

**Exploration of Revealed Comparative Advantage in Brazil and
India: A Disaggregated Level Analysis with special focus on
Bilateral Trade**

*Dissertation submitted to Jawaharlal Nehru University
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MASTER OF PHILOSOPHY

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DECLARATION

I declare that the thesis entitled "Exploration of Revealed Comparative Advantage in Brazil and India: A Disaggregated Level Analysis with special focus on Bilateral Trade" submitted by me for the award of the degree of Master of Philosophy of Jawaharlal Nehru University is my own work. The thesis has not been submitted for any other degree of this University or of any other university.

A handwritten signature in black ink, appearing to read 'Abhishikta', is written above the name.

ABHISHIKTA ACHARYYA

CERTIFICATE

We recommend that this thesis be placed before the examiners for evaluation.

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PROF ABDUL NAFEY
Chairperson, CCUS&LAS

A handwritten signature in black ink, appearing to read 'Abdul Nafey', is written above the name, followed by the date '25/7/07'.

PROF ABDUL NAFEY
Supervisor

Dedicated

To the two most precious "ladies" in my life,

My Ma

&

My Daughter Jhilik

Acknowledgement

As I am on the verge of completion of my maiden effort of writing a dissertation for M. Phil, I passionately remember the persons who have directly and indirectly helped me in my pursuit. Firstly, I must acknowledge my little daughter, Aalokita(Jhilik). As she is the one who has done the maximum sacrifice as the most understanding kid when her mother has been busy studying. It was a difficult decision to pursue academics after a professional break and that too with a little baby to look after. If my husband Bibek was not constantly pursuing me to resume my study again, I would not have thought of doing MPhil. My parents, like always have dedicated themselves for rendering all the service so that their daughter can concentrate only on studies. And overall, I am one of the luckiest ones who have got such supportive and academically oriented in-laws.

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Preface

Revealed Comparative Advantage is a very popular and widely used methodology to identify the export potential of a country. The dissertation attempts to analyse India and Brazil's revealed comparative advantage in order to compare their export potential in the world market as well as to identify the potential products for bilateral trade. Since, bilateral trade between India and Brazil is meagre, less than \$ 2 billion according to 2005 data, despite of several measures taken by Govt of India under "Focus LAC", it is a coveted virgin area for a trade economist to find out at disaggregated product level where the advantage lies for both the countries so that focus can be given on those items to boost up trade. Since, India and Brazil both are developing countries, their trade would come under South-South trade which means trade between developing countries and it is believed that trade between two developing countries is most welcome as it minimizes the nuances of imperial trade and contains less distortion in terms of subsidies etc. Also, this will have less adverse effect on terms of trade.

Besides, India and Brazil are the partner countries in trade negotiation under WTO (World Trade Organisation). They are protecting the interests of all the developing countries in that multilateral forum. Hence the products for which they both have advantages would be the common interest point. They would jointly try to protect their interest for those products in WTO negotiation table. Brazilian President Lula said, "India and Brazil need to create a world market by supporting each other." (5 June, 2007)

Since, Doha Development Round of WTO is in a stalemate, all the countries are trying to boost up trade by different Free Trade Agreements. Negotiation is going on for IBSA (India-Brazil-South Africa) Free Trade Agreement. Recently Brazilian President Lula Da Silva visited India and talked of strategic partnership between India and Brazil. According to him, India and Brazil should target \$ 10 billion trade by 2010.¹ In the light of impending Free Trade agreement between India and Brazil, also it is necessary to find out for which products tariff should be reduced and which products should be maintained

¹ The Hindu Business Line, 5th June, 2007

as sensitive items as tariff reduction/elimination between India and Brazil may threaten domestic industry due to high competition. Sensitive product identification in a scientific way is always desirable before jumping into FTA and then negotiating tariff on some vague beliefs and selective lobbying by different industries. Hence, this dissertation is an attempt to identify products for tariff liberalization under bilateral trade negotiation between India and Brazil and also for preparing a starting point before deciding any Product Specific Rules of Origin² etc, which depends of the sensitivity of the items.

However, this dissertation is a maiden and modest effort of the present researcher towards fulfilling the criteria of dissertation writing for M. Phil. The dissertation was prepared within a year including conceiving idea, writing the synopsis etc. The data used here is taken mainly from CMIE, Indiatrades and Ministry of Commerce, India, as those were more accessible for the researcher. Although the CMIE data and World Bank Data have some gap, the CMIE data was more available and it came handy. However, for measurement purpose, utmost care was taken to take the export and import data from same source, so that it matches. WITS (World Bank) data was taken for analyzing the tariff. Some research questions obviously remained unanswered in the dissertation due to paucity of time, which the researcher desires to find out in the future course of time through detailed survey and speaking with the traders and transporters. The transport cost analysis and non-tariff barriers was not touched upon in the present study.

In order to give an idea of the work attempted here and to explain the logical flow of different chapters, let us summarise the theme of the chapters one by one.

In the first chapter, the concept of RCA has been explained, with justification of RCA as a methodology in empirical trade analysis. The chapter discusses the various methods of measuring RCA in the existing trade literature and strength and shortcomings of RCA. It has also shown how RCA has been used in order to analyse different perspectives of

² Rules of Origin is determined to see whether in any FTA the goods which are coming under zero/lower duty are actually originating in the partner country. It has two aspects: % of value addition in the country and change of tariff heading in the country due to value addition. For the sensitive items, there is agreed upon products specific rules of origin which is more stringent/liberal than the general Rules of Origin to help the domestic industry.

trade in different articles by the modern time scholars. In the end of the chapter, it has been justified why RCA as a tool would be used in the present dissertation to analyse the potential trade between India and Brazil and also to compare the prospect of export of India and Brazil in the world market.

In the following Chapter (Chapter 2), the RCA of India and Brazil at HS³-two digit level was calculated. Then, under each two digit level product, it is calculated that India and Brazil has how many items with Revealed Comparative Advantage. Then each 99 products at two digit level is analysed in a comparative framework. For each product category it is analysed that at six digit level which are the products where only Brazil has $RCA > 1$, which are the products where only India has $RCA > 1$ and which are the products where both have advantages and their RCA values were compared to know who is in more advantageous position.

Chapter 3 attempts to examine the correspondence between Brazilian demand and Indian supply of products in the bilateral trade perspective. First, India's major exported items have been presented in a pie chart showing their percentage of contribution in total Indian export to Brazil. The latest export figures of all the commodities are presented in a tabular form. Then Export Specialisation Index has been calculated for all these products to see whether these exports are sufficient according to Brazilian demand considering Brazil's import of those products from the world. These Export Specialisation Index has been compared with RCA Index of India to analyse whether India has export advantage in Brazilian market for the products where India has revealed comparative advantage in the world market. Then, productwise we have analysed the tariff structure of Brazil and the major exporters of products in Brazil in an attempt to explain the discrepancy of direction of RCA and ES in Brazil. In simple language, it is to analyse the reasons why India could not have Export Specialisation in Brazilian market although India has

³ HS Code is a Product classification under Harmonised System which is followed by all the countries to disclose their trade figures including export and import. The HS code is available for aggregate level (two digit) and further disaggregated into four-digit level and six digit level. The individual countries apply their tariff in further disaggregated level at eight digit level. Earlier, SITC code was used for recording trade data. In the dissertation we have followed HS code everywhere either at two digit level or at six digit level for disaggregated analysis

revealed comparative advantage in world market. Products have been identified for which tariff reduction should be recommended.

An inter-temporal comparison between ES in 2002 and 2004 has been done to check whether there has been any improvement/deterioration in Export Specialisation while exporting to Brazil. Then, productwise growth rate has been calculated to identify the dynamic products. Since, growth figures can be deceptive as from a very low base a product can easily grow at a very high rate, it is attempted to compare the growth with latest RCA index to identify the potential export products to Brazil. This gives our analysis a holistic view as it considers both the static and dynamic scenario.

Chapter 4 identifies opportunities and threats in Indo-Brazil trade. As India Government is in a spree of signing and negotiating FTA with different countries and particularly in the light of ongoing negotiations of IBSA Free Trade Agreement, it is imperative to identify where the opportunities and threats lie between India and Brazil under any such regional trade agreements. Rank Correlation Coefficient between India and Brazil's RCA has been calculated with the use of SPSS package. It has been analysed from the results for which product India and Brazil has competitive relation and for which they are complementary in nature. The competitive products should be considered as sensitive items for any bilateral trade negotiation as their import without tariff may endanger the domestic industry. On the other hand, the complementary products trade should be encouraged through tariff elimination to boost up bilateral trade.

The stage of industrialization of India and Brazil has been compared by calculating the standard deviation of RCA indices of the products. Then the specialization of India and Brazil according to factor content has been identified by categorizing the products into product categories according to factor intensities and then it goes on testing whether India and Brazil has advantage in those product categories.

The summary and conclusion chapter tries to collate the findings of each chapter. A survey was attempted to identify the qualitative aspects of India's export of pharma

products to Brazil. However, response was not enough due to lack of rigorous follow up. Also resource constraint was there to travel extensively and meet up the exporters. However, the limited responses has given some direction to the study. The researcher hopes that the quantitative findings of the present study would be better analysed and supplemented by the qualitative analysis and policy recommendation could be formulated for boosting up export after a detailed discussion with the stakeholders of Indo-Brail trade.

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List of Abbreviations

RCA	Revealed Comparative Advantage
ES	Export Specialisation
WTO	World Trade Organisation
FTA	Free Trade Agreements
RTA	Regional Trade Agreements

Chapter 1

EVOLUTION OF RCA

In this chapter, the concept of RCA has been explained, with justification of RCA as a methodology in empirical trade analysis. The chapter discusses the various methods of measuring RCA in the existing trade literature and strength and shortcomings of RCA. It has also shown how RCA has been used in order to analyse different perspectives of trade in different articles written by the modern time scholars. In the end of the chapter, it has been justified why RCA as a tool would be used in the present dissertation to analyse the potential trade between India and Brazil and also to compare the prospect of export of India and Brazil in the world market.

Explaining the RCA / Justification of use of RCA in Trade

The Classical theory of comparative advantage predicted that gains from exchange maximize welfare and free trade would lead to world economic prosperity.¹ The determinants of comparative advantage, however, differed among trade theories. The Ricardian theory, for example, explained comparative advantage from costs and technological differences, but the Heckscher-Ohlin-Samuelson theory considered factor price differences. The Neo-Factor-Proportion theory looked at factor efficiency, but the technology gap and product cycle theory examined technological innovation and such soft technological change as learning-by-doing as the cause of comparative advantage differences. Recent studies, for example Memedovic (1994), included the 'type of state' (class base, administrative capacity and mode of intervention) and argued that the help of the government can bring about changes in comparative advantage. The most recent studies have identified several other factors as explaining trade specialization. These factors include those related to inter-country differences in demand and national consumer preferences (Davis and Weinstein 1996; Lundback and Torstensson 1998), product differentiation and international technology differences (Trefler 1995), and

¹ Comparative advantage is not the same thing as international competitiveness or competitive advantage (Krugman, 1996). The notion of comparative advantage has little significance from a macroeconomic perspective. However, it is meaningful to talk about international competitiveness both on the macro and micro levels

differences in country size, or market-size effect, and industry characteristics such as factor intensities (e.g., Torstensson 1998). While a smaller country is likely to specialize in standardized products, a large country is likely to be a net exporter in scale-intensive industries based on economies of scale and trade costs (Helpman and Krugman 1985).

Comparative advantage faces a measurement problem, as it is defined in terms of autarkic (closed economy) price relationships that are not observable. Trade statistics reflect only post-trade situations. The “revealed comparative advantage” (RCA) approach, pioneered by Balassa (1965, 1977, 1979 and 1986), assumed that the true pattern of comparative advantage can be observed from post-trade data.

Measuring RCA

The concept of revealed comparative advantage (Balassa 1965, 1977, 1979, 1986) pertains to the relative trade performance of individual countries in particular commodities. On the assumption that the commodity pattern of trade reflects the inter-country differences in relative costs as well as in non-price factors, this is assumed to “reveal” the comparative advantage of the trading countries. The factors that contribute to movements in RCA are economic: structural change, improved world demand and trade specialization.

In this dissertation we will use Balassa’s (1965) measure of relative export performance by country and industry/commodity, defined as a country’s share of world exports of a commodity divided by its share of total world exports. The index for country *i* commodity *j* is calculated as follows:

$$RCA_{ij} = (X_{ij}/X_{wj}) / (X_i/X_w)$$

Where

X_{ij} = *i*th country’s export of commodity *j*

X_{wj} = world exports of commodity *j*

X_i = total exports of country *i*

X_w = total world exports

..... in either a designated market or in a region or for the whole world. The RCA is measured using post-trade data.

In simple language, hence, India's RCA for a particular product is the ratio of share of the product's export to India's total export and the share of that product's export in total world export. The index of revealed comparative advantage (RCA_{ij}) has a relatively simple interpretation. If it takes a value greater than unity, the country has a revealed comparative advantage in that product. Similarly, if it takes a value less than unity, the country has a revealed comparative disadvantage in that product.

Strength and Shortcomings of RCA as a Methodology

The advantage of using the comparative advantage index is that it considers the intrinsic advantage of a particular export commodity and is consistent with changes in an economy's relative factor endowment and productivity.

The disadvantage, however, is that it cannot predict future improvements in factor endowments and pursuit of appropriate trade policies by a country. However, that shortcoming can be supplemented by qualitative analysis like analyzing policies or conducting surveys.

Another problem of RCA is that the measures are effective as long as trade practices are carried in a distortion free environment. However, the trade patterns of the countries are often distorted on account of intervention of government in the form of import restrictions, export subsidies and other protectionist policies. Such anomalies in trade practices also affect effectiveness of RCA index as a sound instrument to measure comparative advantage of domestic tradable products/sectors. Several studies have proposed number of measures to remove prevailing anomalies in the trade practices on account of government intervention. For example in the study of Ferto and Hubbard (2003), uses nominal assistance coefficients (NACs) to filter the effects of possible distortions in measuring Hungarian Agri-food sector RCAs vis a vis the EU. The NC is a measure of producer's support expressed in relation to Gross arm Receipts valued at world undistorted prices. The index value of greater than 1 implies positive support, equal to 1 implies no support and less than 1 implies negative support. It has been noted that government intervention and competitiveness tend to be inversely related implying

that those product groups revealing comparative advantage would become even more competitive if trade distorted supports could be eliminated.

Greenway and Milner on the other hand, suggest the employment of a price based measure of RCA called 'implicit revealed comparative advantage' (IRCA) to get rid of the distortion caused by the post policy intervention. Vollrath suggests that the Revealed Competitiveness (RC) index is preferable since supply and demand balance is embodied in the index.

Veeramani (2005) has shown that it is possible for a country to continuously expand its exports of a product even as the RCA value suggests that the country does not have a comparative advantage in that product. The explanation is very simple: even at a highly disaggregated level, the RCA index masks important heterogeneities within the product. In other words, countries tend to specialize in different types of a given product, indicating the significance of intra-industry reallocation of resources under trade liberalization.

RCA as a Tool for Analysing Different Perspectives of Trade

RCA has been a very popular tool of trade analysis. In different scholastic articles it has been measured in different ways, each attempting to overcome its shortcomings. Let us discuss some of the excellent papers which has used it for empirically analyzing the trade patterns and future trade potentials. A majority of these studies use data on export shares. Bela Balassa was the greatest proponent of RCA. The Balassa index is used in varieties of situations to examine the competitiveness of a country in different lines of products/industries. For example, Vollrath (1991) used the index in a study to analyse specialization in trade at the global level, Balassa (1965) at the sub-global level and Dimelis and Atsios (1995) at the bilateral level for examining competitiveness.

The Balassa Index has passed through an evolutionary process. Liesner (1958) was the first to contribute to the empirical analysis in the area of RCA to examine the

competitiveness of the UK in the European Common Market. A simple measure of RCA is used in the study as the following:

$$RCAI = X_{ij} / X_{nj}$$

where X denotes exports, i for country, j for product (or industry), and n for a set of countries (e.g. any RTA).

There are difficulties in measuring comparative advantage, and the conceptualization and estimation issues remain complex even now. Balassa (1989) has observed that relative prices under autarky are not observable. Considering these factors, Balassa (1965) argues that it may not be necessary to include all constituents effecting country's comparative advantage. Instead, comparative advantage of a country is "revealed" by its observed trade patterns, and for this purpose, one may not require pre-trade relative prices which are not observable. Balassa (1965) has proposed a derived index to estimate comparative advantage from observed data, and the index is known as "Balassa Index". During the last four decade there have been attempts to develop new indices to overcome the deficiencies in the Balassa Index, but the index is still a commonly accepted measure to analyse trade data.

Balassa (1977) has undertaken an analysis of the pattern of comparative advantage of industrial countries for the period 1953 to 1971. The evidence provided in the paper supports the available evidence on trade in research intensive products, indicating the continuous renewal of the product cycle, with the US maintaining its ever increasing technological lead. Based on the standard deviation of the RCA indices for different countries an association is also seen to hold between size and diversification of exports. Balassa's results show that while the extent of export diversification tends to increase with the degree of technological development a reversal takes place at higher levels.

Bela Balassa (1979) following his earlier work (1965, 1977), considered a country's relative export performance in individual product categories to reflect its "revealed" comparative advantage within the manufacturing sector. He used Relative export performance as an indicator of comparative advantage in preference to export- import

ratios or net exports, since intercountry differences in the commodity pattern of imports are greatly influenced by the system of protection applied. This is in particular the case in developing countries, where import barriers are high and vary from commodity to commodity.

For 36 countries, ratios of “revealed” comparative advantage, calculated for the individual product categories, have been regressed on variables representing relative capital intensity, defined alternatively using a stock and a flow measure. The regression equations, shown below, have been estimated in a doublelogarithmic form, so that the value of the β coefficient for country j indicates the percentage change in the country’s comparative advantage ratio (x_{ij}) associated with a 1% change in capital intensity (k_i):

$$\text{Log } x_{ij} = \log \alpha_j + \beta_j \log k_i$$

A positive (negative) β coefficient shows that a country has a comparative advantage in capital (labor) intensive products while the numerical magnitude of the β coefficient indicates the extent of the country’s comparative advantage in capital (labor) intensive commodities human capital endowments. The empirical estimates show that intercountry differences in the structure of exports are in a large part explained by differences in physical and human capital endowments. The results lend support to the “stages” approach to comparative advantage, according to which the structure of exports changes with the accumulation of physical capital and human capital. The approach is also supported by inter-temporal comparisons for Japan, which indicate that Japanese exports have become increasingly physical capital and human capital intensive over time (Heller, 1976). The policy warns against distorting the system of incentives in favor of products in which the country has a comparative disadvantage.

In a follow up paper in 1986 Professor Balassa, set out to test the Heckscher Ohlin theory by simultaneously introducing trade flows, factor intensities, and factor endowments in an empirical investigation of the pattern of comparative advantage in manufactured goods in a multi-country model. Following Deardorfs theoretical analysis of the Heckscher-Ohlin theorem, the paper utilized data on net exports to test the hypothesis that countries relatively well-endowed with capital (labour) will export relatively capital-

intensive (labour-intensive) commodities. The findings confirmed the hypothesis. It was also shown that the pattern of trade is further affected by the policies applied.

Greenway and Milner (1993) have argued that the structure of the Balassa's original RCA index is lopsided due to exclusion of imports in the index. In order to correct export bias in the RCA index, several indices are proposed in the literature by introducing imports in the modified indices. Greenway and Milner have proposed 'own' country trade performance.

Vollrath (1991) brought structural transformation in the RCA index. He has proposed three alternative ways of measuring a country's RCA using both export and import variables. These alternative specifications of RCA are called *the relative trade advantage* (RTA), *the logarithm of the relative export advantage* ($\ln RXA$), and *the revealed competitiveness* (RC). RTA accounts for exports as well as imports. It is calculated as the difference between Relative Export Advantage (RXA) which equates the Balassa index and its counterpart Relative Import Advantage (RMA). The third measure is Revealed Competitiveness $RC = \ln RXA - \ln RMA$.

One of the advantages of presenting Vollrath's three alternative measures is that positive value of revealed comparative advantage reveal comparative/competitive advantage whereas negative values indicate comparative/competitive disadvantage. This condition is applicable to all the three alternative measures.

Yeats (1997) studies the possible distortions in trade patterns on account of discriminatory trade barriers that are characteristic of the RTAs. He uses the index of revealed comparative advantage in conjunction with the changes in the regional orientation of exports to identify any apparent inefficiencies in trade patterns for the Mercusor group of countries.

C. Y. Chow, Peter, in 1990 has examined the "revealed comparative advantage" (RCA) of the Asian NICs during the period of their rapid economic development and structural

transformation between 1966 and 1986. The scope of that paper was limited to manufactured exports to the U.S. market for the following reasons. First, exports of manufactured products from the Asian NICs have accounted for only a relatively small percentage share in the European market. However, their exports have become more and more significant in the U.S. market. The percentage share of the NICs' total manufactured exports in the United States increased more than four times, from 3.82 percent in 1966 to 15.86 percent in 1986. Moreover, for some specific product categories, such as textiles, apparel, and footwear, the NICs have obtained an oligopolistic position in the U.S. market. The United States is by far the largest export market for the NICs. Had it not been for increasing trade barriers in the United States, the market penetration of the NICs would undoubtedly have been even greater. Second, the European Community (EC), despite its common commercial policies, has applied different degrees of trade restrictions on imports from each of the Asian NICs. Hence, not all of the NICs have equal access to the EC market.' Third, Japan's imports of manufactured goods from the NICs are relatively low in comparison with the U.S. imports from the NICs. Until the recent currency appreciation, starting in September 1985, most of the trade between Japan and the NICs was rather lopsided, with the NICs importing capital/intermediate goods from Japan rather than the other way round. Therefore, to evaluate the international competitiveness of manufactured exports among Japan and the NICs, this study focused on their relative performances in the U.S. market by examining their respective RCAs. The paper concluded that RCA indices between Japan and each of the Asian NICs become less similar after the early 1970s, when Japan's export structures shifted to high-technology intensive products.

Richardson and Zhang (1999) have used the Balassa index of RCA for the U.S to analyze the patterns of variation across time, sectors and regions. They find the patterns to differ across different parts of the world, over time as also for different levels of aggregation of the export data. Differentials are accounted for by factors like geographical proximity of trading partners and per capita income with the extent of influence of these factors varying over time and across sectors/sub sectors.

Yue (2001) uses the RCA index to demonstrate the fact that China has changed its export pattern to coincide with its comparative advantage and that there are distinct differences in export patterns between the coastal regions and the interiors in China.

Štefan Bojnec(2001) used Revealed Comparative Advantage Measures for assessing Regional And Central And East European Agricultural Trade. According to the paper, Oceania, South America, the Caribbean, and, to a lesser extent, Africa have a relative revealed comparative export advantage in agricultural products. The NAFTA countries and Europe have neither a marked relative revealed comparative export advantage nor a disadvantage. A considerable relative revealed comparative export disadvantage is found for Asia and somewhat less for the CIS countries. Among the CEECs, a relative revealed comparative export advantage is found for Estonia, Lithuania, Hungary, Bulgaria, and Poland, while the analysis shows a relative revealed comparative export disadvantage for Slovenia, Slovakia, Latvia, the Czech Republic, and Romania. Trade and revealed comparative advantage indicators are distorted by trade and other policy impediments, which may enhance exports artificially through the use of export subsidies or shield domestic production using tariffs and non-tariff trade measures. The consistency testing indicates that revealed comparative advantage using export data appear to be least distorted by trade impediments.

Bender and Li (2002) examine the structural performance and shift of exports and revealed comparative advantage of the East Asian and Latin American regions over the period 1981-1997. Their paper examines, if there is a relation between changes in export pattern among different regions and shifts in comparative advantage between regions. The Vollrath (1991) index that accounts for double counting in world trade has been used for analysis.

Fertő and Hubbard (2002) assess the competitiveness of Hungarian agriculture vis-à-vis EU using four indices of revealed comparative advantage. The four indices are –original Balassa index (B), relative trade advantage (RTA), logarithm of the relative export advantage (RXA which is original Balassa index) and relative competitiveness

(difference of the log values of relative export and import advantage). The later three indices were used by Vollrath. A categorization of indices as cardinal (identifies the extent to which a country has comparative advantage/disadvantage), ordinal (provides a ranking of products by degree of comparative advantage), and dichotomous (a binary type demarcation of products based on comparative advantage/disadvantage) has been undertaken in their study. The results show that the indices were less cardinal in identifying whether Hungary has a comparative advantage in a particular product group, but were useful as a binary measure of comparative advantage.

Hirranson/Schumacher(1994) in 'NAFTA's Threat to Central American and Caribbean Basin Exports: A Revealed Comparative Advantage Approach' has used revealed comparative advantage approach using Balassa index to show that the major exports from the Caribbean Basin countries to the United States 'have significant competitive advantages over Mexico's exports of the same products. Hence, NAFTA agreement poses little threat of leading to a displacement of these major CB exports in the US market. Moreover, the products in which CB exports to the US are least threatened by exports from Mexico are primarily resource-based, while the Caribbean Basin exports with which Mexico demonstrates either a significant competitive advantage, or with which it is very competitive are primarily nonresource- based. The modernization and growth of the Caribbean Basin economies are based, in part, on their ability to develop competitive exports in these non-resource-based products — and the United States granted special concessions, under both its CBI plans, to encourage export diversification to this end. According to such findings of that paper, Mexico's preferential access to the US market under NAFTA, threatened to frustrate Caribbean Basin progress in this direction, and hence the paper recommended the United States *and* the Caribbean Basin policymakers to give full consideration to this possibility.

Leu's paper examines the systematic shift of comparative advantage in East Asian economies by computing and comparing revealed comparative advantage indices for ten selected East Asian economies in the U.S market. The results show that conventional

wisdom of shifting comparative advantage in accordance with the level of development continues to hold true.

Helena Marques (2001) in order to identify the sectors that offer potential competition or opportunities in South-East trade computed two indices. The first is the RCA index, initially introduced by Balassa (1965, 1977), and corrected for intra-industry trade by Neven (1995):

$$\text{Industry Corrected RCA}_i = (X_i/X - M_i/M)/(X_i/X + M_i/M)$$

where X_i and M_i are respectively exports and imports of sector i . Thus this index measures how much larger sector i 's export share is relative to its import share, that is, it measures how large the share of sector i in a country's net exports is, weighted by the sum of the shares. The index varies between 1 and -1 , the former indicating the maximum RCA and the latter meaning a maximum disadvantage. Values close to 0 are interpreted as a sign of predominance of intra-industry trade.

The existing literature presents a range of RCA alternative indices to measure comparative advantage, and sometimes use of different RCA indices may have inconsistent results and interpretational difficulties. Moreover, number of studies has raised apprehensions about the stability and the consistency of alternative measures of RCA (e.g. Balance et al., 1987; Yeats, 1985; Hinloopen and Van Marrewijk, 2001).

Robert H.; Helmut Forstner; Tracy Murray(1989) observed in their paper that a number of alternative measures of revealed comparative advantage have been used in different studies. They wanted to see whether the conclusions of those studies are sensitive to particular index chosen, as, if the alternative indices reveal the same information regarding international pattern of comparative advantage, the choice of index might be based on a particular model's statistical criteria, but if the various indices are not "alternative glimpses of the same elephant", then the choice of index should be based on theoretical relationships.

The tests basically included two classes of indices- those using data on trade and domestic production and consumption and those using only trade data. Among the eight

indices considered only high consistency was observed among net export indices as well as between T/XM and BAL, an export based index. (where $T = X - M$ and $XM = X + M$ and $Bal = \text{Export} / \text{Expected export}$). According to the paper the high degree of inconsistency among alternative RCA indices suggests that empirical studies based on any RCA index as a cardinal measure might be highly sensitive to the particular index chosen. In absence of any rigorous theoretical construct, the paper suggests that researchers could adopt an RCA measure based upon net exports after appropriately normalized for product significance and country size.

Sophie Chauvin and Françoise Lemoine in 2003 in their paper used Indicator of comparative advantage (chelem), a very complicated measure of Revealed Comparative Advantage. The comparative advantage indicator answers the question: "What are the strong points and the weak points of an economy?". Instead of relative export structures, as in the classic Balassa (1965) method, the analytical indicator used here is based on the share of the total trade balance and takes into account the size of each country's market. For country i and product k , the balance is first calculated in relation to Gross Domestic Product at current exchange rate Y_i , giving (in thousandths):

$$y_{i,k} = 1000 \frac{X_{i,k} - M_{i,k}}{Y_i}$$

The contribution of product k to the trade balance, in relation to GDP, is defined by:

$$f_{i,k} = y_{i,k} - g_{i,k} * y_i$$

$$\text{where: } g_{i,k} = \frac{X_{i,k} + M_{i,k}}{X_i + M_i} \quad \text{and} \quad y_i = 1000 * \frac{X_i - M_i}{Y_i}$$

In addition, it is necessary to eliminate the influence of changes which are not specific to the country in question but result from the evolution of the importance of the product in world trade. In relation to a base year the flows X and M in the other years (n) are adjusted by multiplying them all by:

$$c_k^n = \frac{W_k^r}{W_k^r} \frac{W_k^n}{W_k^n}$$

The comparative advantage indicator f^k is therefore calculated using world weights for the base year. For this year it is identical to the relative contribution f . For the other years (n) the difference is all the greater, the more world trade in product k diverges from the average tendency for all merchandise.

Comparative advantages are calculated for individual products at the most detailed level of the CHELEM sectoral classification. The advantage by chain or by stage or production is then calculated by summing.

Exim Bank's study titled 'Strategy for Quantum Jump in Exports: Focus on Africa, Latin America and China', outlines an analytical approach for achieving a significant increase in India's exports, over the medium term, by focusing on Africa, Latin America and China. The study estimates that India could aim to achieve by 2007, a target import share of 2% in Latin America region. Considering the import pattern of these regions and India's export basket, the study is of the view that the target could be achieved through concentrating on 100 thrust product groups that are being imported by Latin America. The study evaluated the identified product groups with a simple, yet reliable, concept of Revealed Comparative Advantage (RCA) and found that more than 80 product groups were showing RCA value of greater than 1.

Need for use of RCA in the Present Dissertation

India's trade with Brazil was very low as India's export to Brazil in 1997 was 132.61 million \$ and import was 152.74 million \$. India had negative balance of trade with Brazil.

Considering the potential of the market in the Latin American region, an integrated programme "Focus:LAC" was launched in November 1997 by the Commerce Ministry. The Programme has been reviewed from time to time and extended up to March 31, 2008. Initiatives such as Enhanced Political Dialogue like Indo-Argentine Joint Commission, Indo-Argentine Joint Trade Committee, Indo-Mexican Joint Commission, Indo-Brazilian Commercial Council, Trade Missions Led by Commerce Minister, appointing Nodal Officer in MOC and different policy initiatives like One Per cent

Additional SIL; Trade Promotional Measures through publicity, fairs and exhibition, buyer-seller meet, India Promotion in Departmental Stores, distribution of catalogues, sales tour, market survey, Indian Brand Equity Fund etc were undertaken under this programme.

Figure 1.1



Source: CMIE

From the data it is evident that export to Brazil has increased significantly with 19.52% compound annual growth rate(CAGR) over 1997-2005. Similarly import has increased significantly with CAGR of 19.83% over the same period. Import share of Brazil has increased from .4% to .7% in comparison to world import in 1997-2005. Now India's export to Brazil is \$ 660.1 million and import from Brazil is 778.38 million \$. Brazil's share in Indian export has increased from .4% to .8% during 1997-2005. The trade deficit with Brazil has increased.

However, as we calculate the Trade-intensity index², we see that India's trade intensity with Brazil in 2004 was .614 which is less than 1, implying that our export to Brazil is less than optimum.

$$^2 T_{ij} = (x_{ij}/X_{it})/(x_{wj}/X_{wt})$$

Where x_{ij} and x_{wj} are the values of country i's exports and of world exports to country j and where X_{it} and X_{wt} are country i's total exports and total world exports respectively Trade intensity index is calculated to see the strength of bilateral trade.

Trade Intensity Index of India with Brazil is equal to the share of India's export to Brazil in India's total export divided by share of world export to Brazil in total world export. An index of more (less) than one indicates a bilateral trade flow that is larger (smaller) than expected, given the partner country's importance in world trade.

India's main imports from Brazil are Sugars and sugar confectionery, Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes' Beverages, spirits and vinegar' Ores, slag and ash, Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof etc.

India's main export to Brazil comprise mainly of Mineral fuels, mineral oils and products or their distillation and then of bituminous substances; mineral waxes, Organic Chemicals, Pharmaceutical products, Man-made filaments, Miscellaneous chemical products, Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof etc.

In different trade delegations between these two countries it was stated that Brazil is strong in agri-business, automobiles, aircraft manufacturing, mining etc., while India has competitive edge in IT, pharmaceuticals, chemicals and engineering products. But, there was no effort to empirically identify the products where India has definite export advantage over and above Brazil.

There was no study which calculated India's and Brazil's RCA in order to compare their comparative advantage in the global market as well as for bilateral trade. In the present scenario of constant negotiation for one FTA after another, specifically in the context of ongoing discussions on RTAs like IBSA (India-Brazil-South-Africa) in promoting south-south trade, we should know in definite manner where India's comparative advantage lies vis a vis Brazil's and whether India and Brazil really have specialization in similar products. While finalizing the Product specific Rules of Origin for any FTA between India and Brazil we must know definitely for which products we have strong competition so that we can keep those products in negative list of imports under zero duty.

Also, it was imperative to calculate the India's Export specialization in Brazil's market (bilateral RCA) in order to understand India's export position considering Brazil's demand for the products. The outcome from the rigorous study should derive policy

implication regarding areas where India should give more export thrust or may be India should negotiate for more market access in Brazil.

For two reasons, we would use RCA index of Balassa in this study for examining competitiveness of India. Firstly, results from multiple indicators of RCA very often cause interpretational inconsistencies. Sometimes interpretation of results for a product/industry may be inconclusive when analysis of results of different indicators leads us to different directions. Secondly, developing countries like India and Brazil impose high import barriers. Hence, inclusion of imports would actually consider inefficient trade.

We would be looking at broad aggregates at the first level. However, to build up a more detailed picture of the relative potential for opportunities and competition between Brazil and India, it is important to disaggregate the analysis further. On the one hand, it is possible that within each 2-digit sector there are both competitive and non-competitive products. On the other hand, the degree of overlapping at 2-digits may well be decreased at a higher level of disaggregation namely by considering the six digit products under each product category. Thereafter, product-wise bilateral RCA of India in Brazilian market or Export Specialisation would be considered and would be compared with RCA and growth rate to analyse export potential of different products. RCA according to Factor intensity would also be considered. Finally, the rank correlation among India and Brazil's RCA would be calculated to identify opportunities and threats in bilateral trade between India and Brazil.

Chapter 2

COMPARATIVE ANALYSIS OF INDIA AND BRAZIL'S RCA

In this Chapter, the RCA of India and Brazil at HS³-two digit level was calculated. Then, under each two digit level product, it is calculated that India and Brazil has how many items with Revealed Comparative Advantage. Then each 99 products at two digit level is analysed in a comparative framework. For each product category it is analysed that at six digit level which are the products where only Brazil has $RCA > 1$, which are the products where only India has $RCA > 1$ and which are the products where both have advantages and their RCA values are compared to know who is in more advantageous position.

RCA of Brazil

Let us recollect the Revealed Comparative Advantage Index for country *i* and commodity *j* which is calculated as follows:

$$RCA_{ij} = (X_{ij}/X_{wj}) / (X_i/X_w)$$

Where

X_{ij} = *i*th country's export of commodity *j*

X_{wj} = world exports of commodity *j*

X_i = total exports of country *i*

X_w = total world exports.

Brazil's RCA means $((\text{Brazil's export of commodity } j) / \text{Brazil's total export}) / ((\text{world export of commodity } j) / (\text{total world export}))$, where *j*= any particular commodity.

In the broad-category-based analysis, Brazil's RCA of 99 products at two digit level was calculated.

⁴ HS Code is a Product classification under Harmonised System which is followed by all the countries to disclose their trade figures including export and import. The HS code is available for aggregate level (two digit) and further disaggregated into four-digit level and six digit level. The individual countries apply their tariff in further disaggregated level at eight digit level. Earlier, SITC code was used for recording trade data. In the thesis we have followed HS code everywhere either at two digit level or at six digit level for disaggregated analysis

Table 2.1: Broad Category-wise Analysis of Brazil's RCA

Commodity Code	Commodity Name	Brazil's RCA
0	All Commodities	
12	Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal plants; straw and fodder.	16.81
17	Sugars and sugar confectionery.	14.31
9	Coffee, tea, mate and spices.	12.42
26	Ores, slag and ash.	11.06
23	residues and waste from the food industries; prepared animal fodder.	10.89
2	Meat and edible meat offal.	8.82
47	Pulp of wood or of other fibrous cellulosic material; waste and scrap of paper or paperboard.	6.21
24	Tobacco and manufactured tobacco substitutes.	5.68
41	Raw hides and skins (other than furskins) and leather.	4.54
15	Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes.	3.98
20	Preparations of vegetables, fruit, nuts or other parts of plants.	3.91
64	Footwear, gaiters and the like; parts of such articles.	3.01
16	Preparations of meat, of fish or of crustaceans, molluscs or other aquatic invertebrates.	2.99
44	Wood and articles of wood; wood charcoal.	2.98
5	Products of animal origin, not elsewhere specified or included.	2.89
72	Iron and steel.	2.55
68	Articles of stone, plaster, cement, asbestos, mica or similar materials.	2.37
25	salt; sulphur; earths and stone; plastering materials, lime and cement.	2.01
76	Aluminium and articles thereof	1.88
10	Cereals.	1.86
		1.83
18	Cocoa and cocoa preparations.	1.76
21	Miscellaneous edible preparations.	1.69
69	Ceramic products.	1.61
28	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals, or radioactive elements or of isotopes.	1.58
52	Cotton	1.52
80	Tin and articles thereof.	1.40
8	Edible fruit and nuts; peel or citrus fruit or melons.	1.36
75	Nickel and articles thereof.	1.28
63	Other made up textile articles; sets; worn clothing and worn textile articles; rags.	1.20
13	Lac; gums, resins and other vegetable saps and extracts.	1.19
40	Rubber and articles thereof.	1.18

Commodity Code	Commodity Name	Brazil's RCA
14	Vegetable plaiting materials; vegetable products not elsewhere specified or included.	1.15
50	Silk	1.15
35	Albuminoidal substances; modified starches; glues; enzymes.	1.11
36	Explosives; pyrotechnic products; matches; pyrophoric alloys; certain combustible preparations.	1.00

Source: Indiatrades Data and Researcher's Calculation.

From the above table, we observe that Brazil basically has revealed its comparative advantage in primary, agricultural and low value products. The high value products like aircraft, ships and arms and ammunition where Brazil has comparative advantage has been highlighted.

Brazil has $RCA > 1$ in 38 items at HS -2 digit level.

RCA of India

India's RCA means $((\text{India's export of commodity } j) / \text{India's total export}) / ((\text{world export of commodity } j) / (\text{total world export}))$, where $j =$ any particular commodity.

Table 2.2: Broad Category-wise Analysis of India's RCA

Commodity Code	Commodity Name	RCA
0	All Commodities	
50	Silk	13.57
13	Lac; gums, resins and other vegetable saps and extracts.	11.61
71	Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad with precious metal and articles thereof; imitation jewellery; coin.	9.67
26	Ores, slag and ash.	8.88
57	Carpets and other textile floor coverings.	8.47
63	Other made up textile articles; sets; worn clothing and worn textile articles; rags.	6.89
14	Vegetable plaiting materials; vegetable products not elsewhere specified or included.	6.30
9	Coffee, tea, mate and spices.	6.18
10	Cereals.	5.27
52	Cotton	5.04
53	Other vegetable textile fibres; paper yarn and woven fabrics of paper yarn.	4.86
25	salt; sulphur; earths and stone; plastering materials, lime and cement.	4.00
42	Articles of leather, saddlery and harness; travel goods, handbags and similar containers articles of animal gut (other than silk-worm gut).	3.49
62	Articles of apparel and clothing accessories, not knitted or crocheted.	3.14
55	Man-made staple fibres.	3.08

Commodity Code	Commodity Name	RCA
67	Prepared feathers and down and articles made of feathers or of down; artificial flowers; articles or human hair.	3.05
97	Works of art, collectors' pieces and antiques.	3.02
3	Fish and crustaceans, molluscs and other aquatic invertebrates.	2.86
54	Man-made filaments	2.76
23	residues and waste from the food industries; prepared animal fodder.	2.67
41	Raw hides and skins (other than furskins) and leather.	2.46
61	Articles of apparel and clothing accessories, knitted or crocheted.	2.43
8	Edible fruit and nuts; peel or citrus fruit or melons.	1.94
72	Iron and steel.	1.83
68	Articles of stone, plaster, cement, asbestos, mica or similar materials.	1.71
74	Copper and articles thereof	1.66
73	Articles of iron or steel	1.65
64	Footwear, gaiters and the like; parts of such articles.	1.61
29	Organic Chemicals	1.54
32	Tanning or dyeing extracts; tannins and their derivatives; dyes, pigments and other colouring matter; paints and varnishes; putty and other mastics; inks.	1.38
12	Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal plants; straw and fodder.	1.32
7	Edible vegetables and certain roots and tubers.	1.31
24	Tobacco and manufactured tobacco substitutes.	1.30
28	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals, or radioactive elements or of isotopes.	1.22
36	Explosives; pyrotechnic products; matches; pyrophoric alloys; certain combustible preparations.	1.13
27	Mineral fuels, mineral oils and products or their distillation; bituminous substances; mineral waxes.	1.12
58	Special woven fabrics; tufted textile fabrics; lace; tapestries; trimmings; embroidery.	1.12
82	Tools, implements, cutlery, spoons and forks, of base metal; parts thereof of base metal.	1.08

Source: Indiatrades Data and Researcher's Calculation.

India has $RCA > 1$ in 39 items. India has advantage in resource based and labour intensive products and mainly in textile products.

Table 2.3: Comparative Analysis India and Brazil's RCA at disaggregated Level

Serial Number	Commodity Name	Brazil's RCA	India's RCA	How many products at six digit have RCA>1 in Brazil	How many products at six digit have RCA>1 in India
1	Live animals.	0.16	0.05	1	1
2	Meat and edible meat offal.	8.82	0.72	15	7
3	Fish and crustaceans, molluscs and other aquatic invertebrates.	0.80	2.86	5	12
4	Dairy produce, birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included.	0.34	0.39	3	6
5	Products of animal origin, not elsewhere specified or included.	2.89	0.80	6	5
6	Live trees, and other plants; bulbs, roots and the like; cut flowers and ornamental foliage.	0.17	0.39	0	2
7	Edible vegetables and certain roots and tubers.	0.04	1.31	1	9
8	Edible fruit and nuts; peel or citrus fruit or melons.	1.36	1.94	11	8
9	Coffee, tea, mate and spices.	12.42	6.18	8	21
10	Cereals.	1.86	5.27	4	8
11	Products of the milling industry; malt; starches; insulin; wheat gluten.	0.24	0.61	4	6
12	Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal plants; straw and fodder.	16.81	1.32	4	8
13	Lac; gums, resins and other vegetable saps and extracts.	1.19	11.61	5	5
14	Vegetable plaiting materials; vegetable products not elsewhere specified or included.	1.15	6.30	1	5
15	Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes.	3.98	0.98	12	8
16	Preparations of meat, of fish or of crustaceans, molluscs or other aquatic invertebrates.	2.99	0.62	4	2
17	Sugars and sugar confectionery.	14.31	0.33	6	2
18	Cocoa and cocoa preparations.	1.76	0.04	4	0
19	Preparations of cereals, flour, starch or milk; pastrycooks' products.	0.34	0.34	1	1
20	Preparations of vegetables, fruit, nuts or other parts of plants.	3.91	0.36	9	4
21	Miscellaneous edible preparations.	1.69	0.53	6	3
22	Beverages, spirits and vinegar.	0.90	0.06	3	0
23	residues and waste from the food industries; prepared animal fodder.	10.89	2.67	6	9

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Serial Number	Commodity Name	Brazil's RCA	India's RCA	How many products at six digit have RCA>1 in Brazil	How many products at six digit have RCA>1 in India
24	Tobacco and manufactured tobacco substitutes.	5.68	1.30	5	5
25	salt; sulphur; earths and stone; plastering materials, lime and cement.	2.01	4.00	12	30
26	Ores, slag and ash.	11.06	8.88	6	10
27	Mineral fuels, mineral oils and products or their distillation; bituminous substances; mineral waxes.	0.61	1.12	3	7
28	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals, or radioactive elements or of isotopes.	1.58	1.22	19	60
29	Organic Chemicals	0.58	1.54	56	126
30	Pharmaceutical products.	0.14	0.92	3	10
31	Fertilisers	0.67	0.06	6	1
32	Tanning or dyeing extracts; tannins and their derivatives; dyes, pigments and other colouring matter; paints and varnishes; putty and other mastics; inks.	0.44	1.38	6	17
33	Essential oils and resinoids; perfumery, cosmetic or toilet preparations.	0.53	0.56	9	10
34	Soap, organic surface-active agents, washing preparations, lubricating preparations, artificial waxes, prepared waxes, polishing or scouring preparations, candles and similar articles, modelling paste unit	0.43	0.26	2	1
35	Albuminoidal substances; modified starches; glues; enzymes.	1.11	0.72	4	2
36	Explosives; pyrotechnic products; matches; pyrophoric alloys; certain combustible preparations.	1.00	1.13	3	2
37	Photographic or cinematographic goods.	0.61	0.14	3	4
38	Miscellaneous chemical products.	0.51	0.86	15	17
39	Plastics and articles thereof.	0.47	0.75	13	17
40	Rubber and articles thereof.	1.18	0.94	21	26
41	Raw hides and skins (other than furskins) and leather.	4.54	2.46	5	9
42	Articles of leather, saddlery and harness; travel goods, handbags and similar containers articles of animal gut (other than silk-worm gut).	0.38	3.49	3	15
43	Furskins an artificial fur; manufactures thereof.	0.17	0.01	1	0
44	Wood and articles of wood; wood charcoal.	2.98	0.09	31	8
45	Cork and articles of cork.	0.07	0.06	0	0
46	Manufacturers of straw; of esparto or of other plaiting materials; basketware and wickerwork.	0.01	0.19	0	0

Serial Number	Commodity Name	Brazil's RCA	India's RCA	How many products at six digit have RCA>1 in Brazil	How many products at six digit have RCA>1 in India
47	Pulp of wood or of other fibrous cellulosic material; waste and scrap of paper or paperboard.	6.21	0.01	1	0
48	Paper and paperboard; articles of paper pulp, of paper or of paperboard.	0.81	0.26	19	15
49	Printed books, newspapers, pictures and other products of the printing industry; manuscripts, typescripts and plans.	0.13	0.36	0	2
50	Silk	1.15	13.57	3	6
51	Wool, fine or coarse animal hair; horsehair yarn and woven fabric.	0.14	0.53	0	11
52	Cotton	1.52	5.04	15	78
53	Other vegetable textile fibres; paper yarn and woven fabrics of paper yarn.	0.97	4.86	2	14
54	Man-made filaments	0.26	2.76	5	35
55	Man-made staple fibres.	0.43	3.08	6	59
56	Wadding, felt and nonwovens; special yarns; twine, cordage, ropes and cables and articles thereof.	0.75	0.42	4	12
57	Carpets and other textile floor coverings.	0.19	8.47	2	16
58	Special woven fabrics; tufted textile fabrics; lace; tapestries; trimmings; embroidery.	0.29	1.12	1	16
59	Impregnated, coated, covered or laminated textile fabrics; textile articles of a kind suitable for industrial use.	0.38	0.44	3	5
60	Knitted or crocheted fabrics.	0.24	0.22	0	3
61	Articles of apparel and clothing accessories, knitted or crocheted.	0.16	2.43	0	61
62	Articles of apparel and clothing accessories, not knitted or crocheted.	0.10	3.14	2	84
63	Other made up textile articles; sets; worn clothing and worn textile articles; rags.	1.20	6.89	6	34
64	Footwear, gaiters and the like; parts of such articles.	3.01	1.61	13	12
65	Headgear and parts thereof.	0.08	0.15	1	2
66	Umbrellas, sun umbrellas, walking-sticks, seat-sticks, whips, riding-crops and parts thereof.	0.01	0.09	0	1
67	Prepared feathers and down and articles made of feathers or of down; artificial flowers; articles or human hair.	0.01	3.05	0	1
68	Articles of stone, plaster, cement, asbestos, mica or similar materials.	2.37	1.71	14	14
69	Ceramic products.	1.61	0.36	6	6
70	Glass and glassware.	0.55	0.50	8	10

Serial Number	Commodity Name	Brazil's RCA	India's RCA	How many products at six digit have RCA>1 in Brazil	How many products at six digit have RCA>1 in India
71	Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad with precious metal and articles thereof; imitation jewellery; coin.	0.39	9.67	10	19
72	Iron and steel.	2.55	1.83	63	62
73	Articles of iron or steel	0.64	1.65	22	46
74	Copper and articles thereof	0.42	1.66	3	19
75	Nickel and articles thereof.	1.28	0.05	2	1
76	Aluminium and articles thereof	1.88	0.61	10	11
78	Lead and articles thereof.	0.03	0.38	0	3
79	Zinc and articles thereof.	0.85	0.52	1	2
80	Tin and articles thereof.	1.40	0.29	1	2
81	Other base metals; cermets; articles thereof.	0.66	0.13	3	3
82	Tools, implements, cutlery, spoons and forks, of base metal; parts thereof of base metal.	0.74	1.08	15	26
83	Miscellaneous articles of base metal.	0.35	0.53	2	3
84	Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof.	0.56	0.27	76	80
85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of articles.	0.25	0.17	29	36
86	Railway or tramway locomotives, rolling-stock and parts thereof; railway or tramway track fixtures and fittings and parts thereof; mechanical (including electro-mechanical) traffic signalling equipment unit	0.28	0.10	1	1
87	Vehicles other than railway or tramway rolling stock, and parts and accessories thereof.	0.89	0.30	20	18
88	Aircraft, spacecraft, and parts thereof.	2.61	0.04	2	0
89	Ships, boats and floating structures.	1.83	0.50	1	2
90	Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus; parts and accessories thereof.	0.13	0.21	7	12
91	clocks and watches and parts thereof.	0.01	0.29	0	15
92	Musical instruments; parts and accessories of such articles.	0.11	0.19	1	2
93	Arms and ammunition; parts and accessories thereof.	1.60	0.03	3	0

Serial Number	Commodity Name	Brazil's RCA	India's RCA	How many products at six digit have RCA>1 in Brazil	How many products at six digit have RCA>1 in India
94	Furniture; bedding, mattresses, mattress supports, cushions and similar stuffed furnishings; lamps and lighting fittings, not elsewhere specified or included; illuminated signs, illuminated name-plate unit	0.80	0.24	4	1
95	Toys, games and sports requisites; parts and accessories thereof.	0.06	0.19	1	2
96	Miscellaneous manufactured articles.	0.58	0.81	6	10
97	Works of art, collectors' pieces and antiques.	0.06	3.02	0	2
99	Miscellaneous goods.	0.00	0.38		

Source: Indiatrades Data and Researcher's Calculation.

Product-wise Comparison of India and Brazil's RCA at Disaggregated Level

Live Animals: Neither Brazil nor India has revealed comparative advantage in this. At disaggregated level, Brazil has revealed advantage in sheeps, while India has revealed advantage in fowls of the species Gallus Domestics.

Meat and edible meat offal: Brazil has revealed comparative advantage in this. India does not have revealed comparative advantage.

Where India has revealed comparative advantage only and Brazil has disadvantage

HS Code	Description	India's RCA
20210	Carcasses and half-carcasses of bovine animals, frozen	15.46
20421	Carcasses and half-carcasses of sheep, fresh or chilled	10.67
20220	Other cut meat of bovine animals, frozen with bone in	6.61
21090	Other, including edible flours and meals of meat or meat offal.	1.37
20680	Other edible offals, fresh or chilled	1.25
20423	Boneless meat of sheep, fresh or chilled	1.1

Where India and Brazil both have RCA

HS Code	Description	India's RCA	Brazil's RCA
20230	Boneless of bovine animals, frozen	4.89	17.79

Where Brazil only has RCA>1

HS Code	Description	Brazil's RCA
20712	Meat/edible ofal of fowls of the species gallus domesticus not cut in pieces,frozen	56.18
20321	Carcasses and half-carcasses, frozen	38.57
20714	Cuts & offal of fowls of the species gallus domesticus, frozen	28.93
20727	Cuts and offal of turkeys frozen	25.65
20230	Boneless of bovine animals, frozen	17.79
20725	Meat& edible ofals of turkeys whole, frozen	14.24
20629	Other edible offals of bovine animals, frozen	9.42
20329	Other meat of swine, frozen	8.32
21020	Meat of bovine animals	7.47
20130	Boneless of bovine animals, fresh or chilled	6.99
20641	Livers of swine, frozen	5.33
20622	Edible livers of bovine animals, frozen	5.01
20621	Tongues of bovine animals, frozen	4.33
20322	Hams, shoulders and cuts thereof, with bone in, frozen	2.30
20649	Other edible offals of swine, frozen	1.06

Fish and Crustaceans, Molluces and other aquatic invertebrates: In this category India has revealed comparative advantage while Brazil has not.

The commodities at HS-six digit level where Brazil only has revealed comparative advantage

HS Code	Description	Brazil's RCA
30611	Rock lobster & other sea crawfish (palinurus sp panulirus sp jасus sp) frozen	17.76
30269	Other fish fresh or chilled excluding livers and roes	1.32
30343	Skipjack or stripe-bellied bonito, excluding livers and roes	1.02

Commodities in which only India has advantage

HS Code	Description	India's RCA
30741	Cuttle fish and squid, live, fresh or chilled	36.73
30614	Crabs frozen	9.99
30379	Other frozen fish, excluding livers and roes	6.07
30749	Cuttle fish and squid, excluding live fresh/chilled	5.09
30510	Fish meal fit for human consumption	4.67
30739	Mussels (mytilus spp. etc), other than live fresh or chilled	3.92
30751	Octopus(octopus spp) live fresh/chilled	3.13
30624	Crabs not frozen	2.86
30612	Lobsters (hoharus spp.) frozen	2.45
30333	Sole (losea spp.) excluding livers and roes frozen	1.25

Commodities where India and Brazil both have revealed comparative advantage

HS Code	Description	Brazil's RCA	India's RCA
30613	Shrimps and prawns frozen	3.27	13.06
30232	Yellowfin tunas, excluding livers and roes fresh or chilled	1.33	1.32

Dairy produce, birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included: Neither India nor Brazil has revealed comparative advantage in this category.

Commodities at HS-6 digit level in which only India has advantage

HS Code	Description	India's RCA
40811	Egg Yolks Dried	8.47
40700	Birds' eggs, in shell, fresh, preserved or cooked.	2.88
40229	Other	2.8
40210	In powder, granules or other solid forms, of a fat content, by weight, not exceeding 1.5%.	1.57

Commodities at HS-6 digit level in which only Brazil has revealed advantage

HS Code	Description	Brazil's RCA
40299	Other	5.16

India and Brazil both have advantages in the following:

HS Code	Description	India's RCA	Brazil's RCA
40819	Other Egg Yolks not Dried	9.37	3.67
40891	Birds Eggs not in Shell Dried	1.94	3.87

Products of animal origin not elsewhere specified:

Neither India nor Brazil has revealed comparative advantage in this category at two digit HS level.

At HS-six digit level, only India has revealed comparative advantage in:

HS Code	Description	India's RCA
50610	Ossein and bones treated with acid.	42.43
50100	Human hair, unworked, whether or not washed or scoured; waste of human hair.	6.87
50790	Other	3.09
50290	Other	1.35

Only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
50400	Guts, bladders and stomachs of animals (other than fish), whole and pieces thereof.	4.35
50790	Other	3.46
51199	Other.	3.24
50690	Other	2.09
51191	Products of fish or crustaceans, molluscs or other aquatic invertebrates; dead animals of Chapter 3.	2.03

Commodities where both India and Brazil has advantage:

HS Code	Description	India's RCA	Brazil's RCA
51000	Ambergris, castoreum, civet and musk; cantharides; bile, whether or not dried; glands and other animal products used in the preparation of pharmaceutical products, fresh, chilled, frozen or otherwise UNIT	3.38	9.92

Live trees, and other plants; bulbs, roots and the like; cut flowers and ornamental foliage: Neither India nor Brazil has revealed comparative advantage in this. In fact Brazil has no product under this category with revealed comparative advantage.

At HS-6 digit level, only India has RCA in :

HS Code	Description	India's RCA
60499	Foliage Branches etc, Not Fresh without Flower/ Flower Buds & Grasses Suitable for Bouquets/Ornamental Purposes excluding Fresh	13.87
60390	Other Cut Flowers & Flower Buds Suitable for Bouquets/For Ornamental Purposes	7.39

Edible Vegetables, certain roots and tubers:

Only India has revealed comparative advantage in this category at 2 digit HS level.

At HS-6 digit level, only Brazil has revealed comparative advantage in :

HS Code	Description	Brazil's RCA
71490	Other	3.20

At HS-6 digit level, only India has RCA in the following:

HS Code	Description	India's RCA
71390	Other	43.94
71140	Cucumbers & Gherkins, Provisionally Presvd	38.60

HS Code	Description	India's RCA
71340	Lentils (Mosur), Dried & Shld	14.39
70310	Onions and shallots.	10.63
71220	Onions Dried	7.72
71190	Other vegetables; mixtures of vegetables.	3.73
71320	Chickpeas (Garbanzos) Dried & Shld	3.00
71090	Mixture of Vegetables Frozen	2.20
71230	Mushrooms and truffles.	1.33

Edible Fruit and nuts, peels or citrus fruit or melons: Both India and Brazil have RCA in this category.

At six digit level, only Brazil has revealed comparative advantage in

HS Code	Description	Brazil's RCA
80121	Brazil Nuts Fresh/Dred in Shell	35.99
80122	Brazil Nuts Fresh/Dred Shelled	14.25
80720	Papaws (Papayas) Fresh	13.47
80719	Melon, other than Water Melon	6.52
80810	Apples Fresh	1.69
80530	Lemons (Citrus Limon Citrus Limonum) & Limes (Citrus Aurantifolia), Fresh or Dried	1.48
80610	Grapes Fresh	1.46
80420	Figs	1.07

At six digit level, only India has comparative advantage in

HS Code	Description	India's RCA
81290	Other	8.54
80119	Other coconut	2.76
81090	Other	2
81340	Other fruit.	1.59

Commodities where both India and Brazil have RCA

HS code	Description	India's RCA	Brazil's RCA
80132	Shelled cashew nuts	64.09	19.46
80450	Guavas, mangoes and mangosteens.	17.64	10.25
80232	Shelled Walnuts Fresh or Dried	5.31	1.34
80590	Other Citrus Fruits Fresh or Dried	9.51	1.19

Coffee, Tea, mate and spices: Both India and Brazil has revealed comparative advantage in this category. But, overall Brazil's RCA is 12.42 which is higher than India's RCA 6.18.

Only India has RCA in the following commodities at HS-6 digit level:

HS Code	Description	India's RCA
91030	Turmeric (curcuma)	82.79
90920	Seeds of coriander	32.73
90930	Seeds of cumin	27.70
90950	Seeds of fennel or juniper	25.85
90240	Other black tea (fermented) and other partly fermented tea	17.81
91099	Other spices	13.53
90230	Black tea (fermented) and partly fermented tea, packets not exceeding 3 kg.	10.17
91050	Curry	8.75
90830	Cardamoms	8.01
90910	Seeds of anise or badian	5.62
90190	Other coffee	4.67
91091	Mixtures referred to in note 1(b) to this chapter.	3.75
90500	Vanilla	2.59
91020	Saffron	1.42
90940	Seeds of caraway	1.12
90220	Other green tea	1.07

Only Brazil has RCA in

HS Code	Description	Brazil's RCA
90620	Cinnamon & its tree flowers crashed or grinded	18.61
90700	Cloves (whole fruit, cloves and stems).	9.19

Products where both have RCA

HS Code	Description	India's RCA	Brazil's RCA
90420	Fruits of the genus capsicum or of the genus pimenta, dried or crushed or ground.	17.20	2.74
90412	Crushed or ground pepper	8.83	4.86
90411	Pepper neither crushed nor ground	7.27	19.04
90810	Nutmeg	6.33	4.46
91010	Ginger	5.08	1.74
90111	Coffee neither roasted nor decaffeinated	3.11	29.19

Cereals

India and Brazil both have revealed comparative advantage in this category, but India's RCA 5.27 is higher than Brazil's RCA 1.86.

Only India has revealed comparative advantage in the following 6 digit products:

HS Code	Description	India's RCA
100630	Semi-milled or wholly milled rice, whether or not polished or glazed.	38.30
100820	Millet	14.75
100510	Maize Seed	4.67
100110	Durum Wheat	3.00
100890	Other Cereals	1.03

Where both have advantages:

HS Code	Product description	India's RCA	Brazil's RCA
100590	Other Maize (Corn)	1.05	5.10
100640	Broken rice	14.83	2.23
100510	Maize Seed	4.67	1.11
100190	Other	1.72	1.07

Product of milling industry, malt; stretches, insulin, white gluten:

Neither India nor Brazil has revealed comparative advantage in this category.

HS-6 digit level products for which India has revealed comparative advantage and Brazil has not:

HS Code	Description	India's RCA
110230	Rice Flour	7.10
110630	Flour, meal and powder of the products of Chapter 8.	2.74
110290	Other Cereal Flour	2.19
110610	Flour & Meal of the Dried Leguminous Vegetables of Heading No.0713	1.22

Where Brazil has revealed comparative advantage and India has not

HS Code	Description	Brazil's RCA
110814	Starch of Manioc(Cassava)	4.80
110313	Groats & Meal of Maize (Corn)	2.95

Where both have advantages

HS Code	Product description	India's RCA	Brazil's RCA
110620	Flour and meal of sago, roots or tubers of heading No. 07.14	1.35	8.79
110812	Starch of Maize (Corn)	1.15	1.06

Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal plants; straw and fodder:Both India and Brazil have RCA in this category. However, Brazil's RCA (16.81) is much higher than India's RCA (1.32)

Brazil only has revealed comparative advantage in the following 6-digit level products:

HS Code	Description	Brazil's RCA
120929	Other Seeds of Forage Plants	8.04
120720	Cotton Seeds whether or not Broken	4.62
120924	Kentucky Blue Grass (Poa Pratensis L) Seed of Forage Plants	1.12

India only has revealed comparative advantage in the following

HS Code	Description	India's RCA
120740	Seasamum Seeds whether or not Broken	39.22
120210	In shell	27.71
120760	Safflower Seeds whether or not Broken	22.28
120799	Other	11.34
120220	Shelled, whether or not broken	10.06
120730	Castor Oil Seeds whether or not Broken	9.1
121190	Other	6.61
120750	Mustard Seeds whether or not Broken	5.24
120999	Other	2.2
120926	Timothy Grass Seed of Forage Plants	1.37

Where both have advantages

HS Code	Product description	India's RCA	Brazil's RCA
120220	Shelled, whether or not broken	10.06	2.80
120210	In shell	27.71	1.53

Lac, gums, reisins and other vegetable saps and extracts: Both India and Brazil have advantage in this category. But, India's RCA (11.61) is much higher than Brazil's RCA (1.19)

India only has revealed comparative advantage in the following 6-digit products

HS Code	Description	India's RCA
130190	Other	36.50
130232	Mucilages and thickeners, whether or not modified, derived from locust beans, locust bean seeds or guar seeds.	35.39

Only Brazil has RCA in

HS Code	Description	Brazil's RCA
130220	Pectic Substncs Pectints & Pectats	3.66
130190	Other	1.35

Where both have revealed comparative advantage:

HS Code	Product description	India's RCA	Brazil's RCA
130219	Other	6.22	1.99
130211	Saps & Extracts of Opium	81.46	10.27
130110	Lac	65.09	2.39

Vegetable plaiting materials, vegetable products not elsewhere specified or included

Both India and Brazil have advantage, but India's advantage (6.3) is much higher than Brazil's advantage (1.15).

Products at six digit level where only India has advantage

HS Code	Description	India's RCA
140410	Raw vegetable materials of a kind used primarily in dyeing or tanning.	29.66
140290	Vegetable Materials Nes	20.21
140390	Other	11.25
140490	Other	6.58

Where both have revealed comparative advantage:

HS Code	Description	India's RCA	Brazil's RCA
140420	Cotton Linters	2.09	4.80

Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes:

In this category Brazil has revealed comparative advantage and India does not have.

Products at six digit level, where only Brazil has advantage:

HS Code	Description	Brazil's RCA
152110	Vegetable waxes	44.79
151229	Other Cotton Seed Oil & Its Fractions	33.75
150710	Soya Bean Crude Oil whether or not Degummed	23.54
150790	Other Soya Bean Oil & Its Fractions	18.05
152190	Other	12.75
151521	Crude Maize(Corn) Oil & Its Fractions	9.40
151710	Margarine excl. Liquid Margarine	2.17
150590	Other Wool Grease & Fatty Substances	1.41
152200	Degras; residues resulting from the treatment of fatty substances or animal or vegetable waxes.	1.07

Where only India has advantage

HS Code	Description	India's RCA
151530	Castor Oil and Its Fractions	85.94
151550	Sesame Oil & Its Fractions	3.77
151319	Coconut (Copra) Refined Oil & Fractions	2.29
151800	Animal or vegetable fats and oils and their fractions, boiled, oxidised, dehydrated, sulphurised, blown, polymerised by heat in vacuum or in inert gas or otherwise chemically modified, excluding those UNIT	2.09
150410	Fish-liver oils and their fractions.	1.67

Where both have advantages

HS Code	Description	India's RCA	Brazil's RCA
150810	Ground Nut Oil Crude	21.25	4.56
150890	Other	18.59	1.86
150200	Fats of bovine animals, sheep or goats, raw or rendered, whether or not pressed or solvent-extracted.	1.32	1.58

Preparations of meat, of fish or of crustaceans, molluscs or other aquatic invertebrates:

Only Brazil has revealed comparative advantage in this category.

At HS six digit level, India has advantage in:

HS Code	Description	India's RCA
160520	Shrimps & Prawns Prpd or preserved	4.40
160420	Other Prepared or Preserved Fish	2.12

At HS six digit level, Brazil has advantage in :

HS Code	Description	Brazil's RCA
160250	Prepared/preserved Meat, Meat Offal of Bovine Animals	27.52
160300	Extracts and juices of meat, fish or crustaceans, molluscs or other aquatic invertebrates.	8.47
160232	Prepared/preserved Meat, Meat Offal/Blood of Fwls of the Spcs Galus Dmstcs	4.97
160231	Prpd/preserved Poultry of Hdng 0105 Turkeys	1.12

Sugar and Sugar Confectionery

Brazil has revealed comparative advantage in this category, India has not revealed any advantage in this category.

At six digit HS level, India has advantage in

HS Code	Description	India's RCA
170191	Sugar Refined containing Flvmg or Clearing Matter	1.46
170230	Glucose and glucose syrup, not containing fructose or containing in the dry state less than 20% by weight of fructose.	1.11

At six digit HS level, Brazil has advantage in

HS Code	Description	Brazil's RCA
170111	Cane sugar	45.15
170199	Other	18.24
170410	Chewing Gum whether or not Sugar Coated	4.15
170490	Other	2.42
170310	Cane molasses	1.89
170290	Other, including invert sugar.	1.15

Cocoa and cocoa preparations: Brazil has revealed high comparative advantage, India has revealed comparative disadvantage in this category.

At HS six digit level, India has not revealed comparative advantage .

At HS six digit level, Brazil has revealed advantage in

HS Code	Description	Brazil's RCA
180320	Wholly or Partly Defatted Cocoa Paste	13.16
180310	Cocoa Paste not Defatted	2.53
180632	Other Food Prpn in Blcks Slbs/Bars not Fild	1.35
180690	Other	1.29

Preparations of cereals, flour, starch or milk, pastrycooks' products: Neither Brazil, nor India has advantage in this category.

At HS six-digit level only Brazil has advantage in:

HS Code	Description	Brazil's RCA
190520	Gingerbread & the Like	3.02

At HS six-digit level, India has revealed comparative advantage in

HS Code	Description	India's RCA
190490	Crls in Grain Form excl. Maize Pre-Ckd etc	1.70

Preparations of vegetables, fruits, nuts or other parts or plants: Only Brazil has revealed comparative advantage and India has not revealed comparative advantage.

At HS six-digit level, India has revealed comparative advantage in

HS Code	Description	India's RCA
200110	Cucumbers & gherkins Prpd/preserved by vinegar or acetic acid	9.39
200310	Mushrooms Prpd/preserved	2.41
200190	Other vegetables prpd/preserved by vinegar or acetic acid	2.05
200490	Other Veg & Mixtrs of Veg, Prpd/preserved,Frozen	1.22

At HS six-digit level Brazil has advantage in:

HS Code	Description	Brazil's RCA
200911	Orange Juic Frozn	60.54
200919	Ornge Juic not Frozen	12.02
200891	Palm Hearts Prepared or Preserved	9.14
200940	Pineapple Juice	5.27
200930	Juice of any other single Citrus fruit.	3.42
200980	Juice of any other single fruit or vegetable.	2.31
200960	Grape Juice (incl. Grape Must)	1.90
200970	Apple Juice	1.30
200710	Homogenised Preparations	1.13

Miscellaneous Edible Preparations:

Only Brazil has revealed comparative advantage and India has not revealed comparative advantage in this category.

At HS six-digit level Brazil has advantage in

HS Code	Description	Brazil's RCA
210111	Extracts essences and concentrates of coffee	11.45
210220	Inactive Yeast, other Single-Cell Dead Micro-Org	5.47
210610	Protein Concntrts & Textured Protn Sbstncs	2.78
210112	Prpn with a Basis of Extrcts Essncs or Cncntrts or with a Basis of Coffee	1.27
210420	Homogenised Composite Food Preparations	1.27
210230	Prepared Baking Powders	1.10

At HS six-digit level, India has revealed comparative advantage in

HS Code	Description	India's RCA
210120	Extracts, essences and concentrates, of tea or mate, and preparations with a basis of these extracts, essences or concentrates or with a basis of tea or mate.	4.52
210111	Extracts essences and concentrates of coffee	2.98
210130	Roasted chicory and other roasted coffee substitutes, and extracts, essences and concentrates thereof.	2.06

Beverages, Spirits and vinegar: Neither India nor Brazil has revealed comparative advantage in this category.

India does not export any product at six digit level with advantage,

At HS six-digit level Brazil has advantage in

HS Code	Description	Brazil's RCA
220710	Undenatrd Ethyl Alcohol of an Alcoholic Strength of 80 Percent or Higher by Volume	33.13
220720	Ethyl Alcohol & other Spirits Denatured	12.05
220840	Rum and tafia	2.22

Residues and waste from the food industries, prepared from animal fodder:
 India and Brazil both have revealed comparative advantage in this category. But, Brazil's RCA 10.89 is higher than India's RCA 2.67.

At HS six-digit level, India has revealed comparative advantage in

HS Code	Description	India's RCA
230500	Oil-cake and other solid residues, whether or not ground or in the form of pellets, resulting from the extraction of ground-nut oil.	81.36
230220	Of rice	29.27
230640	Of rape or colza seeds	14.26
230690	Other	11.72
230670	Oil Cake/Solid Residus of Maize(Corn)Germs	10.04
230650	Of coconut or copra	1.62
230620	Of linseed	1.55

At HS six-digit level Brazil has advantage in

HS Code	Description	Brazil's RCA
230890	Other Vegtbl Prdcts of Hdg 2308	17.53
230250	Bran Shrps & other Resdus of Legminus Plnts	3.62
230610	Of cotton seeds	2.86
230110	Flours, meals and pellets, of meat or meat offal; greaves	2.53

Both have advantages in the following:

HS Code	Description	India's RCA	Brazil's RCA
230400	Oil-cake and other solid residues, whether or not ground or in the form of pellets, resulting from the extraction of soya-bean oil.	5.12	26.56
230210	Of maize (corn)	1.22	1.45

Tobacco and manufactured tobacco substitutes:

India and Brazil both have revealed comparative advantage in this category. But, Brazil's RCA 5.68 is higher than India's RCA 1.3.

At HS six-digit level Brazil has advantage in

HS Code	Description	Brazil's RCA
240391	'Homogenised' or 'Reconstituted' Tobacco	1.57

At HS six-digit level, India has revealed comparative advantage in

HS Code	Description	India's RCA
240310	Smoking tobacco, whether or not containing tobacco substitutes in any proportion.	1.31

Both have advantages in the following:

HS Code	Description	India's RCA	Brazil's RCA
240399	Other	3.91	2.39
240120	Tobacco, partly or wholly stemmed/stripped.	3.37	24.21
240110	Tobacco not stemmed/stripped	3.35	2.13
240130	Tobacco Refuse	2.54	28.33

Salt, sulphur, earths and stone; plastering materials, lime and cement:

India and Brazil both have revealed comparative advantage in this category. But, Brazil's RCA 2.01 is lower than India's RCA 4.

At HS six-digit level, India has revealed comparative advantage in

HS Code	Description	India's RCA
251621	Sandstone Crude or Roughly Trimmed	73.36
251622	Sandstone Merely Cut by Sawng/otherwise Intoblocks/Slbs of a Rectnglr (incl. Sq) Shape	68.28
252530	Mica waste	66.17
251320	Emery, natural corundum, natural garnet and other natural abrasives	28.12
252310	Cement Clinkers	15.27
250820	decolourising earths and Fuller's earth.	13.65
252520	Mica powder	13.01
251110	Natural barium sulphate (barytes)	9.51
252910	Felspar	8.94
251512	Merely cut, by sawing or otherwise, into blocks or slabs of a rectangular (including square) shape.	4.88
251690	Other monumental or building stone.	4.83
252100	Limestone flux; limestone and other calcareous stone, of a kind used for the m	3.34
252321	White Cement whether or not Artificially Clrd	3.27
252329	Other	3.24
250850	Andalusite, kyanite and sillimanite	3.18
252230	Hydraulic Lime	2.90
250100	Salt (including table salt and denatured salt) and pure sodium chloride, whether or not in aqueous solution or containing added anti-caking or free flowing agents; sea water.	2.81
251830	Agglomerated Dlmite (incl. Tarred Dolomite)	2.64
250810	Bentonite	2.38
251910	Natural Magnesium Carbonate(Magnesite)	1.77
250510	Silica sands and quartz sands	1.47
251520	Ecaussine and other calcareous monumental or building stone; alabaster.	1.24
251710	Pebbles, gravel, broken or crushed stone, of a kind commonly used for concrete aggregates, for road metalling or for railway or other ballast, shingle and flint, whether or not heat-treated	1.21
252010	Gypsum; anhydrite	1.04

At HS six-digit level Brazil has advantage in:

HS Code	Description	Brazil's RCA
250700	Kaolin and other kaolinic clays, whether or not calcined.	12.11
250410	In powder or in flakes	6.02
250610	Quartz	2.84
250490	Other	1.81
251990	Other	1.36

Both have revealed comparative advantages in the following:

HS Code	Description	India's RCA	Brazil's RCA
251611	Granite Crude or Roughly Trimmed	42.29	5.14
252510	Crude Mica and Mica rifted into sheets or splittings	29.73	1.66
251612	Granite Merely Cut Into Block/Slabs of Rectangular (incl. Sqr) Shape	16.51	26.24
250621	Crude or roughly trimmed.	11.98	16.73
250610	Quartz	5.38	2.84
252610	Not crushed, not powdered.	1.75	1.38
250629	Other Quartzite	1.63	5.4

Ores, slag and ash

India and Brazil both have revealed comparative advantage in this category. But, Brazil's RCA 11.06 is higher than India's RCA 8.88.

At HS six-digit level, only Brazil has revealed comparative advantage in

HS Code	Description	Brazil's RCA
261590	Other	1.79
261610	Silver Ores & Concentrates	1.15

At HS six-digit level, India has revealed comparative advantage in

HS Code	Description	India's RCA
260120	Roasted Iron Pyrites	68.86
262011	Hard Zinc Spelter	60.70
261000	Chromium ores and concentrates	42.69
261400	Titanium ores and concentrates	10.64
260600	Aluminium ores and concentrates	7.24
262019	Other Ash & Residue containing Mainly Zinc	5.89
262100	Other slag and ash, including seaweed ash (kelp).	4.10

Both have revealed comparative advantages in the following:

HS Code	Description	India's RCA	Brazil's RCA
260112	Agglomerated	8.56	31.52
260111	Non-agglomerated	25.38	24.2
260600	Aluminium ores and concentrates	7.24	38.9
260200	Manganese ores and concentrates, including manganiferous iron ores and concentrates with a manganese content of 20% or more, calculated on the dry weight.	2.14	11.55

Mineral Fuels, mineral oils and products or their distillation; bituminous substances, mineral waxes:

Only India has revealed comparative advantage and Brazil does not have revealed comparative advantage in this category.

At HS six-digit level, India has revealed comparative advantage in

HS Code	Description	India's RCA
270740	Napthalene	3.55
271000	Petroleum oils and oils obtained from bituminous minerals, other than crude; preparations not elsewhere specified or included, containing by weight 70% or more of petroleum oils or of oils obtained fUNIT	3.55
270119	Other coal	2.68
271210	Petroleum jelly	2.66
271320	Petroleum bitumen	1.86
270799	Other	1.36
271119	Other Liquefied Petroleum Gases & Gaseous Hydrocarbon	1.05

At HS six-digit level Brazil has revealed comparative advantage in

HS Code	Description	Brazil's RCA
270112	Bituminous Coal whether or not Pulvrstd but not Aglomrtd	6.40
271311	Petroleum coke not calcined	2.13
270710	Banzole	1.16

Inorganic Chemicals, organic or inorganic compounds of precious metals, of rare-earth metals, or radioactive elements or of isotopes

Both India and Brazil have revealed comparative advantage.

At HS six-digit level Brazil has revealed comparative advantage in:

HS Code	Description	Brazil's RCA
281420	Ammonia in Aqueous Solution	13.81
280469	Others	13.49
282990	Other	5.74
284321	Silver Nitrate	5.52
284920	Of silicon	5.48
282090	Other Manganese Oxides	4.62
282010	Manganese dioxide	4.17
282590	Other	4.12
281810	Artificial Corundum	2.60
284329	Other Compound of Silver	2.59
283531	Sodium Triphosphate (Sodium Triphosphate)	2.45
285000	Hydrides, nitrides, azides, silicides and borides, whether or not chemically defined, other than compounds which are also carbides of heading No. 28.49.	1.54
283525	Calcium Hydrogenorthophosphate ('Dicalcium Phosphate')	1.33
282110	Iron oxides and hydroxides	1.29

Both have revealed comparative advantages in the following:

HS Code	Description	India's RCA	Brazil's RCA
282620	Fluorosilicates of sodium or of potassium	9.16	4.39
282760	Iodides and iodide oxides	8.58	5.16
281820	Aluminium oxide, other than artificial corundum.	6.33	4.97
281830	Aluminium Hydroxide	1.89	2.1
283090	Other	1.22	1.06

Organic Chemicals

India has revealed comparative advantage in this category and Brazil has not .

At HS six-digit level, India has revealed comparative advantage in:

HS Code	Description	India's RCA
294200	Other organic compounds.	79.72
290362	Hexachlorobenzene and DDT (1, 1, 1-trichloro -2, 2- bis (p-chlorophenyl) ethane)	78.03
290344	Dichloro Tetra Fluoro Ethane and Chloro Penta Fluoro Ethane	59.98
293941	Ephedrine and its salts	42.94
290611	Menthol	35.28
292222	Anisidines, dianisidines, phenetidines, and their salts	31.38
293921	Quinine and its salts	26.20

HS Code	Description	India's RCA
292221	Aminohydroxynaphthalene-sulphonic acids and their salts	25.52
291221	Benzaldehyde	24.62
290342	Dichloro Difluoro Ethane	24.21
293331	Pyridine and Its Salts	20.65
293942	Pseudo Ephedrine (Inn) and Its Salts	16.06
292243	Anthranilic Acid	14.81
290722	Hydroquinone (Quinol) and Its Salts	14.47
290341	Trichloro Fluoro Methane	12.11
291431	Phenylacetone	11.14
291249	Other	10.09
290715	Naphthols and their salts	9.58
290311	Chloromethane (methyl chloride) and chloroethane (ethyl chloride)	9.18
291634	Phenylacetic Acid & Its Salts	8.57
291540	Mono-, di- or trichloroacetic acids, their salts and esters	7.39
290820	Derivatives containing only halogen substituents and their salts	7.35
294110	Penicillins and their derivatives with a penicillanic acid structure; salts thereof	7.07
290243	P-Xylene	7.03
290361	Chlorobenzene, o-dichlorobenzene and p-dichlorobenzene	6.95
290290	Other	6.92
290941	2-2 Oxydiethanol (diethylene glycol, digol)	6.85
292229	Other	6.76
291813	Salts and esters of tartaric acid	6.47
293221	Coumarin, Mthylcoumrn & Ethylcoumrn	6.47
292519	Other Imides & Thr Drvtvs Slts thereof	6.15
291711	Oxalic acid, its salts and esters	6.05
290517	Satrd Ddcan-1-Ol(Lryl-Alchl)Hxadecan-1-Ol(Cetyl Alchl)&Octdecn-1-Ol(Stryl Alchl)	5.80
292159	Other	5.79
293319	Other	5.61
294120	Streptomycins & Thr Drvtvs Slts thereof	5.42
291900	Phosphoric esters and their salts, including lactophosphates; their halogenated, sulphonated, nitrated or nitrosated derivatives.	5.32
292112	Diethylamine and Its Salts	5.17
293311	Phenazone (Antipyrin) and Its Derivatives	5.14
292422	Acetamedobenzoic Acid	5.04
292310	Choline and Its Salts	4.99
291423	Ionones and methylionones	4.67
290712	Cresols and their salts	4.42
290514	Other butanols	4.28
290369	Other	4.24
293292	1-(1,3-Benzodioxol-5-Yl) Propan-2-One	3.96
290319	Other	3.87
293626	Vitamin B12(Cyanocobalanim) & Its Drvtvs	3.74
291419	Other Acyic Ketones without other Oxygn Fnctn	3.71
290349	Other than halogenated derivative of acyclic hydrocarbons containing two or more differnet halogens	3.63

HS Code	Description	India's RCA
293949	Other	3.55
290713	Octylphnl Nonylphnl & Thr Isomers,Salts	3.55
291300	Halogenated, sulphonated, nitrated or nitrosated, derivatives of products of heading No. 29.12	3.43
291816	Gluconic acid, its salts and esters	3.41
293629	Other vitamins and their derivatives	3.38
290629	Other	2.93
290343	Trichloro Trifluoro Ethane	2.71
291539	Other	2.71
291522	Sodium Acetate	2.68
291219	Other	2.65
291570	Palmitic acid, stearic acid, their salts and esters	2.62
294150	Erthromycin & Its Drvtvs SIts thereof	2.59
290345	Other Derivatives Perhalogenated Only With Fluorine & Chlorine	2.57
293371	6 hexanelactam (epsilon caprolactam)	2.52
293351	Malonylurea (barbituric acid) and its derivatives; salts thereof	2.45
291470	Halogenated, sulphonated, nitrated or nitrosated derivatives	2.45
291529	Other	2.44
290911	Diethyl Ether	2.44
292520	Imines and their derivatives; salts thereof	2.40
292990	Other Cmpnds With Other Nitrogen Function	2.40
292141	Aniline and its salts	2.38
293321	Hydantoin and Its Derivatives	2.35
294140	Chloramphenicol & Its Drvtvs SIts thereof	2.32
292390	Otr Quaternary Ammonium Salts & Hydroxide Lecithins & other Phosphoaminolipids	2.22
293930	Caffeine and Its Salts	2.21
291421	Camphor	2.19
291631	Benzoic acid, its salts and esters	2.14
291719	Other	2.00
290729	Other	1.97
291439	Other than aromatic ketone without other oxygen function	1.92
290714	Xylenols and Their Salts	1.91
294190	Other	1.79
290890	Other	1.70
293721	Cortisone, hydrocortisone, prednisone (dehydrocortisone) and prednisolone (dehydrohydrocortisone)	1.68
292151	O-, m-, p-Phenylenediamine, diaminotoluenes, and their derivatives; salts thereof	1.63
292090	Other	1.62
290621	Benzyl Alcohol	1.62
293690	Other Vit & Provit incl. Natural Concentrts	1.59
290420	Derivatives containing only nitro or only nitroso groups	1.53
292211	Monoethanolamine and Its Salts	1.51
291619	Other	1.44
291739	Other	1.43

HS Code	Description	India's RCA
291230	Aldehyde-Alcohols	1.42
291639	Other	1.42
293990	Other	1.39
291521	Acetic Acid	1.27
293610	Unmixed Provitamins	1.26
290522	Acyclic terpene alcohols	1.25
293291	Isosafrole	1.24
291229	Other	1.23
292111	Methylamine Di-Or Trimethyl Amine & Their Salts	1.22
293329	Other	1.21
292700	Diazo-, azo- or azoxy-compounds.	1.17
290241	O-Xylene	1.15
292320	Lecithins and other phosphoaminolipids	1.14
291211	Methanal (Formaldehyde)	1.13
292212	Diethanolamine and Its Salts	1.13
293929	Other Alkaloids of Cinchona & Their Derivatives and Salts thereof	1.12
292410	Acyclic amides (including acyclic carbamates) and their derivatives; salts thereof	1.06
293219	Other	1.05

At six digit level Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
291535	2 ethoxyethyl acetate	33.54
290543	Mannitol	23.37
292242	Glutamic Acid and Its Salts	20.05
292421	Ureines & Their Derivatives Salts thereof	9.02
290323	Tetrachlorethylene (Perchloroethylene), Unsaturated	8.90
293810	Rutoside (rutin) and its derivatives	8.73
290944	Other Monoalkyl Ethers of Ethylene Glycol or of Diethylene Glycol	8.52
290315	1,2 Dichloroethane (ethylene dichloride), a saturated chlorinated derivative of acyclic hydrocarbons	6.70
293293	Piperanol	5.34
290919	Other Acyclic Ethers & Their Halogenated, Sulfonated Nitrate or Nitrosated Derivatives	5.00
290314	Carbon Tetrachloride, Saturated	4.87
290123	Unsat. Butene (Butylene) & Isomers thereof	4.34
292241	Lysine and Its Esters Salts thereof	3.88
290532	Propylene Glycol (Propane-1,2-Diol)	3.54
291413	4 Methylpentan-2-one (methyl isobutyl ketone)	3.35
291814	Citric Acid	3.21
292119	Other Acyclic Monoamines & Their Derivatives Salts thereof	2.68
291412	Butanone (Methyl Ethyl Ketone)	2.58
291712	Adipic Acid Its Salts and Esters	2.33
290515	Saturated Pentan-1-ol (Amyl Alcohol) & Isomers thereof	1.95
293100	Other organo-inorganic compounds.	1.94
292213	Triethanolamine and Its Salts	1.80

HS Code	Description	Brazil's RCA
291714	Maleic Anhydride	1.79
290514	Other butanols	1.67
291020	Methyloxirane (Propylene Oxide)	1.65
292610	Acrylonitrile	1.62
290960	Alchl Peroxides, Ethr Peroxides, Ketone Peroxides & Thr Halgntd Slphntd Nitratd or Nitrosatd Derivatives	1.58
290810	Drvtvs of Phenol/Phenol Alcohol containing Onlyhalogen Substituents and Their Salts	1.38
291532	Vinyl Acetate	1.37
290122	Unsaturated Propene (Propylene)	1.34
290516	Satrd Octnl (Octyl Alchl) & Ismrs thereof	1.33
290219	Other Cyclanes, Cyclenes & Cycloterpenes	1.28
290619	Other	1.26
290242	M-Xylene	1.23
291614	Esters of Methacrylic Acid	1.19

At six digit level Both India and Brazil have revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA	India's RCA
291821	Salicylic acid and its salts	23.05	1.6
292320	Lecithins and other phosphoaminolipids	11.30	1.14
291811	Lactic acid, its salts and esters	6.83	1.41
291823	Other esters of salicylic acid and their salts	5.91	2.04
290220	Benzene	5.07	4.43
292143	Toluidines and their derivatives; salts thereof	4.87	3.36
291531	Ethyl Acetate	4.77	1.48
291440	Ketone-Alcohols & Ketone Aldehydes	4.22	2.82
290542	Pentaerythritol	3.69	2.88
293930	Caffeine and Its Salts	3.68	2.21
290490	Other	3.50	10.11
290124	Buta -1, 3-diene and isoprene	2.60	4.57
293910	Alkaloids of opium and their derivatives; salts thereof	2.08	9.01
290410	Derivatives containing only sulpho groups, their salts and ethyl esters	2.01	13.08
291815	Salts and esters of citric acid	1.97	1.37
292142	Aniline derivatives and their salts	1.87	22.55
290531	Ethylene Glycol (Ethanediol)	1.45	2.84
291813	Salts and esters of tartaric acid	1.27	6.47
292144	Diphenylamine and its derivatives; salts thereof	1.11	5.45
292212	Diethanolamine and Its Salts	1.10	1.13
291735	Phthalic Anhydride	1.07	6.65
290890	Other	1.03	1.7

Pharmaceutical products: Neither India nor Brazil has revealed comparative advantage in this category.

At six digit level Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
300120	Extracts of glands or other organs or of their secretions	5.49
300510	Adhesive dressings and other articles having an adhesive layer	1.40
300610	Sterile surgical catgut, similar sterile suture materials and sterile tissue adhesives for surgical wound closure; sterile laminaria and sterile laminaria tents; sterile absorbable surgical or dental UNIT	1.36

At six digit level India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
300320	Medicaments Cont. Other Anti-Biotics	19.89
300110	Glands and other organs, dried, whether or not powdered.	18.57
300310	Mdcmnts containing Pnclns/Thr Drvts With A/Pnclnic Acid Strctre, Strptmcns/Thr Drvts	8.70
300339	Other Medicaments	7.99
300410	containing penicillins or derivatives thereof, with a penicillanic acid structure, or streptomycins or their derivatives	4.42
300331	Medicaments containing Insulin	3.92
300390	Other	3.84
300450	Other medicaments containing vitamins or other products of heading No. 29.36.	3.41
300420	containing other antibiotics.	2.48
300220	Vaccines for human medicine	1.56

Fertilisers: Neither Brazil not India has revealed comparative advantage in this.

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	RCA
310560	Minrl or Chmcl Fertlrs containing the Two Fertlsng Elmnts Phosphorus & Potassium	19.93
310520	Minrl/Chemcl Fertlrs containing the Three Fertlsng Elmnts Nitrogn Phosphrs & Potasium	2.44
310559	Other Minrl/Chemcl Fertlrs containing Two Fer-Lsng Elemnts Nitrogen & Phosphorus	2.06
310390	Other Minerls of Chemcl Frtlrs Phosphc	1.10
310290	Other, including mixtures not specified in the foregoing subheadings	1.08

At six digit level Both India and Brazil have revealed comparative advantage in the following:

HS Code	Description	India's RCA	Brazil's RCA
310390	Other Minerls of Chemcl Frtlrs Phosphc	1.24	1.1

Tanning or dyeing extracts; tannins and their derivatives; dyes, pigments and other colouring matter; paints and varnishes; putty and other mastics; inks.: Brazil has not revealed comparative advantage in this, but India has revealed comparative advantage in this.

At six digit level India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
320412	Acid dyes, whether or not pre-metallised, and preparations based thereon; mordant dyes and preparations based thereon	11.30
320415	Vat dyes (including those usable in that state as pigments) and preparations based thereon	10.23
320413	Basic dyes and preparations based thereon	8.62
320490	Other Synthetic Organic Colorng Matter	6.89
320414	Direct dyes and preparations based thereon	6.39
320210	Synthetic Organic Tanning Substances	3.97
320417	Pigments and preparations based thereon	3.34
320419	Other, including mixtures of colouring matter of two or more of the subheading Nos. 3204.11 to 3204.19	3.01
320290	Other	2.11
320620	Pigmnts & Prptns Basd On Chrom Compnd	2.04
320411	Disperse dyes and preparations based thereon	1.66
321519	Other	1.64
320110	Quebracho Extract	1.16

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	RCA
320120	Wattle Extract	37.87
320630	Pigmnts & Prptns Basd On Cadm Compnds	7.66
321310	Colours in Sets	1.76

At six digit level Both India and Brazil have revealed comparative advantage in the following:

HS Code	Description	India's RCA	Brazil's RCA
320190	Other	3.00	139
320420	Synthetic Organic Prdcts of a Kind used As Fluorescent Brightening Agents	3.44	1.19
320416	Reactive dyes and preparations based thereon	13.70	1.11

Essential Oils and resinoids, perfumery, cosmetic or toilet preparations

Neither Brazil nor India has revealed comparative advantage in this.

At six digit level India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
330122	Of jasmin	27.31
330741	'Agarbatti' & other Odoriferous Preparations Which operate by Burning	26.79
330125	Of other mints	24.37
330124	Of peppermint (Mentha piperita)	20.50
330130	Resinoids	5.52
330129	Other	2.13
330111	Essential Oils of Bergamot	1.51

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
330112	Essential Oils of Orange	31.45
330113	Essential Oils of Lemon	3.27
330620	Yarn to Clean Betwn Teeth (Dntl Floss)	2.78
330126	Essential Oil of Vetiver	1.84
330590	Other	1.35
330114	Essential Oils of Lime	1.13

At six digit level Both India and Brazil have revealed comparative advantage in the following:

HS Code	Description	India's RCA	Brazil's RCA
330190	Other	13.76	11.76
330610	Dentifrices	1.42	4.05
330119	Other	2.32	2.33

Soap, organic surface-active agents, washing preparations, lubricating preparations, artificial waxes, prepared waxes, polishing or scouring preparations, candles and similar articles, modeling paste unit;

Neither Brazil nor India has revealed comparative advantage in this category.

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
340119	Other	1.14

At six digit level Both India and Brazil have revealed comparative advantage in the following:

HS Code	Description	India's RCA	Brazil's RCA
340111	For toilet use (including medicated products)	1.05	1.86

Albuminoidal substances, modified starches, glues, enzymes;

Only Brazil has revealed comparative advantage in this product at two digit level and India has not revealed any.

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
350110	Casein Casein Derivatives Casein Glues	3.95
350710	Rennet and concentrates thereof	1.16

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
350400	Peptones and their derivatives; other protein substances and their derivatives, not elsewhere specified or included; hide powder, whether or not chromed.	2.48
350211	Dried (Egg Albumin)	1.77
350610	Prdcts for Use As Glues/Adhsvs Put Up for Retl Sale As Glues/Adhsvs not exceeding 1 Kg	1.04

At six digit level Both India and Brazil have revealed comparative advantage in the following:

HS Code	Description	India's RCA	Brazil's RCA
350300	Gelatin (including gelatin in rectangular (including square) sheets, whether or not surface-worked or coloured) and gelatin derivatives; isinglass; other glues of animal origin, excluding casein gluesUNIT	2.70	7.43

Explosives, pyrotechnic products, matches, pyrophoric alloys, certain combustible preparations:

Only India has revealed comparative advantage in this category.

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
360500	Matches, other than pyrotechnic articles of heading No. 36.04.	2.19
360300	Safety fuses; detonating fuses; percussion or detonating caps; igniters; electric detonators.	1.77
360200	Prepared explosives, other than propellant powders.	1.36

At six digit level Both India and Brazil have revealed comparative advantage in the following:

HS Code	Description	India's RCA	Brazil's RCA
360500	Matches, other than pyrotechnic articles of heading No. 36.04.	7.78	2.19
360300	Safety fuses; detonating fuses; percussion or detonating caps; igniters; electric detonators.	1.38	1.77

Photographic and Cinematographic goods:

Neither Brazil nor India has revealed comparative advantage in this category.

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
370690	Other	13.29
370610	Of a width of 35 mm or more	2.74
370520	Microfilms Exposed & Developed	1.97
370239	Other Flm without Perforations of Width not Exceeding 105Mm	1.05

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
370320	Other Photographic Paper etc for Color Photography	2.80
370310	Photopaper etc in Rolls Original Width Exceeding 610Mm	1.65
370254	Other Film for Color Photography (Polychrome) of a Width exceeding 16Mm but not exceeding 35Mm & of length not exceeding 30M other than for Slides	1.13
370110	For X-ray	1.08

Miscellaneous Chemical Products: Neither Brazil nor India has revealed comparative advantage in this category.

At HS six-digit level, India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
381710	Mixed alkylbenzene	7.26
382420	Naphthenic acids, their water insoluble salts and their esters	4.51
382370	Industrial fatty alcohols	2.68
380620	Salts of Rosin or of Resin Acids or of Derivatives of Rosin/Resin Acids, excl. Salts of Rosin Adducts	2.44
381119	Other Anti-Knock Preparation	2.43
382311	Stearic acid	1.97
380210	Activated Carbon	1.89
380890	Rodenticides and Other Similar Preparation	1.60
381210	Prepared Rubber Accelerators	1.52
381230	Anti-oxidising preparations and other compound stabilisers for rubber or plastics	1.44
380190	Other (Graphite Based Preparations)	1.07

At HS six-digit level Brazil has revealed comparative advantage in

HS Code	Description	Brazil's RCA
380510	Gum, wood or sulphate turpentine oils	11.31
380130	Carbonaceous Pastes for Electrodes & Furnace Linings	5.34
380610	Rosin and resin acids	4.20
380993	Finishing agents and dye carriers - leather industry	1.91
382479	Other, containing Two or More Different Halogens	1.63
380830	Herbicides, anti-sprouting products and plant-growth regulators	1.55
382312	Oleic Acid	1.54
380820	Fungicides	1.51
380690	Other (Rosin Spirits etc)	1.06
380840	Disinfectants	1.04
381090	Other	1.03

Both have revealed comparative advantages in the following:

HS Code	Description	India's RCA	Brazil's RCA
380810	Insecticides	9.33	1.06
380590	Other	2.87	2.82
381511	Supprtd Catalysts with Nickel/Nickel Cmpnds	1.76	1.05
382479	Other,containing Two or More Diffrent Halogens	1.75	1.63
382319	Other Industrial Monocarboxylic Fatty Acid	1.43	1.04
380820	Fungicides	1.25	1.51

Plastic and articles thereof: Neither Brazil nor India has revealed comparative advantage in this category.

At HS six-digit level Brazil has revealed comparative advantage in:

HS Code	Description	Brazil's RCA
390110	Polyethylene Hvng a Spfc Grvty Below 0.94	2.09
391290	Other	1.64
391231	Carboxymethylcellulose and Its Salts	1.42
392091	Other Pltes Shts etc of Polyvinyl Butyral	1.39
391710	Artfcl Guts of Hrdnd Prtn/of Celulsc Mtrls	1.33
390130	Ethylene-Vinyl Acetate Copolymers	1.30
390220	Polyisobutylene	1.26
390910	Urea resins; thiourea resins	1.16
392020	Pltes Shts etc. of Polymrs of Propylrn	1.01

HS six-digit level, India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
392069	Of other polyesters	8.83
390210	Polypropylene	4.31
391890	Of other plastics	3.75
392329	Sacks & Bags (incl. Cones)of other Plastics	3.06
392062	Pltes Shts etc of Plyethylrn Terephthalte	2.80
390390	Other Polymrs of Styrene	1.96
390290	Other Polymers of Propylene in Pmry Forms	1.54
392071	Of regenerated cellulose	1.40
391610	Of polymers of ethylene	1.31
392510	Resrvrs Tanks Vats & Similar Contnr Upto 30ol	1.15
391739	Other Tubes Pipes and Hoses	1.13
390421	Other PVC, Non-plasticised	1.08
392390	Other Articles for the Cnvyne/Pckng of Goods	1.04

Both have revealed comparative advantages in the following:

HS Code	Description	India's RCA	Brazil's RCA
390760	Polyethylene Terephthalate	4.41	1
391220	Cellulose nitrates (including collodions)	3.32	11.73
390120	Polyethylene Hving a Spfc Grvty 0.94 /More	3.18	1.87
391731	Flexible Tubes Pipes and Hoses Having a Minimum Burst Pressure of 27.6 Mpa	1.45	3.76
390940	Phenolic resins	1.11	1.16

Rubber and articles thereof: Only Brazil has revealed comparative advantage in this category and India has not revealed comparative advantage.

At HS six-digit level, only Brazil has revealed comparative advantage in

HS Code	Description	Brazil's RCA
401140	Of a kind used on motorcycles	5.81
400259	Other Acrylonitrile-Butadiene rubber (Nbr)	5.22
400219	Other	2.93
400821	Plts Shts Strps of Non-Cellular rubber	2.69
401191	Other Having a 'Herring-Bone'/Similar Tread	1.89
400220	Butadiene Rubber (Br)	1.82
400270	Ethylene-propylene-nonconjugated diene rubber (EPDM)	1.79
401130	New Pnmte Tyres of a Kind used On Aircraft	1.60
400610	'Camel-Black'Strps for Retreading rubber Tyrs	1.37
400299	Other	1.33
401692	Erasers	1.22
401110	New Pnmte Tyres of a Knd used On Motor Cars (incl. Station Wagons & Racing Cars)	1.17
401029	Other conveyor or transmission belts or belting of vulcanised rubber	1.02

At HS six-digit level, only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
401320	Inner Tubes of Rubber used On Bicycles	14.33
401410	Sheath contraceptives	11.65
400121	Natural rubber in Smoked Sheets	9.22
401011	(Cnvyr Blt/Bltnng)Renfrcd Only With Metl	6.77
400130	Balta Gutta-Percha etc & Similar Natrl Gums	4.77
401691	Floor Coverings and Mats	4.30
401199	Other	3.67
401012	(Cnvyr Blt/Bltnng)Renfrcd with Txl Mtrls	3.64
400129	Other	3.07
400110	Natural rubber latex, whether or not pre-vulcanised	2.94
400241	Latex, Chloroprene rubber	2.57
401511	Surgical Gloves	2.51

HS Code	Description	India's RCA
401390	Other	2.41
401695	Other Inflatable Articles	2.35
401290	Other	1.84
401013	(Cnvyr Blt/Bltn)Renfrcd Only with Plastics	1.62
401700	Hard rubber (for example, ebonite) in all forms, including waste and scrap; articles of hard rubber.	1.44
401022	Endless Trnmsn Belts of Trapeloidal Crs- Sectn (V-Belts) whether or not Grvd, of a Circumfrncebetwn 100 Cm & 240 Cm	1.43
401610	Other Articles of Cellular Rubber	1.35
401021	Endless Trnmsn Belts of Trapezoidal Cros-Sectn(V-Belts) whether or not Grvd,of a Circumfrnce Betwn 60 Cm & 180 Cm.	1.33
400829	Others of Non-Cellular Rubber	1.26
400280	Mixtures of any product of heading No. 40.01 with any product of this heading	1.16
401019	Other Conveyor Belt or Belting	1.13

Both have revealed comparative advantages in the following:

HS Code	Description	Brazil's RCA	India's RCA
401290	Other	6.44	1.84
401390	Other	3.01	2.41
401120	New Pnmtc Tyres used On Buses/Lorries	2.35	2.32
401310	Of a kind used on motor cars (including station wagons and racing cars), buses or lorries	1.84	4.04
401012	(Cnvyr Blt/Bltn)Renfrcd with Txtl Mtrls	1.39	3.64
401150	New Pnmtc Tyres of a Knd used On Bicycls	1.38	9.63
401022	Endless Trnmsn Belts of Trapeloidal Crs- Sectn (V-Belts) whether or not Grvd, of a Circumfrncebetwn 100 Cm & 240 Cm	1.13	1.43
401320	Inner Tubes of Rubber used On Bicycles	1.04	14.33

Raw hides and skins (other than furskins) and leather: Both India and Brazil hs revealed comparative advantage in this category.

At HS six-digit level, only Brazil has revealed comparative advantage in

HS Code	Description	Brazil's RCA
410431	Full grains and grain splits	6.26

At HS six-digit level, only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
410612	Otherwise Re-Tannd Lthr of Goat/Kid	69.82
410620	Parchment-dressed or prepared after tanning	15.61
410790	Of other animals	8.10
410310	Of goats or kids	1.95
410520	Parchment-dressed or prepared after tanning	1.35

Both have revealed comparative advantages in the following:

HS Code	Description	Brazil's RCA	India's RCA
410512	Shp/Lmb Skn Lthr otherwise Pre-Tnnd whether or not Splt	2.46	4.04
410422	Bovine leather, otherwise pre-tanned	17.22	1.1
410439	Other	4.41	6.44
410429	Other	3.73	3.72

Articles of leather, saddlery and harness, travel goods, handbags and similar containers articles of animal gut (other than silk worm): Only India has revealed comparative advantage in this category and Brazil has not.

At HS six-digit level, only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
420400	Articles of leather or of composition leather, of a kind used in machinery or mechanical appliances or for other technical uses.	25.43
420610	Catgut	11.35
420231	With outer surface of leather, of composition leather or of patent leather	10.67
420329	Other	7.80
420310	Articles of apparel	7.00
420221	With outer surface of leather, of composition leather or of patent leather	5.20
420340	Other Clothing Accsories	4.50
420321	Specially designed for use in sports	4.03
420211	With outer surface of leather, of composition leather or of patent leather	2.85
420219	Other	2.40
420330	Belts & Bandoliers	2.07
420222	With outer surface of sheeting of plastics or of textile materials	1.46
420239	Other	1.18

Both have revealed comparative advantages in the following:

HS Code	Description	Brazil's RCA	India's RCA
420610	Catgut	28.04	11.35
420500	Other articles of leather or of composition leather.	4.41	2.01
420690	Other Articles of Gut excl. Catgut	3.07	17

Furskins and artificial fur; manufactures thereof: Neither Brazil nor India has revealed comparative advantage in this.

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
430219	Other	1.60

At six digit level only India has not revealed comparative advantage in any product.

Wood and articles of wood, wood charcoal: Only Brazil has revealed comparative advantage in this category at 2 digit level and India has not revealed comparative advantage.

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
440729	Other of tropical wood	19.80
441219	Other	17.35
440799	Other	9.84
441214	Other plywood consisting solely of sheets of wood each ply not exceeding 6 mm thickness, with at least one outer ply of non coniferous wood	8.62
440920	Non-coniferous	8.53
441111	Fibr Bord of Density Excd 0.8 G/Cm3 not Mechanically Workd or Surface Covrd	6.96
441820	Doors,Their Frames and Thresholds	6.76
440122	Non-Coniferous Wood in Chips or Particls	4.69
441299	Other	4.46
441830	Parquet Panels	3.94
440724	Virola,Mahgny(Swetenia Spp)Imbuia & Blsa	3.54
440410	Hoopwood etc Coniferous	3.37
441222	Other Plywd with At Lst One Outr Ply of Non-Coniferous Wd	3.22
441890	Other Builders Joinery etc	3.14
441510	Cases Boxes Crates Drums and Similar Packings Cable-Durms of Wood	2.93
440910	Coniferous	2.88
440839	Other	2.63
440121	Coniferous Wood in Chips or Particls	2.49
442190	Other	2.47
441131	Fibr Bord not Mechanically Workd/Surface Coverd of Dnsty>0.35G/Cm3 but <=0.5G/Cm3	1.94
441213	Plywood consisting solely of sheets of wood each ply not exceeding 6 mm thickness with at least one outer ply of tropical wood	1.80
440200	Wood charcoal (including shell or nut charcoal), whether or not agglomerated.	1.73
440890	Other	1.63
441011	Waferboard incl. Orientd Strnd Bord of Wd	1.61
441121	Fibr Bord not Mechanically Workd/Surface Cvrdr of Dnsity>0.5 G/Cm3 But<=0.8G/Cm3	1.25
440710	Coniferous	1.19
441840	Shutterng for Concrete Constructional Work	1.12

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
440831	Vnr Shets,Mrti(Drk Rd,Lght Rd & Bakau)	17.93
440420	Non-coniferous	1.45
441292	Other Plywdwth At Least One Ply of Tropical Wd	1.41
442110	Cloths Hangers	1.06

At six digit level Both India and Brazil have revealed comparative advantage in the following:

HS Code	Description	India's RCA	Brazil's RCA
441090	Of other ligneous materials	2.32	2.29
441199	Other	1.26	2.2
441223	Other Plywood With At Least One Outer Ply Ofnon-Conifrs Wd and containing One Particle Board	1.06	1.28
440810	Coniferous	1.02	1.02

Cork and articles of cork: Neither Brazil nor India has revealed comparative advantage in this category either at HS-62digit level or even at 6 digit level.

Manufacturers of straw, or esparto or of other plating materials, basketware and wickerwork:

Neither Brazil nor India has revealed comparative advantage in this category either at HS-2digit level or even at 6 digit level

Pulp of wood or of other fibrous cellulosic material; waste and scrap of plating material; waste and scrap of paper or paperboard:

Only Brazil has revealed comparative advantage in this category at 2 digit level and India has not revealed comparative advantage.

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
470329	Bleached or Semi-Bleached Non-Coniferous Chemical Wood Pulp Sulphate	23.91

At six digit level only India has not revealed comparative advantage in any product.

Paper and paperboard; articles of paper pulp, of paper or of paperboard: Neither Brazil nor India has revealed comparative advantage in this category at HS-2digit level.

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
482020	Exercese Books	11.50
480459	Other Krft Papr/Paprbord Weing 225G/M2/More	10.17
481930	Sacks ,Bags Width of Base 40 Cm and Above	4.86
480411	Krft Liner Unbleached	4.70
480252	Weighing 40 g/m2 or more but not more than 150 g/m2	3.67
481039	Other	3.27
480830	Other Krft Ppr Crpd/Crnkld whether or not Embsd/Prfrtd	2.34
480820	Sack Krft Ppr Crpd/Crnkld whether or not Embsd/Prfrtd	1.93
480431	Other Craft Paper & Paperboard Weighing 150 G/M2 or Less Unbleached	1.69
481320	Cig Papr in Rolls of Width not exceeding 5 Cm	1.66
480570	Other paper and paperboard, weighing more than 150 g/m2 but less than 255 g/m2	1.62
482210	Bobins Spools Usd Forwindng Textl Yarn	1.39
480253	Weighing more than 150 g/m2	1.22
481390	Other	1.07
480540	Filter paper and paperboard	1.03
481091	Multiply Papr and Paprbord	1.01

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
480210	Hand-made paper and paperboard	23.28
482020	Exercese Books	6.84
481099	Other Coated Papr and Pprbrd (Not Mltiply)	5.43
481630	Duplicator Stencils	3.35
481110	Tard Bituminisd/Asphaltd Papr and Paprbord	2.71
482390	Other	1.74
480910	Carbon or similar copying papers	1.49
481129	Other Gummed or Adhesive Papr and Paprbord	1.45
481730	Boxes, pouches, wallets and writing compendiums of paper or papernoard containing an assortment of paper stationery	1.42
482010	Registers, account books, note books, order books, receipt books, letter pads, memorandum pads, diaries and similar articles	1.36
480220	Paper and paperboard of a kind used as a base for photosensitive, heat-sensitive or electro-sensitive paper or paperboard	1.13
480990	Other Copying or Transfer Papers	1.04

At six digit level Both India and Brazil have revealed comparative advantage in the following:

HS Code	Description	India's RCA	Brazil's RCA
481610	Carbon or Simlr Copying Paprs.	8.11	1.03
480251	Weighing less than 40 g/m2	5.65	3.94
482090	Other Articles of Stationary of Papr/Paprbord	1.38	1.79

Printed books, newspapers, pictures and other products of the printing industry, manuscripts, typescripts and plans: Neither Brazil nor India has revealed comparative advantage in this category at HS-2digit level.

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
490110	In single sheets, whether or not folded.	3.31
490210	Appearing at least four times a week.	1.08

At six digit level Brazil has not revealed comparative advantage in any product.

Silk: Both India and Brazil have revealed comparative advantage in this category, but India's RCA (13.57) is much higher than Brazil's RCA (1.15).

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
500600	Silk yarn and yarn spun from silk waste, put up for retail sale; silk-worm gut.	23.21
500790	Other fabrics	19.39
500720	Other fabrics, containing 85% or more by weight of silk or of silk waste other than noil silk	18.16
500710	Fabrics of niil silk	14.64
500500	Yarn spun from silk waste, not put for retail sale	1.36

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
500400	Silk yarns (other than yarn spun from silk waste) not put up for retail sale	16.31
500390	Other	1.39

At six digit level Both India and Brazil have revealed comparative advantage in the following:

HS Code	Description	India's RCA	Brazil's RCA
500310	Not carded or combed	3.32	13.61

Wool, fine or coarse animal hair, horsehair yarn and woven fabric: Neither Brazil nor India has revealed comparative advantage in this category at HS-2digit level.

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
510540	Coarse Animal Hair Carded or Combed	22.47
510400	Garnetted stock of wool or of fine or coarse animal hair.	14.65
511000	Yarn of coarse animal hair or of horsehair (including gimped horsehair yarn), whether or not put up for retail sale.	5.98
511120	Other, mixed mainly or solely with manmade filaments	2.29
510510	Carded Wool	1.55
511111	Of a weight not exceeding 300 g/m2	1.54
510810	Carded Yarn of Fine Animal Hair not Put Up for Retail Sale	1.50
510529	Other	1.28
510710	Containing 85% or more by weight of wool	1.17
510119	Other Wool,Greasy,incl. Fleece-Washed	1.05
510220	Coarse animal hair	1.00

Brazil has not revealed comparative advantage in any product at any product at- six digit level.

Cotton: Both India and Brazil have revealed comparative advantage in this category at two-digit level but India's RCA(5.04) is much higher than Brazil's RC (1.52).

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
520790	Other Cotton Yarn Put Up for Retail Sale	73.00
520521	Measuring 714.29 decitex or more (not exceeding 14 metric number)	67.35
520710	Coton Yarn containing Coton>=85% by Wt Put Up for Retail Sale	58.23
520541	Measuring per single yarn 714.29 decitex or more (not exceeding 14 metric number per single yarn)	40.75
520511	Measuring 714.29 decitex or more (not exceeding 14 metric number)	37.09
520535	Measuring per single yarn less than 125 decitex (exceeding 80 metric number per single yarn)	33.45
520811	Plain weave, weighing not more than 100 g/m2.	31.54
520411	containing 85% or more by weight of cotton	29.45
520821	Plain weave, weighing not more than 100 g/m2.	26.46
520911	Plain weave	25.36
521142	Denim of Yarns of Different Colour of Mxd Cotn Fabrics Weighing>200 Gsm	18.66
520831	Plain weave, weighing not more than 100 g/m2.	16.66
521121	Plain weave	14.74
520543	Measuring per single yarn less than 232.56 decitex but not less than 192.31 decitex (exceeding 43 metric number but not exceeding 52 metric number per	13.10

HS Code	Description	India's RCA
	single yarn)	
520548	Cotton yarn(other than sewing thread), containing 85% or more by weight of cotton, not put up for retail sale measuring per single yarn less than 83.33 decitex (exceeding 120 metric number)	12.89
521019	Other fabrics	11.03
521214	Other Woven fabrics of Cotton of Yrns of Diff Colours Weighing not More than 200 G/M2	10.99
520851	Plain weave, weighing not more than 100 g/m2.	10.89
521012	3 thread or 4 thread twill including cross twill unbleached woven fabrics of cotton, containing 85% or more by weight of cotton, mixed with man made fibres weighing not more than 200 g/sq metre	10.11
521215	Other Prntd Woven fabrics Wghng <=200 G/M2	10.11
521051	Plain weave	9.85
520921	Plain wave	9.57
520527	Cotton yarn(other than sewing thread), containing 85% or more by weight of cotton, not put up for retail sale measuring less than 106.4 decitex but not less than 83.33 decitex (exceeding 94 metric numUNIT	9.23
520547	Cotton yarn(other than sewing thread), containing 85% or more by weight of cotton, measuring single yarn less than 106.4 decitex but not less than 83.33 decitex (exceeding 94 metric number but not excUNIT	9.19
521151	Plain weave	8.13
520611	Sngl Yrn of Uncmbd Fbrs Measurng 714.29 Dctx/More(not exceeding 14 Mtrc No)	7.49
520841	Plain weave, weighing not more than 100 g/m2.	7.18
521222	Other Blchd Woven fabrics Wghng >200 G/M2	7.07
521212	Other Blchd Woven fabrics Wghng <=200 G/M2	6.70
520829	Other fabrics	6.69
521211	Unbleached	6.66
521022	3 thread or 4 thread twill including cross twill bleached woven fabrics of cotton, containing 85% or more by weight of cotton, mixed with man made fibres weighing not more than 200 g/sq metre	6.63
521052	3 thread or 4 thread twill including cross twill printed woven fabrics of cotton, containing 85% or more by weight of cotton, mixed with man made fibres weighing not more than 200 g/sq metre	6.25
520912	3 thread or 4 thread twill including cross twill unbleached woven fabrics of cotton, containing 85% or more by weight of cotton, weighing more than 200 g/sq metre	5.91
520546	Cotton yarn(other than sewing thread), containing 85% or more by weight of cotton, measuring single yarn less than 125 decitex but not less than 106.33 decitex (exceeding 80 metric number but not exceUNIT	5.75
520542	Measuring per single yarn less than 714.29 decitex but not less than 232.56 decitex (exceeding 14 metric number but not exceeding 43 metric number per single yarn)	5.51
520951	Plain weave	5.24
520528	Cotton yarn(other than sewing thread), containing 85% or more by weight of cotton, not put up for retail sale measuring less than 83.33 decitex (exceeding 120 metric number)	5.10
520919	Other fabrics	5.01
520812	Plain weave, weighing more than 100 g/m2.	4.73
521011	Plain weave	4.40
520514	Measuring less than 192.31 decitex but not less than 125 decitex (exceeding	4.37

HS Code	Description	India's RCA
	52 metric number but not exceeding 80 metric number)	
521213	Other Dyed Woven fabrics Wghng <=200 G/M2	4.33
520524	Measuring less than 192.31 decitex but not less than 125 decitex (exceeding 52 metric number but not exceeding 80 metric number)	4.12
520644	Multpl(Flded)/Cbld Yrn of Cmbd Fbrs Measurng Per Sngl Yrn <192.31 but >= 125 Dctx (>52 but <=80 Mtrc No)	3.34
520959	Other fabrics	3.22
520419	Swng Thrd containing Less than 85% by Weight Ofcotton not Put Up for Retail Sale	3.08
520931	Plain weave	2.89
520859	Other fabrics	2.85
520533	Measuring per single yarn less than 232.56 decitex but not less than 192.31 decitex (exceeding 43 metric number but not exceeding 52 metric number per single yarn)	2.81
521152	3 thread or 4 thread twill including cross twill printed woven fabrics of cotton, containing 85% or more by weight of cotton, mixed with man made fibres weighing more than 200 g/sq metre	2.70
520210	Yarn Waste (incl. Thread Waste)	2.55
520531	Measuring per single yarn 714.29 decitex or more (not exceeding 14 metric number per single yarn)	2.45
520299	Other	2.39
521131	Plain weave	2.28
520813	3 thread or 4 thread twill including cross twill unbleached woven fabrics of cotton, containing 85% or more by weight of cotton, weighing not more than 200 g/sq metre	2.27
521111	Plain weave	2.12
520822	Plain weave, weighing more than 100 g/m2.	2.09
521159	Other fabrics	2.04
520615	Sngl Yrn of Uncmbd Fbrs Measurng Less than 125 Dctx(exceeding 80 Mtrc No)	1.83
521225	Other Printed Woven fabrics Wghng >200 G/M2	1.76
520853	3 thread or 4 thread twill including cross twill printed woven fabrics of cotton, containing 85% or more by weight of cotton, weighing not more than 200 g/sq metre	1.61
520819	Other fabrics	1.56
521141	Plain weave	1.40
520515	Measuring less than 125 decitex (exceeding 80 metric number)	1.32
520534	Measuring per single yarn less than 192.31 decitex but not less than 125 decitex (exceeding 52 metric number but not exceeding 80 metric number per single yarn)	1.20
521119	Other fabrics	1.16

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
520100	Cotton, not carded or combed.	4.75
521142	Denim of Yarns of Different Colour of Mxd Cotn Fabrics Weighing>200 Gsm	3.36
520849	Other fabrics	1.16
520932	3 thread or 4 thread twill including cross twill dyed woven fabrics of cotton, containing 85% or more by weight of cotton, weighing more than 200 g/sq metre	1.05

At six digit level Both India and Brazil have revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA	India's RCA
520922	3 thread or 4 thread twill including cross twill bleached woven fabrics of cotton, containing 85% or more by weight of cotton, weighing more than 200 g/sq metre	6.34	3.93
520941	Plain weave	4.95	5.87
520513	Measuring less than 232.56 decitex but not less than 192.31 decitex (exceeding 52 metric number)	4.15	2.13
520943	Other fabrics of 3-thread or 4-thread twill, including cross twill	3.42	4.24
520942	Denim	2.90	2.34
520523	Measuring less than 232.56 decitex but not less than 192.31 decitex (exceeding 43 metric number but not exceeding 52 metric number)	2.36	4.91
520526	Cotton yarn(other than sewing thread), containing 85% or more by weight of cotton, not put up for retail sale measuring less than 126 decitex but not less than 106.38 decitex (exceeding 80 metric numUNIT	2.07	46.25
520929	Other fabrics	2.01	1.1
520420	Put up for retail sale	1.69	13.1
520522	Measuring less than 714.29 decitex but not less than 232.56 decitex (exceeding 14 metric number but not exceeding 43 metric number)	1.37	3.82
520952	3 thread or 4 thread twill including cross twill printed woven fabrics of cotton, containing 85% or more by weight of cotton, weighing more than 200 g/sq metre	1.18	1.34

Other vegetable textile fibres, paper yarn and woven fabrics of paper yarn: Only India has revealed comparative advantage in this category at 2-digit level and Brazil has not revealed any.

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
530720	Multiple (folded) or cabled	75.81
530810	Coir yarn	70.10
531010	Unbleached	55.81
530511	Raw	16.08
530710	Single	11.87
530519	Other	7.70
530290	Others(excl. True Hemp)	5.98
530490	Other	4.79
530599	Other	3.11
531090	Other	2.99
530310	Jute and other textile bast fibres, raw or retted.	2.99
530390	Other	1.60
530620	Multiple (folded) or cabled	1.01

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
530890	Other Veg Textl Yarn	6.01

At six digit level Both India and Brazil have revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA	India's RCA
530410	Sisal and other textile fibres of the genus Agave, raw	45.84	1.05

Manmade filaments: Only India has revealed comparative advantage in this category at 2-digit level and Brazil has not revealed any.

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
540410	Monofilament	1.16
540249	Other Yarn, Single, Untwisted or With a Twist not exceeding 50 Turns Per Metre	1.14
540720	Woven Fabrics Obtained From Strip/The Like	1.06

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
540710	Woven fabrics obtained from high tenacity yarn of nylon fabrics or other polyamides or of polyesters	24.11
540310	High tenacity yarn of viscose rayon	15.75
540320	Artificial Textured Yarn	12.99
540784	Printed	12.71
540754	Printed.	10.20
540242	Yarn of Polyester, Prtly Ormtd, Untwstd or with a Twist <= 50 Turns Per Mtr, Single	9.88
540834	Printed	8.07
540781	Unbleached or bleached	6.93
540824	Printed	5.74
540342	Of cellulose acetate	5.33
540259	Other	5.29
540744	Printed	4.75
540251	Other Yarn of Nylon or Other Polymds Sngl With a Twist Exceeding 50 Turns Per Metre	4.38
540262	Other Yarn of Polystrs, Multpl or Cabld	3.91
540252	Other Yarn of Polyesters, Single, With a Twist Exceeding 50 Turns/Per Metre	3.35
540610	Synthetic Filament Yarn	3.15
540774	Woven Fabrics containing 85% or More by Wt of other Synthetic Filaments, Printed	2.96
540752	Dyed	2.80
540810	Woven Fabrics, Obtained From High Tenacity Yarn of Viscose Rayon	2.65
540620	Artificial Filament Yarn	2.54
540822	Dyed	2.42
540730	Fabrics Consistng of Layers of Parallel Textile Yarn	2.28
540782	Dyed	2.19

HS Code	Description	India's RCA
540233	Textured Yarn of Polyesters	2.07
540341	Of viscose rayon	1.46
540269	Other	1.44
540220	High tenacity yarn of polyesters	1.44
540339	Other Yarn,Single	1.42
540239	Other	1.35
540773	Other Woven fabrics of Yrns of Difrnt Colors containing 85% or More by Wt of Synthc Filmnts	1.22
540120	Sewing Thread of Artificial Filaments	1.21
540823	Woven Fabrics of Yarns of Difrnt Colors Cntng>=85% of Artifcl Filmnts/Strp/Like	1.14
540332	Other Yarn of Viscose Rayon,Single,With a Twist Exceeding 120 Turns Per Metre	1.08

At six digit level Both India and Brazil have revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA	India's RCA
540331	Other Yarn of Viscose Rayon,Sngl,Untwstd/ With a Twist not exceeding 120 Turns Per Metre	1.43	6.31
540743	Other Woven Fabrics containing >85% Polyamade of Yarns of Different Colours	1.01	2.55

Man-made staple fibres: Only India has revealed comparative advantage in this category at 2-digit level and Brazil has not revealed any.

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
551341	Woven Fabrics of Polyester Staple Fibres, Plain Weave,Printed	2.61
550932	Multiple(Folded)/Cabled Yrn Cntng>=85% of Acrylic/Modacrylic Staple Fibres	2.07
551613	Woven fabrics of Yrn of Different Colrs containing 85% or More by Wt Ofartfcl Stpl Fbrs	1.19

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
551443	Woven fabrics of other Polyster Stpl Fbrs,Prntd	32.01
550951	Other Yarn of Polyster Stpl Fbrs Mixed Mainly/Solely With Artificial Staple Fbrs	26.75
551012	Multiple (folded) or cabled yarn	23.40
550922	Multiple(Folded)/Cabled Yrn containing 85% or More by Wt of Polyestr Staple Fibres	21.17
550959	Other Yarn of Polyester Staple Fibres	19.78
551644	Woven fabrics Cntng<85% by Wt of Artfcl Stpl Fbrs,Mxd Mainly/Solely with Cotton,Printed	13.51
550953	Other Yarn of Polyester Staple Fibrs Mixed Mainly/Solely With Cotton	13.29
551323	Woven fabrics of other Polyestr Stpl Fbrs,Dyed	13.14
551329	Woven fabrics of other Synthc Stpl Fbrs,Dyed	12.70

HS Code	Description	India's RCA
551011	Single yarn	12.43
550999	Other Synthc Yrn Mxd Mainly/Solely with Fbre other than Cotton/Fine Animals Hair & Wool	11.55
550941	Single yarn	9.39
550942	Multiple (folded) or cabled yarn.	9.37
551519	Fabrics of Polyestr Stpl Fbrs Mxd Mainly or Solely With other Fbrs	9.32
551511	fabrics of Polyestr Stpl Fbrs,Mxd Mainly or Solely with Viscose Rayon Stpl Fbrs	9.00
551020	Other yarn, mixed mainly or solely with wool or fine animal hair.	8.17
551521	fabrics of Acrylc/Modacrylc Stpl Fbr Mxd Mainly/Solely With Man-Made Filaments	7.79
551349	Woven fabrics of other Synthc Stpl Fbrs,Prntd	7.32
551419	Woven fabrics of other Syn Fbrs,Blcd/Unblcd	7.30
551512	fabrics of Polyestr Stpl Fbrs Mxd Mainly/ Solely with Man-Made Filament	6.74
551591	Other Woven fabrics of Syn Fbrs Mxd Mainly or Solely With Man-Made Filaments	6.66
551313	Woven Fabrics of Other Polyester Staple Fibres, Bleached or Unbleached	5.13
550190	Other	5.10
551221	Woven Fabrics,Unblchd/Blchd,containing 85% or More by Wt of Acrylc/Modacrylc Staple Fbrs	4.44
550921	Single Yrn containing 85% or More by Wt of Polyester Staple Fibres	4.16
551291	Woven fabrics of Syn Stpl Fbrs containing 85% Ormore by Wt of other Syn Fbrs,Blcd/Unblcd	3.81
551130	Of artificial staple fibres.	3.74
551641	Woven fabrics containing <85% by Wt of Artfcl Stpl Fbrs,Mxd Mainly/Solely With Cotton,Unblchd/Blchd	3.69
551513	fabrics of Polyestr Stpl Fbrs Mxd Mainly/ Solely with Wool/Fine Animals Hair	3.60
551319	Woven Fabrics of Other Synthetic Staple Fibres ,Bleached or Unbleached	3.26
551211	Woven Fabrics,Unblchd/Blchd,containing 85% or More by Wt of Polyestr Staple Fibres	3.24
551411	Woven Fabrics of Polyester Staple Fibres, Plain Weave,Unbleached or Bleached	3.02
550620	Staple Fibrs of Polyesters,Carded/Combed	3.01
551219	Other Woven Fabrics,containing 85% or More by Wt of Polyestr Staple Fibres	2.99
551312	Woven fabrics of 3-Thread/4-Thrd Twil incl. Cross Twill Polystr Stpl Fbrs,Blcd/Unblcd	2.97
551333	Woven fabrics of Other Polysters Staple Fibrs,Yrn of Diffent Colours	2.68
550952	Other Yarn of Polystr Stple Fbrs Mixed Mainly/Solely With Wool/Fine Animal Hair	2.65
551592	Other Woven fabrics of Syn Fbrs Mxd Mainly or Solely With Wool or Fine Animal Hair	2.39
550130	Synthc Filamnt Tow,Acrylic/Modacrylic	2.34
551449	Woven Fabrics of other Syn Stpl Fbrs,Prntd	2.33
551614	Printed	2.32
550969	Other Yrn of Acrylc/Modacrylc Staple Fibres	2.16
550320	Staple Fibres of Polyester not Crd/Cmbd	2.16
551321	Woven Fabrics of Polyester Staple Fibres, Plain Weave,Dyed	2.08
550110	Synthc Filamnt Tow of Nylon/other Plyamds	2.07

HS Code	Description	India's RCA
550911	Single Yarn containing 85% or More by Wt of Staple Fibres of Nylon/other Polyamids	1.97
550330	Staple Fibres of Acrlc/Modacrlc not Crd/Cmbd	1.81
551429	Woven Fabrics of other Synthtc Fibrs,Dyed	1.79
550962	Other Yrn of Acrylc/Modacrylc Staple Fibresmixed Mainly/Solely With Cotton	1.62
551299	Other Woven Fabrics of Synthtc Staple Fibrscontng 85% or More by Wt of other Syn Fibrs	1.52
551090	Other yarn.	1.41
551030	Other yarn, mixed mainly or solely with cotton	1.32
551623	Woven fabrics containing <85% by Wt of Artfcl Stpl Fbrs,Mxd Mainly/Solely With Man-Made Filaments,of Yrn of Diffmnt Colr	1.26
551229	Other Woven Fabrics,containing 85% or More by Wtof Acrylic or Modacrylic Staple Fibres	1.25
550510	Waste etc.of Synthetic Fibres	1.20
550992	Other Synthetic Yarn Mixed Mainly/Solely With Cotton	1.16

At six digit level Both India and Brazil have revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA	India's RCA
550120	Synthtc Filamnt Tow of Polyestr	23.42	1.17
550410	Viscose Rayon Staple Fibres not Crd/Comb	4.82	2.29
550931	Single Yrn containing 85% or More by Wt of Acrylic/Modacrylic Staple Fibres	1.06	2.38

Wadding, felt and nonwovens; special yarns; twine, cordage, ropes and cables and articles thereof: Neither India nor Brazil has revealed comparative advantage in this category at HS-2 digit level.

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
560710	Of jute or other textile bast fibres of heading No. 53.03.	7.90
560221	Felt, Not Impregnated, Coated, Covered/ Laminated, of Wool/Fine Animal Hair	3.16
560121	Of cotton	2.57
560819	Other Knotted Netting of Twine, Cordage or Rope of Man-Made Textile Materials	2.46
560790	Other	2.14
560811	Made up fishing nets	2.08
560500	Metallised yarn, whether or not gimped, being textile yarn, or strip or the like of heading No. 54.04 or 54.05, combined with metal in the form of thread, strip or powder or covered with metal.	1.66
560750	Of other synthetic fibres	1.57
560749	Other Cordge etc of Polyethln/Polypropyln	1.27
560900	Article of yarn, strip or the like of heading No. 54.04 or 54.05, twine, cordage, rope or cables, not elsewhere specified or included.	1.15

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
560721	Binder or Baler/Twine of Sisal or Other Textile Fibres of the Genus Agave	47.57
560311	Man-Made Filmnt Wghng<25G/Sqm	1.82

At six digit level Both India and Brazil have revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA	India's RCA
560729	Other Twine,Rope etc of Sisal or Other Textile Fibres of the Genus Agave	4.36	4.89
560890	Other	2.01	4.76

Carpets and textile floor coverings: Only India has revealed comparative advantage in this category at 2-digit level and Brazil has not revealed any.

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
570220	Floor coverings of coconut fibres (coir)	79.32
570259	Of other textile materials.	52.53
570239	Of other textile materials.	47.56
570231	Of wool or fine animal hair	47.43
570291	Of wool or fine animal hair	24.47
570110	Of wool or fine animal hair	20.32
570251	Of wool or fine animal hair	19.10
570500	Other carpets and other textile floor coverings, whether or not made up.	19.01
570249	Of other textile materials	12.10
570310	Of wool or fine animal hair	11.29
570299	Of other textile materials	7.73
570210	Kelem, "Schumacks", "Karamanie" and similar hand-woven rugs.	5.64
570252	Of man-made textile materials.	5.50
570390	Of other textile materials.	4.79
570241	Of wool or fine animal hair	3.87
570232	Of man-made textile materials.	2.99

At six digit level Both India and Brazil have revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA	India's RC
570190	Of other textile materials.	2.41	14.02
570292	Of man-made textile materials	1.12	2.55

Special woven fabrics, tufted textile fabrics; lace, tapestries, trimmings, embroidery: Only India has revealed comparative advantage in this category at 2-digit level and Brazil has not revealed any.

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
581099	Of other textile materials	12.92
580211	Terry Towelling & Similar Woven Terry Fabrics of Cotton Unbleached	6.85
580900	Woven fabrics of metal thread and woven fabrics of metallised yarn of heading No. 56.05, of a kind used in apparel, as furnishing fabrics or for similar purposes, not elsewhere specified or included.	5.04
580310	Of cotton	4.67
580430	Hand Made Lace	4.64
581091	Of cotton	3.74
581092	Of man-made fibres	3.48
580890	Other	3.09
580125	Warp pile fabrics, cut	2.52
580500	Hand-woven tapestries of the type Gobelins, Flanders, Aubusson, Beauvais and the like, and needle-worked tapestries (for example, petit point, cross stitch), whether or not made up.	2.46
581010	Embroidery without Visible Ground	2.30
580810	Braids in the piece	2.12
580220	Terry Towelling & Similar Woven Terry Fabrics of Other Textile Materials	1.89
580190	Of other textile materials.	1.74
581100	Quilted textile products in the piece, composed of one or more layers of textile materials assembled with padding by stitching or otherwise, other than embroidery of heading No. 58.10.	1.26

At six digit level Both India and Brazil have revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA	India's RCA
580219	Other	12.57	1.48

Impregnated, coated, covered or laminated textile fabrics; textiles article of a kind suitable for industrial use: Neither India nor Brazil has revealed comparative advantage in this category at two digit level.

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
590110	Textile fabrics coated with gum or amylaceous substances, of a kind used for the outer covers of books or the like	1.31
590310	With Polyvinyl Chloride	1.14
590699	Other	1.05

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
590220	Tyre Cord Fabric of Polyesters	1.11

At six digit level Both India and Brazil have revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA	India's RCA
590210	Tyre Cord Fabric of Nylon/other Polyamides	1.74	2
590800	Textile wicks, woven, plaited or knitted, for lamps, stoves, lighters, candles or the like; incandescent gas mantles and tubular knitted gas mantle fabric, therefore, whether or not impregnated.	1.36	2.77

Knitted or crocheted fabrics: Neither India nor Brazil has revealed comparative advantage in this category at two digit level.

Brazil has not revealed comparative advantage in this category at six digit level.

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
600121	Looped Pile Fabrics of Cotton	6.89
600199	Other Pile Fabrics of other Ttxtl Materials	2.91
600220	Other knitted/crocheted fabrics of a Width<=30cm	2.26

Articles of apparel and clothing accessories, knitted or crocheted: Only India has revealed comparative advantage in this category at 2-digit level and Brazil has not revealed any.

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
610120	Men's or boys' overcoats, capes, cloaks, anoraks etc of cotton, knitted or crocheted	19.70
610110	Men's or boys' overcoat etc of wool or fine animal hair, knitted or crocheted	19.41
610441	Women's or girls' dresses of wool or fine animal hair, knitted or crocheted	15.44
610791	Men's or boys' bathrobes, dressing gowns, etc of cotton, knitted or crocheted	15.02
610819	Women's or girls' slips & petticoats of other textile materials, knitted or crocheted	14.45
610721	Men's or boys' nightshirts & pyjamas of cotton, knitted or crocheted	14.14
610510	Men's or boys' shirts of cotton, knitted or crocheted	13.59
610831	Women's or girls' nightdresses & pyjamas of cotton, knitted or crocheted	11.88
610190	Men's or boys' overcoats etc of other textile materials, knitted or crocheted	10.58
610442	Women's or girls' dresses of cotton, knitted or crocheted	10.31
610321	Men's or boys' ensembles of wool/fine animal hair, knitted or crocheted	9.51
610412	Women's or girls' suits of cotton, knitted or crocheted	9.25
610319	Men's or boys' suits of other textile materials, knitted or crocheted	7.78
610610	Women's or girls, blouses, shirts and shirt-blouses of cotton, knitted or crocheted	6.63
610342	Men's or boys' trousers, shorts etc of cotton, knitted or crocheted	5.77

HS Code	Description	India's RCA
611219	Track suits of other textile materials	5.56
610711	Men's or boys' underpants and briefs of cotton, knitted or crocheted	5.33
610910	T-shirts, singlets & other vests, of cotton, knitted or crocheted	4.82
611780	Other accessories (excl. shawls, scarves, mufflers, mantillas, veils, ties, bow ties, and cravats), knitted or crocheted	4.63
611720	Ties, bow ties and cravats	4.21
610220	Women's or girls' overcoats, car-coats, capes etc of cotton, knitted or crocheted	4.05
610322	Men's or boys' ensembles of cotton, knitted or crocheted	3.99
611120	Babies' garments & clothing accessories of cotton, knitted or crocheted	3.94
610792	Men's or boys' bathrobes, dressing gowns, etc of man-made fibres	3.79
610290	Women's or girls' overcoats etc of other textile materials, knitted or crocheted	3.36
610452	Women's or girls' skirts & divided skirts of cotton, knitted or crocheted	2.87
610811	Women's or girls' slips & petticoats of man-made fibres, knitted or crocheted	2.69
610462	Women's or girls' trousers, shorts etc of cotton, knitted or crocheted	2.66
611211	Track suits of cotton	2.59
610312	Men's or boys' suits of synthetic fibres, knitted or crocheted	2.55
610422	Women's or girls' ensembles of cotton, knitted or crocheted	2.48
611420	Other garments of cotton	2.35
610429	Women's or girls' ensembles of other textile materials, knitted or crocheted	2.34
610421	Women's or girls' ensembles of wool/fine animal hair, knitted or crocheted	2.24
611710	Shawls, scarves, mufflers, mantillas, veils and the like	2.13
611520	Women's full-length or knee-length hosiery, measuring per single yarn less than 67 decitex	2.10
610411	Women's or girls' suits of wool/fine animals hair, knitted or crocheted	2.08
610799	Men's or boys' bathrobes, dressing gowns, etc Of other textile materials, knitted or crocheted	2.08
610520	Men's or boys' shirts of man-made fibres, knitted or crocheted	2.06
610461	Women's or girls' trousers, shorts etc of wool/fine animal hair, knitted or crocheted	2.02
610443	Women's or girls' dresses of synthetic fibres, knitted or crocheted	1.80
611699	Other gloves etc of other textile materials	1.80
610419	Women's or girls' suits of other textile materials, knitted or crocheted	1.78
610821	Women's or girls' briefs & panties of cotton, knitted or crocheted	1.72
610719	Men's or boys' underpants and briefs of other textile materials, knitted or crocheted	1.68
610899	Women's or girls' bathrobes, dressing gowns, etc of other textile materials, knitted or crocheted	1.57
610444	Women's or girls' dresses of artificial fibres, knitted or crocheted	1.50
610449	Women's or girls' dresses of other textile materials, knitted or crocheted	1.48
610729	Men's or boys' nightshirts & pyjamas of other textile materials, knitted or crocheted	1.45
610590	Men's or boys' shirts of other textile materials, knitted or crocheted	1.35
611692	Other gloves etc of cotton	1.30
610332	Men's or boys' jackets & blazers of cotton, knitted or crocheted	1.29
611220	Ski suits	1.25
610331	Men's or boys' jackets & blazers of wool/fine animal hair, knitted or crocheted	1.16
610349	Men's or boys' trousers, shorts etc of other textile materials, knitted or crocheted	1.11
611010	Jerseys, pullovers, cardigans, waistcoats etc of wool or fine animal hair, knitted or	1.08

HS Code	Description	India's RCA
	crocheted	
610329	Men's or boys' ensembles of other textile materials, knitted or crocheted	1.05
610413	Women's or girls' suits of synthetic fibres, knitted or crocheted	1.05
611519	Panty hose & tights of other textile materials	1.04
610432	Women's or girls' jackets of cotton, knitted or crocheted	1.04
611239	Men's/boy's swimwear of other textile materials	1.03

Brazil has not revealed comparative advantage in this category at six digit level.

Articles of apparel and clothing accessories, not knitted or crocheted: Only India has revealed comparative advantage in this category at 2-digit level and Brazil has not revealed any.

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
620441	Of wool or fine animal hair	34.82
621490	Of other textile materials	32.97
620630	Of cotton	21.50
620442	Of cotton	19.99
620910	Babies' Garments and Clothing Accessories of Wool or Fine Animal Hair	17.89
620620	Women's or Girls' Blouses, Shirts & Shirt Blouses of Wool/Fine Animal Hair	17.47
620510	Men's/Boy's Shirts of Wool/Fine Animals Hair	15.74
621410	Of silk or silk waste	14.63
620819	Of other textile materials	13.35
621420	Of wool or fine animal hair	13.28
620422	Of cotton	10.91
621430	Shwls, Scrvs, Mufflers etc of Synthc Fbrs	10.19
620821	Of cotton	10.11
621440	Shwls Scrvs, Mufflrs etc of Artificial Fbrs	9.60
620520	Of cotton	9.27
620411	Suits of Wool or Fine Animal Hair	8.89
620811	Of man-made fibres	8.84
620799	Of other textile materials	8.47
620452	Of cotton	7.73
620443	Of synthetic fibres	7.42
620111	Overcoats, Raincoats, Carcoats, Capes, Cloaks and Similar Articles of Wool/Fine Animal Hair	7.36
620412	Of cotton	6.34
620721	Of cotton	5.84
620453	Of synthetic fibres	5.79
620719	Of other textile materials	5.69
621142	Of cotton	5.57
620112	Of cotton	5.35

HS Code	Description	India's RCA
620640	Of man-made fibres	5.17
620413	Of synthetic fibres	5.15
620610	Of silk or silk waste	5.03
620791	Of cotton	4.86
620920	Of cotton	4.78
620421	Ensembles of Wool or Fine Animal Hair	4.61
620990	Of other textile materials	4.52
620461	Of wool or fine animal hair	4.41
620449	Of other textile materials	4.27
620711	Of cotton	4.15
620829	Of other textile materials	3.75
620892	Of man-made fibres	3.73
620322	Ensembles of Cotton	3.30
620930	Of synthetic fibres	3.16
621111	Swimwear for Men'S or Boys'	3.11
621310	Handkerchiefs of Silk or Silk Waste	3.06
620432	Of cotton	3.04
620419	Of other textile materials	2.85
620321	Ensembles of Wool of Fine Animal Hair	2.70
620332	Of cotton	2.67
620451	Skrts & Dvded Skrts of Wool/Fine Animals Hair	2.58
621590	Of other textile materials	2.33
620119	Of other textile materials	2.19
620590	Of other textile materials	2.17
620333	Of synthetic fibres	2.09
620212	Of cotton	2.06
620530	Of man-made fibres	2.06
620822	Of man-made fibres	2.05
620192	Of cotton	1.96
620319	Of other textile materials	1.94
621320	Of cotton	1.90
620211	Of wool or fine animal hair	1.81
621131	Other Garments of Wool or Fine Animal Hair for Men'S or Boys'	1.79
620423	Of synthetic fibres	1.62
620342	Of cotton	1.62
621010	Garments,Made Up of Fabrics of Heading No.5602 or 5603	1.61
620341	Trousers,Bib & Brace Overalls Breeches & Shorts of Wool/Fine Animals Hair,Men'S/Boys'	1.60
620690	Blouses,Shirts etc of other Txtl Materials	1.54
620291	Of wool or fine animal hair	1.51
620729	Nightshrts & Pyjms of other Txtl materials	1.51
621141	Other Garments,of Wool or Fine Animal Hair,For Women'S or Girls'	1.50
620199	Of other textile materials	1.40
620343	Trousers,Bib & Brace,Overalls,Breeches & Shorts of Synthetic Fibrs,Men'S or Boys'	1.38
620722	Nightshrts & Pyjms of Man-Made Fibres	1.37
620331	Jackets & Blazers of Wool/Fine Animals Hair	1.32

HS Code	Description	India's RCA
621710	Accessories	1.25
621143	Other Garments of Man-Made Fibres	1.24
620792	Other Similar Garments of Man-Made Fbres	1.20
620459	Of other textile materials	1.16
620323	Ensembles of Synthetic Fibres	1.16
620431	Jackets of Wool or Fine Animal Hair	1.13
620312	Suits of Synthetic Fibres	1.12
620219	Of other textile materials	1.04
620462	Of cotton	1.03
620339	Of other textile materials	1.01
620113	Of man-made fibres	1.01

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
621112	Swimwear for Women'S or Girls'	1.93

At six digit level Both India and Brazil have revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA	India's RCA
620891	Of cotton	1.30	6.11

Other made-up textile articles; sets, worn clothing and worn textile articles, rags:

Both India and Brazil has revealed comparative advantage in this category at two digit level, but India's RCA (6.89) is much higher than Brazil's RCA (1.2).

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
630492	Other furnishing articles, not knitted or crocheted, of cotton	71.49
630510	Sacks and bags for packing, of jute or of other textile bast fibres of heading no. 53.03.	41.75
630419	Other bedspreads	32.73
630311	Curtains (including drapes) and interior blinds; curtain or bed valances, knitted or crocheted, of cotton	25.68
630190	Blankets and travelling rugs of other fibres	16.03
630499	Furnishing articles, not knitted or crocheted, of other textile materials	14.17
630240	Table linen, knitted or crocheted.	13.99
630790	Other madeup articles	12.61
630120	Blankets (other than electric blankets) and travelling rugs, or wool or fine animal hair	12.13
630411	Bedspreads, knitted or crocheted	8.47
630391	Other curtains etc. of cotton	7.14

HS Code	Description	India's RCA
630399	Other curtains etc. of other textile materials	6.55
630493	Other furnishing articles, not knitted or crocheted, of synthetic fibres	6.32
630130	Blankets (other than electric blankets) and travelling rugs, of cotton	6.29
630251	Other table linen of cotton	5.08
631010	Sorted rags, scrap twine, cordage, rope etc., used or new	4.88
630259	Other table linen of other textile materials	4.46
630590	Sacks & bags of other textile materials	4.32
630491	Other furnishing articles, knitted or crocheted	3.91
630639	Sails of other textile materials	3.89
630210	Bed linen, knitted or crocheted.	3.79
630710	Floor-cloths, dish-cloth, dusters and similar cleaning cloths	3.29
630539	Sacks & bags of other man-made textile materials	3.10
630291	Other linen of cotton	3.09
630641	Pneumatic mattresses of cotton	2.89
631090	Other rags, scrap, twine, cordage, rope etc.	2.88
630110	Electric blankets	1.46
630299	Other linen of other textile materials	1.39
630229	Printed bed linen of other textile materials	1.37
630720	Life-jackets and life-belts	1.12
630619	Tarpaulins, awnings and sunblinds of other textile materials	1.04

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
630691	Other camping goods of cotton	11.89
630222	Printed bed linen, of man-made fibres	9.19
630232	Other bed linen of man-made fibres	6.03

At six digit level Both India and Brazil have revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA	India's RCA
630520	Sacks and bags for packing, of cotton	10.87	18.37
630260	Toilet linen and kitchen linen, of terry towelling or similar terry fabrics, of cotton	5.93	3.4
630611	Tarpaulins, awnings and sunblinds of cotton	1.10	15.48

Footwear, gaiters and the like; parts of such articles: Both India and Brazil has revealed comparative advantage in this category at two digit level, but India's RCA (1.61) is lower than Brazil's RCA (3.01).

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
640320	Footwear with outer soles of leather, and uppers which consist of leather straps across the instep and around the big toe.	38.22
640110	Footwear incorporating a protective metal toe-cap.	22.58
640351	Other footwear with outer soles of leather covering the ankle	20.39
640610	Uppers and parts thereof other than stiffeners	8.27
640312	Ski boots and cross country ski footwear and snowboard boots with outer soles of rubber, plastics, leather or composition leather and uppers of leather	6.87
640420	Footwear with outer soles of leather/composition leather and with upper of textile materials	4.20
640330	Footwear made on a base/platform of wood not having an inner sole/a protective metal toe-cap	3.71
640391	Other footwear covering the ankle	2.65
640510	Other footwear with uppers of leather/composition leather	2.08
640340	Other footwear incorporating protective metal toe-cap	1.58
640191	Waterproof footwear covering the knee of rubber/plastics	1.30

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
640199	Other waterproof footwear of rubber/plastics	13.93
640220	Footwear with upper straps or thongs assembled to the sole by means of plugs.	8.89
640399	Other footwear with outer soles of other materials	5.74
640291	Other footwear covering the ankle with outer soles and uppers of rubber/plastics	2.71
640359	Other footwear with outer soles of leather	2.58
640299	Other footwear of 6402	1.76
640419	Other footwear with outer soles of rubber/plastics and with uppers of textile materials	1.65
640411	Sports footwear; tennis shoes, basketball shoes, gym shoes, training shoes and the like with outer soles of rubber or plastics	1.22

At six digit level Both India and Brazil have revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA	India's RCA
640691	Other footwear parts of wood	11.43	1.05
640391	Other footwear covering the ankle	4.17	2.65
640610	Uppers and parts thereof other than stiffeners	2.14	8.27
640420	Footwear with outer soles of leather/composition leather and with upper of textile materials	1.79	4.2
640330	Footwear made on a base/platform of wood not having an inner sole/a protective metal toe-cap	1.05	3.71

Headgear and parts thereof: Neither India nor Brazil has revealed comparative advantage in this category at two digit level.

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
650200	Hat-shapes, plaited or made by assembling strips of any material, neither blocked to shape, nor with made brims, nor lined, nor trimmed.	2.08

At six digit level both India and Brazil has revealed comparative advantage in the following

HS Code	Description	Brazil's RCA	India's RCA
650100	Hat-forms, hat bodies and hoods of felt, neither blocked to shape nor with made brims; plateaux and manchons (including slit manchons), of felt.	5.74	7.2

Umbrellas, sun umbrellas, walking sticks, seat sticks, whips, riding corps and parts thereof: Neither India nor Brazil has revealed comparative advantage in this category at two digit level.

At HS six-digit level, only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
660310	Handles and knobs	4.70

At HS six-digit level, only Brazil has not revealed comparative advantage in anything.

Prepared feathers and down and article made of feathers or of down; artificial made of feathers or of down; artificial flowers; article of human hair: Only India has revealed comparative advantage in this category at two digit level and Brazil has not revealed comparative advantage in this category.

At HS six-digit level, only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
670300	Human hair, dressed, thinned, bleached or otherwise worked; wool or other animal hair or other textile materials, prepared for use in making wigs or the like.	50.35

Articles of stone, plaster, cement, asbestos, mica or similar materials: Both India and Brazil has revealed comparative advantage in this category at two digit level, but India's RCA (1.71) is lower than Brazil's RCA (2.37).

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
681490	Other worked mica and articles of mica etc.	10.76
681260	Paper, millboard and felt	6.09
680221	Simply cut/sawn marble, travertine and alabaster with a flat or even surface	3.66
680423	Other millstones, grindstones, grinding wheels and the like of natural stone	3.06
680410	Millstones & grindstones for milling, grinding/pulping (eg. Sil Batta)	2.81
680299	Other stone	2.24

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
681390	Other friction materials (for clutches etc.)	6.06
680510	Natural or artificial abrasive powder or grain on a base of woven textile fabric only	2.89
681110	Corrugated sheets of asbestos-cement, of cellulose fibre-cement or the like	1.71
680530	Natural or artificial abrasive powder or grain on a base of other materials	1.69
681591	Articles containing magnesite dolomite/chromite	1.49
680520	Natural or artificial abrasive powder or grain on a base of paper or paperboard only	1.12

At six digit level both India and Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA	India's RCA
680223	Simply cut or sawn granite with a flat/even surface	14.64	13.35
681310	Brake linings and pads	9.82	1.96
681270	Compressed asbestos fibre jointing; in sheets/rolls	4.50	12.85
680229	Other simply cut/sawn monumental or building stone with a flat even surface	4.36	10.66
681410	Plates, sheets and strips of agglomerated or reconstituted mica, whether or not on a support.	2.71	1.34
680293	Other granite	2.45	2.3
680210	Tiles cubes etc. whether or not rectangular (incl. square) whose largest surface area be enclosed in a square measuring <49 sq cm artificially coloured granules etc	1.01	1.29
681290	Other asbestos materials	1.64	4.96

Ceramic Products : Only Brazil has revealed comparative advantage in this category at two digit level and India has not revealed comparative advantage in this category.

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
690810	Tiles, cubes and similar articles, whether or not rectangular, the largest surface area of which is capable of being enclosed in a square of 49 sq. cm.	3.46
690710	Tiles, cubes and similar articles whether or not rectangular, the largest surface area of which is capable of being enclosed in sqr < 49 sq cm	3.25
690390	Other refractory ceramic goods	2.31
690100	Bricks, blocks, tiles and other ceramic goods of siliceous fossil meals (for example, kieselguhr, tripolite or diatomite) or of similar siliceous earths.	1.82
691190	Other household & toileteries articles of porcelain china	1.77

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
690890	Other glazed ceramic flags etc.	3.65
690310	Other refractory ceramic goods containing by weight more than 50% of graphite or other forms of carbon or of a mixture of these products.	2.50
690210	Refractory bricks, blocks, tiles and similar goods containing by weight, singly or together, more than 50% of the elements magnesium, calcium or chromium, expressed as magnesium oxide, calcium oxide oUNIT	1.87
690320	Other refractory ceramic goods containing by weight more than 50 % of alumina (aluminium oxide) or of a mixture or compound of alumina and of silica (silicon dioxide)	1.61
691200	Ceramic tableware, kitchenware, other household articles and toilet articles, other than of porcelain or china.	1.24

At six digit level both India and Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA	India's RCA
691090	Other sanitary fixtures (excl. of porcelain)	5.50	1.27

Glass and glassware: Neither India nor Brazil has revealed comparative advantage in this category at two digit level.

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
701190	Other glass envelopes	17.71
700530	Wired, float & surface ground/polished glass	7.70
701610	Glass cubes & other glass small wares whether or not on backing for mosaics/similar purposes	3.85
701990	Other glass fibres and articles thereof	3.05
701810	Glass beads, imitation pearls, imitation precious or semi-precious stones and similar glass smallwares.	2.54
700420	Glass coloured throughout the mass (body tinted) opacified flashed or having an absorbent, reflecting or non reflecting layer	2.16
700320	Wired sheets	1.54
701790	Other laboratory, hygienic/pharmaceutical glassware	1.36
701010	Ampoules	1.14
700490	Other drawn and blown glass	1.10

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
701332	Glassware of glass having a linear coefficient of expansion not exceeding 5×10^{-6} per Kelvin within a temperature range of 0 degree c to 300 degree c	7.40
700231	Tubes of fused quartz/other fused silica	3.66
701912	Rovings	2.75
700521	Coloured non wired glass throughout the mass (body tinted) opacified, flashed/merely surface ground	1.62
700721	Laminated safety glass of size and shape suitable for incorporation in vehicles, aircraft, spacecraft or vessels	1.52
701931	Glass mats	1.48
700312	Non-wired sheets coloured throughout the mass (body tinted) opacified, flashed/having an absorbent, reflecting/non-reflecting layer	1.24
701110	Glass envelopes for electric lighting	1.02

Natural or coloured pearls, precious or semi-precious stones, precious metals, metals clad with precious metal and article thereof; imitation jewellery, coin: Only India has revealed comparative advantage in this category at two digit level and Brazil has not revealed comparative advantage in this category.

At HS six-digit level, only Brazil has revealed comparative advantage in

HS Code	Description	Brazil's RCA
711320	Articles of jewellery and parts thereof of base metal clad with precious metal	4.78
710813	Other non-monetary semi manufactured forms of gold	3.61
711510	Catalysts in the form of wire cloth or grill, of platinum	2.11
710692	Semi-manufactured silver.	2.06
711290	Waste and scrap of precious metal, other	1.97
711590	Other articles of precious metal	1.01

At HS six-digit level, only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
710239	Other non-industrial diamonds	26.20
711719	Other imitation jewellery of base metals whether or not plated with precious metal	22.70
710110	Natural pearls	13.39
711319	Articles of jewellery and parts thereof of other precious metal, whether or not plated or clad with precious metal.	12.64
710510	Dust and powder of diamonds	9.65
710391	Otherwise worked rubies, sapphires and emeralds.	7.28
711790	Other imitation jewellery of base metals whether or not plated with precious metal	6.19
711411	Articles of goldsmith's or silversmith's wares and parts thereof of silver, whether or not plated or clad with other precious metal.	4.85
711311	Articles of jewellery and parts thereof of silver, whether or not	4.70

HS Code	Description	India's RCA
	plated or clad with other precious metal.	
711419	Articles of goldsmith's or silversmith's wares and parts thereof of other precious metal, whether or not plated or clad with precious metal.	3.69
711420	Articles of goldsmith's or silversmith's wares and parts thereof of base metal clad with precious metal.	2.97
711711	Cuff links & studs of base metal whether or not plated with precious metal	2.81
710121	Cultured pearls unworked	1.93
711620	Articles of precious or semi precious stones (natural, synthetic/reconstructed)	1.57
710490	Other synthetic/reconstructed precious/semi precious stones	1.21
710231	Non-industrial diamonds unworked/simplely sawn cleaved or bruted	1.07

At six digit level both India and Brazil has revealed comparative advantage in the following

HS Code	Description	Brazil's RCA	India's RCA
710310	Precious stores(other than diamonds) and semi precious stones unworked or simply sawn or roughly shaped	15.03	11.15
710399	Otherwise worked other precious and semi-precious stone	5.00	18.51
710221	Industrial diamonds unworked or simply sawn, cleaved or bruted.	4.75	9.23
711620	Articles of precious or semi precious stones (natural, synthetic/reconstructed)	1.77	1.57

Iron and Steel: Both India and Brazil has revealed comparative advantage in this category at two digit level, but India's RCA (1.83) is lower than Brazil's RCA (2.55).

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
722520	Flat rolled products of high speed steel, of a width of 600 mm or more	94.28
720150	Alloy pig iron, speigeleisen	47.88
720250	Ferro-silico-chromium	44.32
720120	Non-alloy pig iron containing weight > 0.5% phosphorous	38.62
721041	Corrugated products of iron or non-alloy steel, otherwise plated/coated with zinc, of a width of 600 mm or more	29.07
720990	Other flat rolled products of iron or non-alloy steel n.e.s.	18.78
721911	Flat-rolled products of stainless steel, of a width of 600mm or more, not further worked than hot-rolled, in coils, of a thickness exceeding 10mm	17.63
720915	Flat-rolled products of iron or non-alloy steel, of a width of 600 mm or more, in coils, not further worked than cold-rolled (cold reduced) of thickness 3 mm or more	17.38
720825	Flat-rolled products of iron or non-alloy steel, of a width of 600 mm or more, in coils of a thickness of 4.75 mm or more only hot-rolled pickled	15.68
722240	Angles, shapes and sections of stainless steel	15.51

HS Code	Description	India's RCA
721049	Other products of iron/non-alloy steel, otherwise plated/coated with zinc, of a width of 600 mm or more	9.21
721610	U, I or H sections, hot-rolled, hot-drawn extruded of iron or non-alloy steel, of a height of less than 80 mm	8.57
722220	Bars and rods, cold-formed or cold-finished.	7.79
722880	Hollow drill bars and rods of alloy or non-alloy steel	7.36
720249	Other ferro-chromium	7.08
720918	Flat-rolled products of iron or non-alloy steel, of a width of 600 mm or more, in coils not further worked than cold rolled (cold reduced) of thickness of less than 0.5 mm	6.76
722012	Hot-rolled products of stainless steel, of a width of less than 600 mm, of a thickness of less than 4.75 mm	6.52
722300	Wire of stainless steel	6.50
722011	Hot-rolled products of stainless steel, of a thickness of 4.75mm or more, of a width of less than 600 mm	6.10
720719	Other products containing by weight less than 0.25% of carbon	5.55
721090	Other flat-rolled products of iron/non-alloy steel clad, plated or coated, of width of 600 mm or more	5.55
720810	Flat-rolled products of iron or non-alloy steel, of a width of 600 mm or more, in coils not further worked than hot-rolled, with patterns in relief	5.54
720390	Other ferrous products & iron in pellets, lumps etc	5.39
721011	Flat-rolled products of iron or non-alloy steel, of a width of 600 mm or more, plated or coated with tin of a thickness of 0.5 mm or more.	5.23
721399	Other nes	4.69
720241	Ferro-chromium containing by weight more than 4% of carbon	4.63
720610	Ingots	3.95
722810	Bars and rods, of other alloy steel	3.87
722100	Bars and rods, hot-rolled, in irregularly wound coils, of stainless steel	3.42
721020	Flat-rolled products of iron or non-alloy steel products, of a width of 600 mm or more, plated/coated with lead incl. teme/plate	3.22
720836	Flat-rolled products in coils, of a width of 600 mm or more, of a thickness exceeding 10 mm, not further worked than hot-rolled excl. pickled	2.50
721410	Other bars and rods of iron or non-alloy steel, forged.	2.15
720521	Powders of alloy steel	2.11
722860	Other bars and rods cold finished	1.87
721935	Cold rolled products of stainless steel, of a width of 600 mm or more, of a thickness of less than 0.5mm	1.86
720925	Flat-rolled products of iron or non-alloy steel, not in coils, not further worked than cold-rolled (cold reduced) of a thickness of 3 mm or more	1.71
722910	Wire of other alloy high speed steel	1.60
722699	Other flat rolled products of other alloy steel of width less than 600 mm	1.50
722211	bars and rods not further worked than hot rolled, hot drawn or extruded of circular cross section	1.04
721240	Flat-rolled products of iron or non-alloy steel painted, varnished/coated with plastics, of a width of less than 600 mm	1.03
722820	Other bars & rods of silico manganese steel	1.03

At HS six-digit level, only Brazil has revealed comparative advantage in

HS Code	Description	Brazil's RCA
720293	Ferro-niobium	70.98
720229	Other ferro-silicon	14.02
720712	Other semi-finished products of iron or non-alloy steel, containing by weight less than 0.25 % of carbon, of rectangular (other than square) cross-section.	13.16
720720	Semi-finished products of iron or non-alloy steel, containing by weight 0.25% or more of carbon.	9.39
720711	Semi-finished products of iron or non-alloy steel containing by weight less than 0.25 % of carbon of rectangular (including square) cross-section, the width measuring less than twice the thickness.	5.92
721810	Ingots & other primary forms of stainless steel	5.52
721050	Flat-rolled products of iron or non-alloy steel plated/coated with chromium oxides or with chromium & chromium oxide, of a width of 600 mm or more	4.67
720221	Ferro-silicon containing by weight more than 55% of silicon	4.31
721621	L-sections, of iron or non-alloy steel, not further worked than hot-rolled hot-drawn or extruded of height less than 80 mm	3.90
721391	Other bars and rods, hot rolled in irregularly wound coils of iron or non alloy steel of circular cross section measuring less than 14 mm in diameter	3.70
721061	Flat-rolled products of iron/non alloy steel plated or coated with aluminium-zinc alloys, of a width of 600 mm or more	3.40
720219	Other ferro-manganese	2.59
720851	Flat-rolled products of iron or non-alloy steel, of a width of 600 mm or more, not in coils of a thickness exceeding 10mm not further worked than hot rolled pickled	2.56
722850	Other bars and rods of other alloy steel, not further worked than cold-formed or cold-finished.	2.55
722219	Other bars and rods not further worked than hot rolled, hot drawn or extruded	2.51
720916	Flat-rolled products of iron or non-alloy steel, of a width of 600 mm or more, in coils not further worked than cold-rolled (cold reduced) of thickness exceeding 1 mm but less than 3 mm	2.37
721310	Bars & rods of iron or non-alloy steel, hot-rolled, containing indentations, ribs, grooves/other deformations produced during the rolling process	2.29
720852	Flat-rolled products, of iron or non-alloy steel, of a width of 600 mm or more, not in coils of a thickness 4.75 mm or more but not exceeding 10 mm, not further worked than hot rolled pickled	2.26
721934	Cold rolled products of stainless steel, of a width of 600 mm or more, of a thickness of 0.5mm or more but not exceeding 1mm	2.22
721622	T-sections, of iron or non-alloy steel not further worked than hot-rolled, hot-drawn or extruded of height less than 80 mm	2.18
721420	Other bars and rods of iron or non-alloy steel, not further worked than forged, hot rolled, hot-drawn or hot-extruded, containing indentations, ribs, grooves or other deformations produced or twisted UNIT	2.02
721119	Flat-rolled products of iron or non-alloy steel, hot-rolled, of thickness < 4.75 mm	1.90
721632	I-sections, of iron or non-alloy steel not further worked than hot-rolled, hot-drawn or extruded of height of 80 mm or more	1.85
720917	Flat-rolled products of iron or non-alloy steel, of a width of 600 mm or more, in coils not further worked than cold-rolled (cold reduced) of a thickness of 0.5 mm or more but not exceeding 1 mm	1.81
721923	Hot rolled products of stainless steel, of a width of 600 mm or more, not in coils. of a thickness of 3 mm or more but less than 4.75 mm	1.70
720838	Flat rolled products in coils, of a width of 600 mm or more, of thickness of 3 mm or	1.67

HS Code	Description	Brazil's RCA
721933	Cold rolled products of stainless steel of a width of 600 mm or more of a thickness exceeding 1mm but less than 3mm	1.64
721190	Other flat rolled products of iron/non-alloy steel of width less than 600 mm, not clad, plated or coated	1.64
722592	Flat rolled products of other alloy steel otherwise plated/coated with zinc, of a width of 600mm or more	1.58
721220	Flat rolled products of iron/non alloy steel of a width of less than 600 mm electrolytically plated/coated with zinc	1.58
721499	Other nes	1.51
720926	Flat-rolled products of iron or non-alloy steel, not in coils not further worked than cold rolled (cold-reduced) of a thickness exceeding 1 mm but less than 3 mm	1.44
722540	Other hot-rolled products of other alloy steel, not in coils, of a width of 600mm or more.	1.31
722550	Other cold rolled products of other alloy steel, of a width 600 mm or more	1.29
720280	Ferro-tungsten & ferro-silico-tungsten	1.28
722790	Other hot rolled bars and rods of other alloy steel in irregularly wound coils	1.25
720510	Granules of pig iron, spiegeleisen, iron or steel	1.13
721491	Other bars and rods of iron or non alloy steel not further worked than forged hot rolled hot drawn or hot extruded but including those twisted after rolling of rectangular (other than square) cross seUNIT	1.07
721640	L/T sections, of iron or non-alloy steel not further worked than hot-rolled, hot-drawn or extruded of height of 80 mm or more	1.03
720854	Flat-rolled products, of iron or non-alloy steel, of a width of 600 mm or more, not in coils of a thickness of less than 3 mm, not further worked than hot-rolled pickled	1.02

At six digit level both India and Brazil has revealed comparative advantage in the following

HS Code	Description	Brazil's RCA	India's RCA
720110	Non-alloy pig iron containing by weight $\leq 0.5\%$ phosphorous	30.32	2.94
722490	Other semi-finished products of other alloy steel	15.65	1.01
720299	Other ferro alloys	9.61	6.45
720690	Other iron/non-alloy steel in primary forms	8.87	3.32
722620	Flat rolled products of high speed steel, of a width of less than 600mm.	5.27	16.05
720230	Ferro-silico-manganese	4.44	3.84
721669	Angle, shapes etc not further worked than cold formed/cold finished obtained from other products other than flat-rolled of iron or non-alloy steel	4.31	3.04
720211	Fero-manganese, containing more than 2% by weight of of carbon	3.74	1.02
720839	Flat rolled products in coils, of a width of 600 mm or more, of a thickness of $< 3\text{mm}$, not further worked than hot-rolled excl. pickled	3.43	3.37
721012	Flat-rolled products of iron or non-alloy steel, of a width of 600 mm or more, plated or coated with tin, of a thickness of less than 0.5 mm	3.15	1.22
721114	Flat rolled products of iron/non alloy steel not further worked than hot-	2.47	1.06

HS Code	Description	Brazil's RCA	India's RCA
	rolled of thickness 4.75 mm or more, of width less than 600 mm		
721720	Wire of iron or non alloy steel plated or coated with zinc	2.28	1.51
721914	Hot-rolled products of stainless steel in coils of a thickness of less than 3 mm, not further worked than hot rolled, in coils, of a width of 600 mm or more	1.85	12.25
720837	Flat-rolled products in coils, of a width of 600 mm or more, of a thickness of 4.75mm or more, but not exceeding 10mm, but not further worked than hot rolled excl. pickled	1.79	1.03
721790	Other nes	1.78	2.23
720928	Flat-rolled products of iron or non-alloy steel, not in coils not further worked than cold rolled (cold reduced) thickness of less than 0.5 mm	1.57	20.98
721049	Other products of iron/non-alloy steel, otherwise plated/coated with zinc, of a width of 600 mm or more	1.55	9.21
721129	Other flat-rolled products of iron/non alloy steel not further worked than cold-rolled (cold-reduced) excl. 721123.00	1.43	1.61
720826	Flat-rolled products of iron or non-alloy steel, of a width of 600 mm or more, in coils of thickness of 3mm or more but less than 4.75 mm, not further worked than hot-rolled pickled	1.20	15.37
720927	Flat-rolled products of iron or non-alloy steel, not in coils not further worked than cold rolled (cold reduced) of a thickness of 0.5 mm or more but not exceeding 1 mm	1.14	1.7
721899	Other stainless steel in ingots or other primary forms semi finished products of stainless steel	1.09	1.3
721590	Other bars and rods of iron/non-alloy steel	1.04	1.52
722220	Bars and rods, cold-formed or cold-finished.	1.02	7.79

Articles of iron and steel: Only India has revealed comparative advantage in this category at two digit level and Brazil has not revealed comparative advantage in this category.

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
732394	Other household articles of iron (other than cast iron) or steel, enamelled.	31.34
731811	Coach screws, threaded, of iron or steel	14.91
732599	Other cast articles of malleable cast iron, nes	13.76
730721	Flanges of stainless steel	12.76
732421	Baths of cast iron, whether or not enamelled	9.53
732591	Grinding balls & similar articles for mills of malleable cast iron	8.79
732391	Table, kitchen or other household articles etc. of cast iron not enamelled.	7.20
731910	Sewing, darning or embroidery needles of iron or steel	6.70
730511	Longitudinally submerged arc welded line pipe of a kind used for oil or gas pipelines, of iron or steel having external diameter > 406.4 mm	6.65
730519	Other line pipe of a kind used for oil or gas pipelines	6.41

HS Code	Description	India's RCA
732393	Other household articles of stainless steel	6.01
730610	Line pipe of a kind used for oil or gas pipelines of iron or steel	5.69
731990	Other articles of 7319	5.47
730791	Flanges of other iron or steel	4.47
730512	Other longitudinally welded line pipe used for oil or gas pipelines having external diameter > 406.4 mm, of iron or steel	4.27
730590	Other tubes and pipes having internal and external circular cross-sections with external diameter > 406.4 mm of iron or steel	4.14
732619	Other articles of iron or steel, forged or stamped but not further worked	3.60
730120	Angles shapes and sections	2.72
732429	Other baths of iron or steel	2.64
732510	Other articles of non-malleable cast iron	2.62
732310	Iron/steelwool; pot scourers & scouring or polishing pads, gloves & the like	2.48
731930	Other pins of iron/steel	2.08
731210	Stranded wire, ropes, and cables of iron or steel, not electrically insulated	1.86
732611	Grinding balls & similar articles for mills, forged or stamped but not further worked of iron or steel	1.83
730539	Other tubes pipes etc, otherwise welded with external diameter >406.4 mm, of iron or steel	1.82
732010	Leaf springs and leaves thereof of iron or steel	1.69
730421	Drill pipes of iron/steel of a kind used in drilling for oil or gas	1.66
731819	Other threaded articles of iron or steel	1.42
731822	Other washers, non-threaded of iron or steel	1.36
731813	Screw hooks & screw rings, threaded of iron or steel	1.34
730490	Other seamless tubes/pipes and hollow profiles	1.32
731816	Threaded nuts of iron or steel	1.32
730840	Props & similar equipment for scaffolding, shuttering or pit-propping of iron or steel	1.24
731815	Other screws & bolts whether or not with nuts or washers, threaded, of iron or steel	1.20
731511	Roller chain of iron or steel.	1.12
730441	Other tubes, pipes and hollow profile, of circular cross-section, of stainless steel, cold-drawn or cold-rolled (cold-reduced)	1.07
732399	Other household utensils and its parts of iron or steel	1.04

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
731300	Barbed wire of iron or steel; twisted hoop or single flat wire, barbed or not, and loosely twisted double wire, of a kind used for fencing, of iron or steel	5.89
730810	Bridges & bridge sections of iron or steel	5.78
732111	Cooking appliances and plate warmers for gas fuel or for both gas and other fuels of iron or steel.	3.48
732112	Cooking appliances and plate warmers for liquid fuel of iron or steel.	2.31
731100	Containers for compressed or liquefied gas, of iron or steel.	1.90
730429	Casing, tubing of iron/steel of a kind used in drilling for oil or gas	1.86
732190	Parts for appliances of iron or steel of hdg.no.7321	1.66
731520	Skid chain of iron or steel	1.18

At six digit level both India and Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA	India's RCA
730520	Casing used in drilling for oil or gas having external diameter >406.4mm, of iron or steel	4.87	6.55
731581	Stud-link chain of iron or steel	4.54	1.08
730711	Cast fittings of non-malleable cast iron.	4.00	3.43
730300	Tubes, pipes and hollow profiles, of cast iron	3.71	5.64
730820	Towers & lattice masts of iron or steel	3.66	7.29
730511	Longitudinally submerged arc welded line pipe of a kind used for oil or gas pipelines, of iron or steel having external diameter > 406.4 mm	3.20	6.65
732619	Other articles of iron or steel, forged or stamped but not further worked	1.87	3.6
730410	Line pipe of a kind used for oil or gas pipelines, of iron (other than cast iron) or steel.	1.87	2.1
731512	Other articulated link chain of iron or steel.	1.76	2.76
732310	Iron/steeliwool; pot scourers & scouring or polishing pads, gloves & the like	1.52	2.48
731210	Stranded wire, ropes, and cables of iron or steel, not electrically insulated	1.42	1.8
730610	Line pipe of a kind used for oil or gas pipelines of iron or steel	1.39	5.89
730719	Other cast fittings	1.38	1.59
730690	Other tubes, pipes etc. of iron or steel	1.04	12.46

Copper and articles thereof: Only India has revealed comparative advantage in this category at two-digit level and Brazil has not revealed comparative advantage in this category.

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
741532	Other screws; bolts and nuts, threaded	11.69
741910	Chain and parts thereof of copper.	8.28
740323	Copper-nickel base alloys (cupro-nickel) or copper-nickel-zinc base alloys(nickel silver)	7.78
741999	Other articles of heading 7419	5.91
741700	Cooking or heating apparatus of a kind used for domestic purposes, non-electric, and parts thereof, of copper	5.79
740321	Copper-zinc base alloys (brass)	5.73
741820	Sanitary ware and parts thereof of copper	3.88
740921	Plates, sheets & strip of copper-zinc base alloys (brass) in coils, of a thickness exceeding 0.15 mm	3.28
741811	Pot scourers & scouring or polishing pads,gloves & the like, of copper	3.07
741122	Tubes & pipes of copper-nickel base alloys (cupro-nickel)/copper-nickel-zinc base alloy (nickel-silver)	2.70
741521	Washers (incl. spring washers), not threaded	2.58
740311	Cathodes & sections of cathodes of refined copper	2.54
740322	Copper-tin base alloys (bronze)	2.44

HS Code	Description	India's RCA
740620	Copper powders of lamellar structure, flakes	2.23
741420	grill netting and fencing welded at the intersection of wire with a mam cross sectional dimension of 3 mm or more and having a mesh size of 100 sq cm or more	1.22
741510	Nail & tacks, drawing pin, staples & similar articles	1.09
740939	Plates, sheets, strips of copper-tin base alloys (bronze) not in coils, of a thickness exceeding 0.15 mm	1.04

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
740729	Bars, rods and profiles of other copper alloys	1.15

At six digit level both India and Brazil has revealed comparative advantage in the following

HS Code	Description	Brazil's RCA	India's RCA
741819	Other threaded articles	3.15	30.69
740811	Refined copper wire of which the maximum cross-sectional dimension exceeds 6 mm.	2.10	3.59

Nickel and articles thereof: Only Brazil has revealed comparative advantage in this category at two digit level and India has not revealed comparative advantage in this category.

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
750110	Nickel mattes	3.19
750210	Unwrought nickel, not alloyed	1.79

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
750521	Wire of nickel, not alloyed	1.43

Aluminium and articles thereof: Only Brazil has revealed comparative advantage in this category at two digit level and India has not revealed comparative advantage in this category.

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
761511	Pot scourers & scouring or polishing pads, gloves & the like	12.72
760519	Other aluminium wire, not alloyed	5.73
761490	Other stranded wire, cables plaited bands etc of aluminium	5.13
760320	Powders of lamellar structure-flakes	3.59
761691	Cloth, grill, netting & fencing, of aluminium wire	2.86
760611	Aluminium plates sheets and strip of a thickness exceeding 0.2 mm not alloyed	1.94
760529	Other wire of aluminium alloys	1.07

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
760511	Aluminium wire-not alloyed-of which the maximum cross-sectional dimension exceeds 7 mm	7.14
760310	Powders of non-lamellar structure.	3.06
760120	Aluminium alloys	2.68
760521	Wire of aluminium alloys of which maximum cross-sectional dimension exceeds 7 mm	1.85
760711	Aluminium foil rolled but not further worked, not backed, of a thickness not exceeding 0.2 mm	1.63
760612	Rectangular (incl. square) plates etc. of aluminium alloys of a thickness exceeding 0.2mm	1.32

At six digit level both India and Brazil has revealed comparative advantage in the following

HS Code	Description	Brazil's RCA	India's RCA
760110	Aluminium, not alloyed	5.48	1.29
761519	Other table kitchen or other household articles and parts thereof	1.77	1.61
761410	Stranded wire, cables etc of aluminium, not electrically insulated with steel core	1.31	2.75
761210	Collapsible tubular containers of aluminium	1.12	1.31

Lead and articles thereof: Neither India nor Brazil has revealed comparative advantage in this category at two digit level.

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
780500	Lead tubes, pipes and tube or pipe fittings (for example, couplings, elbows, sleeves).	5.29
780300	Lead bars, rods, profiles and wire.	3.75
780411	Lead plates, sheets, strip and foil of a thickness (excluding any backing) not exceeding 0.2 mm.	1.05

At six digit level Brazil has revealed comparative advantage in no product.

Zinc and articles thereof: Neither India nor Brazil has revealed comparative advantage in this category at two digit level.

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
790400	Zinc bars, rods, profiles and wire.	7.80
790310	Zinc dust	2.48

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
790111	Zinc, not alloyed, containing by wt \geq 99.99% zinc	1.68

Tin and articles thereof: Only Brazil has revealed comparative advantage in this category at two digit level and India has not revealed comparative advantage in this category.

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
800400	Tin plates, sheets and strip of a thickness exceeding 0.2 mm.	12.40
800600	Tin tubes, pipes and tube or pipe fittings (for example, couplings, elbows, sleeves)	5.19

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
800110	Tin, not alloyed.	1.83

Other base metals; cements and articles thereof: Neither India nor Brazil has revealed comparative advantage in this category at two digit level.

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
810199	Other articles of tungsten and its alloys	3.46
810293	Wire of molybdenum	1.86
810193	Tungsten wire	1.10

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
811299	Other metals, wrought and articles thereof	6.86
810510	Cobalt mattes and other intermediate products of cobalt metallurgy; unwrought cobalt; waste and scrap; powders.	2.31
810390	Other articles of tantalum.	1.92

Tools, implements, cutlery, spoons and forks, of base metal; parts thereof of base metal: Only India has revealed comparative advantage in this category at two digit level and Brazil has not revealed comparative advantage in this category.

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
821490	Other articles of cutlery, of base metal	13.58
820570	Vices, clamps & the like, of base metal	10.89
820310	Files, rasps & similar tools, of base metal	10.49
820411	Hand-operated spanners and wrenches non adjustable, of base metal	8.56
820412	Adjustable hand operated spanners and wrenches, of base metal	8.15
820580	Anvils; portable forges; hand or pedal-operated grinding wheels with frameworks, of base metal	7.73
820120	Forks, of base metal	6.73
820530	Planes, chisels, gauges and similar cutting tools for working wood, of base metal	5.85
821194	Blades of hdg 8211	5.53
821510	Sets of assorted articles, of base metal containing one article plated with precious metal	4.77
821195	Handles of base metal	4.11
820510	Drilling threading or tapping tools, of base metal	3.79
821410	Paper knives, letter openers, erasing knives, pencil sharpeners & blades therefore, of base metal	1.64
820320	Pliers, pincers, tweezers & similar tools, of base metal	1.56
820340	Pipe-cutters, bolt croppers, perforating punches and similar tools, of base metal	1.46
820560	Blow lamps, of base metal	1.44
820590	Sets of articles of two or more of subheadings 8205.	1.33
820559	Other hand tools (including glaziers' diamonds), of base metal	1.25
820740	Tools for tapping or threading, of base metal	1.12
820330	Metal cutting shears & similar tools, of base metal	1.01

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
821191	Table knives having fixed blades, of base metal	7.03
820291	Straight saw blades, of base metal, for working metal	5.08
821192	Other knives having fixed blades, of base metal	4.21
820240	Chain saw blades, of base metal	4.03

HS Code	Description	Brazil's RCA
821210	Razors, of base metal	1.79
821599	Other articles not in sets	1.73
820750	Tools for drilling other than rock drilling, of base metal	1.47
820140	Axes, billhooks & similar hewing tools, of base metal	1.22

At six digit level both India and Brazil has revealed comparative advantage in the following

HS Code	Description	Brazil's RCA	India's RCA
			2.95
820110	Spades & shovels, of base metal	6.35	
820130	Mattocks, picks, hoes & rakes, of base metal	3.00	7.09
820310	Files, rasps & similar tools, of base metal	2.51	10.49
820190	Other handtools used in agriculture/horticulture/forestry, of base metal	2.08	4.76
821220	Safety razor blades, including razor blade blanks in strips, of base metal	1.89	1.49
820520	Hammers & sledge hammers, of base metal	1.67	1.61
820210	Hand saws, of base metal	1.61	1.47

Miscellaneous articles of base metal: Neither India nor Brazil has revealed comparative advantage in this category at two digit level.

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
830510	Fittings for loose leaf binders of files, of base metal	4.65
830241	Other mountings, fittings and similar articles suitable for buildings, of base metal	1.91
830590	Other fittings etc incl. parts, of base metal	1.30

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
830910	Crown corks, of base metal	1.86
830990	Other packing accessories, of base metal	1.76

Nuclear Reactors, boilers, machinery and mechanical appliances, parts thereof:

Neither India nor Brazil has revealed comparative advantage in this category at two digit level.

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
842111	Centrifuges, incl. centrifugal dryers, cream separators	21.54
840110	Nuclear Reactors	17.03
842850	Mine wagon pushers, locomotive or wagon trassers, wagon tippers and similar railway wagon handling equipment	8.08
844841	Shuttles	7.68
845510	Tube Mills	6.82
846930	Other Typewriter Non-Electric	6.79
843041	Self-propelled	6.54
840212	Wrtube Boilrs with a Stm Prdctn<=45T/Hr	5.99
845522	Rolling Mills-Cold	4.68
844833	Spindles, spindle flyers, spinning rings and ring travellers	4.37
840219	Other vapour generating boilers, including hybrid boilers.	4.24
842099	Other Parts of Calendrng/other Rlng Machns	4.03
848010	Moulding Boxes for Metal Foundry	3.59
847920	Machinery for the extraction or preparation of animal or fixed vegetable fats or oils	3.55
841829	Other Household Type Refrigerators	3.43
841012	Of a power not exceeding 1,000 kW but not exceeding 10,000 kW	2.87
848291	Balls, needles and rollers	2.86
847751	Machinery for Mouldng/Retreadng Pneumtc Types or for Mouldng/Otherwise Formng Innr Tubes	2.71
841440	Air compressors mounted on a wheeled chassis for towing	2.52
846120	Shaping or slotting machines	2.51
845899	Other	2.47
842919	Other	2.46
840610	Turbines for Marine Propulson	2.44
845490	Parts of Artices Under Hdg 8454	2.44
844820	Parts & Accssrs of Mchns of Hdg No.8444/of Their Auxlry Machinery	2.31
840590	Parts of Gas Generators	2.31
845230	Sewing Machine Needles	2.21
848410	Gskts & Similar Joints of Mtl Shtng Cmbnd withotr Mtrl/of Two/More Layrs of Mtl	2.17
843790	Parts	2.13
842619	Other(Trnsprtr Crns,Gantry Crns,Brdg Crns)	2.10
841710	Furnaces & Ovens for Roastng, Mltng/other Ht-Trtmnt of Ores,Pyrites/of Mtls	2.09
847960	Evaporative Air Coolers	2.00
841011	Hydraulic Turbines & Water Wheels of a Power not Exceeding 1000 Kw	1.99
846820	Other gas-operated machinery and apparatus	1.97
848299	Other Ball/Rlr Bearng Parts	1.97
845410	Converters	1.97
841940	Distilling or rectifying plant	1.87
840510	Produced gas or water gas generators with or without their purifiers acetylene gas generators and similar water process gas generators with or without their purifiers	1.84
840890	Other engines	1.82
841392	Parts of Liquid Elevators	1.81
844250	Printing type, blocks, plates, cylinders and other printing components; blocks, plates, cylinders and lithographic stones, prepared for printing purposes (for example, planed, grained or polished)	1.77

HS Code	Description	India's RCA
847190	Other nes	1.54
841320	Hand Pumps,excl. Those of 841311/841319	1.54
845939	Other boring-milling machines	1.52
840410	Auxlry Plnt Usd with Boilrs of 8402/8403	1.43
841182	Of a power exceeding 5,000 KW and upto 15,000 KW	1.43
845910	Way-Type Unit Head Machines	1.43
840420	Condensers for Steam/other Vpr Powr Units	1.42
844220	machinery, apparatus and equipment for type setting or composing by other processes with or without founding device	1.40
844849	Other	1.36
847910	Machinery for Public Wrks,Buildng/The Like	1.35
844520	Textile spinning machines	1.33
841239	Other Pneumatic Power Engines & Motors	1.32
844851	Sinkers needles and other articles used in forming stitches	1.27
845420	Ingot moulds and ladles	1.26
840681	Other Turbines of an Output> 40 Mw	1.24
846693	For machines of headings Nos. 84.56 to 84.61	1.23
847329	Parts & Accessrs of other Mchns of 8470	1.21
844629	Other	1.18
844511	Carding machines	1.18
843510	Machinery	1.16
845940	Other boring machines	1.16
844831	Card Clothing	1.13
845590	Other Parts of Mtl Rolling Mills	1.12
845521	Hot or combination bot and cold	1.11
847990	Parts	1.11
845012	Other Mchns,with Built-In Cntrfgl Drier of a Dry Linen Capacity not exceeding 10 Kg	1.08
845530	Rolls for Rolling Mills	1.07
842119	Centrifuges, incl. centrifugal dryers, Other	1.06
840710	Air-Craft Engines	1.05
841911	Instantaneous or storage water heaters, non-electric - Instantaneous gas water heaters	1.03
847021	Electronic Calculating Machines Incorporating Printing Device	1.02

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
842920	Graders and Levellers	25.60
843359	Other Harvesting & Threshing Machinery	21.21
842911	Track laying	11.50
846781	Chain Saws for Working in Hand	10.89
843230	Seeders,Planters & Transplanters	7.23
843069	Other Machinery,Not Self-Propelled	5.86
846210	Forging or die-stamping machines (including presse) and hammers	5.77
841340	Concrete Pumps	5.39
841430	Compressors Usd in Reprigerating Equipment	5.17
841931	Dryers for Agricultural Products	5.13
843710	Machines for Cleaning,Sorting or Grading Seed,Grain or Dried Leguminous Vegetables	5.04
842832	Other Continuous Action Elevatrs & Conveyrsfor Goods/Materials,Bucket Type	4.13
843920	Machinery for making paper/paperboard	3.69
840220	Super-Heated Water Boilers	3.63
842481	Applncs for Horticultural/Agricultural Work	3.54
846810	Hand-Held Blow Lamp	3.49
841111	Turbo Jets of a Thrust <=25 Kn	3.49
840999	Other	3.37
848310	Trnsmsn Shft(incl. Cam & Crnk Shft) & Crnk	3.32
841311	Pumps for dispensing fuel or lubricants of the type used in filling stateions or in garages	3.25
845210	Sewing machines of the household type	3.19
841090	Parts of Hydrlic Turbnes incl. Regulators	3.09
843351	Combine Harvester-Threshers	3.00
840682	Other Turbines of an Output <= 40 Mw	2.89
841810	Combined Refrigerator Freezers,Fitted With Separate External Doors	2.85
843352	Other Threshing Machinery	2.64
841012	Of a power not exceeding 1,000 kW but not exceeding 10,000 kW	2.63
844831	Card Clothing	2.59
841330	Fuel,Lubricating/Cooling Medium Pumps for Internal Combustion Piston Engines	2.55
843290	Parts	2.48
842951	Front-End Shovel Loaders	2.45
848330	Bearing Housungs,Not Incorporating Ball or Roller Bearings;Plain Shaft Bearings	2.43
844180	Other Machinery for Making Up Paper-Pulp, Paper or Paper Board	2.22
847432	Mchns for Mxng Mnrl Substncs with Bitumen	2.07
843910	Machinery for making pulp of fibrous cellulosic material	2.05
840734	Of a cylinder capacity exceeding 1,000 cc	2.00
844330	Flexographic Printing Machinery	1.99
845730	Multi-station transfer machines	1.97
843210	Ploughs	1.94
841830	Freezers of the chest type, not exceeding 800 l capacity	1.94

HS Code	Description	Brazil's RCA
841891	Furniture designed to receive refrigerating or freezing equipment	1.90
843050	Other machinery, self-propelled	1.83
841821	Compression-Type Refrigerators, Household	1.77
844832	Of machines for preparing textile fibres, other than card clothing	1.75
840991	Suitable for use solely or principally with spark-ignition internal combustion piston engines.	1.72
842940	Tamping machines and road rollers	1.67
842959	Other Mchncl Shovls, Excvtrs & Shovl Loadrs	1.66
847730	Blow Moulding Machines	1.64
847420	Crushing or grinding machines	1.62
843390	Parts	1.58
842112	Centrifuges, incl. centrifugal dryers, clothes dryers	1.55
843999	Parts of Machinery for Mking/Fnshng Papr/Papbrd	1.49
843320	Other Mowrs, incl. Cutr Bars for Trctr Mountng	1.42
843629	Other Poultry-Keeping Machinery	1.42
842810	Life and skip hoists	1.38
840820	Engines of a kind used for the propulsion o vehicles of Chapter 87	1.38
846789	Other	1.31
843840	Brewery Machinery	1.27
847490	Parts of Machns of Hdg 8474	1.26
841840	Freezers of the upright type, not exceeding 900 l capacity	1.24
843610	Machinery for Prprng Animals Feeding Stuffs	1.23
841822	Absorption-Type, Electrc Househld Rfrgrtrs	1.12
847050	Cash registers	1.11
841932	Dryers for Wood, Paper Pulp, Paper/Paperboard	1.08
848030	Moulding patterns	1.05
841520	Air-Conditioning Machines of a Kind Usd Frpersons, in Motor Vehicles	1.03

At six digit level both India and Brazil has revealed comparative advantage in the following

HS Code	Description	Brazil's RCA	India's RCA
843221	Disc Harrows	11.59	5.54
843830	Machinery for sugar manufacture	7.95	6.84
843621	Poultry Incubators and Brooders	5.54	1.77
845530	Rolls for Rolling Mills	3.60	1.07
845019	Other Mchns of a Dry Linn Cpty<=10 Kg	1.92	1.05
848220	Tapered roller bearings, including cone and tapered roller assemblies	1.88	1.25
843590	Parts of Machinaries of Sub Hd 843510	1.75	2.86
840211	Wtrtube Boilrs with a Stm Prdctn>45T/Hr	1.15	2.53
841013	Of a power exceeding 10,000 kW	1.02	4.32

Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of articles:

Neither India nor Brazil has revealed comparative advantage in this category at two digit level.

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
852451	Other magnetic tapes of a width not exceeding 4 mm	45.66
852452	Other magnetic tapes of width exceeding 4 mm & not exceeding 6.5 mm	19.55
852440	Magnetic tapes for reproducing phenomena other than sound or image	6.71
854511	Electrodes of a kind used for furnaces	4.73
854519	Other electrodes	4.68
852453	Other magnetic tapes of a width exceeding 6.5 mm	4.48
852499	Other nes	3.29
850133	Other D.C. motors, D.C. generators of an output exceeding 75 KW but not exceeding 375 KW	2.69
854419	Winding wires of other metals/substances	2.65
853331	Wirewound variable resistors, including rheostats and potentiometers for a power handling capacity not exceeding 20 W	2.48
854590	Other articles of carbon, with or without metal, of a kind used for electrical purposes	2.44
854690	Electrical insulators of other materials	2.40
850134	Other D.C. motors, D.C. generators of an output exceeding 375 KW	2.35
851722	Teleprinters	2.28
853310	Fixed carbon resistors, composition/film types	2.11
850422	Liquid dielectric transformers having a power handling capacity exceeding 650 KVA but not exceeding 10000 KVA	2.06
852813	Reception apparatus for B/W or other monochrome TV, whether or not incorporating radio-broadcast receivers or sound or video recording or reproducing apparatus	1.93
853529	Other automatic circuit breakers	1.68
852491	Other magnetic tapes for reproducing phenomena other than sound or image	1.38
850132	Other D.C. motors, D.C. generators of an output exceeding 750 W but not exceeding 75 KW	1.35
853610	Fuses of a voltage not exceeding 1000 volts	1.35
851210	Lighting/visual signaling equipment of a kind used on bicycles	1.26
851140	Strtr meters & dual purpose strtr gnrtts	1.24
851420	Induction/dielectric furnaces & ovens	1.20
853590	Other electrical apparatus for switching/protecting electrical circuits etc. for a voltage exceeding 1000 volts	1.16
851230	Sound signalling equipment	1.12
850511	Permanent magnets and articles intended to become permanent magnets after magnetisation of metal	1.11
854319	Other particle accelerators	1.09
854011	Cathode-ray TV picture tubes, incl. video monitor-cathode-ray tubes-colour	1.07
851840	Audio-frequency electric amplifiers	1.03

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
854610	Electrical insulators of glass	8.74
850153	A.C. motors, multiphase, of an output exceeding 75 KW	4.60
850152	A.C. motors, multi-phase, of an output exceeding 750 W but not exceeding 75 KW	3.03
850710	Lead acid accumulators of a kind used for starting piston engines	2.37
850132	Other D.C. motors, D.C. generators of an output exceeding 750 W but not exceeding 75 KW	2.25
853210	Fixed capacitors designed for use in 50/60 hz circuits and having a reactive power handling capacity of not less than 0.5 KVA _r (power capacitors)	2.11
851190	Parts of articles of hdng 8511	2.09
853225	Other fixed capacitors dielectric of paper/plastics	2.02
852729	Other radio-broadcast receivers not capable to operate with external power, used in motor vehicles, incl. apparatus for receiving radio-telephony/radio-telegraphy	2.00
854091	Parts of cathode-ray tubes	1.61
851240	Windscreen wipers, defrosters and demisters	1.36
854420	Co-axial cable and other co-axial electric conductors	1.31
851730	Telephonic or telegraphic switching apparatus	1.31
850920	Floor polishers, with self-contained electric motor	1.27
854520	Brushes	1.22
851110	Sparkling plugs	1.21
854460	Other electric conductors for a voltage exceeding 1000 V	1.19
850940	Food grinders and mixers; fruit or vegetable juice extractors, with self-contained electric motor	1.16
853222	Other fixed capacitors, aluminium electrolytic	1.12
853922	Other filament lamps (excl. U-V/infra-red lamps) of a pwr not exceeding 200 w & for a voltage exceeding 100 volts	1.06
850164	A.C. generators (alternators) of an output exceeding 750 KVA	1.05
850300	Parts suitable for use solely or principally with the machines of heading no. 85.01 or 85.02	1.01

At six digit level both India and Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA	India's RCA
850423	Liquid dielectric transformers having a power handling capacity exceeding 10,000 KVA	3.22	2.95
854620	Electrical insulators of ceramics	2.73	5.39
850421	Liquid dielectric transformers having a power handling capacity not exceeding 650 KVA	2.20	1.38
853510	Fuses of a voltage exceeding 1000 volts	2.02	2.87
854790	Other insulating fittings for electrical machines, appliances or equipment	1.26	13.59
854011	Cathode-ray TV picture tubes, incl. video monitor-cathode-ray tubes-colour	1.22	1.07
850140	Other A.C. motors, single-phase	1.08	1.58

Railway or tramway locomotives; rolling stock and parts thereof; railway or tramway track fixtures and fittings thereof; mechanical (including electro-mechanical) traffic signaling equipment Unit: Neither India nor Brazil has revealed comparative advantage in this category at two digit level.

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
860729	Other brakes & parts thereof	1.86

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
860799	Other parts of other coaches/carriages	1.03

Vehicles other than railway or tramway rolling stock and parts and accessories thereof: Neither India nor Brazil has revealed comparative advantage in this category at two digit level.

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
871493	Hubs, other than coaster braking hubs and hub brakes, and free-wheel sprocket-wheels	17.00
871492	Wheel, rims and spokes	7.68
870130	Track-laying tractors	6.84
870990	Parts of the vehicles of hdg 8709	5.89
870290	Other motor vehicles public-transport type	5.31
871496	Pedals & crank-gear & parts thereof	3.49
870810	Bumpers and parts thereof	2.26
871130	Motorcycles (including mopeds) and cycles fitted with an auxiliary motor, with or without side-cars; side-cars with reciprocating internal combustion piston engine of a cylinder capacity exceeding 250UNIT	2.00
871499	Other parts and accessories of bicycles and other cycles	1.83
871491	Frames, forks & parts thereof	1.71
871494	Brakes, incl. coaster braking hubs & hub brakes & parts thereof	1.57
870390	Other motor cars & motor vehicles principally for the transport of persons, including station wagon etc	1.57
871411	Saddles of motor cycles incl. mopeds	1.54

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
870790	Other bodies, for the motor vehicles of heading no. 8701, 8702, 8704, 8705	5.49
870190	Other tractors	3.68
870410	Dumpers designed for off-highway use	2.34
870850	Drive axles with differential whether or not provided with other transmission components	2.11
870839	Other brakes & servo-brakes & parts thereof	2.03
870423	Other motor vehicles for the transport of goods, g.v.w. exceeding 20 tonnes, with compression ignition internal combustion piston engine (diesel/semi diesel)	2.02
870120	Road tractors for semi-trailers	1.88
870530	Fire fighting vehicles	1.74
870210	Motor vehicles with compression-ignition internal combustion piston engine (diesel/semi diesel) public-transport type	1.72
870422	Motor vehicles for the transport of goods, with weight exceeding 5 tonnes but not exceeding 20 tonnes, with compression ignition internal combustion piston engine (diesel/semi diesel)	1.62
870880	Suspension shock absorbers	1.60
870870	Road wheels & parts & accessories thereof	1.42
870323	Vehicles with spark ignition internal combustion reciprocating piston engine, of a cylinder capacity exceeding 1,500 cc but not exceeding 3,000 cc.	1.28
870421	Motor vehicles for the transport of goods, with compression ignition internal combustion piston engine (diesel/semi diesel), g.v.w. not exceeding 5 tonnes	1.26
870893	Clutches & parts thereof	1.16
870891	Radiators	1.16

At six digit level both India and Brazil has revealed comparative advantage in the following

HS Code	Description	Brazil's RCA	India's RCA
871120	Motorcycles (including mopeds) and cycles fitted with an auxiliary motor, with or without side-cars; side-cars with reciprocating internal combustion piston engine of a cylinder capacity exceeding 50 UNIT	5.72	4.6
870321	Vehicles with spark ignition internal combustion reciprocating piston engine, of a cylinder capacity not exceeding 1,000 cc.	5.27	1.17
870600	Chassis fitted with engines, for the motor vehicles of headings nos. 87.01 to 87.05	3.34	12.26
871495	Saddles of bicycles and other cycles	1.75	1.1
870210	Motor vehicles with compression-ignition internal combustion piston engine (diesel/semi diesel) public-transport type	1.16	1.72

Aircraft, spacecraft and parts thereof: Only Brazil has revealed comparative advantage in this category at two digit level and India has not revealed comparative advantage in this category.

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
880230	Aeroplanes & other aircraft, of an unladen weight exceeding 2000 kg but not exceeding 15000 kg	14.11
880240	Aeroplanes & other aircraft, of an unladen weight exceeding 15000 kg	1.88

India has not revealed comparative advantage in any product at six digit level also.

Ships, boats and floating structures: Only Brazil has revealed comparative advantage in this category at two digit level and India has not revealed comparative advantage in this category.

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
890520	Floating/submersible drilling/production platforms	1.87

At six digit level both India and Brazil have revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA	India's RCA
890590	Other	28.18	3.95

Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus; parts and accessories thereof : Neither India nor Brazil has revealed comparative advantage in this category at two digit level.

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
900140	Spectacle lenses of glass.	7.19
902230	X-Ray Tubes	5.89
901811	Electro-Cardiographs	2.26
901820	Ultra-Violet/Infra-Red Ray Apparatus	1.88
901600	balances of a sensitivity of 5 cg or better, with or without weights.	1.81
900792	Parts & Accessories for Projectors	1.71
900652	Other Cameras for Roll Film of a Width<35 Mm	1.63
902290	Other, including parts and accessories.	1.54
902219	Apprtas Bsd On Use of X-Rays,For other Use incl. Radiography/Radiotherapy Apparatus	1.38
900720	Projectors	1.21
902214	Other apparatus for medical surgical or veterinary uses based on the use of x rays	1.21

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
902820	Liquid Meters	2.46
902121	Artificial Teeth	2.01
902590	Parts & Accsrs of Instruments of Hdg 9025	1.40
902830	Electricity Meters	1.31
902213	Other Apparatus for Dental Uses	1.18
902910	Revolution counters, production counters, taximeters, mileometers, pedometers and the like	1.08

At six digit level both India and Brazil has revealed comparative advantage in the following

HS Code	Description	Brazil's RCA	India's RCA
901832	Tubuler metal needles and needles for sutures.	2.52	1.45

Clocks and watches and parts thereof: Neither India nor Brazil has revealed comparative advantage in this category at two digit level.

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
910529	Other Wall Clocks	7.10
911410	Springs, including hair-springs	6.88
911430	Dials	4.20
910291	Battery or accumulator powered.	3.99
910112	Wrist-Wtch,Elctricly Opertd,whether or not Incrptng Stop-Wtch Fclty with Optoelectmc Dsplay with Case of Prcs Mtl/of Mtl Clad Prcs Mtl	3.98
910519	Other Alarm Clocks	3.08
910119	Other Wrist Watches,Electricly Operated, whether or not Incorporating a Stop-Watch Facility with Case of Prcs Mtl/of Mtl Clad Prcs Mtl	2.91
910299	Other	2.74
910191	Battery or accumulator powered.	2.47
911420	Jewels for Watches/Clocks	2.33
910199	Other	2.24
910219	Other Wrist-Watches,Electrly Operated,whether or not Incorporating a Stop-Watch Facility	2.14
910229	Other Wrist-Watches,Whether/Not Incorporating a Stop-Watch Facility	1.56
911180	Other Watch Cases	1.26
910390	Other Clocks With Watch Movements	1.21

At six digit level Brazil has revealed comparative advantage in no product.

Musical instruments; parts and accessories thereof: Neither India nor Brazil has revealed comparative advantage in this category at two digit level.

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
920300	Keyboard pipe organs; harmoniums and similar keyboard instruments with free metal reeds.	2.15
920992	Parts and Accessories for the Musical Instruments of Headng No.9202	1.77

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
920510	Brass-wind instruments.	1.22

Arms and ammunition; parts and accessories thereof: Only Brazil has revealed comparative advantage in this category at two digit level and India has not revealed comparative advantage in this category.

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
930621	Shotgun Cartridges	20.15
930330	Other Sportng,Huntng/Target-Shootng Rifles	14.01
930320	Other Sporting,Hunting or Target-Shooting Shotguns,incl. Combination Shotgunrifles	2.51

India has revealed no comparative advantage at six digit level also.

Furniture, bedding, mattresses, mattress supports, cushions and similar stuffed furnishings; lamps and lighting fittings, not elsewhere specified or included; illuminated signs, illuminated nameplate unit: Neither India nor Brazil has revealed comparative advantage in this category at two digit level.

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
940210	Dentists', barbers' or similar chairs and parts thereof.	6.55
940350	Wooden furniture of akind used in the bedroom	4.88
940330	Wooden furniture of a kind used in offices	1.14

At six digit level both India and Brazil has revealed comparative advantage in the following:

HS Code	Description	India's RCA	Brazil's RCA
940360	Other Wooden Furniture	1.13	1.74

Toys, games and sports requisites; parts and accessories thereof: Neither India nor Brazil has revealed comparative advantage in this category at two digit level.

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
950420	Articles & Accessories for Billiard	5.20

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
950662	Inflatable	2.80
950669	Other	7.14

Miscellaneous manufactured articles: Neither India nor Brazil has revealed comparative advantage in this category at two digit level.

At six digit level only Brazil has revealed comparative advantage in the following:

HS Code	Description	Brazil's RCA
960910	Pencil & Crayons with Leads enclosed in Rgd Sth	8.01
960920	Pencil Leads,Black/Coloured	3.75
961390	Parts of Lighters	2.86
960340	Paint,Distempers,Varnished/Similar Brushes(excl. Brushes of Hdg No.960330);Paint Pads & Rollers	1.63
960390	Other Articles of Hdg 9603	1.20
961380	Other lighters	1.08

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
960831	Indian ink drawing pens	14.28
960630	Button Moulds & other parts of Button;Button Blnks	12.98
960190	Other	5.08
960200	Worked vegetable or mineral carving material and articles of these materials; moulded or carved articles of wax, of stearin, of natural gums or natural resins or of modelling pastes, and othe moulded UNIT	4.53
960891	Pen nibs and nib points	3.94
960810	Ball Point Pens	2.55
960860	Refills for Ball Point Pens,Comprising the ball point and ink reservoir	1.87

HS Code	Description	India's RCA
960899	Other	1.57
960310	Brooms & Brushes,consisting of Twigs/other Vgtbl Mtrls Bound Togthr,with/wiht Hands	1.46
961490	Other	1.42
960321	Tooth Brushes	1.11

Works of art, collectors' pieces and antiques: Only India has revealed comparative advantage in this category at two digit level and Brazil has not revealed comparative advantage in this category.

At six digit level only India has revealed comparative advantage in the following:

HS Code	Description	India's RCA
970190	Other	73.09
970300	Original sculptures and statuary, in any material.	1.96

At six digit level! Brazil has not revealed comparative advantage in any product.

Chapter 3

ANALYSING CORRESPONDENCE BETWEEN BRAZILIAN DEMAND AND INDIA'S SUPPLY

This chapter attempts to examine the correspondence between Brazilian demand and Indian supply of products in the bilateral trade perspective. Firstly, India's major exported items have been presented in a pie chart showing their percentage of contribution in total Indian export to Brazil. The latest export figures of all the commodities are presented in a tabular form. Then Export Specialisation Index has been calculated for all these products to see whether these exports are sufficient according to Brazilian demand considering Brazil's import of those products from the world. These Export Specialisation Index has been compared with RCA Index of India to analyse whether India has export advantage in Brazilian market for the products where India has revealed comparative advantage in the world market. Then, productwise we have analysed the tariff structure of Brazil and the major exporters of products in Brazil in an attempt to explain the discrepancy of direction of RCA and ES in Brazil. In simple language, it is to analyse the reasons why India could not have Export Specialisation in Brazilian market although India has revealed comparative advantage in world market. Products have been identified for which tariff reduction should be recommended.

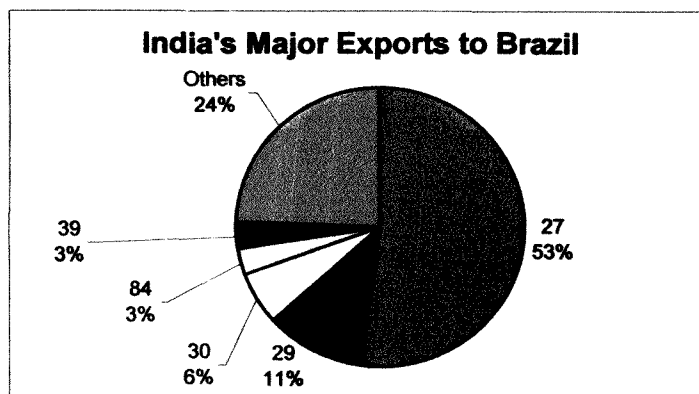
An inter-temporal comparison between ES in 2002 and 2004 has been done to check whether there has been any improvement/deterioration in Export Specialisation while exporting to Brazil. Then, product-wise growth rate has been calculated to identify the dynamic products. Since, growth figures can be deceptive as from a very low base a product can easily grow at a very high rate, it is attempted to compare the growth with latest RCA index to identify the potential export products to Brazil.

India's Present Export to Brazil: A Profile

As one analyses India's export basket to Brazil, it is observed that India's export to Brazil is highly concentrated. Only five major items comprise of 76% of India's export to Brazil. In fact the first item, Mineral Fuels, Mineral Oils and Products of Their

Distillation; Bituminous Substances; Mineral Waxes contributes to 53% in India's export to Brazil. Mainly Petroleum Bitumen is exported under this product category.

Figure 3.1: India's major export items to Brazil (in 2005)



Data source: Ministry of Commerce

Table 3.1: India's Export to Brazil in 2005 (in \$ Million)

HS Code	Product Description	India's Export to Brazil
27	Mineral Fuels, Mineral Oils and Products of Their Distillation; Bituminous Substances; Mineral Waxes. (Mainly Petroleum Bitumen)	570.95
29	Organic Chemicals	120.51
30	Pharmaceutical Products	65.68
84	Nuclear Reactors, Boilers, Machinery and Mechanical Appliances; Parts Thereof.	34.14
39	Plastic and Articles Thereof.	33.35
54	Man-Made Filaments.	32.69
38	Miscellaneous Chemical Products.	29.44
85	Electrical Machinery and Equipment and Parts Thereof; Sound Recorders and Reproducers, Television Image and Sound Recorders and Reproducers, and Parts.	24.73
62	Articles of Apparel and Clothing Accessories, Not Knitted or Crocheted.	21.96
32	Tanning or Dyeing Extracts; Tannins and Their Deri. Dyes, Pigments and Other Colouring Matter; Paints and Ver; Putty and Other Mastics; Inks.	21.08
40	Rubber and Articles Thereof.	16.89
52	Cotton.	14.7
72	Iron and Steel	11.1
55	Man-Made Staple Fibres.	10.47

HS Code	Product Description	India's Export to Brazil
87	Vehicles Other Than Railway or Tramway Rolling Stock, and Parts and Accessories Thereof.	10.04
90	Optical, Photographic Cinematographic Measuring, Checking Precision, Medical or Surgical Inst. and Apparatus Parts and Accessories Thereof;	9.63
82	Tools Implements, Cutlery, Spoons and Forks, of Base Metal; Parts Thereof of Base Metal.	6.04
70	Glass and Glassware.	5.21
33	Essential Oils and Resinoids; Perfumery, Cosmetic or Toilet Preparations.	4.51
73	Articles of Iron or Steel	4.47
63	Other Made Up Textile Articles; Sets; Worn Clothing and Worn Textile Articles; Rags	4.01
67	Prepared Feathers and Down and Articles Made of Feathers or of Down; Artificial Flowers; Articles of Human Hair.	3.71
57	Carpets and Other Textile Floor Coverings.	3.57
13	Lac; Gums, Resins and Other Vegetable Saps and Extracts.	3.06
25	Salt; Sulphur; Earths and Stone; Plastering Materials, Lime and Cement.	2.63
53	Other Vegetable Textile Fibres; Paper Yarn and Woven Fabrics of Paper Yarn.	2.37
28	Inorganic Chemicals; Organic or Inorganic Compounds of Precious Metals, of Rare-Earth Metals, or Radi. Elem. or of Isotopes.	2.17
96	Miscellaneous Manufactured Articles.	2.14
74	Copper and Articles Thereof.	1.96
50	Silk	1.76
97	Works of Art Collectors' Pieces and Antiques.	1.65
9	Coffee, Tea, Mate and Spices.	1.12
41	Raw Hides and Skins (Other Than Furskins) and Leather	1.07
12	Oil Seeds and Olea. Fruits; Misc. Grains, Seeds and Fruit; Industrial or Medicinal Plants; Straw and Fodder.	1.04
86	Railway or Tramway Locomotives, Rolling-Stock and Parts Thereof; Railway or Tramway Track Fixtures and Fittings and Parts Thereof; Mechanical	0.97
71	Natural or Cultured Pearls, Precious or Semiprecious Stones, Pre. Metals, Clad With Pre. Metal and Articles Thereof; Imitation. Jewelry; Coin.	0.85
7	Edible Vegetables and Certain Roots and Tubers.	0.81
42	Articles of Leather, Saddlery and Harness; Travel Goods, Handbags and Similar Cont. Articles of Animal Gut (Other Than Silk-Warm) Gut.	0.73
99	Miscellaneous Goods.	0.69
24	Tobacco and Manufactured Tobacco Substitutes.	0.67
61	Articles of Apparel and Clothing Accessories, Knitted or Corcheted.	0.67

HS Code	Product Description	India's Export to Brazil
76	Aluminium and Articles Thereof.	0.49
56	Wadding, Felt and Nonwovens; Spacial Yarns; Twine, Cordage, Ropes and Cables and Articles Thereof.	0.47
34	Soap, Organic Surface-Active Agents, Washing Preparations, Lubricating Preparations, Artificial Waxes, Prepared Waxes, Polishing or Scouring Prep.	0.45
64	Footwear, Gaiters and The Like; Parts of Such Articles.	0.39
58	Special Woven Fabrics; Tufted Textile Fabrics; Lace; Tapestries; Trimmings; Embroidery.	0.35
83	Miscellaneous Articles of Base Metal.	0.34
94	Furniture; Bedding, Mattresses, Mattress Supports, Cushions and Similar Stuffed Furnishing; Lamps and Lighting Fittings Not Elsewhere Specified or Inc	0.33
95	Toys, Games and Sports Requisites; Parts and Accessories Thereof.	0.33
49	Printed Books, Newspapers, Pictures and Other Products of The Printing Industry; Manuscripts, Typescripts and Plans.	0.24
5	Products of Animal Origin, Not Elsewhere Specified or Included.	0.22
98	Project Goods; Some Special Uses.	0.2
68	Articles of Stone, Plaster, Cement, Asbestos, Mica or Similar Materials.	0.17
44	Wood and Articles of Wood; Wood Charcoal.	0.15
59	Impregnated, Coated, Covered or Laminated Textile Fabrics; Textile Articles of A Kind Suitable For Industrial Use.	0.14
75	Nickel and Articles Thereof.	0.14
89	Ships, Boats and Floating Structures.	0.11
37	Photographic or Cinematographic Goods.	0.1
48	Paper and Paperboard; Articles of Paper Pulp, of Paper or of Paperboard.	0.09
15	Animal or Vegetable Fats and Oils and Their Cleavage Products; Pre. Edible Fats; Animal or Vegetable Waxes.	0.08
81	Other Base Metals; Cermets; Articles Thereof.	0.08
3	Fish and Crustaceans, Molluscs and Other Aquatic Invertebrates.	0.07
23	Residues and Waste From The Food Industries; Prepared Animal Fodder.	0.06
19	Preparations of Cereals, Flour, Starch or Milk; Pastry cooks Products.	0.05
10	Cereals.	0.03
14	Vegetable Plaiting Materials; Vegetable Products Not Elsewhere Specified or Included.	0.03
65	Headgear and Parts Thereof.	0.03
69	Ceramic Products.	0.03
92	Musical Instruments; Parts and Accessories of Such Articles.	0.03

HS Code	Product Description	India's Export to Brazil
6	Live Trees and Other Plants; Bulbs; Roots and The Like; Cut Flowers and Ornamental Foliage.	0.02
8	Edible Fruit and Nuts; Peel or Citrus Fruit or Melons.	0.02
11	Products of The Milling Industry; Malt; Starches; Insulin; Wheat Gluten.	0.02
21	Miscellaneous Edible Preparations.	0.02
35	Albuminoidal Substances; Modified Starches; Glues; Enzymes.	0.02
16	Preparations of Meat, of Fish or of Crustaceans, Molluscs or Other Aquatic Invertebrates	0.01
26	Ores, Slag and Ash.	0.01
46	Manufactures of Straw, of Esparto or of Other Plaiting Materials; Basketware and Wickerwork.	0.01
91	Clocks and Watches and Parts Thereof.	0.01
2	Meat and Edible Meat Offal.	0
20	Preparations of Vegetables, Fruit, Nuts or Other Parts of Plants.	0
31	Fertilisers.	0
66	Umbrellas, Sun Umbrellas, Walking-Sticks, Seat-Sticks, Whips, Riding-Crops and Parts Thereof.	0
78	Lead and Articles Thereof.	0
79	Zinc and Articles Thereof.	0

Source: Ministry of Commerce, India

Export Specialization Index to Test Whether Supply is Matching Demand

We want to gauge how far India is supplying to Brazilian market according to the Brazilian demand. For this we would consider India's export of a particular product vis a vis Brazil's import of that product from the world.

Methodology: The export specialization (ES) index is a slightly modified RCA index, in which the denominator is usually measured by specific markets or partners. It provides product information on revealed specialization in the export sector of a country and is calculated as the ratio of the share of a product in a country's total exports to the share of

this product in imports to specific markets or partners rather than its share in world exports:

$$ES = (x_{ij}/X_{it}) / (m_{kj}/M_{kt})$$

Where x_{ij} and X_{it} are export values of country i in product j and total export of country i , respectively, and where m_{kj} and M_{kt} are the import values of product j in market k and total imports in market k . The ES is similar to the RCA in that the value of the index less than unity indicates a comparative disadvantage and a value above unity represents specialization in this market.

Hence, in this context we would calculate for each product, India's export share of that product to Brazil in India's total export to Brazil divided by Brazil's import share of that product from world in its total import. This will give India's revealed comparative advantage of that product in Brazilian market.

Results:

Table 3.2: India's Export Specialiation in Brazilian Market at aggregate and Disaggregate level

HS Code	Product Description	ES	How many products at six digit level has ES	% of products with ES in total products under each 2 digit
50	Silk	10.92	2	22.2
67	Prepared feathers and down and articles made of feathers or of down; artificial flowers; articles or human hair.	10.87	2	25
57	Carpets and other textile floor coverings.	10.78	8	34.78
53	Other vegetable textile fibres; paper yarn and woven fabrics of paper yarn.	8.80	5	17.24
63	Other made up textie articles; sets; worn clothing and worn textile articles; rags.	8.77	10	17.24

HS Code	Product Description	ES	How many products at six digit level has ES	% of products with ES in total products under each 2 digit
13	Lac; gums, resins and other vegetable saps and extracts.	7.30	4	33.3
9	Coffee, tea, mate and spices.	6.18	7	22.5
27	Mineral fuels, mineral oils and products or their distillation; bituminous substances; mineral waxes.	5.64	3	6
62	Articles of apparel and clothing accessories, not knitted or crocheted.	5.45	30	25.21
54	Man-made filaments	5.10	11	16.9
55	Man-made staple fibres.	4.18	10	8.7
14	Vegetable plaiting materials; vegetable products not elsewhere specified or included.	3.03	1	10
97	Works of art, collectors' pieces and antiques.	2.77	2	50
30	Pharmaceutical products.	2.72	10	19.6
52	Cotton	2.70	15	11.5
32	Tanning or dyeing extracts; tannins and their derivatives; dyes, pigments and other colouring matter; paints and varnishes; putty and other mastics; inks.	2.67	14	31.8
29	Organic Chemicals	2.44	70	22.4
36	Explosives; pyrotechnic products; matches; pyrophoric alloys; certain combustible preparations.	2.17	1	12.5
72	Iron and steel.	2.12	17	9.94
70	Glass and glassware.	1.94	8	12.7
38	Miscellaneous chemical products.	1.67	7	4.4
82	Tools, implements, cutlery, spoons and forks, of base metal; parts thereof of base metal.	1.59	15	23.8
33	Essential oils and resinoids; perfumery, cosmetic or toilet preparations.	1.50	4	11.4
96	Miscellaneous manufactured articles.	1.35	6	13.6

HS Code	Product Description	ES	How many products at six digit level has ES	% of products with ES in total products under each 2 digit
61	Articles of apparel and clothing accessories, knitted or crocheted.	0.90	6	5.3
93	Arms and ammunition; parts and accessories thereof.	0.85	1	7.7
39	Plastics and articles thereof.	0.78	11	8.7
12	Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal plants; straw and fodder.	0.75	2	5.4
58	Special woven fabrics; tufted textile fabrics; lace; tapestries; trimmings; embroidery.	0.70	3	7.31
40	Rubber and articles thereof.	0.65	11	16.1
73	Articles of iron or steel	0.57	8	6.56
42	Articles of leather, saddlery and harness; travel goods, handbags and similar containers articles of animal gut (other than silk-worm gut).	0.49	1	4.8
7	Edible vegetables and certain roots and tubers.	0.38	2	3.8
28	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals, or radioactive elements or of isotopes.	0.37	10	5.5
41	Raw hides and skins (other than furskins) and leather.	0.35	1	3.22
86	Railway or tramway locomotives, rolling-stock and parts thereof; railway or tramway track fixtures and fittings and parts thereof; mechanical (including electro-mechanical) traffic signalling equipmentUNIT	0.31	1	4.76
90	Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus; parts and accessories thereof.	0.27	10	6.33
69	Ceramic products.	0.23	0	0
84	Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof.	0.22	23	4.6
24	Tobacco and manufactured tobacco substitutes.	0.21	0	0

HS Code	Product Description	ES	How many products at six digit level has ES	% of products with ES in total products under each 2 digit
56	Wadding, felt and nonwovens; special yarns; twine, cordage, ropes and cables and articles thereof.	0.19	1	2.94
34	Soap, organic surface-active agents, washing preparations, lubricating preparations, artificial waxes, prepared waxes, polishing or scouring preparations, candles and similar articles, modelling pasteUNIT	0.17	2	9.5
92	Musical instruments; parts and accessories of such articles.	0.17	0	0
44	Wood and articles of wood; wood charcoal.	0.13	0	0
87	Vehicles other than railway or tramway rolling stock, and parts and accessories thereof.	0.13	11	14.7
5	Products of animal origin, not elsewhere specified or included.	0.12	0	0
74	Copper and articles thereof	0.12	6	11.11
71	Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad with precious metal and articles thereof; imitation jewellery; coin.	0.12	4	8.51
68	Articles of stone, plaster, cement, asbestos, mica or similar materials.	0.12	1	2.08
76	Aluminium and articles thereof	0.12	1	2.94
94	Furniture; bedding, mattresses, mattress supports, cushions and similar stuffed furnishings; lamps and lighting fittings, not elsewhere specified or included; illuminated signs, illuminated name-plateUNIT	0.11	1	2.7
95	Toys, games and sports requisites; parts and accessories thereof.	0.11	1	2.38
85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of	0.11	21	7.19

HS Code	Product Description	ES	How many products at six digit level has ES	% of products with ES in total products under each 2 digit
	articles.			
83	Miscellaneous articles of base metal.	0.09	1	2.94
64	Footwear, gaiters and the like; parts of such articles.	0.09	0	0
75	Nickel and articles thereof.	0.09	0	0
25	salt; sulphur; earths and stone; plastering materials, lime and cement.	0.08	2	2.27
99	Miscellaneous goods.	0.08		
49	Printed books, newspapers, pictures and other products of the printing industry; manuscripts, typescripts and plans.	0.08	0	0
23	residues and waste from the food industries; prepared animal fodder.	0.05	0	0
37	Photographic or cinematographic goods.	0.04	0	0
15	Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes.	0.04	1	2.5
81	Other base metals; cermets; articles thereof.	0.03	0	0
48	Paper and paperboard; articles of paper pulp, of paper or of paperboard.	0.02	0	0
8	Edible fruit and nuts; peel or citrus fruit or melons.	0.01	0	0
31	Fertilisers	0.01	1	3.8
89	Ships, boats and floating structures.	0.00	0	0
1	Live animals.	0.00	0	0
2	Meat and edible meat offal.	0.00	0	0
3	Fish and crustaceans, molluscs and other aquatic invertebrates.	0.00	0	0

HS Code	Product Description	ES	How many products at six digit level has ES	% of products with ES in total products under each 2 digit
4	Dairy produce, birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included.	0.00	0	0
6	Live trees, and other plants; bulbs, roots and the like; cut flowers and ornamental foliage.	0.00	0	0
10	Cereals.	0.00	0	0
11	Products of the milling industry; malt; starches; inulin; wheat gluten.	0.00	0	0
16	Preparations of meat, of fish or of crustaceans, molluscs or other aquatic invertebrates.	0.00	0	0
17	Sugars and sugar confectionery.	0.00	0	0
18	Cocoa and cocoa preparations.	0.00	0	0
19	Preparations of cereals, flour, starch or milk; pastrycooks' products.	0.00	0	0
20	Preparations of vegetables, fruit, nuts or other parts of plants.	0.00	0	0
21	Miscellaneous edible preparations.	0.00	0	0
22	Beverages, spirits and vinegar.	0.00	0	0
26	Ores, slag and ash.	0.00	0	0
35	Albuminoidal substances; modified starches; glues; enzymes.	0.00	0	0
43	Furskins and artificial fur; manufactures thereof.	0.00	0	0
45	Cork and articles of cork.	0.00	0	0
46	Manufactures of straw; of esparto or of other plaiting materials; basketware and wickerwork.	0.00	0	0
47	Pulp of wood or of other fibrous cellulosic material; waste and scrap of paper or paperboard.	0.00	0	0

HS Code	Product Description	ES	How many products at six digit level has ES	% of products with ES in total products under each 2 digit
51	Wool, fine or coarse animal hair; horsehair yarn and woven fabric.	0.00	0	0
59	Impregnated, coated, covered or laminated textile fabrics; textile articles of a kind suitable for industrial use.	0.00	0	0
60	Knitted or crocheted fabrics.	0.00	0	0
65	Headgear and parts thereof.	0.00	0	0
66	Umbrellas, sun umbrellas, walking-sticks, seat-sticks, whips, riding-crops and parts thereof.	0.00	0	0
78	Lead and articles thereof.	0.00	0	0
79	Zinc and articles thereof.	0.00	0	0
80	Tin and articles thereof.	0.00	0	0
88	Aircraft, spacecraft, and parts thereof.	0.00	0	0
91	clocks and watches and parts thereof.	0.00	0	0

Source: Indiatrades Data and Researcher's Calculation.

India's Export Specialisation in Brazilian Market (in 2004)

In the above table as products were arranged in an descending order according to their Export Specialisation, it becomes clear that India has strong revealed comparative advantage in Brazilian market for Silk; Prepared feathers and down and articles made of feathers or of down; artificial flowers; articles or human hair; Carpets and other textile floor coverings; Other vegetable textile fibres; paper yarn and woven fabrics of paper yarn; Other made up textie articles; sets; worn clothing and worn textile articles; rags; Lac; gums, resins and other vegetable saps and extracts; Coffee, tea, mate and spices etc. In total at two-digit level in 24 products India has Export Specialisation in Brazilian market while for 40 products India has revealed comparative disadvantage in Brazilian market. India has not exported 30 products at all to Brazilian market.

The last two columns show how many products at six digit level has Export specialisation at six digit. The exact products would be known from the Appendix Table1.

Supply Matching Demand?

The Export Specialisation shows whether the items which India is supplying to Brazil is according to Brazil's import demand. Among the major export items we see that 27(mineral fuel) , 29(organic chemicals), 30(pharmaceutical) are matching Brazil's demand. But, for 39(plastics) and 84(machinery) India 's supply should be more according to Brazil's demand for the product as other countries of the world is supplying much more than India is exporting. There should be concerted effort to increase the export further.

Table 3.3: Comparing India's Export Performance in Brazilian Market vis a vis other Markets

<p>Products where India's RCA>1 and India's ES in Brazil is >1</p>	<p>9(coffee, tea, mate and spices), 13(lac, gums), 14(vegetable plaiting materials), 27 (mineral oils), 29(organic chemicals), 32 (tanning, dyeing materials), 36(explosives), 50 (silk), 52(cotton), 53 (vegetable textile fibres, paper yarn and woven fabric of paper yarn), 54(man-made filaments), 55(man-made staple fibres), 57(carpets), 62(article of apparel and clothing accessories, not knitted or crocheted), 63 (worn clothing, rags), 67(feather articles, artificial flower, articles of human hair), 72(iron and steel), 82 (tools, cutlery etc. of base metal), 97(works of art, collectors pieces and antiques)</p>
<p>Products where India's RCA>1 and India's ES in Brazil is <1</p>	<p>7(edible vegetables and certain roots and timbers),8((edible fruits and nuts), 12(oilseeds, medicinal plant etc), 23 (food waste, fodder), 24 (tobacco), 25(salt, sulphur, lime, cement), 28(inorganic chemicals), 41(raw hides, leather), 42 (leather articles), 58(special woven fabrics), 61(article of apparel and clothing accessories, knitted or crocheted), 64(footwear), 68(articles of stone, plaster, cement, asbestos, mica), 71(pearls, precious stones), 73(articles of</p>

	iron and steel), 74(copper and articles thereof)
Products where India's RCA<1 and India's ES in Brazil is >1	38(miscellaneous chemical products)
Products where India's RCA<1 and India's ES in Brazil is <1	5(products of animal origin), 15(vegetable or prepared fats), 30 (pharmaceutical products), 31 (fertilizers), 33(essential oils, perfumery, cosmetic or toilet preparations), 34(soap, candles), 37 (photographic or cinematographic goods), 39 (plastic) , 40 (rubber), 44 (wood), 48(paper or paperboard), 49(books, newspapers, pictures etc), 56 (special yarns, ropes, cable), 69 (ceramic products).70 (glass and glassware), 75(nickel), 76 (aluminium), 84 (nuclear reactors, boilers, machinery), 85 (9electrical machinery), 87 (vehicle other than tramway or railway), 92 (musical instruments), 94(furniture, bedding, mattresses), 95(toys, games), 96(miscellaneous manufactured articles), 99(miscellaneous goods)
Products where India's RCA>1 and India's Export to Brazil=0	3(fish etc), 10(cereals), 26(ores, slag, ash)
Products where India's RCA<1 and India's Export to Brazil=0	1(live animals), 2 (meat), 4(dairy produce, honey), 6(live trees, cut flowers), 11(malt, starches), 16 (meat, fish preparation), 17(sugar or confectionery), 18 (cocoa or cocoa preparation)), 19(preparation of cereal, flour, starch or milk), 20(vegetable preparation), 21(miscellaneous edible preparation), 22(beverages, spirits and vinegar), 35 (albuminoidal substances, modified starches, glues, enzymes), 43(

	fur), 45(cork articles), 46(straw, basketware, wickerware), 47(pulp of wood, paperboard), 51 (wool, animal hair, woven fabric), 59(textile articles), 60(knitted or crocheted fabrics), 65(headgears), 66(umbrella, walking sticks, whips), 78(lead), 79(zinc), 80(tin), 88(aircraft), 91(clocks and watches)
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The first row products where India's $RCA > 1$ and India's ES in Brazil is > 1 is the most potential products. Here India has revealed comparative advantage in the world as well as in Brazilian market. Those are the products where we have advantage as well as we have been able to access Brazilian market. 25 (salt, sulphur, lime, cement) is one such product where India has high Export specialization in Brazilian market and India's RCA is also reasonably high. Similarly silk is also one such product where India has established itself in world market as well as in Brazilian market. For 53 (vegetable textile fibres, paper yarn and woven fabric of paper yarn) India has advantage in world market, but India has very high advantage in Brazilian market.

The last row where India's $RCA < 1$ and India's Export to Brazil = 0 has least potential of export to Brazil. Exporters should not waste their effort to export them as they neither have any comparative advantage in the world market not India has been able to export them to Brazil.

Similarly, Products where India's $RCA < 1$ and India's ES in Brazil is < 1 are not very high potential export products for Brazil as historically India has not revealed it comparative advantage in those products either in Brazil market or in world market.

Analysing Tariff Structure and Competition in Brazilian Market

We attempted to analyse the reason why for some products India's $RCA > 1$ But still India does not have Export Specialisation in Brazilian market. We have extracted the tariff data from WITS (World Integrated Trade Solution) of World Bank at six digit level and we have averaged the tariff at two digit level.

For getting major exporters to Brazil, product-wise we have analysed from which countries Brazil imports the most. In general the major exporters in Brazil are: USA, Argentina, Germany, China, Nigeria and Japan. Intuitions indicate that USA is a natural trade partner to Brazil as it is close to Brazil since North America and South America are closer than any other continents. Germany and Japan have advantages in the value added mechanical products and China is having the cost advantage and is in general very aggressive about export.

Brazil is a party to MERCOSUR (Mercado De Sul). This is a Free Trade Agreement among Brazil, Argentina, Uruguay and Paraguay. Tariff on 90% of their regional trade have been eliminated. Tariff has become zero between Brazil and Argentina. Hence trade between these countries is naturally high.

India has a Preferential Trade Agreement (PTA) with MERCOSUR whereby MERCOSUR has offered tariff concession to India for 452 items at eight digit level. This concession is highly insufficient to boost trade as will be clear from the next analysis.

Analysing Products for which India's $RCA > 1$ and India's Export to Brazil = 0

Fish Products(3): The average tariff in Brazil is 5-10%. The major exporters of this product to Brazil are Norway, Argentina and Chile. Norway is in general very famous for its fish products and sea foods including Salmon and naturally Brazil also imports from the country. Again Argentina is a natural choice because of proximity and Argentina has advantage as Brazil imposes no tariff on it. If India can also reach to an FTA with Brazil whereby the tariff on this product becomes zero, then we can expect that, India will be able to export fish products to Brazil. Presently, there is no tariff preference for India under India-MERCOSUR PTA.

Cereals (10): MFN Tariff of Brazil on this product is 4-10%. Brazil imports mainly from Argentina and Uruguay which are the partner countries of MERCOSUR. Hence, definitely bilateral tariff reduction will brighten India's prospect of export to Brazil. Only

some duty preference is there on grains for India under India-MERCOSUR PTA, but this should be extended for many other products.

Ores, slag and ash (26): Brazil imports mainly from Chile and Peru. These are neighbouring countries and hence transport costs must be low. MFN tariff⁴ is 2-4%. Since, India is far from Brazil, transport cost is high. Hence, tariff elimination may boost up export. Only some duty preference is there for Zinc Sulphide for India under India-MERCOSUR PTA, but this should be extended for many other products.

Analysing Products where India's RCA>1 but India's ES<1

Edible Vegetables, roots and timbers (7): Brazil mainly imports from Argentina which enjoys zero duty in Brazil. The MFN tariff in Brazil is 10%. It is clear that tariff reduction to India will help in boosting up India's export to Brazil since. India has revealed comparative advantage in this commodity in the world market.

Edible fruits and nuts (8): For this products also, Brazil mainly imports from Argentina which enjoys zero duty in Brazil. The MFN tariff in Brazil is 10%. It is clear that tariff reduction to India will help in boosting up India's export to Brazil since. India has revealed comparative advantage in this commodity in the world market.

Oilseeds, medicinal plants etc (12): Brazil mainly imports from Paraguay which enjoys less duty in Brazil as they are the member of MERCOSUR. Also, their transportation cost would be low due to proximity. The MFN tariff for this product in Brazil is 0-10%. It is clear that tariff reduction to India will help in boosting up India's export to Brazil since, India has revealed comparative advantage in this commodity in the world market

Tobacco (24): Brazil imports tobacco very less quantity and mainly imports from Malawi and Argentina. Tobacco is the main industry of Malawi and their growth in production has resulted in lower export price. However, Argentina here also benefits from zero duty. The MFN tariff of Brazil for tobacco is 14-20% which is quite high and

⁴ MFN= Most Favoured Nation (for WTO member countries)

hence any bilateral tariff reduction should be beneficial for boosting Indian export to Brazil.

Salt, sulphur, lime, cement (25): USA and Canada are the main exporters of this products to Brazil most probably because transportation cost for this product is very important and USA and Canada are in close proximity to Brazil, while India is a far away country. The MFN tariff is 4%. Tariff reduction may reduce the landed price of India's goods and hence Indian export may be increased. Only some duty preference is there for India under India-MERCOSUR PTA, but this should be extended for many other products.

Organic Chemicals (28): USA and Argentina are the main exporters of this product in Brazil. They are close to Brazil and Argentina has the zero tariff advantage. Average MFN tariff for this product in Brazil is 6.26%. Tariff reduction for India would be beneficial. Only some duty preference is there for India under India-MERCOSUR PTA, but this should be extended for many other products.

Leather articles (42): China was the main exporter of this product to Brazil. China was the leading exporter of finished leather goods in the international market commanding 18 per cent share in it against the country's 2.6 per cent in last year. MFN Tariff of Brazil for this product is 20%. If it is reduced for India through bilateral negotiation, then India can expect an export rise.

Special woven fabrics (58): Brazil imports very low amount of this product and mainly imports from Argentina. Brazil's MFN tariff is 18%. Again for this product also, tariff reduction would help India to boost export in Brazil.

Article of apparel and clothing accessories, knitted or crocheted (61): Brazil mainly imports from China which has advantage in this products. MFN tariff is 20% which is quite high and a tariff reduction will help India to raise its exports to Brazil.

Footwear (64): Brazil mainly imports from China which has advantage in this products as China is the world's largest producer of casual footwear. MFN tariff for footwear in Brazil is 18-20% which is quite high and a tariff reduction will help India to raise its exports to Brazil.

Articles of stone, plaster, cement, asbestos, mica (68): Brazil mainly imports this from USA which is very nearby and hence has to bear lower transport cost. MFN tariff for this product in Brazil is 6-10% and tariff reduction will help India for boosting export. Only some duty preference is there for India under India-MERCOSUR PTA, but this should be extended for many other products.

Pearls and precious stones (71): Brazil mainly imports this from South Africa and Peru. Peru is famous for precious stones and South Africa is famous for diamonds. However, MFN tariff of Brazil is 9.75 and a tariff reduction for India may boost India's export. Only some duty preference is there on silver and platinum products for India under India-MERCOSUR PTA, but this should be extended for many other products.

Articles of iron and steel (73): USA and Japan mainly supplies to Brazil which have advantage for this product. Brazil's MFN tariff is 15.08%. If that is reduced in an FTA then India may increase its export to Brazil.

Copper and articles thereof: Brazil mainly import from Chile and Peru. Copper is main industry in Chile and Peru and also they are close to Brazil which has lower transport cost implication. The MFN tariff in Brazil for this product is 11.2%. An FTA may reduce this tariff and India's copper export can be increased.

Inter-temporal Export Specialisation in Brazilian Market

Now, we calculate the Export Specialisation of India in Brazilian market in 2002 and we analyse the change in ES between 2002 and 2004. We observe that India's Export specialization has increased in cases of lacs, gums, reisins; mineral fuels, mineral oils etc; cotton; man-made filaments; man-made staple fibres; carpets; other made-up textile

articles and has increased marginally for tanning or dyeing extracts and essential oils, toiletries and articles of apparel and clothing and glass and glassware. ES has decreased in cases of coffee, tea, mate and spices; organic chemicals; silk; other vegetable textile fibres; decreased marginally for pharmaceuticals. Products which have attained ES in 200, but did not have any ES in 2002 are: vegetable plaiting materials; explosives, matches; miscellaneous chemical products; prepared feathers, artificial flowers etc; iron and steel; stool, implements, cutlery; miscellaneous items and works of arts. On the contrary products where there was ES in 2002 and no export disadvantage in 2004 are: raw hides and leather, manufacturing items; special woven fabrics.

Table 3.4: Product-wise relative growth rate of India's export to Brazil

Commodity Code	Commodity Name	Export in 2005	Growth
3	Fish and crustaceans, molluscs and other aquatic invertebrates.	2.11	-0.77
5	Products of animal origin, not elsewhere specified or included.	27.11	11.32
6	Live trees, and other plants; bulbs, roots and the like; cut flowers and ornamental foliage.	2.09*	
7	Edible vegetables and certain roots and tubers.	281.94	0.96
8	Edible fruit and nuts; peel or citrus fruit or melons.	2.82	-0.97
9	Coffee, tea, mate and spices.	653.83	-0.67
10	Cereals.	0.94*	
11	Products of the milling industry; malt; starches; inulin; wheat gluten.	4.66	10.65
12	Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal plants; straw and fodder.	476.58	0.99
13	Lac; gums, resins and other vegetable saps and extracts.	1123.38	0.65
14	Vegetable plaiting materials; vegetable products not elsewhere specified or included.	33.2	4.78
15	Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes.	30.3	1.43
16	Preparations of meat, of fish or of crustaceans, molluscs or other aquatic invertebrates.	0.59*	
19	Preparations of cereals, flour, starch or milk; pastrycooks' products.	18.02*	
20	Preparations of vegetables, fruit, nuts or other parts of plants.	3.09	-0.59
21	Miscellaneous edible preparations.	10.11	7.50
23	Residues and waste from the food industries; prepared animal fodder.	25.3*	
24	Tobacco and manufactured tobacco substitutes.	45.55	2.52
25	Salt; sulphur; earths and stone; plastering materials, lime and cement.	120.71	0.14

Commodity Code	Commodity Name	Export in 2005	Growth
26	Ores, slag and ash	0	**
27	Mineral fuels, mineral oils and products or their distillation; bituminous substances; mineral waxes.	140201.6	205.94
28	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals, or radioactive elements or of isotopes.	1158.24	0.11
29	Organic Chemicals	38480.84	0.09
30	Pharmaceutical products.	20592.55	1.43
31	Fertilisers	50.73	5.40
32	Tanning or dyeing extracts; tannins and their derivatives; dyes, pigments and other colouring matter; paints and varnishes; putty and other mastics; inks.	7569.51	0.95
33	Essential oils and resinoids; perfumery, cosmetic or toilet preparations.	1709.02	-0.19
34	Soap, organic surface-active agents, washing & lubricating preparations, artificial & prepared waxes, polishing or scouring preparations, candles and similar articles, modelling pastes, 'dental waxes'UNIT	177.47	22.38
35	Albuminoidal substances; modified starches; glues; enzymes.	9.58	3.20
36	Explosives; pyrotechnic products; matches; pyrophoric alloys; certain combustible preparations.	57.5*	
37	Photographic or cinematographic goods.	46.1	6.68
38	Miscellaneous chemical products.	14576.06	2.07
39	Plastics and articles thereof.	8975.25	2.11
40	Rubber and articles thereof.	2808.04	-0.32
41	Raw hides and skins (other than furskins) and leather.	178.34	-0.90
42	Articles of leather, saddlery and harness; travel goods, handbags and similar containers articles of animal gut (other than silk-worm gut).	238.07	-0.15
44	Wood and articles of wood; wood charcoal.	48.07	7.13
45	Cork and articles of cork.	0.91*	
48	Paper and paperboard; articles of paper pulp, of paper or of paperboard.	56.91	-0.36
49	Printed books, newspapers, pictures and other products of the printing industry; manuscripts, typescripts and plans.	30.69	1.50
50	Silk	276.42	-0.50
51	Wool, fine or coarse animal hair; horsehair yarn and woven fabric.	23.22	2.92
52	Cotton	2514.25	0.34
53	Other vegetable textile fibres; paper yarn and woven fabrics of paper yarn.	511.67	0.09
54	Man-made filaments	16398.98	10.22
55	Man-made staple fibres.	3350.14	0.27
56	Wadding, felt and nonwovens; special yarns; twine, cordage, ropes and cables and articles thereof.	61.41	0.04
57	Carpets and other textile floor coverings.	685.5	-0.22

Commodity Code	Commodity Name	Export in 2005	Growth
58	Special woven fabrics; tufted textile fabrics; lace; tapestries; trimmings; embroidery.	96.78	-0.40
59	Impregnated, coated, covered or laminated textile fabrics; textile articles of a kind suitable for industrial use.	17.06	1.95
60	Knitted or crocheted fabric	0	-1.00
61	Articles of apparel and clothing accessories, knitted or crocheted.	373.51	1.53
62	Articles of apparel and clothing accessories, not knitted or crocheted.	4988.05	0.42
63	Other made up textile articles; sets; worn clothing and worn textile articles; rags.	1048.06	1.00
64	Footwear, gaiters and the like; parts of such articles.	33.54	-0.46
66	Umbrellas, sun umbrellas, walking-sticks, seat-sticks, whips, riding-crops and parts thereof.	1.4	69.00
67	Prepared feathers and down and articles made of feathers or of down; artificial flowers; articles of human hair.	1037.18	3.48
68	Articles of stone, plaster, cement, asbestos, mica or similar materials.	60.33	-0.66
69	Ceramic products.	85.22	0.15
70	Glass and glassware.	2398.08	2.00
71	Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad with precious metal and articles thereof; imitation jewellery; coin.	119.36	-0.61
72	Iron and steel.	4936.85	1.11
73	Articles of iron or steel	1632.6	1.34
74	Copper and articles thereof	346.85	7.48
75	Nickel and articles thereof.	37.93	19.28
76	Aluminium and articles thereof	176.89	-0.39
78	Lead and articles thereof.	15.13*	
80	Tin and articles thereof.	0.25*	
81	Other base metals; cermet; articles thereof.	11.08	-0.64
82	Tools, implements, cutlery, spoons and forks, of base metal; parts thereof of base metal.	1800.6	0.09
83	Miscellaneous articles of base metal.	62.98	-0.34
84	Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof.	11155.26	1.32
85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of articles.	4056.33	0.05
86	Railway or tramway locomotives, rolling-stock and parts thereof; railway or tramway track fixtures and fittings and parts thereof; mechanical (including electro-mechanical) traffic signalling equipment	235.92	12.47
87	Vehicles other than railway or tramway rolling stock, and parts and accessories thereof.	2369.03	-0.38
89	Ships, boats and floating structures.	2.2*	

Commodity Code	Commodity Name	Export in 2005	Growth
90	Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus; parts and accessories thereof.	2323.62	1.60
92	Musical instruments; parts and accessories of such articles.	22.98	-0.39
93	Arms and ammunition; parts and accessories thereof.	41.25*	
94	Furniture; bedding, mattresses, mattress supports, cushions and similar stuffed furnishings; lamps and lighting fittings, not elsewhere specified or included; illuminated signs, illuminated name-plateUNIT	78.48	4.83
95	Toys, games and sports requisites; parts and accessories thereof.	62.73	0.30
96	Miscellaneous manufactured articles.	807.98	0.33
97	Works of art, collectors' pieces and antiques.	262.88	96.72
98	Project Goods; some special uses.	10.74	-0.93
99	Miscellaneous goods.	353.39	

*= some export has occurred in 2005 from no export in 2001
**= some export has occurred in 2001 but no export in 2005

Source: Indiatrades Data and Researcher's Calculation.

Mapping the products in terms of export specialization in 2004 and export growth between 2001-2005) in four quadrant

Products Having Export Specialisation in Brazil and positive Growth	Products Having Export Disadvantage in Brazil and positive Growth
<ul style="list-style-type: none"> ➤ Prepared feathers and down and articles made of feathers or of down; artificial flowers; articles or human hair.(67) ➤ Other vegetable textile fibres; paper yarn and woven fabrics of paper yarn.(53) ➤ Other made up textile articles; sets; worn clothing and worn textile articles; rags.(63) ➤ Lac; gums, resins and other vegetable saps and extracts.(13) ➤ Mineral fuels, mineral oils and products or their distillation; bituminous substances; mineral waxes.(27) ➤ Articles of apparel and clothing accessories, not knitted or crocheted.(62) ➤ Man-made filaments(54) ➤ Man-made staple fibres.(55) ➤ Vegetable plaiting materials; vegetable products not elsewhere specified or included.(14) ➤ Works of art, collectors' pieces and antiques.(97) ➤ Pharmaceutical products.(30) ➤ Cotton(52) 	<ul style="list-style-type: none"> ➤ Articles of apparel and clothing accessories, knitted or crocheted. ➤ Plastics and articles thereof. ➤ Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal plants; straw and fodder. ➤ Articles of iron or steel ➤ Edible vegetables and certain roots and tubers. ➤ Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals, or radioactive elements or of isotopes. ➤ Railway or tramway locomotives, rolling-stock and parts thereof; railway or tramway track fixtures and fittings and parts thereof; mechanical (including electro-mechanical) traffic signalling equipmentUNIT ➤ Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus; parts and accessories thereof. ➤ Ceramic products. ➤ Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof. ➤ Tobacco and manufactured tobacco substitutes. ➤ Wadding, felt and nonwovens; special yarns;

<ul style="list-style-type: none"> ➤ Tanning or dyeing extracts; tannins and their derivatives; dyes, pigments and other colouring matter; paints and varnishes; putty and other mastics; inks.(32) ➤ Organic Chemicals(29) ➤ Iron and steel.(72) ➤ Glass and glassware.(70) ➤ Miscellaneous chemical products.(38) ➤ Tools, implements, cutlery, spoons and forks, of base metal; parts thereof of base metal.82) ➤ Miscellaneous manufactured articles.(96) 	<p>twine, cordage, ropes and cables and articles thereof.</p> <ul style="list-style-type: none"> ➤ Soap, organic surface-active agents, washing preparations, lubricating preparations, artificial waxes, prepared waxes, polishing or scouring preparations, candles and similar articles, modelling pasteUNIT ➤ Products of animal origin, not elsewhere specified or included. ➤ Copper and articles thereof ➤ Furniture; bedding, mattresses, mattress supports, cushions and similar stuffed furnishings; lamps and lighting fittings, not elsewhere specified or included; illuminated signs, illuminated name-plateUNIT ➤ Toys, games and sports requisites; parts and accessories thereof. ➤ Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of articles. ➤ Nickel and articles thereof. ➤ salt; sulphur; earths and stone; plastering materials, lime and cement. ➤ Printed books, newspapers, pictures and other products of the printing industry; manuscripts, typescripts and plans. ➤ Photographic or cinematographic goods. ➤ Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes. ➤ Fertilisers
<p>Products Having Export Specialisation in Brazil and negative Growth</p> <ul style="list-style-type: none"> ➤ Silk (50) ➤ Carpets and other textile floor coverings.(57) ➤ Coffee, tea, mate and spices. (9) ➤ Essential oils and resinoids; perfumery, cosmetic or toilet preparations.(33) 	<p>Products Having Export Disadvantage and negative Growth</p> <ul style="list-style-type: none"> ➤ Arms and ammunition; parts and accessories thereof.(93) ➤ Special woven fabrics; tufted textile fabrics; lace; tapestries; trimmings; embroidery.(58) ➤ Rubber and articles thereof.(40) ➤ Articles of leather, saddlery and harness; travel goods, handbags and similar containers articles of animal gut (other than silk-worm gut).(42) ➤ Raw hides and skins (other than furskins) and leather.(41) ➤ Musical instruments; parts and accessories of such articles. (92) ➤ Vehicles other than railway or tramway rolling stock, and parts and accessories thereof. (87) ➤ Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad with precious metal and articles thereof; imitation jewellery; coin. (71) ➤ Articles of stone, plaster, cement, asbestos, mica

	or similar materials. (42) > Aluminium and articles thereof (76) > Miscellaneous articles of base metal. (83) > Footwear, gaiters and the like: parts of such articles. (64) > Other base metals; cermets; articles thereof. (81) > Paper and paperboard; articles of paper pulp, of paper or of paperboard. (48) > Edible fruit and nuts; peel or citrus fruit or melons. (8)
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- > In the above table the first quadrant products that is **Products Having Export Specialisation in Brazil and positive Growth** are the most prospective export products in Brazilian market.
- > **Products Having Export Disadvantage in Brazil and positive Growth** in the second quadrant are the products which are still less than Brazil's demand, but their export is growing and hence exporters should focus on export of this products.
- > **Products Having Export Specialisation in Brazil and negative Growth** in the second quadrant are the products which still has export specialization in Brazilian market, but the growth is declining which is alarming and exporters should be very careful to see if their products are still satisfying the Brazilians or what the other competitor countries are offering them so that troubleshooting can be made before India's export advantage in Brazilian market disappears.
- > **Products Having Export Disadvantage and negative Growth** in the fourth quadrant are the export products which do not have prospect in Brazilian market, and hence exporters should not target Brazilian market for a promising export future of those products.
- > Preparations of vegetables, fruit, nuts or other parts of plants. Fish and crustaceans, molluscs and other aquatic invertebrates and Knitted or crocheted fabrics are the products where **Export in 2004 is zero and growth is negative**. Some efforts should be taken to understand the market to know why the products for which once there was demand are no more exported to Brazilian market. In fact, some market research may be undertaken under the Govt. of India's Market Access Initiative Schemes.

Chapter 4

IDENTIFYING OPPORTUNITIES VERSUS THREATS IN INDO-BRAZIL TRADE

This Chapter identifies opportunities and threats in Indo-Brazil trade. As India Government is in a spree of signing and negotiating FTA with different countries and particularly in the light of ongoing negotiations of IBSA Free Trade Agreement, it is imperative to identify where the opportunities and threats lie between India and Brazil for any such regional trade agreements. Rank Correlation Coefficient between India and Brazil's RCA has been calculated with the use of SPSS package. It has been analysed from the results for which product India and Brazil has competitive relation and for which they are complementary in nature. The competitive products should be considered as sensitive items for any bilateral trade negotiation as their import without tariff may endanger the domestic industry. On the other hand, the complementary products trade should be encouraged through tariff elimination to boost up bilateral trade.

The stage of industrialization of India and Brazil has been compared by calculating the standard deviation of RCA indices of the products. Then the specialization of India and Brazil according to factor content has been identified by categorizing the products into product categories according to factor intensities and then it goes on testing whether India and Brazil has advantage in those product categories.

Whether India and Brazil is Competitive in Exports: Analysis by Rank Correlation

With an ongoing process of trade reform and common objective of garnering a larger share of the global market, it is necessary to examine the extent of competition that India and Brazil may pose to each other. This is also crucial to examine in the light of any future RTA (Regional Trade Agreements) like IBSA (India-Brazil-South Africa) etc. whereby tariff would be reduced more than multilateral level. It is necessary to identify which are the sensitive items for bilateral trade where India and Brazil has high competition as free trade of those items may pose threat to domestic industry. On the

other hand, the items which are complementary should have less tariff as that would lead to trade creation between the two countries.

The degree and nature of competition between India and Brazil is evaluated by calculating the Spearman's Rank Correlation (SRC) coefficients for RCA indices for India and Brazil in the world market. The aim is to identify, the sectors where India and Brazil compete/complement. A higher and positive value of the coefficient reflect the fact that both the countries are contesting for a share in the world market which is indicative of a competitive relationship between the two countries in the export market. These products should be considered as sensitive items for bilateral trade. A high negative coefficient in a similar fashion is indicative of complementarity in export specialization between the two economies. These items tariff should be reduced to promote trade between the two countries. A value of zero for the spearman correlation coefficient implies no relationship.

Methodology:

In the present study Rank Correlation will be used instead of Pearson's Product-moment correlation as literature (Balance, Forstner, Murray) suggest that RCA measures are more ordinal than cardinal. Also, according to stages theory of comparative advantage a high rank correlation coefficient would suggest that the countries are in same stage of industrialization.

In statistics, Spearman's rank correlation coefficient, named after Charles Spearman and often denoted by the Greek letter ρ (rho), is a non-parametric measure of correlation – that is, it assesses how well an arbitrary monotonic function could describe the relationship between two variables, without making any assumptions about the frequency distribution of the variables.

In principle, ρ is simply a special case of the Pearson product-moment coefficient in which the data are converted to rankings before calculating the coefficient. In practice, however, a simpler procedure is normally used to calculate ρ . The raw scores are

converted to ranks, and the differences d between the ranks of each observation on the two variables are calculated.

If there are no tied ranks, i.e. $\neg \exists i, j, i \neq j \wedge (x_i = x_j \vee y_i = y_j)$

then ρ is given by:

$$\rho = 1 - \frac{6 \sum D^2}{N(N^2 - 1)}$$

where:

D = the difference between the ranks of corresponding values of X and Y , and

N = the number of pairs of values.

If tied ranks exist, classic Pearson's correlation coefficient between ranks has to be used instead of this formula. One has to assign the same rank to each of the equal values. It is an average of their positions in the ascending order of the values.

Determining Significance

The modern approach to testing whether an observed value of ρ is significantly different from zero (one will always have $1 \geq \rho \geq -1$) is to calculate the probability that it would be greater than or equal to the observed ρ , given the null hypothesis, by using a permutation test. This approach is almost always superior to traditional methods, unless the data set is so large that computing power is not sufficient to generate permutations, or unless an algorithm for creating permutations that are logical under the null hypothesis is difficult to devise for the particular case (but usually these algorithms are straightforward).

An alternative approach available for sufficiently large sample sizes is an approximation to the Student's t -distribution. For sample sizes above about 20, the variable

$$t = \frac{\rho}{\sqrt{(1 - \rho^2)/(n - 2)}}$$

has a Student's *t*-distribution in the null case (zero correlation). In the non-null case (i.e. to test whether an observed ρ is significantly different from a theoretical value, or whether two observed ρ s differ significantly) tests are much less powerful, though the *t*-distribution can again be used.

In the present study, Rank Correlation coefficient and their significance level has been calculated using SPSS package.

Table 4.1: Rank correlation Coefficient Between India-Brazil RCA

HS code	Product Description	N=No. of observations	Rank Correlation	Whether significant
0	All Commodities	4937	0.106	Significant at .01 level
1	Live animals.	17	0.008	No
2	Meat and edible meat offal.	51	-0.254	Not significant
3	Fish and crustaceans, molluscs and other aquatic invertebrates.	87	0.367	significant at .01 level
4	Dairy produce, birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included.	26	0.327	Not significant
5	Products of animal origin, not elsewhere specified or included.	15	-0.136	Not significant
6	Live trees, and other plants; bulbs, roots and the like; cut flowers and ornamental foliage.	12	0.656	Significant at .05 level
7	Edible vegetables and certain roots and tubers.	53	0.331	Significant at .05 level
8	Edible fruit and nuts; peel or citrus fruit or melons.	52	0.324	Significant at .05 level
9	Coffee, tea, mate and spices.	31	-0.164	Not significant
10	Cereals.	12	0.406	Not significant
11	Products of the milling industry; malt; starches; insulin; wheat gluten.	28	0.356	Not significant

HS code	Product Description	N=No. of observations	Rank Correlation	Whether significant
12	Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal plants; straw and fodder.	36	0.249	Not significant
13	Lac; gums, resins and other vegetable saps and extracts.	12	0.599	Significant at .05 level
14	Vegetable plaiting materials; vegetable products not elsewhere specified or included.	10	0.486	Not significant
15	Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes.	40	0.189	Not significant
16	Preparations of meat, of fish or of crustaceans, molluscs or other aquatic invertebrates.	25	-0.189	Not significant
17	Sugars and sugar confectionery.	16	0.388	Not significant
18	Cocoa and cocoa preparations.	7	-0.63	Not significant
19	Preparations of cereals, flour, starch or milk; pastry cooks' products.	16	0.328	Not significant
20	Preparations of vegetables, fruit, nuts or other parts of plants.	43	0.179	Not significant
21	Miscellaneous edible preparations.	15	-0.098	Not significant
22	Beverages, spirits and vinegar.	20	0.281	Not significant
23	residues and waste from the food industries; prepared animal fodder.	23	-0.291	Not significant
24	Tobacco and manufactured tobacco substitutes.	9	0.7	Significant at .05 level
25	salt; sulphur; earths and stone; plastering materials, lime and cement.	69	0.195	Not significant
26	Ores, slag and ash.	25	0.334	Not significant
27	Mineral fuels, mineral oils and products or their distillation; bituminous substances; mineral waxes.	51	0.504	Significant at .01 level
28	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals, or radioactive elements or of	181	0.074	Not significant

HS code	Product Description	N=No. of observations	Rank Correlation	Whether significant
	isotopes.			
29	Organic Chemicals	312	0.016	Not significant
30	Pharmaceutical products.	29	-0.221	Not significant
31	Fertilisers	26	-0.057	Not significant
32	Tanning or dyeing extracts; tannins and their derivatives; dyes, pigments and other colouring matter; paints and varnishes; putty and other mastics; inks.	44	0.106	Not significant
33	Essential oils and resinoids; perfumery, cosmetic or toilet preparations.	35	-0.227	Not significant
34	Soap, organic surface-active agents, washing preparations, lubricating preparations, artificial waxes, prepared waxes, polishing or scouring preparations, candles and similar articles, modelling paste unit	21	0.066	Not significant
35	Albuminoidal substances; modified starches; glues; enzymes.	15	-0.147	Not significant
36	Explosives; pyrotechnic products; matches; pyrophoric alloys; certain combustible preparations.	8	0.695	Not significant
37	Photographic or cinematographic goods.	35	-0.334	Not significant
38	Miscellaneous chemical products.	58	0.23	Not significant
39	Plastics and articles thereof.	126	0.203	Significant at .05 level
40	Rubber and articles thereof.	69	0.045	Not significant
41	Raw hides and skins (other than furskins) and leather.	31	-0.039	Not significant
42	Articles of leather, saddlery and harness; travel goods, handbags and similar containers articles of animal gut (other than silk-worm gut).	21	0.457	Significant at .05 level
43	Furskins an artificial fur; manufactures thereof.	14	0.114	Not significant

HS code	Product Description	N=No. of observations	Rank Correlation	Whether significant
44	Wood and articles of wood; wood charcoal.	64	0.133	Not significant
45	Cork and articles of cork.	6	-0.698	Not significant
46	Manufacturers of straw; of esparto or of other plaiting materials; basketware and wickerwork.	6	0.101	Not significant
47	Pulp of wood or of other fibrous cellulosic material; waste and scrap of paper or paperboard.	17	0.178	Not significant
48	Paper and paperboard; articles of paper pulp, of paper or of paperboard.	105	0.231	Significant at .05 level
49	Printed books, newspapers, pictures and other products of the printing industry; manuscripts, typescripts and plans.	14	0.201	Not significant
50	Silk	9	-0.688	Significant at .05 level
51	Wool, fine or coarse animal hair; horsehair yarn and woven fabric.	35	-0.06	Not significant
52	Cotton	130	0.09	Not significant
53	Other vegetable textile fibres; paper yarn and woven fabrics of paper yarn.	29	-0.134	Not significant
54	Man-made filaments	65	0.268	Significant at .05 level
55	Man-made staple fibres.	115	0.045	Not significant
56	Wadding, felt and nonwovens; special yarns; twine, cordage, ropes and cables and articles thereof.	34	0.149	Not significant
57	Carpets and other textile floor coverings.	23	-0.414	Significant at .05 level
58	Special woven fabrics; tufted textile fabrics; lace; tapestries; trimmings; embroidery.	41	-0.218	Not significant
59	Impregnated, coated, covered or laminated textile fabrics; textile articles of a kind suitable for industrial use.	23	0.391	Not significant
60	Knitted or crocheted fabrics.	18	0.125	Not significant
61	Articles of apparel and clothing accessories, knitted or crocheted.	113	0.12	Not significant

HS code	Product Description	N=No. of observations	Rank Correlation	Whether significant
62	Articles of apparel and clothing accessories, not knitted or crocheted.	119	-0.029	Not significant
63	Other made up textile articles; sets; worn clothing and worn textile articles; rags.	58	0.098	Not significant
64	Footwear, gaiters and the like; parts of such articles.	29	-0.114	Not significant
65	Headgear and parts thereof.	8	0.114	Not significant
66	Umbrellas, sun umbrellas, walking-sticks, seat-sticks, whips, riding-crops and parts thereof.	6	-0.27	Not significant
67	Prepared feathers and down and articles made of feathers or of down; artificial flowers; articles or human hair.	8	-0.412	Not significant
68	Articles of stone, plaster, cement, asbestos, mica or similar materials.	48	0.361	Significant at .05 level
69	Ceramic products.	28	0.151	Not significant
70	Glass and glassware.	63	-0.193	Not significant
71	Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad with precious metal and articles thereof; imitation jewellery; coin.	47	0.382	Significant at .01 level
72	Iron and steel.	171	-0.003	Not significant
73	Articles of iron or steel	122	0.113	Not significant
74	Copper and articles thereof	54	0.195	Not significant
75	Nickel and articles thereof.	15	0.128	Not significant
76	Aluminium and articles thereof	33	-0.076	Not significant
78	Lead and articles thereof.	9	0.129	Not significant
79	Zinc and articles thereof.	8	-0.293	Not significant
80	Tin and articles thereof.	5	0.783	Not significant
81	Other base metals; cermets; articles thereof.	36	0.155	Not significant
82	Tools, implements, cutlery, spoons and forks, of base metal; parts thereof of base metal.	63	0.008	Not significant
83	Miscellaneous articles of base metal.	34	-0.098	Not significant

HS code	Product Description	N=No. of observations	Rank Correlation	Whether significant
84	Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof.	510	0.068	Not significant
85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of articles.	292	0.309	Significant at .01 level
86	Railway or tramway locomotives, rolling-stock and parts thereof; railway or tramway track fixtures and fittings and parts thereof; mechanical (including electro-mechanical) traffic signalling equipment unit	21	0.425	Not significant
87	Vehicles other than railway or tramway rolling stock, and parts and accessories thereof.	75	0.046	Not significant
88	Aircraft, spacecraft, and parts thereof.	15	-0.557	Significant at .05 level
89	Ships, boats and floating structures.	15	-0.03	Not significant
90	Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus; parts and accessories thereof.	158	0.083	Not significant
91	clocks and watches and parts thereof.	51	-0.235	Not significant
92	Musical instruments; parts and accessories of such articles.	22	0.154	Not significant
93	Arms and ammunition; parts and accessories thereof.	13	-0.233	Not significant
94	Furniture; bedding, mattresses, mattress supports, cushions and similar stuffed furnishings; lamps and lighting fittings, not elsewhere specified or included; illuminated signs, illuminated name-plate UNIT	37	-0.014	Not significant

HS code	Product Description	N=No. of observations	Rank Correlation	Whether significant
95	Toys, games and sports requisites; parts and accessories thereof.	42	0.333	Significant at .05 level
96	Miscellaneous manufactured articles.	44	0.102	Not significant
97	Works of art, collectors' pieces and antiques.	5	0.1	Not significant

Data Source: Indiatrades, CMIE and researchers calculation

From the above table it is clear that overall India and Brazil has competitive trade relationship as their Revealed comparative advantage has significantly positive rank correlations (at .01 significance level) implying they have specialization in same type of commodities. However, a disaggregated study gives a more realistic view of the situation. The thesis considered each and every product at two digit level and calculated rank correlation of the RCAs of all the six digit products under each product. The result shows that only four products have significantly positive rank correlation at .01 significance level. They are fish products, mineral fuels, oils, waxes, pearls, precious or semi-precious stones and electrical machinery. Twelve products have positive rank correlation significant at .05 level of significance. They are live trees, edible vegetables, edible fruits, lac, gum, resins, tobacco, plastic, leather, paper and paperboard, manmade filaments, stone article, plaster, cement, asbestos and toys, games and sports requisites. In three products India and Brazil has complementary relationship at .05 level of significance. These are silk, aircraft, spacecraft and parts thereof and carpets and other textile floor coverings.

Sectors where competition or complementarity is statistically significant, a detailed analysis is undertaken to identify the commodities that contribute to this relationship. The analysis is based on the RCA index for constituent commodities in each sector. Commodities with maximum proximity in the value of the index of RCA are suggestive of increasing competition and those with maximum difference are taken as making maximum contribution to a complementary relationship. Also the study has considered their RCA at two digit level to see whether they have revealed comparative advantage for those products. These products the thesis is attempting to identify as they would be

sensitive products for India-Brazil bilateral trade and also for export in third country India and Brazil would have competitive relation.

Competitive Products

Fish Products: At two digit level India has revealed comparative advantage and Brazil has not. But, their significant rank correlation indicates that they have competitive relation. A closer disaggregated analysis would reveal that for Yellowfin tunas, excluding livers and roes fresh or chilled, India and Brazil has similar values of RCA. Hence, for these products India and Brazil is highly competitive and in any RTA they should not be made zero duty.

Live trees, and other plants; bulbs, roots and the like; cut flowers and ornamental foliage: Neither India nor Brazil has revealed comparative advantage in this. Though according to rank correlation India and Brazil have significantly positive relationship as they have similar values of RCAs, but for no products at six digit level Brazil has revealed comparative advantage, though India has RCA for two products at six digit level. Hence, there is no threat from Brazil as such. However, in any future RTA between India and Brazil product like other Foliage Branches etc, Fresh without Flowers/Buds & Grasses Suitable for Boquets/Ornamental Purposes-Fresh should be kept as sensitive item as they have close values of RCA.

Edible Vegetables, certain roots and tubers: Only India has revealed comparative advantage in this category at 2 digit HS level. India and Brazil does not have similar RCA for the products where they have revealed comparative advantage, hence they do not pose threat to each other. But, for product like Olives Provisionally Preserved, India and Brazil have very close value of RCA, hence in any potential FTA this product should be included in sensitive list.

Edible Fruit and nuts, peels or citrus fruit or melons: Both India and Brazil have very similar RCA in this category. Both countries have revealed advantage in Shelled cashew nuts, Guavas, mangoes and mangosteens, Shelled Walnuts Fresh or Dried, Other Citrus

Fruits Fresh or Dried. Product like Fresh Plums and Sloes has similar RCA value implying competitive relation between India and Brazil.

Lac, gums, resins and other vegetable saps and extracts: Both India and Brazil has advantage in this category. But, India's RCA (11.61) is much higher than Brazil's RCA (1.19). The products where both have advantage are other items of saps and extracts, Saps & Extracts of Opium, Lac. However India's advantage is much higher than Brazil's advantage.

Tobacco and manufactured tobacco substitutes: India and Brazil both have revealed comparative advantage in this category. But, Brazil's RCA (5.68) is higher than India's RCA (1.3). 4 items in this category have advantages for both India and Brazil. However for items like Tobacco, partly or wholly stemmed/stripped and Tobacco Refuse Brazil's RCA is much higher. But, for other tobacco items (HS Code 240399) and Tobacco not stemmed/stripped India and Brazil are very competitive and hence they are sensitive items for bilateral trade.

Mineral Fuels, mineral oils and products or their distillation; bituminous substances, mineral waxes: Overall, only India has revealed comparative advantage and Brazil does not have revealed comparative advantage in this category. However, for products like Phenols, Creosote Oils India and Brazil have competitive relation.

Plastic and articles thereof: Neither Brazil nor India has revealed comparative advantage in this category. However, at more disagggregated level we see that India and Brazil both have revealed comparative advantage in Polyethylene Terephthalate, Polyethylene Having a Specific Grvty 0.94 /More, Flexible Tubes Pipes and Hoses Having a Minimum Burst Pressure of 27.6 Mpa and Phenolic resins. So, these products are highly competitive. For Cellulose nitrates (including collodions) also both have $RCA > 1$, but Brazil has much more advantage than India.

Articles of leather, saddlery and harness, travel goods, handbags and similar containers articles of animal gut (other than silk worm): Only India has revealed comparative advantage in this category and Brazil has not. Results show significantly positive correlation among the RCA of India and Brazil for this category. A disaggregated analysis reveals that for Catgut both countries have advantage, but Brazil is much more competitive than India. In Other Articles of Gut excl. Catgut both countries have advantage, but India is much more competitive. However, in other articles of leather or of composition leather both have $RCA > 1$ and close value of RCA indicating that India and Brazil has competitive relation for the export of this product.

Paper and paperboard; articles of paper pulp, of paper or of paperboard: Neither Brazil nor India has revealed comparative advantage in this category at HS-2digit level. However for this product rank correlation indicates competitive relation. A Disaggregate level analysis suggests that for paper/ paperboard weighing less than 40 g/m² and **Other Articles of Stationary of Paper/Paperboard** both countries have competitive relation. For carbon or Similar Copying Papers both have advantage but India is much more competitive than Brazil. Also they have competitive relation in Carbonising Base Paper, Other Kraft Paper & Paperboard Weighing Above 150G/M² but Below 225G/M², Other paper, paperboard, cellulose wadding and webs of cellulose fibres, Other Wallpaper and Wallcoverings, Binders Folders & File Covers, etc.

Manmade filaments: Only India has revealed comparative advantage in this category at 2-digit level and Brazil has not revealed any advantage. However, for this product rank correlation indicates a competitive relation at six digit level. The disaggregated analysis reveals that for Other Woven Fabrics containing >85% Polyamide of Yarns of Different Colours both the countries have revealed comparative advantage and the values are close to each other. Also, for Sewing Thread of Synthetic Filaments, Other Yarn of Cellulose Acetate Single, filaments containing 85% or more by weight of non textured polyester filaments, Other Artificial Woven Fabrics of Yarn of Different Colour the two countries considered here have similar values of RCA. Hence, for these products their relation is competitive.

Articles of stone, plaster, cement, asbestos, mica or similar materials: Both India and Brazil has revealed comparative advantage in this category at two digit level, but India's RCA (1.71) is lower than Brazil's RCA (2.37). The competitive relation is revealed from the similar RCAs in Simply cut or sawn granite with a flat/even surface, Plates, sheets and strips of agglomerated or reconstituted mica, whether or not on a support, Other granite, Tiles cubes etc. whether or not rectangular (incl. square) whose largest surface area be enclosed in a square measuring <49 sq cm artificially coloured granules etc.

Natural or coloured pearls, precious or semi-precious stones, precious metals, metals clad with precious metal and article thereof; imitation jewellery, coin: Only India has revealed comparative advantage in this category at two digit level and Brazil has not revealed comparative advantage in this category. But, India and Brazil has significant rank correlation in this category. The disaggregated analysis reveals similar advantage for India and Brazil in Precious stones (other than diamonds) and semi precious stones unworked or simply sawn or roughly shaped, Articles of precious or semi precious stones (natural, synthetic/reconstructed) etc.

Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of articles: Neither India nor Brazil has revealed comparative advantage in this category at two digit level. However, India and Brazil has significant rank correlation in this category. The disaggregated analysis reveals similar advantage for India and Brazil in Liquid dielectric transformers having a power handling capacity exceeding 10,000 KVA, Liquid dielectric transformers having a power handling capacity not exceeding 650 KVA, Fuses of a voltage exceeding 1000 volts, Cathode-ray TV picture tubes, incl. video monitor-cathode-ray tubes-colour, Other A.C. motors, single-phase etc.

Toys, games and sports requisites; parts and accessories thereof: Neither India nor Brazil has revealed comparative advantage in this category at two digit level. However, India and Brazil has significant rank correlation in this category. The disaggregated analysis reveals similar advantage for India and Brazil in other toys, Other Toys, Put Up

in Sets or Outfits, Other games, coin - or disc-operated, other than bowling alley equipment, Other Articles for Casino Game, Parlour Game etc.

Complementary Products:

Silk: Both India and Brazil have revealed comparative advantage in this category, but India's RCA (13.57) is much higher than Brazil's RCA (1.15). India and Brazil has complementarity in this category. India has advantage in Silk yarn and yarn spun from silk waste, put up for retail sale; silk-worm gut, Other fabrics, Other fabrics, containing 85% or more by weight of silk or of silk waste other than noil silk, Fabrics of niil silk, Yarn spun from silk waste, not put for retail sale where Brazil does not have advantage. Hence, in bilateral trade negotiation if Brazil reduces tariff/non-tariff barriers on these commodities, then trade can be increased in a gainful way. Similarly, product like Silk yarns (other than yarn spun from silk waste) not put up for retail sale should be imported from Brazil as Brazil has definite advantage over India in this product.

Carpets and textile floor coverings: Only India has revealed comparative advantage in this category at 2-digit level and Brazil has not revealed any. India and Brazil has complementarity in this category. India has revealed comparative advantage in Floor coverings of coconut fibres (coir), Of other textile materials, Of wool or fine animal hair, Other carpets and other textile floor coverings, whether or not made up, Of other textile materials, Of wool or fine animal hair, Kelem, "Schumacks", "Karamanie" and similar hand-woven rugs, Of man-made textile materials. These products Brazil should import from India for gains from trade.

Aircraft, spacecraft and parts thereof: Only Brazil has revealed comparative advantage in this category at two digit level and India has not revealed comparative advantage in this category. There is complementarity between India and Brazil for this category. Brazil has revealed comparative advantage in Aeroplanes & other aircraft, of an unladen weight exceeding 2000 kg but not exceeding 15000 kg, Aeroplanes & other aircraft, of an unladen weight exceeding 15000 kg. Since, India does not have advantage in this category India may import these products from Brazil.

Stage of Industrialisation According to RCA

As noted by Balassa (1965, 1979), the further industrialized the country, the more diversified its export products will be; and the smaller the standard deviations of RCA indices, the more industrialized the economy.

According to our analysis the standard deviation of Brazil's RCA in 2004 was 3.06 and standard deviation of India's RCA in 2004 was 2.57. Hence, we can conclude that India has more export diversification indicating that India was more industrialized than Brazil in 2004.

Specialisation According to Factor Content

A classification of products based on their factor intensity regarding skill, technology and capital was used to assess the factor content of Indian foreign trade and its evolution over the last twenty years. The analysis presented here is based on the classification proposed by UNCTAD (1996) and results in five product categories by factor intensities:

- 1) group 1 includes primary commodities fuels and other primary commodities including processed food;
- 2) group 2 includes labour intensive and resource based industries, with a low skill-, technology –and capital– content, or where use can be made of indigenous skills and technology acquired through earlier handicraft production;
- 3) group 3 includes industries with a low-to-medium level of skill, technology, capital and scale requirements;
- 4) group 4 includes industries with a medium-to-high level requirements in skill, technology, capital and scale;
- 5) group 5 includes industries which have the highest requirements in terms of skill, technology, capital and scale;
- 6) group 6 corresponds to a special category which is important in India's exports and imports: jewellery (precious stones and metals, pearls).

Table 4.2: Comparative Analysis of India and Brazil's Advantage According to Factor Intensity

Product Group by Factor Intensity	India's advantagee	Brazil's Advantage
Primary Commodities including fuels and processed food	<ol style="list-style-type: none"> 1. Fish and crustaceans, molluscs and other aquatic invertebrates. 2. Coffee, tea, mate and spices. 3. Cereals. 4. Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal plants; straw and fodder. 5. Lac; gums, resins and other vegetable saps and extracts. 6. Vegetable plaiting materials; vegetable products not elsewhere specified or included. 7. residues and waste from the food industries; prepared animal fodder. 8. Tobacco 9. salt; sulphur; earths and stone; plastering materials, lime 10. Ores, slag and ash. 11. Mineral fuels, mineral oils and products or their distillation; bituminous substances; mineral waxes. 	<ol style="list-style-type: none"> 1. Meat and edible meat offal 2. Products of animal origin, not elsewhere specified or included. 3. Edible fruit and nuts; peel or citrus fruit or melons. 4. Coffee, tea, mate and spices. 5. Cereals. 6. Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal plants; straw and fodder.(high RCA) 7. Lac; gums, resins and other vegetable saps and extracts. 8. Vegetable plaiting materials; vegetable products not elsewhere specified or included. 9. Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes. 10. Preparations of meat, of fish or of crustaceans, molluscs or other aquatic invertebrates 11. Sugars and sugar confectionery. 12. Cocoa and cocoa preparations. 13. Preparations of vegetables, fruit, nuts or other parts of

	12. Cotton	plants. 14. Miscellaneous edible preparations. 15. residues and waste from the food industries: prepared animal fodder. 16. Tobacco 17. salt; sulphur; earths and stone; plastering materials, lime 18. Ores, slag and ash. 19. Cotton
Low skill, technology, capital and scale-intensive manufactures	1. Iron and steel. 2. Cement 3. Tubes, pipes and hollow profiles, of cast iron, Other tubes, pipes and hollow profile, of circular cross-section, of stainless steel, cold-drawn or cold-rolled (cold-reduced) 4. Copper and articles thereof 5. Nickel and articles thereof.	1. Iron and steel. 2. Ceramic products. 3. Inner Tubes of Rubber used On Bicycles 4. Other tubes, pipes etc. of iron or steel 5. Nickel and articles thereof. 6. Aluminium and articles thereof 7. Tin and articles thereof. 8. Ships, boats and floating structures.
Labour-intensive and resource-intensive manufactures	1. Other vegetable textile fibres; paper yarn and woven fabrics of paper yarn 2. Man-made filaments 3. Man-made staple fibres. 4. Special woven fabrics; tufted textile fabrics; lace; tapestries; trimmings; embroidery. 5. Articles of apparel and clothing accessories, knitted or crocheted.	1. Other made up textile articles; sets; worn clothing and worn textile articles: rags. 2. leather. 3. Wood and articles of wood; wood charcoal 4. Pulp of wood or of other fibrous cellulosic material; waste and scrap of paper or paperboard

	<ul style="list-style-type: none"> 6. Articles of apparel and clothing accessories, not knitted or crocheted 7. Other made up textile articles; sets; worn clothing and worn textile articles; rags. 8. Carpets and other textile floor coverings. 9. leather. 	
<p>Medium skill, technology, capital and scale-intensive manufactures</p>	<ul style="list-style-type: none"> 1. Air-Craft Engines 2. Machinery for sugar manufacture 3. Other Machines of a Dry Linn Capacity<=10 Kg 4. Of a power exceeding 10,000 kW 5. Machinery for the extraction or preparation of animal or fixed vegetable fats or oils 6. Machinery for Moulding/ Retreading Pneumatic Types or for Moulding/Otherwise Forming Inner Tubes 7. Sewing Machine Needles 8. Way-Type Unit Head Machines 9. machinery, apparatus and equipment for type setting or composing by other processes with or without founding device 10. Machinery for Public Wrks,Buildng/The Like 	<ul style="list-style-type: none"> 1. Piston engines 2. Appliances for Horticultural/Agricultural Work 3. Dryers for Agricultural Products 4. Machines for Cleaning,Sorting or Grading Seed, Grain or Dried Leguminous Vegetables 5. Machinery for making paper/paperboard 6. Sewing machines of the household type 7. Other Threshing Machinery 8. Other Poultry-Keeping Machinery, 9. Brewery Machinery 10. Air-Conditioning Machines of a Kind Usd Frpersons, in Motor Vehicles 11. Machinery for sugar manufacture 12. Other Machines of a Dry Linn Capacity<=10 Kg 13. Machinery of a power

	<ul style="list-style-type: none"> 11. Textile spinning machines 12. Carding machines 13. Other boring machines 14. Parts of the vehicles, bicycles 	<ul style="list-style-type: none"> exceeding 10,000 kW 14. Shuttering for Concrete Constructional Work 15. Arms and ammunition; parts and accessories thereof 16. Clutches & parts thereof 17. Rubber and articles thereof
High skill, technology, capital and scale-intensive manufactures	<p>At two digit level India does not have advantage in clock</p> <ul style="list-style-type: none"> 1. Other Wall Clocks 2. Other Alarm Clocks, Other Clocks With Watch Movements 3. Electronic Calculating Machines Incorporating Printing Device 4. Inorganic Chemicals, organic or inorganic compounds o precious metals, of rare-earth metals, or radioactive elements or of isotopes 5. Organic Chemicals 6. Tanning or dyeing extracts; tannins and their derivatives; dyes, pigments and other colouring matter; paints and varnishes; putty and other mastics; inks 	<p>At two/six digit level Brazil has revealed comparative advantage in no product of clocks and watches</p> <ul style="list-style-type: none"> 1. Aircraft, spacecraft, and parts thereof 2. Inorganic Chemicals, organic or inorganic compounds o precious metals, of rare-earth metals, or radioactive elements or of isotopes
Jewellery	<p>Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad with precious metal and articles thereof; imitation jewellery; coin.</p>	

- From the above table it is clear that Brazil has more advantage in **Primary Commodities including fuels and processed food.**
- Brazil has more advantage in **Low skill, technology, capital and scale-intensive manufactures**
- India has advantage in more number of **Labour-intensive and resource-intensive manufacturing commodities.**
- Brazil has advantage in more number of **medium skill, technology, capital and scale-intensive manufacturing products.**
- India has advantage in more number of **High skill, technology, capital and scale-intensive products.**
- India has more advantage in jewellery.

In general it indicates that India has more advantage in higher end products of the value chain and also in labour intensive products while Brazil has more advantage in low skill, low technology, low and medium capital intensive and small scale manufacturing based products. This result along with the finding of the earlier section that India is a bit more industrialised than Brazil satisfies the basic tenet of Heckscher-Ohlin theorem⁵ that countries have advantage in exporting those factor-intensive products which factors are abundant in that country as India with a more industrialized economy is exporting more skilled and technology intensive products.

⁵ Heckscher-Ohlin is a model of international trade which is built on David Ricardo's theory of comparative advantage by predicting patterns of trade and production based on the factor endowments of a trading region. The model essentially says that countries will export products that utilize the countries abundant factors more and will import products that intensively uses the countries scarce factors.

Chapter 5

SUMMARY AND CONCLUSIONS

Areas covered in the dissertation

The Dissertation has analysed Revealed Comparative Advantages of India and Brazil and used it as a tool to identify the export potential of both the countries in the world market as well as in terms of bilateral trade. Export Specialisation Index is a special case of RCA index with respect to Brazilian market instead of considering world as a whole. This has been used to analyse India's export experience in the Brazilian market. It has been observed that India does not export many products to Brazil or exports very less amount. In an attempt to reach to policy recommendation to rectify this, Export Specialisation index was compared with RCA index. For the products where India has revealed comparative advantage in the world market, but does not have export specialization in Brazilian market or does not export in the Brazilian market at all, tariff structure of Brazil was analysed and main exporters of Brazil were identified in order to explain India's lack of access in Brazilian market. Tariff reduction was recommended for few products as scope of India-MERCOSUR PTA is not sufficient for enhancing market access. Inter-temporal Export specialisation was analysed to reveal the change in export structure. India's export growth to Brazil was calculated and compared with Export specialization index to identify the dynamic export potential products. Finally, rank correlation between India and Brazil's RCA was calculated to identify the opportunities and threats in bilateral trade. Advantage according to factor intensity following UNCTAD classification was arrived upon, considering the RCA index of all the products.

Justification of RCA

The Classical theory of comparative advantage predicted that gains from exchange maximize welfare and free trade would lead to world economic prosperity. But, Comparative advantage faces a measurement problem, as it is defined in terms of autarkic (closed economy) price relationships that are not observable. Trade statistics reflect only post-trade situations. The "revealed comparative advantage" (RCA) approach, pioneered by Balassa (1965, 1977, 1979 and 1986), assumed that the true pattern of comparative advantage can be observed from post-trade data. RCA has been calculated in different

ways by different scholars sometimes incorporating imports or sometimes taking log of basic Balassa index while sometimes taking into account total trade balance and size of the market etc. Similarly RCA as a tool has been used in different literature for different purposes like identifying any inefficiency in trade pattern of a particular group of countries, analyzing structural changes in export, for empirically testing Heckscher Ohlin theorem that relatively capital (labour) abundant countries export relatively capital (labour intensive commodities) or to explore the effect of trade impediments. In this thesis, we have used Classic Balassa Index to explore trade potential of India and Brazil.

Comparative Analysis of India and Brazil's RCA

At HS-2 digit level, Brazil has RCA in 38 items, while India has RCA in 39 items. As one compares RCA of India and Brazil at two digit level, one sees that only Brazil has revealed comparative advantage in 19 products where at aggregate level India does not have advantage. These are: meat, products of animal origin, meat preparation, sugar and confectionery, cocoa and cocoa preparation, preparations of vegetable, frits, nuts etc, miscellaneous edible preparation, animal or vegetable fats, modified starches, hide and leather, fur, wood, ceramic, nickel articles, aluminum articles, tin articles, aircraft, spacecraft and ship, boat and floating structure. For 20 products at HS-2 digit level, India has revealed comparative advantage and Brazil does not have advantage at that aggregate level. These items are: fish, edible vegetables, mineral fuels, organic chemicals, tanning or dyeing extracts, explosives, matches, leather articles, other vegetable textile fibres, paper yarn, manmade filaments, manmade staple fibres, nonwoven, special yarns, robes etc, carpets, special woven fabrics, articles of apparel, and clothing accessories knitted and crocheted and non-knotted or crocheted, feather articles and artificial flowers, pearls and precious stones, iron and steel articles, copper articles, tools and implements and works of art and antiques. For 16 items both have advantages at two digit level, but their advantage varies. For 37 items none of them has advantage.

Chapter 2 of the present dissertation has analysed at disaggregated level, which are the items at HS-6 digit, where only India has advantage, only Brazil has advantage or both have advantages. The policy implication is that, items where only India has advantage

should be imported from India by Brazil in a bilateral trade scenario, similarly items where Brazil only has revealed advantage, should be imported by India from Brazil. The items where both have advantage and values are similar are the most competitive items, where tariff protection should be maintained to safeguard the domestic industry. For these items again both the countries compete in the world market and since they have similar interest they can join together for lobby for market access for those products in the multilateral platform.

Analysing Correspondence between Brazilian Demand and India's Supply

Analysing India's export basket to Brazil, it is observed that India's export to Brazil is highly concentrated. Only five major items, namely, Mineral fuels, mineral oils and products of their distillation, bituminous substances, mineral waxes(53%), organic chemicals(11%), pharma products(6%), nuclear reactors and machinery(84%), plastics (3%) comprise of 76% of India's export to Brazil. In fact in the first item, Mineral Fuels, Mineral Oils and Products of Their Distillation; Bituminous Substances; Mineral Waxes , mainly Petroleum Bitumen is exported.

India has export specialisation in Brazilian market for Silk; Prepared feathers and down and articles made of feathers or of down; artificial flowers; articles or human hair; Carpets and other textile floor coverings; Other vegetable textile fibres; paper yarn and woven fabrics of paper yarn; Other made up textile articles; sets; worn clothing and worn textile articles; rags; Lac; gums, resins and other vegetable saps and extracts; Coffee, tea, mate and spices etc. In total at two-digit level in 24 products India has Export Specialisation in Brazilian market while for 40 products India has revealed comparative disadvantage in Brazilian market. India has not exported 30 products at all to Brazilian market.

Products where India's $RCA > 1$ and India's ES in Brazil is > 1 is the most potential export products for Brazilian market. Here India has revealed comparative advantage in the world as well as in Brazilian market. Those are the products where we have advantage as well as we have been able to access Brazilian market. These products are: 9(coffee, tea,

mate and spices), 13(lac, gums), 14(vegetable plaiting materials), 27 (mineral oils), 29(organic chemicals), 32 (tanning, dyeing materials), 36(explosives), 50 (silk), 52(cotton), 53 (vegetable textile fibres, paper yarn and woven fabric of paper yarn), 54(man-made filaments), 55(man-made staple fibres), 57(carpets), 62(article of apparel and clothing accessories, not knitted or crocheted), 63 (worn clothing, rags), 67(feather articles, artificial flower, articles of human hair), 72(iron and steel), 82 (tools, cutlery etc. of base metal), 97(works of art, collectors pieces and antiques).

Products where India's $RCA < 1$ and India's Export to Brazil=0 has least potential of export to Brazil. These are: 1(live animals), 2 (meat), 4(dairy produce, honey), 6(live trees, cut flowers), 11(malt, starches), 16 (meat, fish preparation), 17(sugar or confectionery), 18 (cocoa or cocoa preparation)), 19(preparation of cereal, flour, starch or milk), 20(vegetable preparation), 21(miscellaneous edible preparation), 22(beverages, spirits and vinegar), 35 (albuminoidal substances, modified starches, glues, enzymes), 43(fur), 45(cork articles), 46(straw, basketware, wickerware), 47(pulp of wood, paperboard), 51 (wool, animal hair, woven fabric), 59(textile articles). 60(knitted or crocheted fabrics), 65(headgears), 66(umbrella, walking sticks, whips). 78(lead), 79(zinc), 80(tin), 88(aircraft), 91(clocks and watches). Exporters should not waste their effort to export them as they neither have any comparative advantage in the world market not India has been able to export them to Brazil.

Similarly, Products where India's $RCA < 1$ and India's ES in Brazil is < 1 are not very potential export products for Brazil as historically India has not revealed its comparative advantage in that products either in Brazil market or in world market. These products are: 5(products of animal origin), 15(vegetable or prepared fats), 30 (pharmaceutical products), 31 (fertilizers), 33(essential oils, perfumery, cosmetic or toilet preparations), 34(soap, candles), 37 (photographic or cinematographic goods), 39 (plastic) , 40 (rubber). 44 (wood), 48(paper or paperboard), 49(books, newspapers, pictures etc), 56 (special yarns, ropes, cable), 69 (ceramic products), 70 (glass and glassware), 75(nickel), 76 (aluminium), 84 (nuclear reactors, boilers, machinery), 85 (electrical machinery), 87 (vehicle other than tramway or railway), 92 (musical instruments), 94(furniture,

bedding, mattresses), 95(toys, games), 96(miscellaneous manufactured articles), 99(miscellaneous goods).

Tariff reduction in Brazil through bilateral negotiation is recommended for boosting the products' exports to Brazil where India's $RCA > 1$ but $ES < 1$ or export to Brazil is zero. These are: 3(fish etc), 10(cereals), 26(ores, slag, ash) where export to Brazil is zero and 7(edible vegetables and certain roots and timbers),8((edible fruits and nuts), 12(oilseeds, medicinal plant etc), 23 (food waste, fodder), 24 (tobacco), 25(salt, sulphur, lime, cement), 28(inorganic chemicals), 41(raw hides, leather), 42 (leather articles), 58(special woven fabrics), 61(article of apparel and clothing accessories, knitted or crocheted), 64(footwear), 68(articles of stone, plaster, cement, asbestos, mica), 71(pearls, precious stones), 73(articles of iron and steel), 74(copper and articles thereof) where $ES < 1$. India although has a PTA with MERCOSUR, but only for 450 products MERCOSUR offers tariff reduction that too at eight digit level which is absolutely insufficient. Shri Kamal Nath, Commerce Minister of India has stated that," process of the expansion of the coverage of the PTA has also been initiated" when in this year the Brazilian President visited India. It is recommended that while negotiating, these products should be given priority for tariff reduction to boost up trade and stride towards the target of \$ 10 billion bilateral trade by 2010.

Products having positive growth and export specialization are the most promising products in Brazilian market from static as well as dynamic angle. These products are:

- Prepared feathers and down and articles made of feathers or of down; artificial flowers; articles of human hair(67)
- Other vegetable textile fibres; paper yarn and woven fabrics of paper yarn.(53)
- Other made up textile articles; sets; worn clothing and worn textile articles; rags.(63)
- Lac; gums, resins and other vegetable saps and extracts.(13)
- Mineral fuels, mineral oils and products or their distillation; bituminous substances; mineral waxes.(27)
- Articles of apparel and clothing accessories, not knitted or crocheted.(62)

- Man-made filaments(54)
- Man-made staple fibres.(55)
- Vegetable plaiting materials; vegetable products not elsewhere specified or included.(14)
- Works of art, collectors' pieces and antiques.(97)
- Pharmaceutical products.(30)
- Cotton(52)
- Tanning or dyeing extracts; tannins and their derivatives; dyes, pigments and other colouring matter; paints and varnishes; putty and other mastics; inks.(32)
- Organic Chemicals(29)
- Iron and steel.(72)
- Glass and glassware.(70)
- Miscellaneous chemical products.(38)
- Tools, implements, cutlery, spoons and forks, of base metal; parts thereof of base metal.82)
- Miscellaneous manufactured articles.(96)

Identifying Opportunities versus Threats in Indo-Brazil Trade

Overall India and Brazil has competitive trade relationship as their Revealed comparative advantage has significantly positive rank correlations (at .01 significance level) implying they have specialization in same type of commodities. However, a disaggregated study gives a more realistic view of the situation. The thesis considered each and every product at two digit level and calculated rank correlation of the RCAs of all the six digit products under each product. The result shows that only four products have significantly positive rank correlation at .01 significance level. They are fish products, mineral fuels, oils, waxes, pearls, precious or semi-precious stones and electrical machinery. Twelve products have positive rank correlation significant at .05 level of significance. They are live trees, edible vegetables, edible fruits, lac, gum, resins, tobacco, plastic, leather, paper and paperboard, manmade filaments, stone article, plaster, cement, asbestos and toys, games and sports requisites. In three products India and Brazil has complementary

relationship at .05 level of significance. These are silk, aircraft, spacecraft and parts thereof and carpets and other textile floor coverings.

Sectors where competition or complementarity is statistically significant, a detailed analysis was undertaken to identify the commodities that contribute to this relationship. The analysis is based on the RCA index for constituent commodities in each sector. Commodities with maximum proximity in the value of the index of RCA are suggestive of increasing competition and those with maximum difference are taken as making maximum contribution to a complementary relationship. These products have been identified in Chapter 4 of this thesis, as they would be sensitive products for India-Brazil bilateral trade and also for export in third country India and Brazil would have competitive relation.

As we have analysed advantage of India and Brazil according to Factor Intensity as defined in UNCTAD classification, we get the following results:

- Brazil has more advantage in **Primary Commodities including fuels and processed food.**
- Brazil has more advantage in **Low skill, technology, capital and scale-intensive manufactures**
- India has advantage in more number of **Labour-intensive and resource-intensive manufacturing commodities.**
- Brazil has advantage in more number of **medium skill, technology, capital and scale-intensive manufacturing products.**
- India has advantage in more number of **High skill, technology, capital and scale-intensive products.**
- India has more advantage in jewellery.

Obstacles for boosting Indian Export to Brazil

For boosting Indian Export to Brazil, “Focus:LAC” programme was launched in November 1997 by the Commerce Ministry of India. The Programme has been reviewed from time to time and extended up to March 31, 2008. Initiatives such as Enhanced

Political Dialogue like Indo-Argentine Joint Commission, Indo-Argentine Joint Trade Committee, Indo-Mexican Joint Commission, Indo-Brazilian Commercial Council, Trade Missions Led by Commerce Minister, appointing Nodal Officer in MOC and different policy initiatives like One Per cent Additional SIL; Trade Promotional Measures through publicity, fairs and exhibition, buyer-seller meet, India Promotion in Departmental Stores, distribution of catalogues, sales tour, market survey, Indian Brand Equity Fund etc were undertaken under this programme.

However, still now the bilateral trade is less than \$ 2 billion and in this pace it is difficult to achieve the target of \$ 10 billion by 2010. One way to boost India's export to Brazil is tariff reduction as has been stated already. Another reason for less trade is perhaps the distance and lack of connectivity. De (2005) finds that one of the strongest barriers to trade at present in IBSA appears to be the weak transport connectivity. It is found that there is no existence of any direct shipping services, particularly between Brazil and India. In addition, due to the increase in transshipment services, trade between India and Brazil is slowly becoming uncompetitive. Nonetheless, there exists good potential to promote intra-regional trade by integrating liner shipping companies and also by improving transport services.

It is obvious that the higher is the volume of bilateral trade, the higher would be the economies of scale in transportation and lower the transaction costs. In case of India and Brazil they are encountered not only with low volume of intra-regional sea freight but also involved in multiple transshipments and high incidence of transport costs. Similarly there is no direct air connectivity between India and Brazil. These issues are well known and the countries are into bilateral talk to improve connectivity.

On the other hand, our survey reveals that Brazilian market is too price sensitive rather than quality sensitive. Hence, to serve Brazilian market India has to lower cost like China. Again exporters face hurdles in Brazilian market in terms of payment recovery and too short a delivery period which is difficult to meet with weak transport linkages. The exporters also suggest tariff reduction in Brazilian market to compete with China.

Policy Recommendations

- The study has identified the products with $RCA > 1$ and $ES < 1$ or $Export = 0$) where exports to Brazil should have been picked up but which is not happening. There is need for eliminating tariff and non-tariff barriers for those items.
- There is a need for detailed market survey to identify the reasons why India is not being able to boost up export for those products after talking to exporters in India and importers in Brazil.
- Also transport linkage in terms of shipping and air link should be improved. However, it has to be kept into mind that increase in volume of bilateral trade itself would be able to lower the transportation cost.
- The industry associations may intervene to recover the payment for the Indian exporters and this issue should be raised in bilateral business negotiations.
- Last, but not the least, the Indian exporters should remember that Brazilian market is price sensitive and hence efforts should be made to export products at lower cost to increase India's market share in Brazilian market.

REFERENCES

Articles:

1. Balance, Robert H, Helmut Forstner and Tracy Murray (1987), "Consistency Tests of Alternative Measures of Comparative Advantage", *The Review of Economics and Statistics*, Vol. 69, No. 1, pp. 157-161
2. Balassa, Bela. (1979), "The Changing Pattern of Comparative Advantage In Manufactured Goods", *The Review of Economics and Statistics*, Vol 61, no 2, May 1979
3. Balassa, Bela (1986) "Comparative Advantage in Manufactured Goods: A Reappraisal", *The Review of Economics and Statistics*, Vol. 68, No. 2, pp. 315-319
4. C. Y. Chow, Peter (1990), "The Revealed Comparative Advantage Of The East Asian NICs", *The International Trade Journal, Volume V, No. 2, Muter 19, 235-262*
5. Carolan, Terrie, Nirvikar Singh and Cyrus Talati (1998), "The Composition of U.S –East Asia Trade and Changing Comparative Advantage", University of California Pacific Rim Research Program.
6. Ferti, Imre and Lionel J. Hubbard (2002) "Revealed Comparative Advantage and Competitiveness in Hungarian Agri-Food Sectors", Institute of Economics, Hungary Academy of Sciences, Discussion paper series 2002/8
7. Hutchinson, Gladstone A, Schumacher, Ute (1994), "NAFTA's threat to Central American and Caribbean Basin exports: A revealed comparative advantage approach", *Journal of Interamerican Studies and World Affairs*, Spring 1994
8. James, William and Oleksandr Movshuk (2000) "International Economic Integration and Competitiveness: An Analysis of Market Share in Manufacturing Industries in Japan, Korea, Taiwan and the United States", *The International*

Centre for the Study of East Asian Development, Working Paper Series, Vol. 2000-04

9. Kaminski, Bartłomiej (1999), "Hungary's Integration into EU markets: Production and Trade Restructuring", World Bank Policy Research Working Paper No. 2135
10. Lall, Sanjaya and John Weiss (2004), People's Republic of China's Competitive Threat to Latin America: An Analysis for 1990-2002", Asian Development Bank Institute, Discussion Paper No. 14
11. Leu, Dr. Gwo-Jiun Mike (1998), " Changing Comparative Advantage in East Asian Economies", School of Accountancy and business Research Centre, Nanyang Technological University, Working Paper No 3-98.
12. Richardson, David. J and Chi Zhang (1999) "Revealing Comparative Advantage: Chaotic or Coherent Patterns Across Time and Sector and U.S Trading Partner?", National Bureau of Economic Research, Working Paper 7212
13. Vollrath, T.L. (1991), "A Theoretical Evaluation of Alternative Trade Intensity Measures of Revealed Comparative Advantage", *Weltwirtschaftliches Archiv*, 130, 265-79.
14. Wirz, Julia (2004) "Skill Intensity in Foreign Trade and Economic Growth", The Vienna Institute for International Economic Studies, Working Paper No. 25
15. Yeats, Alexander J (1997) "Does Mercosur's Trade Performance Raise Concerns About the Effects of Regional Trade Arrangements", International Economics Department, The World Bank
16. "Strategy for Quantum Jump in Exports: Focus on Africa, Latin America and China", EXIM Bank, May 2003.

Book

1. Viswanathan, R(2005), *Business with Latin America*, New Delhi, EXIM Bank

Working Paper/ Discussion Paper

1. Balassa, Bela. (1965), "Trade Liberalisation and 'Revealed' Comparative Advantage", *The Manchester School*, 33, 99-123.
2. Balassa, Bela (1977) "'Revealed' Comparative Advantage Revisited: An Analysis of Relative Export Shares of the Industrial Countries, 1953-1971", *The Manchester School of Economic & Social Studies*, 1977, vol. 45, issue 4, pp. 327-44
3. Batra Amita and Khan Zeba(2005), "Revealed comparative advantage: an analysis for India and China", *ICRIER, New Delhi*
4. Bender, Siegfried and Kui-Wai Li (2002) "The Changing Trade and Revealed Comparative Advantages of Asian and Latin American Manufacture Exports", *Yale University, Economic Growth Center. Discussion Paper Series No. 843*
5. Chauvin, Sophie, Lemoine, Françoise(2003), "India in the World Economy: Traditional Specialisations and Technology Niches", *CEPII Working Paper*, 2003
6. Hinloopen, Jeroen and Charles van Marrewijk (2004), "Dynamics of Chinese Comparative Advantage", *Tinbergen Institute Discussion Paper No. 2004-034/2*
7. Marques, Helena (2001), "Trade Similarity between Eastern and Southern Europe: Mutual Opportunities or Competition?", *Department of Economics, University of Newcastle upon Tyne*, June 2001, Working Paper
8. Mohanty, Uttam(2006), "Assessing Export Competitiveness of India in the Enlarged European Union: Emerging Trends and Policy Options", *NCAER Working Paper*
9., "Competitiveness in Argentina, Brazil and Chile", *OECD publication*, 2004
10. Veeramani,C (2005), "India and Chine: Changing Pattern of Comparative Advantage?", *Indira Gandhi Institute of Development Research, Mumbai*
11. De, Prabir(2005),"Trade In IBSA Economic Cooperation: The Role Of transportation Linkages",*RIS Discussion Paper Number 104*, December 2005.

Webliography

- www.wto.org
- www.bilaterals.org
- www.wikipedia.org
- www.thehindubusinessline.com, “ India-Brazil Target 10 billion dollar trade”, 5th June, 2007

Government Publication

The India-MERCOSUR PTA, Annex II, Offer List of MERCOSUR,
<http://commerce.nic.in/flac/list1-indiamercosur-pta.pdf>

Database used:

Indiatrades of CMIE, Ministry of Commerce, India. WITS (World Bank)

Package used: SPSS

Appendix 1: India's Export Specialisation in Brazilian Market

Description	HS Code	ES
Onions Dried	71220	8.79
Other vegetables; mixtures of vegetables.	71290	2.22
Other black tea (fermented) and other partly fermented tea	90240	12.50
Fruits of the genus capsicum or of the genus pimenta, dried or crushed or ground.	90420	2.76
Nutmeg	90810	1.79
Seeds of cumin	90930	8.96
Seeds of fennel or juniper	90950	32.25
Turmeric (curcuma)	91030	11.92
Other spices	91099	60.58
Seasamum Seeds whether or not Broken	120740	22.89
Other	121190	4.08
Lac	130110	34.77
Other	130190	21.00
Other	130219	1.10
Mucilages and thickeners, whether or not modified, derived from locust beans, locust bean seeds or guar seeds.	130232	27.58
Raw vegetable materials of a kind used primarily in dyeing or tanning.	140410	5.64
Other	151590	2.71
Mica powder	252520	5.64
Mica waste	252530	99.96
Coke and semi-coke of coal, of lignite or of peat, whether or not agglomerated	270400	2.78
Petroleum oils and oils obtained from bituminous minerals, other than crude; preparations not elsewhere specified or included, containing by weight 70% or more of petroleum oils or of oils obtained fUNIT	271000	13.21
Petroleum bitumen	271320	210.63
Phosphorus	280470	4.72
Other	281119	1.31
Chlorides and chloride oxides	281210	6.52
Of sodium	283110	1.79
Other	283329	3.03
Calcium Carbonate	283650	4.04
Other inorganic compounds (including distilled or conductivity water and water of similar purity); liquid air (whether or not rare gases have been removed); compressed air; amalgams, other than amalgaUNIT	285100	9.69
Chloromethane (methyl chloride) and chloroethane (ethyl chloride)	290311	4.69
1,2 Dichloroethane (ethylene dichloride), a saturated chlorinated derivative of acyclic hydrocarbons	290315	1.94
Other	290319	79.97
Dichloro Difluoro Ethane	290342	1.96
Dichloro Tetra Fluoro Ethane and Chloro Penta Fluoro Ethane	290344	499.81
Other Derivatives Perhalogenated Only With Fluorine & Chlorine	290345	49.98

Chlorobenzene, o-dichlorobenzene and p-dichlorobenzene	290361	3.88
Derivatives containing only sulpho groups, their salts and ethyl esters	290410	24.09
Other	290490	12.31
Other butanols	290514	8.00
Satrd Ddcan-1-Ol(Lryl-Alchl)Hxadecan-1-Ol(Cetyl Alchl)&Octdecn-1-Ol(Stryl Alchl)	290517	17.13
Acyclic terpene alcohols	290522	2.65
Menthol	290611	29.35
Benzyl Alcohol	290621	3.87
Phenol (hydroxybenzene) and its salts	290711	1.69
Cresols and their salts	290712	15.99
Xylenols and Their Salts	290714	5.22
Hydroquinone (Quinol) and Its Salts	290722	7.79
Other	290729	8.00
Derivatives containing only halogen substituents and their salts	290820	9.33
Other Ethr-Alchls & Thr Halgntd Slphntd Nitrated or Nitrosated Derivatives	290949	5.75
Ether-phenols, ether-alcohol-phenols and their halogenated, sulphonated, nitrated or nitrosated derivatives	290950	1.36
Acetals and hemiacetals, whether or not with other oxygen function, and their halogenated, sulphonated, nitrated or nitrosated derivatives.	291100	1.32
Benzaldehyde	291221	10.00
Other Acylc Ketones without other Oxygn Fnctn	291419	1.93
Ionones and methylionones	291423	4.58
Sodium Acetate	291522	419.84
Other	291529	33.89
Other	291539	5.24
Mono-, di-or trichloroacetic acids, their salts and esters	291540	2.61
Other	291719	2.70
Lactic acid, its salts and esters	291811	3.57
Other esters of salicylic acid and their salts	291823	2.08
Phosphoric esters and their salts, including lactophosphates; their halogenated, sulphonated, nitrated or nitrosated derivatives.	291900	10.99
Mthylamine Di-Or Trimthyl Amine & Thr Slts	292111	20.77
Cyclanic, cyclenic or cyclo-terpenic mono-or polyamines, and their derivatives; salts thereof :	292130	3.57
Aniline and its salts	292141	3.72
Aniline derivatives and their salts	292142	11.71
Toluidines and their derivatives; salts thereof	292143	13.38
Diphenylamine and its derivatives; salts thereof	292144	3.01
1 naphtylamine (alpha naphtylamine),2 naphtylamine (betanaphtylamine), and their derivatives, salts thereof	292145	25.67
Other	292149	3.20
O-, m-, p-Phenylenediamine, diaminotoluenes, and their derivatives; salts thereof	292151	2.66
Other Oxygen-Function Amino-Alcohols	292219	3.94
Aminohydroxynaphthalene-sulphonic acids and their salts	292221	13.69

Other	292229	19.83
Amino-aldehydes, amino-ketones and amino-quinones, other than those containing more than one kind of oxygen function; salts thereof	292230	5.39
Amino-alcohol-phenols, amino-acid phenols and other amino-compounds with oxygen function	292250	2.06
Other Imides & Thr Drvtvs Slts thereof	292519	4.73
Imines and their derivatives; salts thereof	292520	1.68
Diazo-, azo-or azoxy-compounds.	292700	2.87
Other	293329	13.73
Pyridine and Its Salts	293331	139.34
Compounds containing a quinoline or isoquinoline ring-system (whether or not hydrogenated), not further fused	293340	6.87
Sulphonamides.	293500	1.28
Vitamin B12(Cyanocobalanim) & Its Drvtvs	293626	7.76
Other vitamins and their derivatives	293629	1.42
Other Vit & Provit incl. Natural Concentrts	293690	3.12
Pituitary (anterior) or similar hormones, and their derivatives	293710	99.96
Other	293890	2.97
Alkaloids of opium and their derivatives; salts thereof	293910	55.31
Quinine and its salts	293921	53.21
Other Alklds of Cinchona & Thr Drvtvs and Slts thereof	293929	107.65
Pseudo Ephedrine (Inn) and Its Salts	293942	7.35
Other	293990	2.79
Penicillins and their derivatives with a penicillanic acid structure; salts thereof	294110	20.88
Streptomycins & Thr Drvtvs Slts thereof	294120	1.06
Erthromycin & Its Drvtvs Slts thereof	294150	15.52
Other	294190	4.78
Other organic compounds.	294200	804.65
Glands and other organs, dried, whether or not powdered.	300110	149.94
Mdcmnts containing Pnclns/Thr Drvtvs With A/PncInc Acd Strctre, Strptmcns/Thr Drvts	300310	14.14
Medicaments Cont. Other Anti-Biotics	300320	189.45
Other Medicaments	300339	1.74
Mdcmnts Cont. Alklds/Thr Drvtvs but Not/ Hormns/other Prdctcs of Hdng No. 29.37/Antbt	300340	4.35
Other	300390	1.88
containing penicillins or derivatives thereof, with a penicillanic acid structure, or streptomycins or their derivatives	300410	6.51
containing other antibiotics.	300420	7.67
containing insulin	300431	3.92
Other medicaments containing vitamins or other products of heading No. 29.36.	300450	1.03
Other medicaments (excluding goods of heading 3002,3005,3006) consisting of mixed or unmixed products for therapeutic or prophylactic uses, put up in measured doses or in forms of packings for retail UNIT	300490	2.70
Other Minerls of Chemcl Frlisrs Potssic	310490	8.59

Other	320190	3.69
Colouring matter of vegetable or animal origin (including dyeing extracts but excluding animal black), whether or not chemically defined; preparations as specified in Note 3 to this Chapter based on cUNIT	320300	1.67
Acid dyes, whether or not pre-metallised, and preparations based thereon; mordant dyes and preparations based thereon	320412	10.24
Basic dyes and preparations based thereon	320413	4.82
Direct dyes and preparations based thereon	320414	11.50
Vat dyes (including those usable in that state as pigments) and preparations based thereon	320415	1.02
Reactive dyes and preparations based thereon	320416	19.08
Pigments and preparations based thereon	320417	4.01
Other, including mixtures of colouring matter of two or more of the subheading Nos. 3204.11 to 3204.19	320419	14.43
Synthetic Organic Prdcts of a Kind used As Fluorescent Brightening Agents	320420	2.41
Other Synthetic Organic Colorng Matter	320490	3.15
Glas Frit & other Glas in Pwdr Granul/Flks	320740	1.74
Other	321519	4.91
Other	321590	1.90
Of peppermint (<i>Mentha piperita</i>)	330124	3.54
Of other mints	330125	1.95
Other	330190	24.73
'Agarbatti' & other Odoriferous Prpns Whichoperate by Burning	330741	295.34
For toilet use (including medicated products)	340111	1.76
Preparations Put Up for Retail Sale	340220	1.34
Safety fuses; detonating fuses; percussion or detonating caps; igniters; electric detonators.	360300	3.91
Instant Print Film in Flat	370120	2.10
Insecticides	380810	20.65
Rodenticides and Other Similar Preparation	380890	11.71
Other Anti-Knock Preparation	381119	1399.47
Other Reaction Initiators etc	381590	1.38
Stearic acid	382311	1.56
Industrial fatty alcohols	382370	1.30
Naphthenic acids, their water insoluble salts and their esters	382420	92.27
Polypropylene	390210	2.09
Other Polymers of Propylene in Pmry Forms	390290	3.89
Other PVC, Non-plasticised	390421	6.85
Epoxide resins	390730	1.96
Polyethylene Terephthalate	390760	1.82
Other	391290	1.57
Pltes Shts etc of Plyethyln Terephthalte	392062	25.16
Pltes Shts etc of Unstrtd Polyesters	392063	7.81
Of other polyesters	392069	68.49
Of regenerated cellulose	392071	3.95
Of other plastics	392099	1.16

Tubes,Pipes & Hoses of Vulcnsd rubber not Reinforced/otherwise Combined with other Materials without Fittings	400910	1.34
(Cnvyr Blt/Bltng)Renfrcd Only With Metl	401011	64.62
(Cnvyr Blt/Bltng)Renfrcd with Txtl Mtrls	401012	2.84
Endless Trnsmn Belts of Trapezoidal Cros-Sectn(V-Belts) whether or not Grvd,of a Circumfrnce Betwn 60 Cm & 180 Cm.	401021	2.17
Endless Trnsmn Belts of Trapeloidal Crs- Sectn (V-Belts) whether or not Grvd, of a Circumfrncebetwn 100 Cm & 240 Cm	401022	12.66
New Pnmte Tyres used On Buses/Lorries	401120	2.99
Other	401199	1.25
Other	401290	1.98
Inner Tubes of Rubber used On Bicycles	401320	4.17
Sheath contraceptives	401410	6.39
Surgical Gloves	401511	38.53
Other	410429	3.05
Other	420329	45.98
Other fabrics, containing 85% or more by weight of silk or of silk waste other than noil silk	500720	18.66
Other fabrics	500790	17.04
Measuring 714.29 decitex or more (not exceeding 14 metric number)	520511	321.75
Measuring less than 714.29 decitex but not less than 232.56 decitex (exceeding 14 metric number but not exceeding 43 metric number)	520522	18.41
Coton Yarn containing Coton>=85% by Wt Put Up for Retail Sale	520710	449.83
Other Cotton Yarn Put Up for Retail Sale	520790	99.96
Plain weave, weighing not more than 100 g/m2.	520811	99.96
Plain weave, weighing more than 100 g/m2.	520812	3.42
Plain weave, weighing not more than 100 g/m2.	520821	333.21
Plain weave, weighing more than 100 g/m2.	520822	5.42
Other fabrics	520829	9.57
Plain weave, weighing not more than 100 g/m2.	520831	11.11
Plain weave, weighing more than 100 g/m2.	520832	5.19
Plain weave, weighing more than 100 g/m2.	520852	2.78
3 thread or 4 thread twill including cross twill unbleached woven fabrics of cotton, containing 85% or more by weight of cotton, weighing more than 200 g/sq metre	520912	207.06
Plain weave	520931	216.59
Denim	520942	19.99
Single	530710	99.96
Multiple (folded) or cabled	530720	59.30
Coir yarn	530810	199.92
Other Veg Textl Yarn	530890	99.96
Unbleached	531010	35.07
Texturd Yarn of Nylon or other Polyamides Measuring Per Single Yarn More than 50 Tex	540232	44.87
Textured Yarn of Polyesters	540233	5.48
Yarn of Polyester,Prtly Ormtd,Untwstd or with a Twist <= 50 Turns Per Mtr, Single	540242	18.78

Other Yarn of Polyesters,Single,With a Twist Exceeding 50 Turns/Per Metre	540252	20.68
Other	540269	59.98
Artificial Textured Yarn	540320	99.96
Other Yarn of Viscose Rayon,Sngl,Untwstd/ With a Twist not exceeding 120 Turns Per Metre	540331	27.17
Of viscose rayon	540341	108.78
Dyed	540782	5.77
Woven Fabrics,Obtained From High Tenacity Yarn of Viscose Rayon	540810	21.04
Unbleached or Bleached	540821	22.91
Viscose Rayon Staple Fibres not Crd/Combd	550410	1.38
Multiple(Folded)/Cabled Yrn containing 85% or More by Wt of Polyestr Staple Fibres	550922	14.18
Single Yrn containing 85% or More by Wt of Acrylic/Modacrylic Staple Fibres	550931	6.18
Other Yarn of Polystr Stpl Fbrs Mixed Mainly/Solely With Artificial Staple Fibrs	550951	15.96
Other Yarn of Polyester Staple Fibrs Mixed Mainly/Solely With Cotton	550953	30.63
Single yarn	551011	20.21
Multiple (folded) or cabled yarn	551012	624.76
Other yarn.	551090	17.99
fabrics of Polystr Stpl Fbrs,Mxd Mainly or Solely with Viscose Rayon Stpl Fbrs	551511	4.70
Fabrics of Polyestr Stpl Fbrs Mixd Mainly or Solely With other Fibrs	551519	8.33
Metallised yarn, whether or not gimped, being textile yarn, or strip or the like of heading No. 54.04 or 54.05, combined with metal in the form of thread, strip or powder or covered with metal.	560500	9.75
Of wool or fine animal hair	570110	12.50
Floor coverings of coconut fibres (coir)	570220	99.96
Of wool or fine animal hair	570231	528.37
Of other textile materials.	570239	99.96
Of other textile materials.	570259	99.96
Of wool or fine animal hair	570310	34.53
Of other textile materials.	570390	6.06
Other carpets and other textile floor coverings, whether or not made up.	570500	12.50
Tulles and other net fabrics	580410	99.96
Embroidery without Visible Ground	581010	31.24
Of man-made fibres	581092	1.11
Women's or girls' overcoats etc of other textile materials, knitted or crocheted	610290	419.84
Women's or girls' dresses of cotton, knitted or crocheted	610442	233.25
Women's or girls' skirts & divided skirts of cotton, knitted or crocheted	610452	99.96
Men's or boys' shirts of cotton, knitted or crocheted	610510	2.00

Women's or girls, blouses, shirts and shirt-blouses of cotton, knitted or crocheted	610610	14.28
T-shirts, singlets & other vests, of cotton, knitted or crocheted	610910	1.76
Of cotton	620112	31.57
Of other textile materials	620199	24.32
Of wool or fine animal hair	620211	12.96
Of other textile materials	620319	37.49
Of other textile materials	620419	99.96
Of cotton	620422	8.33
Of synthetic fibres	620423	10.00
Of other textile materials	620429	21.42
Of cotton	620432	3.70
Of wool or fine animal hair	620441	62.48
Of cotton	620442	114.66
Of synthetic fibres	620443	38.76
Dresses of Artificial Fibres	620444	22.91
Of other textile materials	620449	27.26
Of cotton	620452	36.61
Of synthetic fibres	620453	61.60
Of cotton	620462	5.20
Of synthetic fibres	620463	2.40
Of cotton	620520	5.68
Of man-made fibres	620530	1.03
Of other textile materials	620590	45.44
Of silk or silk waste	620610	75.65
Of cotton	620630	316.75
Of man-made fibres	620640	64.06
Blouses, Shirts etc of other Ttxtl Materials	620690	8.77
Of cotton	621142	44.43
Of wool or fine animal hair	621420	46.65
Shwls, Scrvs, Mufflers etc of Synthtc Fbrs	621430	21.66
Shwls Scrvs, Mufflrs etc of Artificial Fbrs	621440	5.23
Of other textile materials	621490	32.25
Curtains (including drapes) and interior blinds; curtain or bed valances, knitted or crocheted, of cotton	630311	99.96
Other curtains etc. of cotton	630391	7.14
Bedspreads, knitted or crocheted	630411	99.96
Other bedspreads	630419	89.25
Other furnishing articles, not knitted or crocheted, of cotton	630492	336.72
Other furnishing articles, not knitted or crocheted, of synthetic fibres	630493	41.65
Furnishing articles, not knitted or crocheted, of other textile materials	630499	39.98
Sacks and bags for packing, of cotton	630520	79.97
Other madeup articles	630790	14.82
Other rags, scrap, twine, cordage, rope etc.	631090	1.80
Human hair, dressed, thinned, bleached or otherwise worked; wool or other animal hair or other textile materials, prepared for use in making wigs or the like.	670300	517.75

Wigs, false beards, eyebrows and eyelashes, hair nets, switches and the like, of human hair	670420	533.13
Simply cut or sawn granite with a flat/even surface	680223	33.32
Other worked mica and articles of mica etc.	681490	29.62
Multiple-walled insulating units of glass.	700800	149.94
Other glass containers of capacity >0.33 litre but <1 litre	701092	15.13
Other glass envelopes	701190	274.90
Glass beads, imitation pearls, imitation precious or semi-precious stones and similar glass smallwares.	701810	60.78
Other non-industrial diamonds	710239	34.47
Otherwise worked other precious and semi-precious stone	710399	13.79
Articles of jewellery and parts thereof of silver, whether or not plated or clad with other precious metal.	711311	1.79
Other imitation jewellery of base metals whether or not plated with precious metal	711790	1.92
Ferro-chromium containing by weight more than 4% of carbon	720241	33.00
Flat-rolled products of iron or non-alloy steel, of a width of 600 mm or more, in coils of thickness of 3mm or more but less than 4.75 mm, not further worked than hot-rolled pickled	720826	3048.85
Flat-rolled products of iron or non-alloy steel, of a width of 600 mm or more, in coils, not further worked than cold-rolled (cold reduced) of thickness 3 mm or more	720915	699.74
Corrugated products of iron or non-alloy steel, otherwise plated/coated with zinc, of a width of 600 mm or more	721041	57.55
Flat rolled products of iron/non alloy steel not further worked than hot-rolled of thickness 4.75 mm or more, of width less than 600 mm	721114	114.24
Other flat-rolled products of iron/non alloy steel not further worked than cold-rolled (cold-reduced) containing by wt less than 0.25% of carbon, of a width of less than 600 mm	721123	1.63
Other flat-rolled products of iron/non alloy steel not further worked than cold-rolled (cold-reduced) excl. 721123.00	721129	3.82
Other flat rolled products of iron/non-alloy steel of width less than 600 mm, not clad, plated or coated	721190	1.97
Other nes	721399	20.68
Other bars and rods of iron or non alloy steel not further worked than forged hot rolled hot drawn or hot extruded but including those twisted after rolling of rectangular (other than square) cross seUNIT	721491	31.24
Bars and rods, hot-rolled, in irregularly wound coils, of stainless steel	722100	8.32
Bars and rods, cold-formed or cold-finished.	722220	57.52
Angles, shapes and sections of stainless steel	722240	14.60
Wire of stainless steel	722300	4.58
Flat rolled products of high speed steel, of a width of 600 mm or more	722520	5.61
Other bars and rods cold finished	722860	1.85
Angles, shapes and sections of other alloy steel	722870	3.65
Line pipe of a kind used for oil or gas pipelines, of iron (other than cast iron) or steel.	730410	7.86

Flanges of stainless steel	730721	16.72
Other butt welding fittings	730793	1.82
Nails, tacks, drawing pins, corrugated nails, staples (other than those of heading no.8305) and similar articles, of iron or steel, whether or not with heads of other material, but excluding such artiUNIT	731700	4.01
Leaf springs and leaves thereof of iron or steel	732010	2.51
Other household articles of stainless steel	732393	4.19
Other household articles of iron (other than cast iron) or steel, enamelled.	732394	113.71
Other cast articles of malleable cast iron, nes	732599	5.04
Copper powders of non-lamellar structure	740610	3.90
Copper powders of lamellar structure, flakes	740620	55.15
Tubes & pipes of copper-nickel base alloys (cupro-nickel)/copper-nickel-zinc base alloy (nickel-silver)	741122	4.50
Other threaded articles	741819	22.21
Articles of copper cast, moulded, stamped or forged, but not further worked	741991	23.88
Other articles of heading 7419	741999	2.50
Other table kitchen or other household articles and parts thereof	761519	9.80
Other handtools used in agriculture/horticulture/forestry, of base metal	820190	13.63
Files, rasps & similar tools, of base metal	820310	18.82
Pliers, pincers, tweezers & similar tools, of base metal	820320	2.70
Hand-operated spanners and wrenches non adjustable, of base metal	820411	18.41
Adjustable hand operated spanners and wrenches, of base metal	820412	2.71
Drilling threading or tapping tools, of base metal	820510	21.04
Planes, chisels, gauges and similar cutting tools for working wood, of base metal	820530	57.12
Household tools, of base metal	820551	4.81
Other hand tools (including glaziers' diamonds), of base metal	820559	4.85
Vices, clamps & the like, of base metal	820570	14.63
Sets of articles of two or more of subheadings 8205.	820590	3.10
Tools for milling, of base metal	820770	4.89
Razors, of base metal	821210	1.64
Safety razor blades, including razor blade blanks in strips, of base metal	821220	3.16
Other articles of cutlery, of base metal	821490	319.88
Padlocks, of base metal	830110	3.75
Other vapour generating boilers, including hybrid boilers.	840219	16.12
Other	840999	1.67
Turbo Jets of a Thrust ≤ 25 Kn	841111	43.57
Pumps for dispensing fuel or lubricants of the type used in filling stateions or in garages	841311	9.52
Other centrifugal pumps	841370	2.08
Parts of Liquid Elevators	841392	14.28
Air compressors mounted on a wheeled chassis for towing	841440	2.94
Other	841869	1.24

Centrifuges, incl. centrifugal dryers, cream separators	842111	7.06
Centrifuges, incl. centrifugal dryers, Other	842119	1.49
Parts	843290	1.70
Parts	843790	4.74
Other Offset Printing Machinery	844319	1.36
Circular knitting machines with cylinder diameter not exceeding 165 mm	844711	1.55
Parts & Accesss of Mchns of Hdg No.8444/of Their Auxlry Machinery	844820	1.73
Sewing machines of the household type	845210	13.04
Other parts of sewing machines	845290	3.95
Parts of Artices Under Hdg 8454	845490	1.18
Other	845899	26.02
Blow Moulding Machines	847730	1.38
Machinery for Mouldng/Retreadng Pneumtc Types or for Mouldng/Otherwise Formng Innr Tubes	847751	148.49
Tapered roller bearings, including cone and tapered roller assemblies	848220	5.68
Mechanical Seals	848420	2.17
Liquid dielectric transformers having a power handling capacity not exceeding 650 KVA	850421	2.34
Liquid dielectric transformers having a power handling capacity exceeding 650 KVA but not exceeding 10000 KVA	850422	6.94
Liquid dielectric transformers having a power handling capacity exceeding 10,000 KVA	850423	12.00
Parts of electrical transformers, static converters (for example, rectifiers) and inductors	850490	1.11
Permanent magnets and articles intended to become permanent magnets after magnetisation of metal	850511	6.24
Permanent magnets & articles intended to become permanent magnets after magnetisation; of other material	850519	1.82
Electro magnets; chucks, clamps & similar devices	850590	8.96
Parts of articles of hdng 8511	851190	1.06
Parts of hdng 8532	853290	1.28
Fuses of a voltage exceeding 1000 volts	853510	13.55
Automatic circuit breakers for a voltage of less than 72.5 KV	853521	3.27
Other automatic circuit breakers	853529	24.66
Isolating switches and make-and-break switches	853530	2.20
Other electrical apparatus for switching/protecting electrical circuits etc. for a voltage exceeding 1000 volts	853590	7.39
Boards, panels, consoles, desks, cabinets and other bases for the goods of heading no. 85.37, not equipped with their apparatus	853810	1.65
Other semi-conductor devices	854150	3.31
Electrodes of a kind used for furnaces	854511	1.11
Other electrodes	854519	2.90
Other articles of carbon, with or without metal, of a kind used for electrical purposes	854590	1.58
Electrical insulators of ceramics	854620	2.55
Electrical insulators of other materials	854690	11.13

Other (axles, wheels etc.), including parts	860719	2.79
Frames, forks & parts thereof	871491	2.58
Wheel, rims and spokes	871492	8.43
Hubs, other than coaster braking hubs and hub brakes, and free-wheel sprocket-wheels	871493	62.01
Brakes, incl. coaster braking hubs & hub brakes & parts thereof	871494	2.15
Saddles of bicycles and other cycles	871495	1.07
Pedals & crank-gear & parts thereof	871496	13.68
Other parts and accessories of bicycles and other cycles	871499	1.83
Camera with a Through-The-Lens Viewfinder (S.L.R.),For Roll Film of a Wdth<=35 Mm	900651	49.98
Other Cameras for Roll Film of a Width<35 Mm	900652	799.70
Parts & Accessories for Cameras	900691	22.41
Electro-Cardiographs	901811	33.32
Tubuler metal needles and needles for sutures.	901832	10.93
Other	901839	1.01
Other ophthalmic instruments and appliances.	901850	2.51
Other instruments and appliances.	901890	1.81
Other apparatus for medical surgical or veterinary uses based on the use of x rays	902214	1.19
Other machines and appliances.	902480	1.16
Other(Bombs,Grenades etc)	930690	24.99
Other Wooden Furniture	940360	8.94
Other	950699	2.82
Worked vegetable or mineral carving material and articles of these materials; moulded or carved articles of wax, of stearin, of natural gums or natural resins or of modelling pastes, and othe moulded UNIT	960200	5.55
Ball Point Pens	960810	6.20
Other	960839	4.11
Refills for Ball Point Pens,Comprising the ball point and ink reservoir	960860	4.35
Other	960899	1.31
Vacuum flasks and other vacuum vessels, complete with cases; parts thereof other than glass inners.	961700	2.94
Paintings, drawings and pastels	970110	8.33
Other	970190	649.76