.236112516 |
| 1991 | 0.0692302 | 0 | 0.010368289 | 0.211811804 |
| 1992 | 0.298653293 | 0.96194803 | 0.012954182 | 0.210940024 |
| 1993 | 0.578482208 | 0.906267152 | 0.074653628 | 0.18081072 |
| 1994 | 1.011486256 | 1.311547008 | 0.313322176 | 0.623227296 |
| 1995 | 1.141826752 | 1.864644544 | 0.582416576 | 0.346357168 |
| 1996 | 1.371297137 | 1.338699804 | 0.648787408 | 0.285013494 |
| 1997 | 1.828678592 | 1.595459328 | 0.89836336 | 0.342329552 |
| 1998 | 1.524692608 | 1.255208832 | 1.755513504 | 0.329214712 |
| 1999 | 1.836891488 | 1.579205801 | 2.320751862 | 0.468484241 |
| 2000 | 2.212467758 | 1.399041517 | 1.70270538 | 0.372415707 |
| 2001 | 2.750091743 | 1.318180571 | 1.730176276 | 0.501494538 |
| 2002 | 4.151453066 | 1.316853986 | 2.422810502 | 0.700461549 |
| 2003 | 6.182287545 | 1.481224151 | 2.413178419 | 0.70092898 |
| 2004 | 10.1497711 | 1.846241792 | 2.683472162 | 1.203496236 |
| 2005 | 17.35085345 | 2.74263765 | 4.087576343 | 1.852974319 |
| 2006 | 23.46823109 | 2.746567805 | 4.601463992 | 2.452518091 |
| 2007 | 34.06774992 | 3.608591587 | 5.311296889 | 2.777501132 |
| 2008 | 41.679951 | 5.542070297 | 8.032154574 | 4.409879456 |
| 2009 | 40.98342318 | 4.402043968 | 6.995015823 | 4.679202175 |
| 2010 | 58.68910706 | 4.984776537 | 10.56224475 | 6.890546374 |
| 2011 | 72.20081162 | 5.944877434 | 13.64881465 | 9.126460905 |
| 2012 | 68.86977193 | 6.74692143 | 13.00804121 | 11.55729127 |
| 2013 | 68.05226889 | 6.233083258 | 13.09422204 | 9.943676263 |
| 2014 | 71.66479683 | 6.425101617 | 11.71620319 | 12.68454449 |
| 2015 | 71.18100555 | 6.138983804 | 10.09020388 | 7.206944576 |
| 2016 | 69.3991763 | 6.595889047 | 8.335500892 | 5.9149134 |
| 2017 | 84.41797828 | 10.11953064 | 10.95811939 | 7.971900584 |
| 2018 | 106.7641577 | 10.83543131 | 12.25972371 | 9.193162754 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **NTOT** | | | | | |
| Year | Brazil | China | India | Russia | South Africa |
| 1980 | 73.88535 | 117.4419 | 71.64179 |  | 126.3158 |
| 1981 | 61.93182 | 120.2381 | 65.46763 |  | 110.5263 |
| 1982 | 59.64912 | 117.284 | 72.30769 |  | 97.32143 |
| 1983 | 57.66871 | 100 | 75.80645 |  | 98.27586 |
| 1984 | 62.17949 | 96.59091 | 94.11765 |  | 104.1237 |
| 1985 | 62.06897 | 92.55319 | 80.99174 |  | 106.0976 |
| 1986 | 73.3871 | 85.10638 | 83.76068 |  | 108.6022 |
| 1987 | 65.24823 | 94.50549 | 100 |  | 111.8182 |
| 1988 | 84.29752 | 90.72165 | 97.56098 |  | 111.1111 |
| 1989 | 74.26471 | 102.1739 | 94.61538 |  | 105.6604 |
| 1990 | 66.44295 | 102.1053 | 85.8156 |  | 104.3478 |
| 1991 | 78.90625 | 101.0309 | 93.6 |  | 105.3097 |
| 1992 | 81.96721 | 103.0928 | 98.31933 |  | 102.5862 |
| 1993 | 87.27273 | 101.0417 | 113.1313 |  | 103.6364 |
| 1994 | 100.9524 | 102.0408 | 118.75 |  | 107.2727 |
| 1995 | 110.3774 | 101.9417 | 108 |  | 106.0345 |
| 1996 | 108.3333 | 105.9406 | 99.03846 |  | 107.4766 |
| 1997 | 114.4231 | 110.2041 | 113.5922 |  | 106.6038 |
| 1998 | 114.2857 | 110.6383 | 117.5824 |  | 104.0404 |
| 1999 | 103.1579 | 104.1237 | 105.2083 |  | 102.0408 |
| 2000 | 100 | 100 | 100 | 100 | 100 |
| 2001 | 99.82373 | 97.44044 | 97.82158 | 96.02374 | 101.8066 |
| 2002 | 98.47395 | 92.11167 | 88.6309 | 93.34056 | 107.0778 |
| 2003 | 97.10822 | 92.93084 | 96.2011 | 100.8436 | 107.6823 |
| 2004 | 97.95062 | 90.76772 | 91.67655 | 114.6561 | 109.3249 |
| 2005 | 98.75548 | 88.44255 | 87.81562 | 138.2006 | 110.9892 |
| 2006 | 103.9667 | 89.47295 | 85.70052 | 157.3768 | 117.8722 |
| 2007 | 106.147 | 88.54621 | 81.6051 | 164.604 | 121.5349 |
| 2008 | 110.0856 | 83.81236 | 81.6051 | 197.9657 | 124.4909 |
| 2009 | 107.2763 | 91.09617 | 95.01241 | 131.9102 | 132.3735 |
| 2010 | 124.4457 | 82.05059 | 93.47166 | 159.6671 | 141.2368 |
| 2011 | 134.1583 | 79.04874 | 89.99257 | 194.4983 | 146.2948 |
| 2012 | 126.3308 | 79.75524 | 90.08283 | 203.0938 | 145.2397 |
| 2013 | 123.7563 | 80.64772 | 92.44597 | 189.6203 | 137.5087 |
| 2014 | 119.5612 | 82.9488 | 93.82253 | 182.0895 | 135.8331 |
| 2015 | 106.4117 | 92.53345 | 104.2283 | 138.4997 | 139.8582 |
| 2016 | 109.6414 | 92.32844 | 108.1865 | 127.3562 | 144.9752 |
| 2017 | 115.9902 | 87.29474 | 103.7423 | 144.0904 | 151.2658 |
| 2018 | 113.5032 | 84.62473 | 97.91992 | 168.862 | 146.4964 |

**Brazil Trade Balance (in USD Billion)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | China | India | Russian Federation | South Africa | Total |
| **2001** | 0.573733 | -0.25738 | 0.638322 | 0.138082 | 1.092753 |
| **2002** | 0.966985 | 0.080553 | 0.824771 | 0.296524 | 2.168833 |
| **2003** | 2.385564 | 0.067952 | 0.94507 | 0.531784 | 3.93037 |
| **2004** | 1.731269 | 0.096483 | 0.850014 | 0.769069 | 3.446835 |
| **2005** | 1.480478 | -0.06498 | 2.195304 | 1.029588 | 4.640386 |
| **2006** | 0.413026 | -0.53507 | 2.500874 | 1.02788 | 3.406714 |
| **2007** | -1.87245 | -1.21142 | 2.031208 | 1.235557 | 0.182892 |
| **2008** | -3.52181 | -2.46196 | 1.320929 | 0.980696 | -3.68215 |
| **2009** | 5.092754 | 1.223943 | 1.456434 | 0.826487 | 8.599618 |
| **2010** | 5.190487 | -0.75012 | 2.241694 | 0.556541 | 7.238607 |
| **2011** | 11.52396 | -2.88034 | 1.272003 | 0.768729 | 10.68436 |
| **2012** | 6.976267 | 0.534102 | 0.350095 | 0.916802 | 8.777266 |
| **2013** | 8.722336 | -3.22749 | 0.298079 | 1.116748 | 6.909669 |
| **2014** | 3.271122 | -1.85153 | 0.812729 | 0.493802 | 2.726123 |
| **2015** | 4.888119 | -0.67213 | 0.24354 | 0.709181 | 5.168709 |
| **2016** | 11.7696 | 0.67883 | 0.278804 | 1.060771 | 13.788 |
| **2017** | 20.16697 | 1.711653 | 0.091649 | 1.020983 | 22.99125 |
| **2018** | 29.47562 | 0.247058 | -1.71847 | 0.700172 | 28.70438 |
| **2019** | 27.60125 | -1.49426 | -2.07267 | 0.371167 | 24.40549 |

**Russia Trade Balance (in USD Billion)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Years** | China | India | Brazil | South Africa | Total |
| **2001** | 3.949512 | 0.574894 | -0.73199 | -0.06987 | 3.722552 |
| **2002** | 4.435819 | 1.093631 | -1.07411 | -0.05219 | 4.403144 |
| **2003** | 4.948928 | 2.150655 | -1.22208 | -0.10575 | 5.771755 |
| **2004** | 5.35884 | 1.850794 | -1.00091 | -0.12259 | 6.086144 |
| **2005** | 5.783162 | 1.52961 | -1.7401 | -0.12153 | 5.451146 |
| **2006** | 2.845306 | 1.95802 | -2.26073 | -0.13924 | 2.403357 |
| **2007** | -9.23997 | 1.724571 | -2.97807 | -0.25491 | -10.7484 |
| **2008** | -13.6214 | 3.516961 | -2.62997 | -0.40219 | -13.1366 |
| **2009** | -6.19088 | 4.412545 | -2.427 | -0.12465 | -4.32998 |
| **2010** | -19.1779 | 3.262964 | -2.3443 | -0.42758 | -18.6868 |
| **2011** | -13.346 | 1.90515 | -2.27545 | -0.34914 | -14.0655 |
| **2012** | -16.0009 | 4.525375 | -1.0539 | -0.40667 | -12.9361 |
| **2013** | -17.5477 | 3.89148 | -1.50819 | -0.49547 | -15.6598 |
| **2014** | -13.4384 | 1.22499 | -1.67942 | -0.40428 | -14.2971 |
| **2015** | -6.76956 | 3.28183 | -0.96224 | -0.29994 | -4.74991 |
| **2016** | -10.0657 | 2.915565 | -0.73789 | -0.32449 | -8.21254 |
| **2017** | -9.12026 | 3.553113 | -1.16582 | -0.4243 | -7.15726 |
| **2018** | 3.82251 | 4.52768 | 0.114392 | -0.49733 | 7.967249 |
| **2019** | 2.664579 | 3.386307 | 0.30669 | -0.54625 | 5.811324 |

**India Trade Balance (in USD Billion)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Years** | Russian Federation | China | Brazil | South Africa | TOTAL |
| **2001** | 0.361009 | -0.90501 | -0.0405 | -1.0768 | -1.66129 |
| **2002** | 0.15986 | -1.08825 | 0.021892 | -1.48217 | -2.38867 |
| **2003** | -0.08857 | -1.04796 | 0.075489 | -1.47831 | -2.53935 |
| **2004** | -0.58385 | -1.95274 | -0.12141 | -0.90019 | -3.55819 |
| **2005** | -1.33127 | -2.98327 | 0.086649 | -1.27938 | -5.50726 |
| **2006** | -1.05515 | -7.8099 | 0.543724 | -0.41257 | -8.73389 |
| **2007** | -1.76039 | -15.0838 | 1.022079 | -1.05211 | -16.8742 |
| **2008** | -3.36058 | -21.4921 | 2.09022 | -3.07026 | -25.8327 |
| **2009** | -2.47333 | -20.2433 | -1.11534 | -3.07571 | -26.9077 |
| **2010** | -2.19833 | -23.8091 | 0.44857 | -3.26213 | -28.821 |
| **2011** | -2.15708 | -38.7652 | 1.656159 | -5.00965 | -44.2758 |
| **2012** | -2.45739 | -39.4111 | 0.768132 | -3.06144 | -44.1618 |
| **2013** | -1.39516 | -35.2186 | 2.279995 | -1.60929 | -35.9431 |
| **2014** | -1.99016 | -44.7963 | 1.596499 | -0.27141 | -45.4614 |
| **2015** | -2.9152 | -52.0278 | -1.00865 | -2.46147 | -58.4132 |
| **2016** | -2.96812 | -51.567 | -1.31452 | -1.84917 | -57.6988 |
| **2017** | -5.84874 | -59.4788 | -2.22674 | -2.80714 | -70.3614 |
| **2018** | -4.51604 | -57.3343 | -1.056 | -2.59637 | -65.5027 |

**China Trade Balance (in USD Billion)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Years** | India | Russian Federation | Brazil | South Africa | Total |
| **2001** | 0.19674 | -5.248323 | -0.996308 | -0.124627 | -6.172518 |
| **2002** | 0.397293 | -4.885948 | -1.536638 | 0.041869 | -5.983424 |
| **2003** | -0.908152 | -3.698141 | -3.699036 | 0.189371 | -8.115958 |
| **2004** | -1.742022 | -3.029295 | -4.998757 | -0.008299 | -9.778373 |
| **2005** | -0.831939 | -2.67866 | -5.165315 | 0.382913 | -8.293001 |
| **2006** | 4.303848 | -1.72184 | -5.529389 | 1.682351 | -1.26503 |
| **2007** | 9.434224 | 8.841316 | -6.943599 | 0.826806 | 12.158747 |
| **2008** | 11.326495 | 9.243088 | -11.055986 | -0.617351 | 8.896246 |
| **2009** | 15.952271 | -3.769181 | -14.162465 | -1.327665 | -3.30704 |
| **2010** | 20.067645 | 3.69808 | -13.638795 | -4.09656 | 6.03037 |
| **2011** | 27.164137 | -1.459582 | -20.550073 | -18.73289 | -13.578408 |
| **2012** | 28.880261 | -0.081728 | -18.867494 | -29.330425 | -19.399386 |
| **2013** | 31.462141 | 9.923344 | -18.403652 | -31.557649 | -8.575816 |
| **2014** | 37.858731 | 12.083439 | -16.763091 | -28.868984 | 4.310095 |
| **2015** | 44.866019 | 1.593294 | -16.910648 | -14.346971 | 15.201694 |
| **2016** | 47.171936 | 5.374919 | -23.53939 | -9.619751 | 19.387714 |
| **2017** | 51.591767 | 1.797862 | -29.398554 | -9.939606 | 14.051469 |
| **2018** | 58.0306 | -10.881863 | -43.410184 | -10.902968 | -7.164415 |
| **2019** | 56.95422 | -10.772611 | -43.726586 | -9.370325 | -6.915302 |

**South Africa Trade Balance (in USD Billion)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Years** | China | India | Brazil | Russian Federation | Total |
| **2001** | -0.603119 | 0.121415 | -0.422783 | -0.01032 | -0.91481 |
| **2002** | -0.909101 | 0.070964 | -0.290095 | -0.051778 | -1.18001 |
| **2003** | -1.321421 | -0.03587 | -0.535416 | 0.038771 | -1.85394 |
| **2004** | -2.519182 | -0.138982 | -0.752219 | 0.057878 | -3.35251 |
| **2005** | -3.576887 | 0.067787 | -0.992079 | -0.028463 | -4.52964 |
| **2006** | -4.770698 | -0.829682 | -0.979554 | -0.172385 | -6.75232 |
| **2007** | -4.393137 | -0.428054 | -1.13871 | -0.413691 | -6.37359 |
| **2008** | -5.599486 | 0.017587 | -1.001851 | -0.063456 | -6.64721 |
| **2009** | -2.655183 | 0.256102 | -0.886522 | -0.246475 | -3.53208 |
| **2010** | -3.405247 | 0.186362 | -0.661072 | 0.172512 | -3.70745 |
| **2011** | -1.712002 | -0.644743 | -0.855671 | 0.130655 | -3.08176 |
| **2012** | -4.295051 | -0.856918 | -0.877262 | 0.225174 | -5.80406 |
| **2013** | -3.940158 | -2.369738 | -0.948132 | 0.025585 | -7.23244 |
| **2014** | -6.668174 | -0.787094 | -0.733804 | -0.089856 | -8.27893 |
| **2015** | -8.3159 | -0.959095 | -0.789699 | -0.19334 | -10.258 |
| **2016** | -6.838927 | 0.052671 | -1.025783 | 0.021189 | -7.79085 |
| **2017** | -6.649852 | 0.245128 | -1.152315 | -0.036313 | -7.59335 |
| **2018** | -8.5159 | 0.618215 | -1.030859 | -0.113322 | -9.04187 |
| **2019** | -6.629651 | -0.202681 | -0.759938 | -0.152715 | -7.74499 |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **Export data(US $ Billions)** | | | | **For India** | | **ITOT = NTOT\*(Export(in $)/(export value index/export volume index))** | | | |
| Year | NTOT India | Brazil | Russia | China | South Africa | Export Value index | Export Volume Index | Brazil | Russia | China | South Africa |
| 1990 | 85.82 | 0.01 |  | 0.02 | 0.002 | 42.40 | 35.04 | 1.04 |  | 1.86 | 0.22 |
| 1991 | 93.60 | 0.02 |  | 0.05 | 0.006 | 41.83 | 35.75 | 1.39 |  | 5.29 | 0.65 |
| 1992 | 98.32 | 0.02 | 0.68 | 0.16 | 0.011 | 46.31 | 39.58 | 1.56 | 56.49 | 18.16 | 1.28 |
| 1993 | 113.13 | 0.06 | 0.65 | 0.28 | 0.037 | 50.90 | 45.45 | 5.95 | 54.85 | 35.36 | 4.73 |
| 1994 | 118.75 | 0.08 | 0.81 | 0.25 | 0.161 | 59.04 | 51.79 | 8.62 | 60.76 | 34.41 | 21.76 |
| 1995 | 108.00 | 0.09 | 1.04 | 0.33 | 0.338 | 72.28 | 66.92 | 8.59 | 90.29 | 38.69 | 39.40 |
| 1996 | 99.04 | 0.13 | 0.81 | 0.61 | 0.321 | 78.12 | 75.84 | 12.74 | 77.43 | 62.71 | 32.72 |
| 1997 | 113.59 | 0.14 | 0.95 | 0.72 | 0.400 | 82.61 | 70.60 | 13.92 | 92.17 | 95.44 | 53.14 |
| 1998 | 117.58 | 0.13 | 0.71 | 0.43 | 0.404 | 78.90 | 73.74 | 14.64 | 78.71 | 53.72 | 50.85 |
| 1999 | 105.21 | 0.14 | 0.95 | 0.54 | 0.293 | 84.16 | 83.33 | 14.14 | 101.97 | 57.59 | 31.14 |
| 2000 | 100.00 | 0.19 | 0.86 | 0.73 | 0.308 | 100.00 | 100.00 | 19.23 | 84.74 | 73.49 | 30.78 |
| 2001 | 97.82 | 0.23 | 0.84 | 0.92 | 0.327 | 102.32 | 108.50 | 23.91 | 101.14 | 85.10 | 30.14 |
| 2002 | 88.63 | 0.36 | 0.74 | 1.53 | 0.470 | 116.21 | 126.53 | 34.85 | 94.52 | 124.68 | 38.29 |
| 2003 | 96.20 | 0.39 | 0.70 | 2.57 | 0.467 | 139.13 | 133.93 | 35.95 | 70.52 | 256.55 | 46.71 |
| 2004 | 91.68 | 0.54 | 0.63 | 4.10 | 0.892 | 180.86 | 155.49 | 42.64 | 54.26 | 437.05 | 95.08 |
| 2005 | 87.82 | 0.97 | 0.71 | 7.18 | 1.404 | 235.06 | 189.04 | 68.49 | 55.52 | 784.43 | 153.32 |
| 2006 | 85.70 | 1.50 | 0.85 | 7.83 | 2.094 | 287.42 | 211.29 | 94.38 | 55.10 | 912.73 | 244.17 |
| 2007 | 81.61 | 1.90 | 0.92 | 9.49 | 2.130 | 354.32 | 242.07 | 105.92 | 60.74 | 1133.78 | 254.37 |
| 2008 | 81.61 | 3.25 | 1.09 | 10.09 | 2.481 | 459.73 | 283.21 | 163.39 | 61.60 | 1337.11 | 328.64 |
| 2009 | 95.01 | 1.78 | 0.96 | 10.37 | 1.960 | 389.13 | 266.35 | 115.89 | 57.97 | 1439.43 | 272.01 |
| 2010 | 93.47 | 3.67 | 1.39 | 17.44 | 3.650 | 534.11 | 334.79 | 215.00 | 74.84 | 2600.64 | 544.29 |
| 2011 | 89.99 | 5.39 | 1.89 | 16.72 | 4.320 | 714.75 | 384.90 | 261.27 | 83.23 | 2793.78 | 721.86 |
| 2012 | 90.08 | 6.16 | 2.14 | 14.73 | 4.973 | 700.41 | 377.93 | 299.56 | 94.44 | 2459.02 | 830.28 |
| 2013 | 92.45 | 6.11 | 2.42 | 16.42 | 5.742 | 742.93 | 409.89 | 311.73 | 126.80 | 2750.76 | 962.19 |
| 2014 | 93.82 | 7.14 | 2.22 | 13.43 | 5.722 | 761.44 | 430.59 | 378.85 | 117.21 | 2228.92 | 949.42 |
| 2015 | 104.23 | 3.10 | 1.61 | 9.58 | 3.814 | 632.27 | 422.47 | 215.84 | 96.93 | 1493.83 | 594.99 |
| 2016 | 108.19 | 2.30 | 1.81 | 8.92 | 3.243 | 624.22 | 434.52 | 173.23 | 113.74 | 1385.71 | 504.04 |
| 2017 | 103.74 | 2.87 | 2.14 | 12.50 | 4.072 | 706.10 | 462.25 | 194.74 | 129.45 | 1980.12 | 645.35 |
| 2018 | 97.92 | 3.58 | 2.33 | 16.37 | 4.017 | 766.36 | 478.84 | 218.85 | 136.74 | 2564.81 | 629.52 |

**ITOT of India with BRICS**

**ITOT of Brazil with BRICS**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **Export data(US $ Billions)** | | | | **For Brazil** | | **ITOT = NTOT\*(Export(in $)/(export value index/export volume index))** | | | |
| Year | NTOT Brazil | Russia | India | China | South Africa | Export Value Index | Export Volume Index | Russia | India | China | South Africa |
| 1990 | 66.44 |  | 0.17 | 0.38 | 0.17 | 57.03 | 57.60 |  | 11.26 | 25.62 | 11.27 |
| 1991 | 78.91 |  | 0.17 | 0.23 | 0.18 | 57.40 | 56.83 |  | 12.94 | 17.69 | 13.96 |
| 1992 | 81.97 | 0.13 | 0.15 | 0.46 | 0.18 | 64.98 | 64.98 | 10.33 | 12.19 | 37.71 | 14.53 |
| 1993 | 87.27 | 0.23 | 0.12 | 0.78 | 0.19 | 69.99 | 72.91 | 20.78 | 11.35 | 70.85 | 17.69 |
| 1994 | 100.95 | 0.17 | 0.62 | 0.82 | 0.23 | 79.05 | 74.58 | 16.51 | 59.16 | 78.32 | 21.59 |
| 1995 | 110.38 | 0.57 | 0.32 | 1.20 | 0.26 | 84.37 | 72.16 | 53.74 | 30.21 | 113.63 | 24.72 |
| 1996 | 108.33 | 0.47 | 0.18 | 1.11 | 0.30 | 86.62 | 74.08 | 43.15 | 17.13 | 103.19 | 27.51 |
| 1997 | 114.42 | 0.76 | 0.17 | 1.09 | 0.33 | 96.15 | 80.84 | 73.18 | 16.00 | 104.70 | 31.92 |
| 1998 | 114.29 | 0.65 | 0.14 | 0.90 | 0.22 | 92.78 | 82.89 | 66.09 | 14.79 | 92.39 | 22.81 |
| 1999 | 103.16 | 0.75 | 0.31 | 0.68 | 0.24 | 87.11 | 88.94 | 78.60 | 33.06 | 71.21 | 25.10 |
| 2000 | 100.00 | 0.42 | 0.22 | 1.09 | 0.30 | 100.00 | 100.00 | 42.30 | 21.75 | 108.53 | 30.22 |
| 2001 | 99.82 | 1.10 | 0.29 | 1.90 | 0.42 | 105.75 | 109.53 | 114.01 | 29.51 | 196.67 | 43.85 |
| 2002 | 98.47 | 1.25 | 0.65 | 2.52 | 0.48 | 109.65 | 118.98 | 133.83 | 69.85 | 269.37 | 51.09 |
| 2003 | 97.11 | 1.50 | 0.55 | 4.53 | 0.73 | 132.81 | 137.68 | 151.02 | 55.74 | 456.36 | 73.89 |
| 2004 | 97.95 | 1.66 | 0.65 | 5.44 | 1.04 | 175.40 | 163.96 | 151.82 | 59.75 | 498.27 | 94.97 |
| 2005 | 98.76 | 2.92 | 1.14 | 6.83 | 1.37 | 215.04 | 179.33 | 240.27 | 93.71 | 562.90 | 112.92 |
| 2006 | 103.97 | 3.44 | 0.94 | 8.40 | 1.46 | 250.02 | 185.31 | 265.35 | 72.35 | 647.49 | 112.72 |
| 2007 | 106.15 | 3.74 | 0.96 | 10.75 | 1.76 | 291.46 | 195.48 | 266.36 | 68.19 | 765.25 | 125.15 |
| 2008 | 110.09 | 4.65 | 1.10 | 16.52 | 1.75 | 359.12 | 190.66 | 271.94 | 64.43 | 965.67 | 102.56 |
| 2009 | 107.28 | 2.87 | 3.42 | 21.00 | 1.26 | 277.57 | 170.17 | 188.66 | 224.60 | 1381.38 | 82.85 |
| 2010 | 124.45 | 4.15 | 3.49 | 30.79 | 1.31 | 366.33 | 186.33 | 262.82 | 221.06 | 1948.71 | 82.92 |
| 2011 | 134.16 | 4.22 | 3.20 | 44.31 | 1.68 | 464.52 | 191.79 | 233.54 | 177.29 | 2454.63 | 93.09 |
| 2012 | 126.33 | 3.14 | 5.58 | 41.23 | 1.77 | 440.10 | 191.15 | 172.34 | 306.01 | 2262.17 | 96.87 |
| 2013 | 123.76 | 2.97 | 3.13 | 46.03 | 1.84 | 439.11 | 196.99 | 165.12 | 173.78 | 2555.31 | 101.95 |
| 2014 | 119.56 | 3.83 | 4.79 | 40.62 | 1.23 | 408.39 | 193.44 | 216.85 | 271.20 | 2300.19 | 69.41 |
| 2015 | 106.41 | 2.46 | 3.62 | 35.61 | 1.35 | 346.77 | 209.42 | 158.38 | 232.47 | 2288.31 | 87.00 |
| 2016 | 109.64 | 2.30 | 3.16 | 35.13 | 1.40 | 336.07 | 216.32 | 162.31 | 223.12 | 2479.52 | 98.60 |
| 2017 | 115.99 | 2.74 | 4.66 | 47.49 | 1.51 | 395.04 | 230.99 | 185.60 | 315.87 | 3220.79 | 102.39 |
| 2018 | 113.50 | 1.66 | 3.91 | 64.21 | 1.36 | 435.22 | 242.00 | 104.47 | 246.76 | 4052.15 | 86.03 |

**ITOT of Russian Federation with BRICS**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **NTOT** | **Export data(US $ Billions)** | | | | **For Russia** | | **ITOT = NTOT\*(Export(in $)/(export value index/export volume index))** | | | |
| Year | Russia | Brazil | India | China | South Africa | Export Value Index | Export Volume Index | Brazil | India | China | South Africa |
| 2000 | 100.00 | 0.26 | 1.08 | 5.25 | 0.03 | 100.00 | 100.00 | 25.86 | 108.17 | 524.76 | 3.36 |
| 2001 | 96.02 | 0.19 | 1.12 | 5.60 | 0.01 | 97.00 | 101.89 | 19.28 | 113.01 | 564.44 | 0.59 |
| 2002 | 93.34 | 0.23 | 1.61 | 6.84 | 0.04 | 102.16 | 111.55 | 23.44 | 164.15 | 696.82 | 4.10 |
| 2003 | 100.84 | 0.26 | 2.74 | 8.26 | 0.01 | 129.42 | 125.72 | 25.16 | 267.97 | 808.95 | 0.68 |
| 2004 | 114.66 | 0.37 | 2.50 | 10.11 | 0.01 | 174.43 | 139.01 | 33.68 | 228.62 | 923.32 | 0.83 |
| 2005 | 138.20 | 0.61 | 2.31 | 13.05 | 0.03 | 232.12 | 146.58 | 52.85 | 201.94 | 1138.69 | 2.20 |
| 2006 | 157.38 | 0.73 | 2.93 | 15.76 | 0.02 | 289.01 | 153.36 | 60.62 | 244.32 | 1315.91 | 1.68 |
| 2007 | 164.60 | 1.13 | 3.03 | 15.17 | 0.01 | 337.42 | 160.44 | 88.42 | 237.44 | 1187.07 | 1.12 |
| 2008 | 197.97 | 2.04 | 5.23 | 21.15 | 0.04 | 449.01 | 158.50 | 142.61 | 365.56 | 1477.83 | 2.81 |
| 2009 | 131.91 | 1.08 | 5.94 | 16.67 | 0.20 | 288.85 | 155.20 | 76.76 | 420.78 | 1181.42 | 13.84 |
| 2010 | 159.67 | 1.72 | 5.41 | 19.78 | 0.05 | 381.43 | 166.48 | 120.07 | 376.77 | 1378.69 | 3.19 |
| 2011 | 194.50 | 2.10 | 4.67 | 34.69 | 0.11 | 497.00 | 163.22 | 134.30 | 298.03 | 2216.06 | 7.32 |
| 2012 | 203.09 | 2.30 | 7.57 | 35.77 | 0.28 | 503.89 | 162.88 | 151.31 | 496.75 | 2348.09 | 18.30 |
| 2013 | 189.62 | 1.98 | 6.98 | 35.63 | 0.29 | 496.83 | 167.82 | 127.11 | 447.23 | 2281.76 | 18.33 |
| 2014 | 182.09 | 2.29 | 4.40 | 37.41 | 0.29 | 473.00 | 169.42 | 149.33 | 286.70 | 2440.28 | 18.63 |
| 2015 | 138.50 | 1.92 | 4.55 | 28.33 | 0.27 | 325.06 | 180.52 | 147.90 | 349.95 | 2179.34 | 21.10 |
| 2016 | 127.36 | 2.34 | 5.82 | 29.95 | 0.20 | 268.21 | 182.15 | 202.20 | 503.64 | 2590.66 | 17.51 |
| 2017 | 144.09 | 2.66 | 7.13 | 41.67 | 0.21 | 336.18 | 189.23 | 215.59 | 577.92 | 3379.76 | 16.68 |
| 2018 | 168.86 | 2.58 | 7.75 | 56.02 | 0.29 | 421.90 | 197.47 | 204.23 | 612.64 | 4427.53 | 22.58 |

**ITOT of China with BRICS**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **NTOT** | **Export data(US $ Billions)** | | | | **For China** | | **ITOT = NTOT\*(Export(in $)/(export value index/export volume index))** | | | |
| Year | NTOT China | Brazil | India | Russia | South Africa | Export Value Index | Export Volume Index | Brazil | India | Russia | South Africa |
| 1992 | 81.97 | 0.06 | 0.16 | 2.34 | 0.01 | 34.08 | 34.08 | 5.31 | 12.99 | 191.50 | 0.63 |
| 1993 | 87.27 | 0.19 | 0.26 | 2.69 | 0.25 | 36.81 | 37.95 | 17.29 | 23.32 | 242.18 | 22.50 |
| 1994 | 100.95 | 0.36 | 0.57 | 1.58 | 0.37 | 48.56 | 48.56 | 36.58 | 57.85 | 159.58 | 36.97 |
| 1995 | 110.38 | 0.76 | 0.77 | 1.66 | 0.64 | 59.70 | 56.86 | 79.79 | 80.45 | 174.99 | 67.01 |
| 1996 | 108.33 | 0.76 | 0.69 | 1.69 | 0.69 | 60.61 | 56.65 | 77.24 | 69.46 | 171.38 | 69.68 |
| 1997 | 114.42 | 1.04 | 0.93 | 2.04 | 0.80 | 73.35 | 67.92 | 110.65 | 98.93 | 215.92 | 84.76 |
| 1998 | 114.29 | 1.09 | 1.02 | 1.84 | 0.90 | 73.72 | 70.88 | 119.27 | 111.72 | 202.19 | 98.76 |
| 1999 | 103.16 | 0.88 | 1.16 | 1.50 | 0.88 | 78.22 | 77.45 | 89.47 | 118.68 | 152.93 | 90.13 |
| 2000 | 100.00 | 1.22 | 1.56 | 2.23 | 1.01 | 100.00 | 100.00 | 122.35 | 156.07 | 223.34 | 101.36 |
| 2001 | 99.82 | 1.35 | 1.90 | 2.71 | 1.05 | 106.78 | 109.69 | 138.54 | 194.41 | 277.95 | 107.53 |
| 2002 | 98.47 | 1.47 | 2.67 | 3.52 | 1.31 | 130.65 | 138.66 | 153.25 | 279.15 | 367.94 | 136.97 |
| 2003 | 97.11 | 2.14 | 3.34 | 6.03 | 2.03 | 175.85 | 182.79 | 216.33 | 337.45 | 608.64 | 204.84 |
| 2004 | 97.95 | 3.67 | 5.94 | 9.10 | 2.95 | 238.09 | 226.83 | 342.87 | 553.95 | 849.04 | 275.47 |
| 2005 | 98.76 | 4.83 | 8.93 | 13.21 | 3.83 | 305.76 | 283.64 | 442.24 | 818.50 | 1210.33 | 350.51 |
| 2006 | 103.97 | 7.38 | 14.58 | 15.83 | 5.77 | 388.83 | 346.17 | 683.11 | 1349.65 | 1465.46 | 533.86 |
| 2007 | 106.15 | 11.40 | 24.05 | 28.53 | 7.44 | 489.74 | 414.86 | 1024.90 | 2162.60 | 2565.29 | 669.41 |
| 2008 | 110.09 | 18.81 | 31.59 | 33.08 | 8.62 | 574.11 | 450.30 | 1623.92 | 2727.23 | 2855.92 | 744.09 |
| 2009 | 107.28 | 14.12 | 29.67 | 17.51 | 7.37 | 482.18 | 403.19 | 1266.47 | 2661.17 | 1571.03 | 660.71 |
| 2010 | 124.45 | 24.46 | 40.91 | 29.61 | 10.80 | 633.12 | 516.49 | 2483.28 | 4153.65 | 3006.26 | 1096.42 |
| 2011 | 134.16 | 31.84 | 50.54 | 38.90 | 13.36 | 761.78 | 561.89 | 3150.42 | 5000.86 | 3849.67 | 1322.27 |
| 2012 | 126.33 | 33.41 | 47.68 | 44.06 | 15.32 | 822.11 | 596.84 | 3064.52 | 4372.72 | 4040.63 | 1405.37 |
| 2013 | 123.76 | 35.90 | 48.43 | 49.59 | 16.83 | 886.43 | 647.42 | 3244.51 | 4377.70 | 4482.44 | 1521.30 |
| 2014 | 119.56 | 34.89 | 54.22 | 53.68 | 15.70 | 939.91 | 684.47 | 3037.80 | 4720.59 | 4673.53 | 1366.89 |
| 2015 | 106.41 | 27.41 | 58.23 | 34.76 | 15.86 | 912.30 | 680.59 | 2176.13 | 4622.45 | 2759.18 | 1258.88 |
| 2016 | 109.64 | 21.98 | 58.40 | 37.34 | 12.85 | 841.74 | 690.25 | 1975.85 | 5250.48 | 3357.16 | 1155.29 |
| 2017 | 115.99 | 28.95 | 68.04 | 42.83 | 14.81 | 908.23 | 738.92 | 2732.00 | 6420.99 | 4041.83 | 1397.47 |
| 2018 | 113.50 | 33.73 | 76.88 | 48.01 | 16.34 | 997.86 | 769.44 | 2952.22 | 6728.68 | 4201.47 | 1429.86 |

**ITOT of South Africa with BRICS**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **NTOT** | **Export data(US $ Billions)** | | | | **For South Africa** | | **ITOT = NTOT\*(Export(in $)/(export value index/export volume index))** | | | |
| Year | South Africa | Brazil | Russia | India | China | Export Value Index | Export Volume Index | Brazil | Russia | India | China |
| 1992 | 102.59 | 0.06 | 0.22 | 0.01 | 0.17 | 78.18 | 65.70 | 5.29 | 18.69 | 0.60 | 15.00 |
| 1993 | 103.64 | 0.12 | 0.16 | 0.03 | 0.18 | 80.79 | 70.86 | 10.97 | 14.76 | 2.58 | 16.70 |
| 1994 | 107.27 | 0.23 | 0.05 | 0.14 | 0.16 | 84.41 | 71.53 | 20.58 | 4.24 | 12.44 | 14.82 |
| 1995 | 106.03 | 0.29 | 0.06 | 0.19 | 0.29 | 92.90 | 75.53 | 24.95 | 5.60 | 16.35 | 24.95 |
| 1996 | 107.48 | 0.28 | 0.05 | 0.25 | 0.19 | 97.46 | 84.75 | 25.88 | 4.88 | 22.98 | 17.55 |
| 1997 | 106.60 | 0.25 | 0.05 | 0.19 | 0.18 | 103.48 | 91.58 | 23.85 | 4.34 | 18.32 | 16.83 |
| 1998 | 104.04 | 0.17 | 0.06 | 0.19 | 0.16 | 87.92 | 85.36 | 16.95 | 6.28 | 19.32 | 16.22 |
| 1999 | 102.04 | 0.16 | 0.06 | 0.39 | 0.27 | 89.07 | 89.07 | 16.05 | 6.34 | 39.33 | 27.66 |
| 2000 | 100.00 | 0.20 | 0.03 | 0.37 | 0.34 | 100.00 | 100.00 | 20.18 | 3.05 | 37.17 | 33.52 |
| 2001 | 101.81 | 0.27 | 0.03 | 0.37 | 0.46 | 97.58 | 101.86 | 28.87 | 3.14 | 39.20 | 49.02 |
| 2002 | 107.08 | 0.18 | 0.04 | 0.35 | 0.45 | 99.13 | 99.88 | 19.12 | 4.52 | 37.93 | 48.58 |
| 2003 | 107.68 | 0.18 | 0.08 | 0.38 | 0.89 | 121.67 | 98.31 | 15.41 | 6.55 | 33.09 | 77.36 |
| 2004 | 109.32 | 0.24 | 0.10 | 0.57 | 1.06 | 153.91 | 103.80 | 18.04 | 7.23 | 41.82 | 77.84 |
| 2005 | 110.99 | 0.32 | 0.07 | 1.17 | 1.37 | 172.18 | 108.84 | 22.29 | 4.92 | 82.11 | 96.02 |
| 2006 | 117.87 | 0.40 | 0.11 | 0.78 | 2.11 | 194.03 | 111.90 | 27.31 | 7.23 | 53.27 | 143.36 |
| 2007 | 121.53 | 0.52 | 0.15 | 1.35 | 4.17 | 232.75 | 122.59 | 33.28 | 9.66 | 86.38 | 266.91 |
| 2008 | 124.49 | 0.66 | 0.24 | 2.28 | 4.31 | 269.43 | 129.60 | 39.48 | 14.55 | 136.50 | 258.07 |
| 2009 | 132.37 | 0.36 | 0.18 | 2.07 | 5.67 | 205.71 | 101.59 | 23.25 | 11.66 | 135.17 | 370.67 |
| 2010 | 141.24 | 0.71 | 0.28 | 3.03 | 8.10 | 304.66 | 122.62 | 40.37 | 15.81 | 172.39 | 460.21 |
| 2011 | 146.29 | 0.81 | 0.30 | 3.37 | 12.50 | 362.92 | 129.49 | 42.44 | 15.84 | 176.11 | 652.27 |
| 2012 | 145.24 | 0.79 | 0.43 | 3.74 | 10.32 | 332.21 | 126.64 | 43.64 | 23.66 | 206.91 | 571.41 |
| 2013 | 137.51 | 0.66 | 0.40 | 3.00 | 12.05 | 320.69 | 132.74 | 37.42 | 22.94 | 170.87 | 685.67 |
| 2014 | 135.83 | 0.63 | 0.37 | 3.76 | 8.77 | 310.32 | 137.11 | 37.94 | 21.97 | 225.39 | 526.38 |
| 2015 | 139.86 | 0.62 | 0.29 | 3.19 | 7.42 | 270.16 | 142.86 | 45.54 | 21.55 | 235.89 | 548.79 |
| 2016 | 144.98 | 0.38 | 0.28 | 3.15 | 6.81 | 254.19 | 141.71 | 30.60 | 22.84 | 254.66 | 550.55 |
| 2017 | 151.27 | 0.41 | 0.35 | 4.11 | 8.67 | 296.66 | 144.25 | 29.84 | 26.08 | 301.98 | 637.89 |
| 2018 | 146.50 | 0.46 | 0.40 | 4.43 | 8.55 | 313.41 | 147.42 | 31.86 | 27.79 | 304.96 | 589.22 |

**GTOT of India with BRICS**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Values for India** | | | | | | **GTOT=((M/Mp)/(X/Xp))\*100** | | | |
|  | **Import Value Index** | **Export value index** | **Import volume index** | **Export volume index** | **Mp** | **Xp** | **Brazil** | **China** | **Russian Federation** | **South Africa** |
| **1990** | 45.76528 | 42.4006532 | 32.45765 | 35.04186 | 141 | 121 | 1301.649 | 157.2875 |  | 128.7732111 |
| **1991** | 39.68682 | 41.8289118 | 31.74946 | 35.75121 | 125 | 117 | 1051.255 | 40.64384 |  | 70.04572623 |
| **1992** | 45.76334 | 46.3138844 | 38.45659 | 39.58452 | 119 | 117 | 1018.29 | 87.70505 | 41.28147293 | 16.52646167 |
| **1993** | 44.22965 | 50.9012655 | 44.67642 | 45.44756 | 99 | 112 | 234.405 | 121.3907 | 44.78034397 | 112.9097825 |
| **1994** | 52.09858 | 59.0425042 | 54.26936 | 51.79167 | 96 | 114 | 775.1761 | 353.7318 | 74.21099122 | 112.6778343 |
| **1995** | 67.36209 | 72.2758517 | 67.36209 | 66.92208 | 100 | 108 | 327.5357 | 263.7829 | 85.29680637 | 78.20521095 |
| **1996** | 73.64143 | 78.116203 | 70.80907 | 75.84097 | 104 | 103 | 114.0227 | 121.8733 | 64.41819377 | 101.2657761 |
| **1997** | 80.41453 | 82.6066028 | 78.07236 | 70.60393 | 103 | 117 | 157.5974 | 175.6669 | 76.5379771 | 141.6109797 |
| **1998** | 83.41902 | 78.8993683 | 91.66926 | 73.73773 | 91 | 107 | 172.9541 | 302.264 | 90.53373673 | 393.1076798 |
| **1999** | 91.1812 | 84.1606633 | 94.98042 | 83.32739 | 96 | 101 | 257.8007 | 251.3475 | 69.01948142 | 727.8449885 |
| **2000** | 100 | 100 | 100 | 100 | 100 | 100 | 93.67579 | 201.062 | 63.50415696 | 453.1923984 |
| **2001** | 97.80505 | 102.316461 | 101.4575 | 108.501 | 96.4 | 94.3 | 115.0086 | 193.7838 | 55.760214 | 420.2510676 |
| **2002** | 109.693 | 116.212396 | 105.8506 | 126.5266 | 103.63 | 91.8481999 | 83.25869 | 151.6055 | 69.44161367 | 367.9447994 |
| **2003** | 140.8261 | 139.131368 | 130.4157 | 133.9343 | 107.9825 | 103.880314 | 77.49424 | 135.4722 | 108.4367653 | 400.4470738 |
| **2004** | 193.6525 | 180.863299 | 152.6273 | 155.4895 | 126.8794 | 116.318645 | 112.2486 | 135.356 | 176.4762197 | 184.2320455 |
| **2005** | 277.2942 | 235.058153 | 195.8328 | 189.0376 | 141.5974 | 124.344632 | 79.96961 | 124.2835 | 253.4787895 | 167.8306215 |
| **2006** | 346.2732 | 287.422633 | 218.1514 | 211.2889 | 158.7307 | 136.033027 | 54.59661 | 171.1901 | 192.6242502 | 102.5822284 |
| **2007** | 445.1805 | 354.320624 | 248.1972 | 242.0693 | 179.3657 | 146.371537 | 37.70191 | 211.2845 | 237.0600227 | 121.9215001 |
| **2008** | 623.0851 | 459.725149 | 313.2395 | 283.211 | 198.9165 | 162.326035 | 29.12202 | 255.3596 | 333.0304094 | 182.59423 |
| **2009** | 499.1998 | 389.125587 | 324.6564 | 266.3539 | 153.7625 | 146.093431 | 154.4822 | 280.4856 | 338.6950862 | 244.136068 |
| **2010** | 679.7614 | 534.108397 | 398.2751 | 334.7928 | 170.6764 | 159.534027 | 82.04561 | 221.0794 | 240.9581016 | 177.0091072 |
| **2011** | 901.4671 | 714.74845 | 436.868 | 384.8991 | 206.3477 | 185.697608 | 62.34771 | 298.6675 | 192.4903804 | 194.3616342 |
| **2012** | 950.4393 | 700.408454 | 461.9868 | 377.9328 | 205.7287 | 185.326212 | 78.85474 | 331.1169 | 193.2962684 | 145.5356139 |
| **2013** | 903.282 | 742.928128 | 460.7185 | 409.8936 | 196.0594 | 181.249036 | 57.95938 | 290.7681 | 145.7649421 | 118.3533444 |
| **2014** | 898.4541 | 761.441742 | 476.6815 | 430.588 | 188.481 | 176.837658 | 72.84541 | 406.6723 | 178.0271484 | 98.27250794 |
| **2015** | 764.9635 | 632.269428 | 532.7482 | 422.4718 | 143.5882 | 149.659541 | 138.1504 | 670.4821 | 292.7309046 | 171.4886041 |
| **2016** | 701.9182 | 624.22498 | 528.6066 | 434.5243 | 132.7865 | 143.657083 | 170.0133 | 733.8944 | 285.2157933 | 169.8717585 |
| **2017** | 873.2524 | 706.102795 | 593.0663 | 462.2487 | 147.2436 | 152.753877 | 184.6767 | 597.1421 | 387.0649809 | 175.4105866 |
| **2018** | 998.5153 | 766.36084 | 610.9119 | 478.8353 | 163.4467 | 160.046866 | 153.7446 | 540.8712 | 356.9355285 | 200.9327852 |

**GTOT of Brazil with BRICS**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Values for Brazil** | | | | | | **GTOT=((M/Mp)/(X/Xp))\*100** | | | |
|  | **Import Value Index** | **Export value index** | **Import volume index** | **Export volume index** | **Mp** | **Xp** | **China** | **India** | **Russian Federation** | **South Africa** |
| **1990** | 38.41754718 | 57.02724487 | 25.78358871 | 57.60327765 | 149 | 99 | 35.40663 | 7.116157 |  | 36.13091 |
| **1991** | 39.14242587 | 57.40229752 | 30.58002021 | 56.83395794 | 128 | 101 | 26.1718 | 11.37315 |  | 32.11322 |
| **1992** | 39.34488022 | 64.97705389 | 32.24990182 | 64.97705389 | 122 | 100 | 10.20611 | 7.943134 | 131.3262 | 35.84791 |
| **1993** | 47.31325846 | 69.99070537 | 43.01205314 | 72.90698477 | 110 | 96 | 17.57709 | 45.92446 | 71.00821 | 55.00123 |
| **1994** | 61.39586052 | 79.04987873 | 58.47224811 | 74.5753573 | 105 | 106 | 24.1565 | 11.90687 | 105.0851 | 109.2776 |
| **1995** | 92.31658573 | 84.37450675 | 86.53957395 | 72.15855752 | 106.6756 | 116.9293 | 38.05497 | 47.2192 | 35.49957 | 123.9598 |
| **1996** | 97.16557077 | 86.6249145 | 89.93359859 | 74.08314568 | 108.0415 | 116.9293 | 121.6555 | 117.5251 | 95.6856 | 161.3018 |
| **1997** | 109.547569 | 96.1454238 | 106.5973473 | 80.84331515 | 102.7676 | 118.9281 | 140.0374 | 173.9568 | 56.53216 | 136.9283 |
| **1998** | 103.424779 | 92.78106058 | 105.5583489 | 82.89031072 | 97.9788 | 111.9323 | 143.1545 | 173.3314 | 56.32528 | 153.9069 |
| **1999** | 88.27383226 | 87.10768901 | 92.92702424 | 88.93653603 | 94.9926 | 97.9436 | 143.7934 | 60.0546 | 46.50033 | 80.57689 |
| **2000** | 100 | 100 | 100 | 100 | 100 | 100 | 112.6045 | 124.7894 | 134.9267 | 75.36145 |
| **2001** | 99.55425352 | 105.7470305 | 102.9337641 | 109.5298278 | 96.7168 | 96.5463 | 69.71412 | 189.8458 | 42.03449 | 67.31887 |
| **2002** | 84.78817663 | 109.6514989 | 90.59565626 | 118.9776198 | 93.5897 | 92.1614 | 60.70178 | 86.34 | 33.62944 | 37.41074 |
| **2003** | 86.76385327 | 132.809617 | 87.34202911 | 137.6759098 | 99.338 | 96.4654 | 46.00755 | 85.19065 | 35.93473 | 26.75199 |
| **2004** | 113.2840636 | 175.3986382 | 103.7270362 | 163.961613 | 109.2136 | 106.9754 | 66.78804 | 83.4681 | 47.73531 | 25.31932 |
| **2005** | 132.3730629 | 215.0423902 | 109.0162473 | 179.3306284 | 121.4251 | 119.9139 | 77.36479 | 104.3951 | 24.44421 | 24.59983 |
| **2006** | 163.425427 | 250.017689 | 125.9354621 | 185.3126376 | 129.7692 | 134.9167 | 98.85609 | 163.2164 | 28.45834 | 30.90828 |
| **2007** | 215.9587983 | 291.4590095 | 153.7487479 | 195.4837169 | 140.4622 | 149.0963 | 124.6379 | 240.3934 | 48.51812 | 31.53875 |
| **2008** | 310.9949662 | 359.1181972 | 181.7614124 | 190.6581226 | 171.1007 | 188.3571 | 133.5504 | 355.9498 | 78.83351 | 48.56428 |
| **2009** | 227.9496003 | 277.5721758 | 149.9170503 | 170.17045 | 152.0505 | 163.1142 | 81.26535 | 68.82871 | 52.80969 | 36.89257 |
| **2010** | 326.6141684 | 366.3262511 | 206.7427115 | 186.330266 | 157.981 | 196.6005 | 103.4642 | 151.1751 | 57.25724 | 71.57511 |
| **2011** | 404.076858 | 464.5228769 | 223.8221984 | 191.7912256 | 180.5348 | 242.2024 | 99.27059 | 254.8886 | 93.68406 | 72.79428 |
| **2012** | 397.9973808 | 440.0993126 | 218.382457 | 191.1520141 | 182.2479 | 230.2352 | 104.9539 | 114.2321 | 112.2492 | 60.72597 |
| **2013** | 427.2567101 | 439.1117638 | 237.2071318 | 196.9911761 | 180.1197 | 222.9094 | 100.3034 | 251.3643 | 111.353 | 48.49595 |
| **2014** | 407.8155865 | 408.3911326 | 230.9562995 | 193.4425719 | 176.5769 | 211.1175 | 109.932 | 165.7887 | 94.18441 | 71.39256 |
| **2015** | 305.3915317 | 346.7673059 | 196.2593419 | 209.4218866 | 155.6061 | 165.5831 | 91.80376 | 126.1833 | 95.8959 | 50.66729 |
| **2016** | 244.5484374 | 336.0651261 | 172.58792 | 216.3188566 | 141.695 | 155.3564 | 72.91202 | 86.09896 | 96.35016 | 26.3916 |
| **2017** | 268.6464238 | 395.0354181 | 182.2027171 | 230.9874834 | 147.4437 | 171.0203 | 66.73257 | 73.3617 | 112.1056 | 37.54347 |
| **2018** | 321.5444127 | 435.2213298 | 202.9333552 | 241.9994579 | 158.4483 | 179.8439 | 61.39601 | 106.3312 | 231.3395 | 55.20135 |

**GTOT of China with BRICS**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Values for China** | | | | | | **GTOT=((M/Mp)/(X/Xp))\*100** | | | | |
|  | **Import Value Index** | **Export value index** | **Import volume index** | **Export volume index** | **Mp** | **Xp** | **Brazil** | **India** | **Russian Federation** | **South Africa** |
| **1992** | 35.8006 | 34.08466 | 36.90783 | 34.08466 | 97 | 100 | 826.7932 | 117.7555 | 155.594 | 106.8118 |
| **1993** | 46.18471 | 36.81497 | 48.10907 | 37.95357 | 96 | 97 | 453.8039 | 162.3937 | 186.9716 | 167.5948 |
| **1994** | 51.36254 | 48.5572 | 52.41076 | 48.5572 | 98 | 100 | 298.127 | 57.29641 | 225.6187 | 149.8354 |
| **1995** | 58.69552 | 59.70233 | 56.97037 | 56.85936 | 03.0281 | 105 | 165.3496 | 52.93871 | 232.5626 | 110.2458 |
| **1996** | 61.74586 | 60.61243 | 61.06712 | 56.64713 | 101.1115 | 107 | 205.8502 | 110.9357 | 322.0776 | 103.3398 |
| **1997** | 63.18837 | 73.35064 | 64.53993 | 67.91726 | 97.9059 | 108 | 157.2664 | 105.9989 | 221.1402 | 109.5488 |
| **1998** | 62.35113 | 73.71982 | 66.27822 | 70.88444 | 94.0748 | 104 | 115.4128 | 98.48435 | 218.7679 | 85.96971 |
| **1999** | 73.6757 | 78.22177 | 75.88994 | 77.4473 | 97.0823 | 101 | 115.0242 | 73.93484 | 293.4037 | 101.9005 |
| **2000** | 100 | 100 | 100 | 100 | 100 | 100 | 132.5199 | 86.72042 | 258.3515 | 102.3326 |
| **2001** | 108.2342 | 106.7796 | 108.3426 | 109.6942 | 99.9 | 97.343 | 169.3028 | 87.3286 | 286.1156 | 109.0216 |
| **2002** | 131.1727 | 130.6549 | 128.2265 | 138.6582 | 102.2976 | 94.228 | 188.6365 | 78.41153 | 219.9406 | 89.16912 |
| **2003** | 183.4293 | 175.8518 | 177.1833 | 182.7852 | 103.5252 | 96.2068 | 253.3198 | 118.1745 | 149.9251 | 84.25898 |
| **2004** | 249.4085 | 238.0894 | 215.6811 | 226.8347 | 115.6376 | 104.9616 | 214.2606 | 117.4051 | 120.9896 | 91.02292 |
| **2005** | 293.2812 | 305.756 | 240.627 | 283.6442 | 121.882 | 107.7956 | 183.0798 | 96.67812 | 106.3748 | 79.59098 |
| **2006** | 351.7229 | 388.8308 | 280.1713 | 346.172 | 125.5385 | 112.323 | 156.5087 | 63.06391 | 99.20346 | 63.37508 |
| **2007** | 424.8951 | 489.7437 | 318.6987 | 414.856 | 133.3219 | 118.0515 | 142.4858 | 53.8137 | 61.10604 | 78.71256 |
| **2008** | 503.3094 | 574.1075 | 330.8628 | 450.2959 | 152.1203 | 127.4956 | 133.0816 | 53.75731 | 60.39089 | 89.81653 |
| **2009** | 447.0292 | 482.182 | 340.5164 | 403.193 | 131.2798 | 119.5909 | 182.4759 | 42.11204 | 110.7012 | 107.5165 |
| **2010** | 620.488 | 633.12 | 415.3299 | 516.4926 | 149.3964 | 122.5806 | 127.8004 | 41.80608 | 71.80377 | 113.1737 |
| **2011** | 774.7991 | 761.781 | 451.7592 | 561.8923 | 171.5071 | 135.5742 | 130.0735 | 36.55877 | 82.01453 | 189.8688 |
| **2012** | 808.0938 | 822.1065 | 467.897 | 596.8392 | 172.7076 | 137.7434 | 124.7902 | 31.4441 | 79.90319 | 232.4151 |
| **2013** | 866.5698 | 886.4279 | 510.4327 | 647.4203 | 169.7716 | 136.9169 | 121.9959 | 28.25821 | 64.50986 | 231.8619 |
| **2014** | 870.6774 | 939.9136 | 525.9376 | 684.4706 | 165.5477 | 137.3198 | 122.8018 | 25.02763 | 64.27585 | 235.4824 |
| **2015** | 746.3933 | 912.2956 | 515.2485 | 680.5905 | 144.8608 | 134.0447 | 148.8292 | 21.24472 | 88.54474 | 175.9382 |
| **2016** | 705.6696 | 841.7359 | 534.2754 | 690.2462 | 132.0798 | 121.9472 | 192.6509 | 18.5994 | 79.76864 | 159.7228 |
| **2017** | 819.3762 | 908.2334 | 581.9338 | 738.9238 | 140.8023 | 122.913 | 177.4724 | 20.97028 | 84.3592 | 143.7659 |
| **2018** | 949.1201 | 997.8592 | 619.3311 | 769.4381 | 153.2492 | 129.6867 | 193.531 | 20.74878 | 103.8066 | 141.0975 |

**GTOT of Russia with BRICS**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Values for Russian Federation** | | | | | | **GTOT=((M/Mp)/(X/Xp))\*100** | | | |
|  | **Import Value Index** | **Export value index** | **Import volume index** | **Export volume index** | **Mp** | **Xp** | **Brazil** | **China** | **India** | **South Africa** |
| **1996** | 151.781 | 85.38745 |  |  |  |  |  |  |  |  |
| **1997** | 160.4543 | 82.73114 |  |  |  |  |  |  |  |  |
| **1998** | 129.3188 | 70.87677 |  |  |  |  |  |  |  |  |
| **1999** | 88.13027 | 71.93073 |  |  |  |  |  |  |  |  |
| **2000** | 100 | 100 | 100 | 100 | 100 | 100 | 149.9013 | 18.08346 | 51.44807 | 210.353 |
| **2001** | 119.8431 | 97.00189 | 120.88 | 101.8927 | 99.1421 | 95.2 | 463.7115 | 28.25282 | 46.75349 | 1244.116 |
| **2002** | 135.8968 | 102.1593 | 138.5056 | 111.5491 | 98.1164 | 91.5824 | 529.2833 | 32.78111 | 29.95847 | 214.4979 |
| **2003** | 169.5644 | 129.4155 | 166.1134 | 125.7211 | 102.0775 | 102.9386 | 580.6568 | 40.4062 | 21.5565 | 1640.356 |
| **2004** | 217.0701 | 174.428 | 198.3423 | 139.0062 | 109.4422 | 125.4822 | 425.9933 | 53.85261 | 29.84349 | 1664.3 |
| **2005** | 279.5997 | 232.1156 | 244.0087 | 146.576 | 114.586 | 158.3585 | 535.2772 | 76.94585 | 46.84682 | 803.5755 |
| **2006** | 366.1919 | 289.0054 | 305.8166 | 153.3619 | 119.7423 | 188.4466 | 647.5403 | 128.9587 | 52.04591 | 1248.433 |
| **2007** | 498.1633 | 337.4206 | 389.9057 | 160.4424 | 127.7651 | 210.3064 | 598.5028 | 264.8857 | 71.02847 | 3092.945 |
| **2008** | 650.5751 | 449.0075 | 454.6396 | 158.5015 | 143.0969 | 283.2828 | 453.0959 | 325.479 | 64.86763 | 2174.578 |
| **2009** | 427.54 | 288.8502 | 303.0189 | 155.1984 | 141.0935 | 186.1168 | 427.5207 | 180.9018 | 33.87084 | 216.1056 |
| **2010** | 554.2196 | 381.4325 | 386.237 | 166.4846 | 143.4921 | 229.1097 | 376.9163 | 314.4501 | 63.30026 | 1651.183 |
| **2011** | 721.8381 | 496.9971 | 461.0914 | 163.2245 | 156.5499 | 304.4869 | 404.9926 | 269.321 | 115.0787 | 786.9736 |
| **2012** | 747.7286 | 503.895 | 490.8835 | 162.8838 | 152.323 | 309.3586 | 295.9583 | 293.9511 | 81.63049 | 499.3933 |
| **2013** | 760.7084 | 496.8305 | 487.2241 | 167.8163 | 156.1311 | 296.0562 | 333.7166 | 283.0197 | 83.94371 | 517.8545 |
| **2014** | 686.2757 | 473.0009 | 447.6078 | 169.4244 | 153.3208 | 279.181 | 315.6565 | 247.4916 | 131.3449 | 439.7519 |
| **2015** | 430.2505 | 325.0588 | 330.9212 | 180.5163 | 130.016 | 180.0718 | 210.9122 | 172.0521 | 68.88707 | 295.4343 |
| **2016** | 426.849 | 268.2109 | 369.1807 | 182.1466 | 115.6206 | 147.2501 | 139.0774 | 196.9961 | 55.37654 | 336.3589 |
| **2017** | 531.3718 | 336.1839 | 430.97 | 189.2302 | 123.2967 | 177.6587 | 175.6465 | 196.9219 | 62.56829 | 454.9789 |
| **2018** | 554.3756 | 421.895 | 438.1508 | 197.4658 | 126.5262 | 213.6547 | 161.4627 | 157.4008 | 70.25498 | 463.2265 |

**GTOT of South Africa with BRICS**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Values for South Africa** | | | | | | **GTOT=((M/Mp)/(X/Xp))\*100** | | | |
|  | **Import Value Index** | **Export value index** | **Import volume index** | **Export volume index** | **Mp** | **Xp** | **Brazil** | **China** | **India** | **Russian Federation** |
| **1992** | 66.46809 | 78.17868 | 57.30008 | 65.69637 | 116 | 119 | 271.7834 | 134.6952 | 562.2704 | 12.41547 |
| **1993** | 67.32109 | 80.78552 | 61.20099 | 70.86449 | 110 | 114 | 145.6524 | 173.23 | 183.9192 | 22.24261 |
| **1994** | 78.67508 | 84.40896 | 71.5228 | 71.53301 | 110 | 118 | 97.49961 | 237.2321 | 89.51704 | 92.73338 |
| **1995** | 102.8658 | 92.89597 | 88.67536 | 75.52646 | 116.0027 | 122.9979 | 88.11057 | 186.4629 | 109.2485 | 57.54862 |
| **1996** | 101.64 | 97.45856 | 94.98876 | 84.74886 | 107.0021 | 114.9969 | 102.5961 | 330.3536 | 113.3659 | 53.89947 |
| **1997** | 111.1231 | 103.482 | 104.832 | 91.57878 | 106.0011 | 112.9978 | 135.8448 | 409.7265 | 182.9055 | 80.41048 |
| **1998** | 98.47449 | 87.92316 | 99.4675 | 85.3631 | 99.0017 | 102.999 | 125.7843 | 475.4614 | 151.8304 | 45.31234 |
| **1999** | 89.90066 | 89.07381 | 91.73272 | 89.07333 | 98.0028 | 100.0005 | 145.9921 | 308.8084 | 64.82545 | 64.44189 |
| **2000** | 100 | 100 | 100 | 100 | 100 | 100 | 145.8934 | 297.1134 | 68.16905 | 250.7418 |
| **2001** | 95.12713 | 97.58196 | 101.0915 | 101.8601 | 94.1 | 95.8 | 260.236 | 234.9083 | 68.3003 | 137.3453 |
| **2002** | 98.55868 | 99.13284 | 106.3332 | 99.88316 | 92.6885 | 99.2488 | 282.3113 | 323.256 | 85.46288 | 239.2785 |
| **2003** | 133.8542 | 121.6743 | 116.462 | 98.31212 | 114.9337 | 123.7633 | 433.266 | 267.716 | 117.8393 | 52.18275 |
| **2004** | 180.0498 | 153.9062 | 132.7588 | 103.8025 | 135.6218 | 148.2684 | 445.5193 | 370.1919 | 136.1133 | 44.78453 |
| **2005** | 209.8141 | 172.1832 | 147.1982 | 108.8373 | 142.5385 | 158.2024 | 457.5453 | 401.0373 | 104.5605 | 156.0127 |
| **2006** | 265.0769 | 194.0269 | 180.2022 | 111.9022 | 147.0998 | 173.3898 | 405.2493 | 384.5379 | 242.6838 | 308.9689 |
| **2007** | 297.8602 | 232.7456 | 190.6672 | 122.5868 | 156.2199 | 189.8618 | 387.7464 | 249.5853 | 160.0856 | 454.8337 |
| **2008** | 342.2798 | 269.4265 | 204.9591 | 129.5951 | 166.9991 | 207.8987 | 313.6652 | 286.2358 | 123.5304 | 157.0033 |
| **2009** | 249.3804 | 205.7059 | 163.0244 | 101.5865 | 152.9712 | 202.4933 | 462.3491 | 194.3609 | 115.9778 | 315.2526 |
| **2010** | 326.1002 | 304.6636 | 185.3717 | 122.6211 | 175.9169 | 248.4593 | 272.6938 | 200.6434 | 132.5575 | 53.6172 |
| **2011** | 419.0268 | 362.9212 | 218.729 | 129.4935 | 191.5735 | 280.2621 | 300.2446 | 166.3381 | 174.2529 | 83.29497 |
| **2012** | 428.2005 | 332.2082 | 237.0785 | 126.6398 | 180.6155 | 262.3253 | 306.8779 | 205.6835 | 178.5425 | 68.71352 |
| **2013** | 425.4252 | 320.6933 | 242.1328 | 132.7364 | 175.6991 | 241.6016 | 335.8256 | 182.4822 | 246.0514 | 128.7807 |
| **2014** | 410.6746 | 310.3203 | 246.4642 | 137.1073 | 166.6265 | 226.3338 | 293.4942 | 239.1018 | 164.301 | 169.1816 |
| **2015** | 352.4209 | 270.1599 | 260.6425 | 142.862 | 135.2124 | 189.1055 | 317.0241 | 295.3706 | 185.0899 | 232.0631 |
| **2016** | 308.4498 | 254.1922 | 249.2897 | 141.706 | 123.7315 | 179.38 | 536.7213 | 288.0894 | 142.816 | 131.8063 |
| **2017** | 341.2221 | 296.6575 | 250.9863 | 144.2538 | 135.9525 | 205.6497 | 580.4401 | 265.6789 | 144.3183 | 167.7258 |
| **2018** | 382.5725 | 313.4111 | 263.6242 | 147.4209 | 145.1204 | 212.5961 | 468.9198 | 292.7474 | 127.2064 | 185.758 |

Refer to attached excel for calculations of D-TOT and Product Basket