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What determines the export performance? A comparative analysis of China and India in the European Union

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PAPER TITLE: What determines the export performance? A comparative analysis of China and India in the European Union

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Abstract: This paper aims to assess the competitiveness of exports of manufactured goods from China and India to the European Union in the 2000s. The empirical analysis is based on two methodologies: (i) a Constant Market Share analysis which allows to decompose the export growth to the European market into several components including an effect usually related to competitiveness, and (ii) an analysis based on the combination of revealed comparative advantage indexes with a geographic orientation of trade which allows to identify the products of China and India that appear to have export potential.

Key words: China, India, Competitiveness, European Union, Constant Market Shares Technique, Trade Potential.

The People's Republic of China (China) and the Democratic Republic of India (India), considered as the next major economic powers in the world[1], present more diversities than resemblances as they have different political systems and distinct economic and political routes to growth. However, they have in common the disadvantages of having adopted closed economic strategies, in the case of China based on a centrally planned economy, and the decision to develop economic reforms (since the 80s in China and 1991 in India) that definitely opened the path to a quick integration in world market. As a consequence, both countries recorded a strong growth of

[1] See Huang and Khanna (2003), *Foreign Policy*, pp. 83–91

international trade flows during the 2000s, which allows to project a decisive transformation of the world pattern of trade. According to WTO[2], China and India exported to the world in 2010 about 10.36% and 1.44% of the world trade of manufacturing products. The annual percentage change of these exports, from 2005 to 2010, was respectively about 16% and 17%.

This study focuses on the export performance of China and India in the European Union of the former 15 members (EU15), the most significant trade partner for both countries in the period 2000s. The purpose is to provide a comparable portrait of China and India in terms of: (i) their pattern of exports and competitiveness; (ii) the importance of competitiveness as a factor of export performance after controlling for the contribution of the specialization pattern and the geographical orientation of trade; (iii) the trade potential of these two countries in the destiny market.

The empirical analysis uses a Constant Market Share analysis, which allows to decompose the export growth to the European market into several components including an effect usually related to competitiveness, and a methodology based on the measurement of the revealed comparative advantage observed over the period analysed combined with a geographic orientation Index. The latter allows to identify products that appear to have potential for China and India to expand their exports.

The analysis will be developed as follows: section 2 highlights the export pattern of both countries and their revealed comparative advantage in the destiny EU15 market; section 3 relies on a Constant Market Share analysis to quantify the contribution to the export performance of each country of its specialization pattern, geographical destinations and competitiveness, the latter associated, as usual, with the residual term; section 4 develops an analysis which informs about the products in which China and India reveal potential to expand their exports to the EU15 market, under certain theoretical and empirical assumptions; finally, section 5 concludes.

2. Export pattern and revealed comparative advantage

[2] See WTO statistics database available at the website respectively for China and India http://stat.wto.org/CountryProfile/WSDBCountryPFView.aspx?Language=E&Country=CN,IN [Accessed at May 2011]

Some broad differences can be highlighted between China and India in terms of their pattern of exports (Graph 1 and 2 in the annex): the share of services remains a small proportion of the total exported in the case of China[3] (about 10%), while it already recorded 35% of total exports in 2010; the Chinese productive structure is predominantly specialized in manufactured products (94% of total exports in 2010), with a low and decreasing exports share in the fuel and mining products as well as in the agricultural products. In the case of India, the pattern of exports records a lower share of manufactured products (about 64% of the Indian exports), a greater share of agricultural products (11% in 2010), although decreasing between 2001 and 2010, and a more relevant and increasing share of the fuel and mining products (25% in 2010).

Turning our attention to the manufacturing sector, the subject of analysis in this study, during the period under observation both countries registered a significant variation of their productive structure in the 2000s, more accentuated in the case of India, as confirmed by the Lorenz Index[4] for the period 2001-2009 at the 4-digit level of disagreggation[5] (Graphs 3 and 4 in the annex). This change is more evident in the sub-period 2001-2005 than in 2005-2009.

Focusing now on the analysis of the export pattern of manufactured products, to facilitate the reading of results we considered the data at the 4-digit level (1225 products) but grouped the products into 30 groups (Table 1 in the annex). The objective was to build groups of analogous products, i.e. that can be considered to belong to the same sector or industry.

Adopting this disaggregation at the level of the 30 groups, analysis of the export pattern of manufactured products of China, as per Graph 5 in the annex, highlights the importance of *Clothing* (group 20) and *Machinery* (group 27), as these groups show a significant and increasing share of total exports over the period under observation

[3] See WTO statistics database available at the website respectively for China and India http://stat.wto.org/ServiceProfile/WSDBServicePFView.aspx?Language=E&Country=CN,IN [Accessed at March 2012]

[4] The Index is given by $LI = abs[(X_{ijg1}/X_{ijT1}) - (X_{ijg0}/X_{ijT0})]$, where X_{ijgT1} is the exports of China or India to UE15 of the product g at the end of the time period y; X_{ijT1} is the total exports at the end of the time period; X_{ijg0} and X_{ijT0} are, respectively, the product and the total exports at the beginning of the time period.

[5] Following the Harmonized System Rev.3 from International Trade Centre (Intracen), available on the website: http://www.intracen.org/ [accessed at February 2011]

(respectively about 9% and 37% in 2001 and 14% and 45% in 2009). The latter is the most important export sector in 2009.

A similar analysis for India (Graph 6 in the annex) shows that *Clothing* (group 20) is the most significant group in 2001 and 2009, recording respectively 22% and 19% of the total exported, even if it lost importance over the period observed. In 2001, *Precious Metals and Stones* (group 23) also recorded a significant share, of about 12% of the total exported. In 2009 there were another two significant groups: *Mineral Fuels* (group 15) and *Automobiles and other transports as well as their accessories* (group 28), which recorded respectively about 15% and 10% of the total exported, with a positive trend of growth during the time period analysed.

Investigation of the Revealed Comparative Advantage (RCA) provides a coherent portrait with the previous analysis. For that purpose we used the traditional index proposed by Balassa(1965)[6].We have calculated this index according to the RCA index defined in Castilho (2003)[7]. A RCA greater (lower) than one means that the exporter country is competitive (non-competitive) in that specific product.

As per Table 2 in the annex, China displays Revealed Comparative Advantage between 2001 and 2009 in groups 15, 18-22, 26, 27 and 30, i.e. in *Raw skins, Leather, Silk, Wool Cotton, Rugs, Clothing, Footwear*, *Slate, Brick, Porcelain or Machinery* and *Tools instruments*. In the sub-period 2005-2009, China shows an advantage as well on groups 24 and 29, i.e. in *Iron, Steel and Copper* or *Electro-medical apparatus and Laboratory equipmen*t *and similar*. In sum, China reveals comparative advantage essentially in the Traditional Sector, as *Footwear, Clothing and Textile* products, more labour-intensive, but also in the *Machinery and Transport Sectors*, which require more technology and qualified workers.

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[6] See Balassa (1965), "Trade Liberalization and Revealed Comparative Advantage", *The Manchester School of Economics and Social Studies*, vol. 33, n.º2, pp. 93-125.

[7] It is an adoption of the RCA, defined as $RCA_{i,j,a} = (X_{i,a} / X_i) / (M_{w-i,a} / M_{w-i})$, where *i* is the exporter country (China or India), *a* is a particular product, *X* stands for exports and *M* for imports (excluding the world imports made by China). The intra-trade between the economies and the world is removed as this trade relation is already determined by the trade preferences. Instead of the world exports were used the world imports, on account of data availability. Therefore, it is possible that the methodology overestimates the competitiveness of both countries in the presence of trade protection due to its negative impact in imports.

Regarding the case of India (Table 3 in the annex), the results highlight the existence of comparative advantage between 2001 and 2009 in Agricultural products, as *Cereals or Vegetables*, in *Ores and Metal products*, *Chemical and Organic compounds*, *Raw skins, Leather, Silk, Wool and similar products*, *Clothing and Footwear*, *Precious metals and Stones*, *Iron, Steel and Copper products* and less on *Mineral Fuels*, *Organic Substances* or *Beauty and Make-up preparations*. Thus, India shows a significant comparative advantage mainly in the Traditional sectors and also in the Agricultural, Metals sectors, i.e. predominantly in products in the primary and labour intensive sectors. Therefore, this pattern contrasts with the one of China basically by the relative heavy weight of the primary sector and the relative low weight of more technology-intensive products.

3. The Competitiveness Effect: a Constant Market Share analysis

To explain the export performance of China and India in the EU25 we decompose the increase in the exports into different components with a constant market share (CMS) analysis. This simple technique of breaking down the analysis of export growth allows to disentangle the effective changes of export share in each individual market from the effects related with the product and geographical structure of exports.

The CMS identity adopted was suggested by Jepman, C. (1981) and is given by:

$$\underbrace{\Delta q}_{TE} = \underbrace{S_0 * \Delta Q}_{SE} + \underbrace{(\Sigma_i S_{i0} * \Delta Q_i - S_0 * \Delta Q)}_{PE} + \underbrace{(\Sigma_i \Sigma_j S_{ij0} * \Delta Q_{ij} - \Sigma_i S_{i0} * \Delta Q_i)}_{ME} + \underbrace{\Sigma_i \Sigma_j \Delta S_{ij} * Q_{ij1}}_{CE}$$

Where *i* is the product and *j* the destiny market. $\Delta q = \Delta[\Sigma_i \Sigma_j q_{ij}]$ means the total variation per product of the exports of a country to the world between two years/period of time, i.e. the growth of the exports of the country; $S_0 = q_0/Q_0$ is the share, per product *i*, of the exports of the country over the total world exports at the beginning of the time period; $\Delta Q = \Delta[\Sigma_i \Sigma_j Q_{ij}]$ means the difference in total world exports between the time period analysed; $S_{i0} = q_{i0}/Q_{i0}$ is the share, per product *i*, of the total exports of the country over the total world exports at the beginning of the time period; ΔQ_i is the difference in total world exports per product *i* in the time period; $S_{ijo} = q_{ij0}/Q_{ij0}$ is the share, per product *i*, of the exports of the country to market *j* over the world exports to market *j* at

the beginning of the period; ΔQ_{ij} means the difference in world exports to a specific market *j* per product *i* in the time period; ΔS_{ij} means the difference in the share, per product *i*, of the exports of the country to market *j* over the world exports to market *j*; and Q_{ij1} is the value of world exports to market *j* at the end of the time period.

The Total Effect (TE) captures the export performance of a country during a specific time period, and it is decomposed into the following effects: the Scale Effect, the Product Effect, the Market Effect and the Competitive Effect.

The Scale Effect (SE) shows the change of the exports of a country when its growth is equal to the world export growth in terms of commodity and market. This effect "shows how much the exports would have increased had the percentage change of the total export been the same as that of the total export of the standard"[8], i.e. the group of countries against which the export performance is measured.

The Product Effect (PE) shows if the export specialization in specific products is relevant for the total export growth in time period. If this effect shows a positive value, it means that the product structure is beneficial to country's exports.

The Market Effect (ME) reveals the contribution of the geographical specialization of the country to its export growth.

The Competitive Effect (CE) is the "residual" term and it "presents -both the influence of price and volume competition"[9] in the export growth, i.e. it mirrors the country capacity to increase its market share.

Some critiques have been made to this method. A limitation of this analysis is that it is not possible to disentangle the influence of the price and volume competition in the residual term[10]. Baldwin (1958) and Richardson(1971) considered it "an index of number approach in which different weights of aggregation can be chosen in order to obtain consistency in accounting for changes in total exports (or exports shares)"[11], i.e. the formula is sensitive to the level of disaggregation, range period or geographical groups used to perform the empirical analysis. For example, the Scale Effect can show

[8] See Jepma (1981).
[9] See Jepma (1981).
[10] For instances, the export data is generally in USD value, instead of domestic currency. Hence developments in market share are influenced by variations in USD exchange rate. It means that, *ceteris paribus*, an appreciation of the USD will result in a decline in the market share of the country analysed.
[11] See Milana, Carlo (1988).

different results according to the comparative group selected, i.e. the group considered to include the most important competitors of the country analysed. Another issue concerns the arbitrary that there is in the choice of the terms used in this methodology: in the Market Effect the proposal is to subtract part[12] of the Product Effect but using instead a similar term[13], the sum of both effects will not change while the individual results would be different.

Another problem is that "over the time period under consideration, both a country's export structure and world exports are continuously changing" (Richardson, 1971)[14].The typical research, however, has observations in the beginning and the end of the period only, while we optimally would like to know at every moment during the period, i.e. using a continuous time period.

The CMS methodology was implemented for China and India using annual exports of manufactured products during 2001-2009, once more divided into two sub-periods: 2001-2004 and 2005-2009. The methodology was applied for the 30 groups above mentioned (Table 1 in the annex) as well as at the 4-digit level of disaggregation[15] .

In the case of China, discriminating the Total Effect by groups (Table 4 in the annex), in the larger period 2001-9, it records a positive value in all groups, i.e. all of them reveal export growth to the EU15. This increase is greater in *Machinery and other equipment* (group 27) and *Clothing* (group 20), recording about 46.52% and 15.23% of the Total Effect, respectively. There was a drop in exports to the European market only in *Animal products or its derivates* (group 2) in the first sub-period analysed and in *Ores and Metal products* or *Mineral Fuels* (groups 7 and 8) in the second sub-period analysed.

Decomposing the results by effects, Table 5 in the annex shows that, between 2001 and 2009, the export growth of China to the EU25 was essentially explained by

[12] It is used the following term: $\Sigma_i S_{i0} * \Delta Q_i$
[13] Which can be the following term: $\Sigma_j \Delta S_j * S$
[14] See Richardson, J. D. (1971), "Constant-Market-Shares Analysis of Export Growth", *Journal of International Economics*, vol. 1, pp. 227-239.

[15] Of the Harmonized System rev.3 from the International Trade Centre.

the Competitive Effect, as it records about 95% of the Total Effect in the time period 2001-2009. The Market Effect is proximally -110% of the Total Effect, signalling that the EU15 as a destination market has a negative influence on the export growth of China. The Product Effect is about 108% of the Total Effect, which means that specialization of China is favourable to its exports to the EU15. Finally, the Scale Effect, related to the world export growth, is only about 16% of the Total Effect, being proximally one-third in the period 2001-2004.

Decomposing now the Total Effect by groups, also presented in Table 5, we conclude that, in the period 2001-2009, all sectors display a positive Competitive Effect but *Animal products or derivate* (group 2), *Ores and metal products* (group 7), and *Mineral Fuels* (group 8). In this time period, the groups that show a greater value of this Effect are *Silk, Wool, Cotton, Fabrics, Synthetic Fibbers* (group 18), *Rugs, Tulle, Padded, Textile coatings* (group 19), and *Machinery and other equipment* (group 27); together, they record, in 2009, 46% of the total exports to the EU15.

Table 1 displays the highest values by groups for the Competitive Effect and its share in total exports of China to the EU15. It is interesting to observe that in the more recent sub-period, 2005-2009, the highest positive values for the Competitive Effect are recorded in *Wood and its products* (group 16), *Precious Metals and Stones* (group23), and *Automobiles and other transports as well as their accessories*, while a negative effect is observed in *Prepared, Preserved or Extracts of products* (group 5), and *Waxes, Albumin and other organic substances* (group 12).

Table 1: The highest values for the Competitive Effect for China exports to EU15 in the time periods 2001-2004 and 2004-2009, and its share over the total China exports to EU15

Groups	Competitiveness Effect		Share of China exports to EU(15) over the total per groups (%)		
	2001-2004	2005-2009	2001	2004	2009
Group 18	88.47	215.59	2.28	1.70	1.24
Group 29	56.42	203.13	3.78	2.62	2.19
Group 19	84.06	183.52	0.46	0.45	0.42
Group 23	24.51	158.45	1.09	0.82	0.55
Group 27	84.40	123.43	36.53	49.09	44.57
Group 16	62.38	106.01	1.24	1.16	1.03
Group 22	70.64	98.41	1.58	1.41	1.66
Group 17	-7.81	91.81	0.64	0.35	0.69
Group 11	60.55	91.42	0.73	0.52	0.43
Group 26	64.97	85.07	2.02	1.76	1.43

Source: Own calculations using data available at the Website of International Trade Centre: http://www.intracen.org/ [accessed at February 2011]

We have also performed the same analysis for data at the 4-digit level to obtain a detailed portrait at the product level. Table 6 in the annex shows the results for products with the highest values for the Total Effect.This micro level corroborates previous conclusions and it is worth mentioning the results for two products: the *Automatic data process machines, optical reader and others* (product 8471) as it is the product with highest percentage of the Total Effect in the period 2001-2009 and this is mainly explained by the Competitive Effect (proximally 99% of the Total Effect in the period 2001-9); and the *Electric apparatus for line telephony including current line system* (product 8517) as it also shows a high Total Effect in the period 2005-2009 (11.41 %) and the growth of exports of China in this product is also mainly given by an increase of the Competitive Effect (89.19% of the Total Effect).

Finally, at this more detailed level of analysis, it is worthwhile mentioning two other products*: Jerseys, pullovers, cardigans and others, knitted or crocheted* (product 6110), which records in the sub-period 2001-2004 about 0.23% of the Total Effect, increasing to 3.90% in the sub-period 2005-2009; and *Women's suits, jackets, dresses skirts and shorts* (product 6204), which records in the sub-period 2001-4 about 0.68% of the Total Effect, increasing to 2.56% in the sub-period 2005-9. In both cases the rise of the exports is essentially given by an increase of the Competitive Effect (respectively 90.36% and 91.65% of the Total Effect in the period 2005-9).

To summarize, it is possible to conclude that most exports of China to the EU15 can be explained by competitiveness. This effect is more relevant in the sub-period 2005-9 than in the sub-period 2001-4, which suggests that China exports became increasingly more competitive in this destiny market. Among the exceptions, it is worth pointing out some sectors with a predominance of the Scale Effect (mainly groups 2, 7 and 8); it possibly means that the weak competitiveness of these groups can be explained by a similar change in exports of China and in world exports.

Turning now to the case of India, the Total Effect discriminated by groups (Table 7 in the annex) displays a positive result for all groups during the time period 2001-2009, revealing that India registered a growth of exports in all categories. The groups that displays a greater growth were *Mineral Fuels* (group 8), *Clothing* (group 20), and *Automobiles and other transports as well as their accessories* (group 28), recording, respectively, about 21%, 18% and 13% of the Total Effect. If we consider the period 2005-2009, there are some groups that show a decrease, i.e. with a negative Total Effect, as *Animal Products or its Derivates*, *Ores and Metal products*, *Silk, Wool, Cotton, Fabrics, Synthetic Fibbers*, or *Rugs, Tulle, Padded and Textile coatings* (groups 2, 7, 18 and 19).

Concerning the decomposition by effects, table 8 in the annex shows that growth of India between 2001-2009 was in a significant part explained by the Competitive Effect, as it records about 69% of Total Effect. It means that export growth of India is given in part by the increase in its capacity to export to EU15. During this period, the Market Effect is proximally -164% of Total Effect, which suggest that the EU15 as a destination market has a negative influence on the export growth of India; the Product Effect is about 165% of Total Effect, which is the most important explanation of the export performance of India to the EU15. The Scale Effect is about 31% of Total Effect, being higher in the period 2005-2009 in which it is about 72%; note however that in this sub-period this effect is less relevant than the Competitive Effect.

Focussing now in more detail the Competitive Effect, it is positive for all groups between 2001 and 2009 but *Animal Products or its Derivates* (group 2), *Vegetables, Cereals and Fruits* (group 3) and for *Other products* (group 30). In the time period 2005-2009, this effect is negative for *Ores and Metal products* (groups 7), *Silk, Wool,*

Cotton, Fabrics or Synthetic fibbers (group 18) and *Wood and its* products (group 26) as did group 3 mentioned above, which reflects the weak capacity of India to increase its export of these products to the EU15. It is worthwhile pointing out that exports of India already show a relevant competitiveness in products that require an application of some technologies and innovation, such as *Machinery and other equipment* (group 27).

Table 2 displays that the highest values for the Competitive Effect in India in the period 2001-2009. They are observed in *Silk, Wool, Cotton, Fabrics, Synthetic Fibbers* (group 18), which records in 2009 about 3% of the exports of India to the EU15, while in the period 2005-2009 they are highest in *Animal Products or its Derivates* (group 2), *Paints, Varnishes and other Beauty and Make-up preparations* (group 11) and *Precious Metals and Stones* (group 23). Together, these groups with a significant competitive effect record in 2009 about 10% of the exports of India to the EU15.

Table 2: The highest results for the Competitive Effect for exports of India to the EU15 in 2001-2004 and 2004-2009, and its share over the total exports of India to the EU15

Groups	Competitiveness Effect		Share of India exports to EU(15) over the total per groups (%)		
	2001-2004	2005-2009	2001	2004	2009
Group 2	1.69	509.99	0.19	0.20	0.08
Group 23	-92.14	162.97	12.16	10.29	8.36
Group 11	29.77	104.15	1.76	1.45	1.27
Group 16	53.35	98.48	0.10	0.12	0.13
Group 22	5.88	89.86	1.26	1.15	1.11
Group 12	50.02	86.15	0.11	0.11	0.11
Group 6	80.89	85.19	0.63	0.61	1.09
Group 27	50.63	83.90	6.56	7.31	8.73
Group 21	2.92	80.79	4.95	4.00	3.38
Group 8	99.82	79.09	0.02	3.37	14.93

Source: Own calculations using data available at the Website of International Trade Centre: http://www.intracen.org/ [accessed at February 2011]

Therefore it is possible to conclude that in the case of India there are also several relevant products for which export growth is explained by competitiveness. This effect is more relevant in the sub-period 2005-9 than in the sub-period 2001-4, which suggests that, similarly to the case of China, exports became increasingly more competitive in the European Market. Nevertheless the competitive effect is more relevant in China. Indeed,

while the export performance of China to the EU15 is mainly supported by competitiveness, in India the main explanation is related to the specialization structure.

The previous analysis for India can be improved by considering the 4-digit level (Table 9 in the annex). At this level of disaggregation, results for the Total Effect in the period 2001-1009 are greater in *Petroleum oils, not crude* (product 2710) (21.05% of Total Effect). Other relevant results products are *Cars, including station wagon* (products 8703), *Aircraft parts* (product 8803) and *Cruise ship, cargo ship, barges* (product 8901), recording, respectively, 7.49%, 1.65% and 1.61% of the Total Effect. If we consider the sub-period 2005-2009, these products display, respectively, 12.01%, 3.35% and 2.93% of the Total Effect. The most interesting point is the fact that these products are essentially explained by the Competitive Effect.

4. Complementarity and Geographical bias: is there potential to increase trade?

In this section we adopt the methodology proposed by Castilho and Flôres (2005) which broadly allows to identify the export potential of China and India in the EU15 market. It is based on revealed comparative advantage indexes combined with a "geographic orientation" dimension.

The methodology is based on two indexes: the *Trade Complementarity Index* (TCI) and the *Geographical Orientation Index* (GOI).

The TCI is defined as the product of the classical *Revealed Comparative Index* (RCA) with the *Comparative Disadvantage Index* (CDM). It analyses the correspondence between the supply of the exporter country with the demand of the trade partner. The index is calculated as follows:

$$TCI_{i.\,j,a} = RCA_{i.j,a} \,.\, CDM_{i.j\,,a} = [(X_{i,a}/X_i) / (M_{w\text{-}i,a}/M_{w\text{-}i})] \,.\, [(M_{j,a}/M_j) / (M_{w\text{-}j,a}/M_{w\text{-}j})]$$

where i is the exporter (either China or India);

j is the importer (EU15);

a is the particular product;

Xi,a (Mj,a)- i (j) exports (imports) of product a;

Xi(Mj)-i (j) total exports (imports) of product a;

Mw-i,a-world imports of product a but those from i

Mw-j-total world imports minus those from bloc i.

TCI values greater than one denote, in principle, a competitive edge for exports of i in the destiny market j: the exporter country displays comparative advantage and meets the demand of the importer country. Therefore, it is a situation of trade complementarity and it is expected that trade liberalization will increase exports of i to j.

The geographical orientation index (GOI) is calculated as follows:

$$GOI_{i.j,a} = (X_{i.j,a}/X_{i,a}) / (M_{j,a}/ M_{w-i,a})$$

GOI is the ratio, for a specific product, between the weight of exports of i (in total exports of i) to importer j and the weight of imports (over world imports, excluding world imports addressed to the exporter) of the importer j. It is the RCAi,j,a with the numerators of both ratios (imports and exports) restricted to importer j. It compares the weight of bilateral trade of a specific product with the partner's participation in world imports of this product.

If GOI is over one there is a "positive" geographical bias: the importance of bilateral exports of that specific product to the exporter's total trade is higher than the importance of its partner in world purchases of the product. If GOI is below one the geographical bias is “negative” and the reason can be the lack of specialization or other reasons, such as the trade barriers or historical, geographical and/or cultural factors.

Combination of the two indexes can generate four different scenarios (table 3). If the GOI is over one and complementarity exists, it is the typical bilateral trade case, based on comparative advantage. If the GOI is over one without complementarity, trade will not be explained by specialization in both sides. If the TCI is under one and the GOI is under one, the geographical bias expresses the lack of complementarity, as expected, and the prevision is the absence of trade. If the GOI is under one and the TCI is greater than one, complementary would suggest room for trade that is not taking place. The latter case is the export potential situation and the assumption is that other factors such as preferences to other countries or trade protection explain this gap.

Table 3: The four possible scenarios provided by the combination of TCI and GOI

TCI > 1 and GOI > 1 The positive geographical bias reflects the complementarity between both countries.	**TCI < 1 and GOI > 1** The geographical bias is positive, but it is not justified by the complementarity. There are other factors that reflect the trade.
TCI > 1 and GOI < 1 There is complementarity, but there is still room for additional trade. It is the trade potential situation.	**TCI < 1 and GOI < 1** The geographical bias is negative as expected considering the lack of complementarity of both economies.

To implement this methodology we used the annual export values between 2001-2009 for both levels of disaggregation: the 30 groups and the 4-digit level [16].

According to the methodology above, the results of indexes crossover for China are summarized in the table 4, while Tables 10 and 11 in the annex display the values obtained for each index between 2001 and 2009.

Table 4: Results for the combination of TCI and GOI in China: groups belonging to each scenario in the period 2001 to 2009

TCI > 1 and GOI > 1 No Groups.	**TCI < 1 and GOI > 1** No Groups, except group 7 between 2005 and 2008.
TCI > 1 and GOI < 1 Groups: 5, 12, 15, 18, 19, 20, 21, 22, 26, 27 and 30.	**TCI < 1 and GOI < 1** Groups: 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 13, 14, 16, 17, 23, 24, 25, 28 and 29.

Source: Own calculations using data available at the Website of International Trade Centre: http://www.intracen.org/ [accessed at February 2011]

The results reveal that there are no groups in the traditional case, i.e. when both indexes are higher than one. Indeed, most trade corresponds to the trade potential case (77% of the total exported to the EU15), and it is worthwhile mentioning that *Machinery and other equipment* (group 27) by itself records about 45% of total exports

[16] For more information please see the Data Appendix in the annex. It is worth pointing out that the value of world exports to country j is replaced by the value of country j imports from world for constraints of data.

to the EU15. Another relevant sector in the trade potential scenario is *Clothing* (group20).

Considering the 4-digit analysis - which is presented for China, in 2009, in the Graph 7[17]in the annex – the most relevant result is the fact that most products are characterized by GOI lower than one and TCI over one, i.e. the trade potential scenario. Among the products that show potential for China to expand exports to the EU15 it is worth mentioning the cases of *Automatic data processing machines or optical reader* (8471), *Electric app for line telephony* (8517), *Diodes or transistors and semiconductor devices* (8541), classified in group 27; *Jerseys, pullovers, cardigans and others, knitted or crocheted* (6110), *Men's suits, jackets, trousers or shorts* (6203), or *Women's suits, jackets, dresses skirts or shorts* (6204), classified in group 20; or *Seat, in particular dentists' or barbers' chairs, or part thereof* (9401), *Other furniture and parts thereof* (9403), or *Articles for funfair, table or parlour games, or auto bowling alley equipment* (9504), classified in group 30.

It is worth noting that the scenario with both indexes under one, i.e. there is not comparative advantage and the geographical bias is "negative", registers several groups which together record 23% of Chinese exports to the EU15. It is the case of *Chemical and Organic compounds* (group 9), *Natural Polymers or Modified, Rubbers and its products, Plates and Plastic products* (group 14), *Iron, Steel and Copper products* (group 24), or *Automobiles and other transports as well as their accessories* (group 28) The exports of these products could be in part explained by the production fragmentation[18] carried out by the "foreign-invested enterprises", not captured by the revealed comparative advantage indexes, showing in this particular case room to expand exports.

Turning now to the scenario of trade potential, in order to understand why trade is not taking place between China and EU15 when complementarity exists, Table 12 in the annex shows the trade protection applied by the European Union in the beginning and in the end of the time period under analysis (2001 and 2011, more precisely). It is concluded that the tariffs applied by EU decreased in several products over the 2000s.

[17] The vertical line shows the situation where TCI is equal to one and the horizontal line where GOI is equal to one.

[18] According to Dean and Lovely(2008), the imported inputs record about 56% of the export growth of China and in 2005 about 84% of exports and imports of intermediate inputs.

In fact, in 2006 the European Commission adopted a major policy strategy (Partnership and Competition) with China, where the EU pledged to accepting increases on Chinese competition while China is pushing to do trade fairly[19], which led to the Partnership and Cooperation Agreement in 2007[20]. In spite of that, Chinese exports still face high tariff barriers in the EU market in 2011, in several cases in products that present trade potential, such as *Television and other electronic apparatus*, *Man and Woman Clothing*, *Machinery or Footwear and other accessories*.

Turning now to the case of India, the global results of indexes crossover are displayed in the table 5 (while the values for each index are shown in tables 13 and 14 in the Annex) .

Table 5: Results for the combination of TCI and GOI in India: groups belonging to each scenario in the period 2001 to 2009

TCI > 1 and GOI > 1 Groups: 15, 19, 20 and 21.	**TCI < 1 and GOI > 1** No Groups, except group 4 during the time periods 2002-2004 and 2007-2008.
TCI > 1 and GOI < 1 Groups: 1, 2, 3, 6, 7, 9, 10, 11, 13, 18, 22, 23, 24 and 26.	**TCI < 1 and GOI < 1** Groups: 4, 5, 8, 12, 14, 16, 17, 25, 27, 28, 29 and 30.

Source: Own calculations using data available at the Website of International Trade Centre: http://www.intracen.org/ [accessed at February 2011]

In contrast with the case of China, now there is some trade according to the classical scenario, i.e. based on specialization (both indexes over one). It is the case of *Raw skins, Leather, Artificial fur and articles thereof* (group 15), *Rugs, Tulle, Padded and Textile coatings* (group 19), *Clothing* (group 20) and *Footwear and others accessories* (group 21). These products together record about 27% of total exports of India to the EU15. It is worthwhile mentioning group 20 as it records about 20% in 2009.

The results also suggest that India shows trade potential in products as *Precious Metals and Stones* (group 23), *Chemical and Organic compounds* (group 9) or *Iron*,

[19]According to the information available on the official website of European Commission: http://ec.europa.eu/trade/creating-opportunities/bilateral-relations/countries/china/

[20] This agreement also includes the upgrading of the 1985 EC-China Trade and Economic Cooperation Agreement.

Steel and Copper products (group 24), which record together 33% of exports of India to the EU15 in 2009 (groups 23, 9 and 24 correspond, respectively, to 8%, 5% and 5%).

Considering the 4-digit analysis for 2009, which is displayed in the Graph 8 in the annex, it shows that there is a large number of products for which the trade with EU15 is not explained by specialization, since results for both indexes are lower than one. The trade potential situation, given by the TCI higher than one and the GOI lower than one, shows several products that were mentioned above in the indexes crossover per groups, such as *Diamonds, not mounted or set* (7102), *Platinum, unwrought or in semi manufactured forms* (7110), or *Articles of jewellery and parts thereof* (7113), which are classified in group 23; products as *Heterocyclic compounds with nitrogen hetero-atom or nucleic acids and their salts* (2933) or *Organic compounds, not elsewhere specified* (2942), which are classified in group 9; or products as *Flat-rolled prod of iron, clad, plated or coated* (7210), or *Cast articles of iron or steel, not elsewhere specified* (7210), which are classified in group 24.

Several products belong to the scenario with both indexes under one, such as *Mineral Fuels* (group 8), *Machinery and other Equipment* (group 27) or *Automobiles and other transports as well as their accessories* (group 28). As suggested for China, it is possible that production fragmentation explains part of this occurrence, as it is likely the case of sectors 27 and 28, which represent respectively 9% and 10% of exports of India to the EU15 in 2009.

Similarity to the case of China, we have confronted the potential trade cases with the trade protection applied by the EU15 to exports of India. Table 15 in the annex, shows the tariffs used in the European market in two time periods (2001 and 2011). In fact, it appears that for several products trade does not reach its potential in spite of complementarity due to trade protection, as in the following sectors: *Men and Women clothing, Coffee, Tea and other vegetable products*, or *Carpets and Textile covers.*

Note that India became one of the EU's "strategic partners" since 2004. The two countries aim “to increase their trade in both goods and services through the Free Trade

Agreement (FTA) negotiations that they launched in 2007"[21], which certainly will reduce some of the tariffs used by the European market to limit exports of India.

Concerning the products that register export potential but there are no tariffs placed by the European market during the time period analysed, an explanation could be the existence of non-tariff barriers, such as the export certificates.

5. Concluding remarks

In this study, the two methodologies used to evaluate the competitiveness of the exports of manufactured products of China and India in the EU15 market point to similar conclusions for most products at both levels of disaggregation, which gives reliability to the results.

In terms of specialization, both countries still record a high share of exports in the Traditional sector. But while China shows an increase of its specialization in the Machinery sector and Electronic Apparatus over the 2000s, India displays an advantage mainly in the Agricultural sector and also in Precious Metals and Stones and Ores and Metal products.

Regarding competitiveness evaluated with the constant market share approach, a relevant conclusion is the predominance of this effect as a component of the export performance of China. In India this effect is also relevant but export performance is mainly explained by the product effect, i.e. the specialization pattern. The competitive effect is particular relevant in products as Textile products, Electronic apparatus or in Machinery and other similar instruments in the case of China , whereas in the case of India it is most salient in products as Animal products and it derivates, Precious Metals and Stones and Ores and Metal products. These results are in line with the revealed comparative advantage observed in both countries.

Another relevant conclusion is that both countries display a vast room to expand exports to the European market, mainly China (around 80% of total exports in 2009, while Indiat records around 30% of total exports.). It is noteworthy that while India registers more trade potential in products related with the Agricultural sector, in China

[21] According to the information available on the official website of European Commission: http://ec.europa.eu/trade/creating-opportunities/bilateral-relations/countries/india/

stands the Machinery sector, reinforcing the trend of specialization observed in each country.

In both countries there are several cases in which specialization complementarity is not mirrored by the trade relation due to the persistence of high levels of trade protection applied by the European Union. It is the case of the Agricultural products in India, where "almost two-thirds of India's people continue to depend (...) for a living"[22], related to the fact that this is one of the most subsided sectors in EU with high tariffs that limit trade opportunities in the European market, and also of several products of the Traditional sector in both countries.

In sectors/products with lack of complementarity and a negative geographical bias, the methodology does not allow to conclude about the causes of trade but a plausible reason could be the fragmentation of the global production, increasingly relevant in Asian countries, mainly in China. The incorporation of this phenomenon in the present analysis opens a new and stimulating path for research on this topic.

[22] See Kowalski, Przemyslaw and Dihel, Nora (2009), pp. 8.

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Annex

1. Data Appendix

The empirical analysis is based on trade statistics for goods of China, India, World and EU15, for the period 2001-2009, following the Harmonized System Rev.3 from International Trade Centre (Intracen) at 4-digit of desaggregation level designation. The values for exports and imports are expressed in thousands of USD dollars.

The following Table shows the list of groups and the corresponding products.

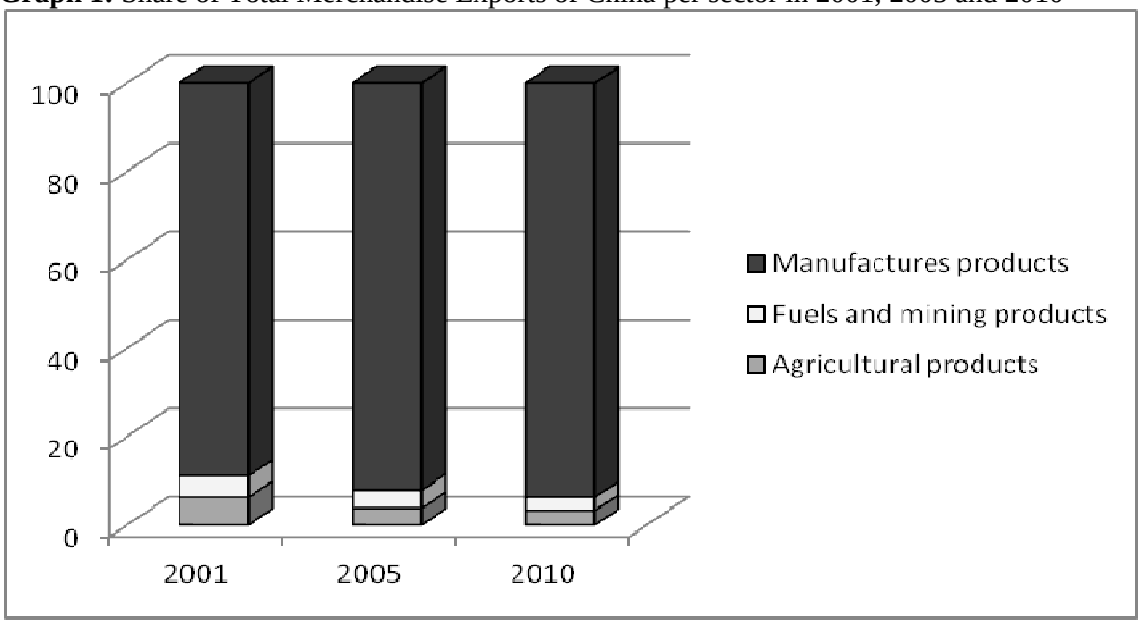
Table 1: List of groups that were created based on HS classification

Groups	Designation	Products code
Group 1	Live Animals	From 0101 to 0307
Group 2	Animal Products or its Derivates	From 0401 to 0511
Group 3	Vegetables, Cereals and Fruits	From 0601 to 1404
Group 4	Fats and Saturated products	From 1501 to 1603
Group 5	Prepared, Preserved or Extracts of products	From 1604 to 2106
Group 6	Bottled or Canned products	From 2201 to 2501
Group 7	Ores and Metal products	From 2502 to 2621
Group 8	Mineral Fuels	From 2701 to 2715
Group 9	Chemical and Organic compounds	From 2716 to 2942
Group 10	Medical and Pharmaceutical products	From 3001 to 3202
Group 11	Paints, Varnishes and other Beauty and Make-up preparations	From 3203 to 3403
Group 12	Waxes, Albumin and other organic substances	From 3204 to 3507
Gropu 13	Powders, Fireworks, Photographic plates and Film, or Residual products of the Chemical or allied industries	From 3601 to 3825
Group 14	Natural Polymers or Modified, Rubber and its products, Plates and Plastic products	From 3901 to 4017
Group 15	Raw Skins, Leather, Artificial fur and articles thereof	From 4101 to 4304
Group 16	Wood and its products	From 4401 to 4706
Group 17	Cork or Paper products and others	From 4707 to 4911
Group 18	Silk, Wool, Cotton, Fabrics or Synthetic fibbers	From 5001 to 5609
Group 19	Rugs, Tulle, Padded and Textile coatings	From 5701 to 5911
Group 20	Clothing	From 6001 to 6310
Group 21	Footwear and others accessories	From 6401 to 6704
Group 22	Natural stone, Slate, Brick, Porcelain and Glasses well as its products	From 6801 to 7020
Group 23	Precious Metals and Stones	From 7101 to 7118
Group 24	Iron, Steel and Copper products	From 7201 to 7419
Group 25	Articles of Nickel, Aluminium, Zinc, Tin and others	From 7501 to 8113
Group 26	Tools and Brass instruments	From 8201 to 8311
Group 27	Machinery and other equipment	From 8401 to 8548
Group 28	Automobiles and other transports as well as their accessories	From 8601 to 8908
Group 29	Optical fibre, Electro-medical apparatus, Laboratory equipment and others instruments	From 9001 to 9305
Group 30	Others products	From 9306 to 9999

Source: Classification available on website of International Trade Centre: http://www.intracen.org/ [accessed at December 2010]

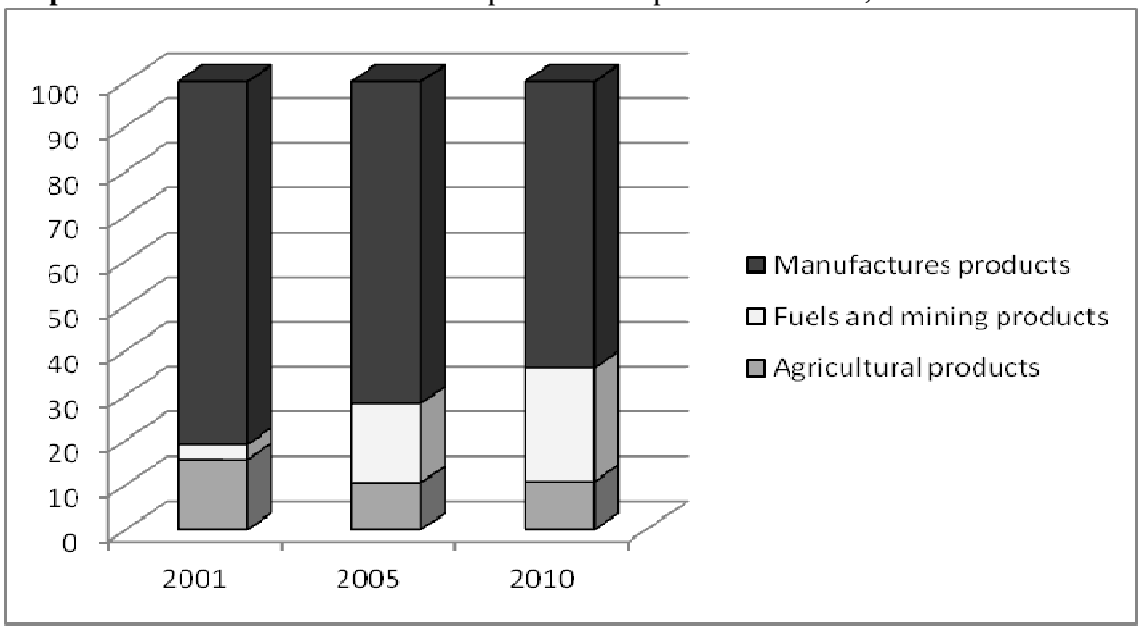
2. Statistical Appendix

Graph 1: Share of Total Merchandise Exports of China per sector in 2001, 2005 and 2010



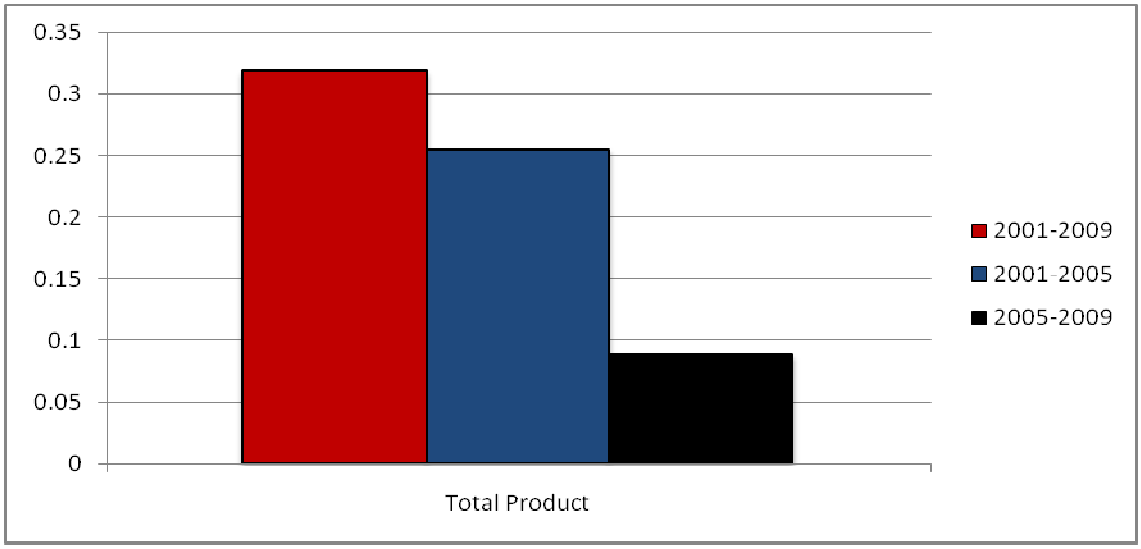
Source: Own calculus based on WTO statistics database available at the website http://stat.wto.org/StatisticalProgram/WSDBViewData.aspx?Language=E [Accessed at March 2012]

Graph 2: Share of Total Merchandise Exports of India per sector in 2001, 2005 and 2010



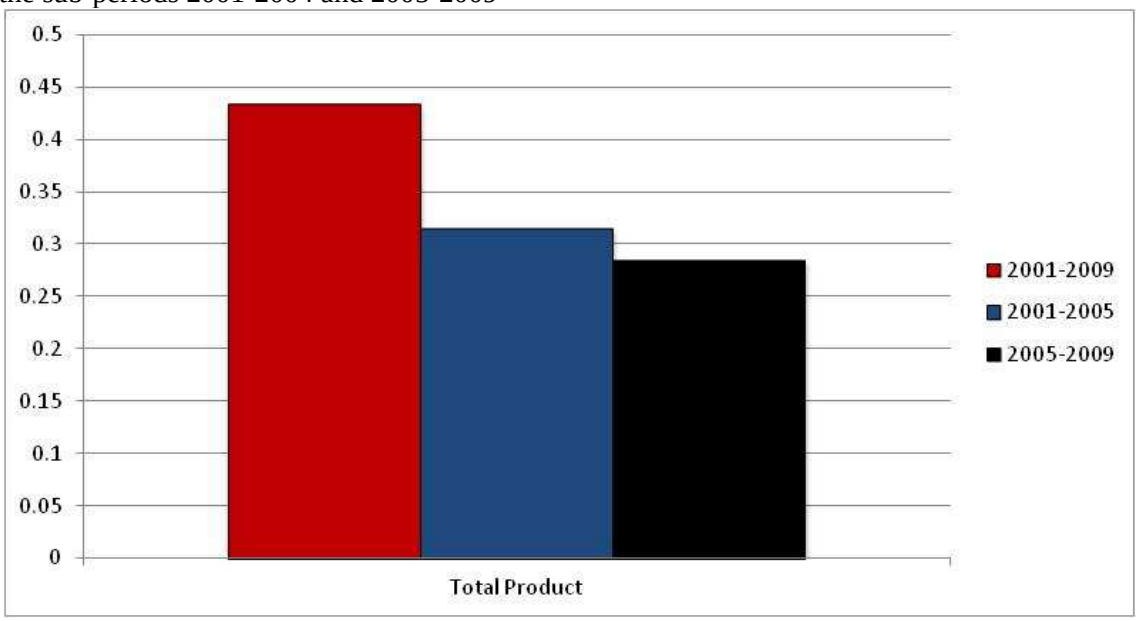
Source: Own calculus based on WTO statistics database available at the website http://stat.wto.org/StatisticalProgram/WSDBViewData.aspx?Language=E [Accessed at March 2012]

Graph 3: Lorenz Index for total exports of manufacturing products of China in 2001-2009 and in the sub-periods 2001-2004 and 2005-2009



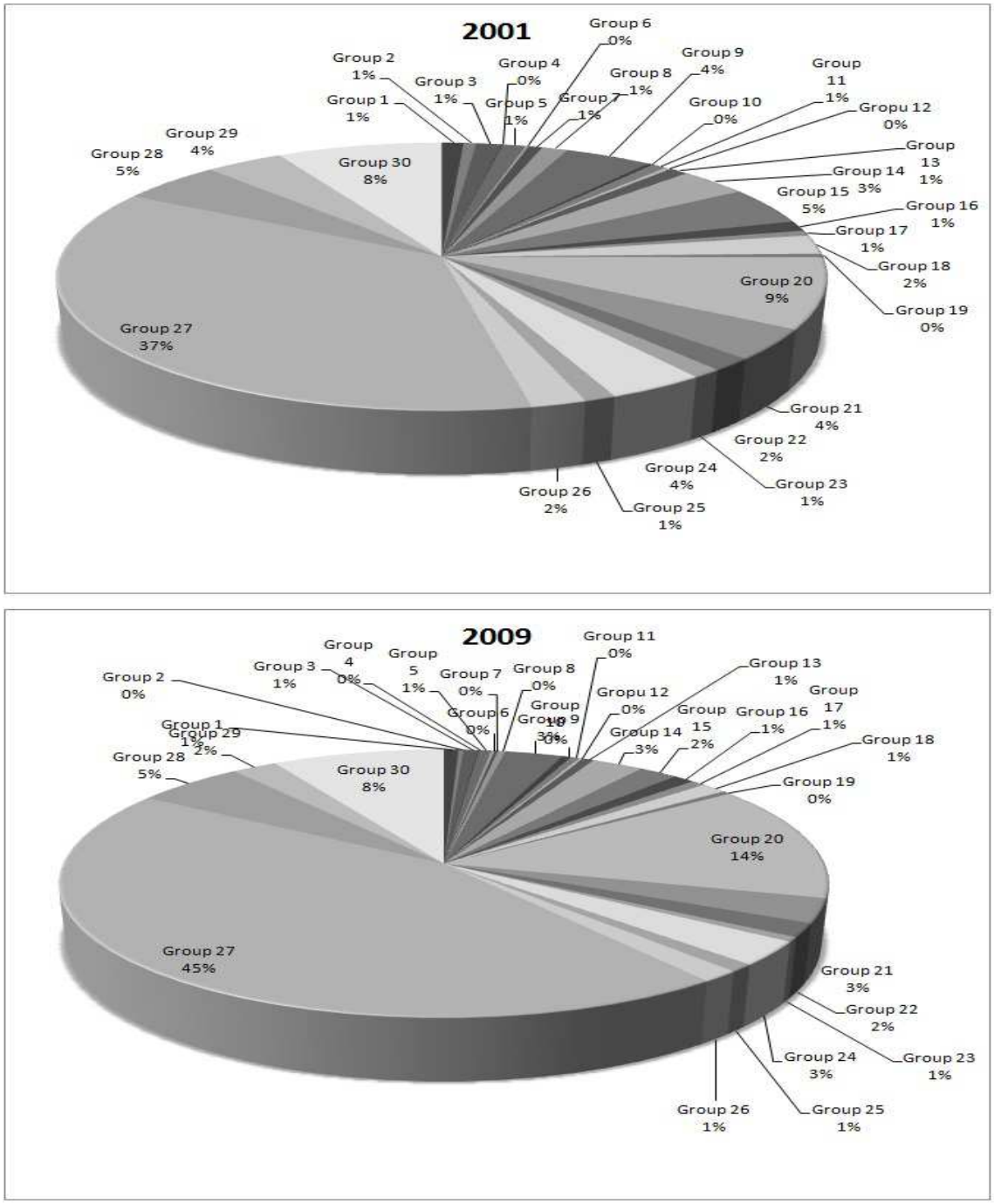
Source: Own calculations using data available at the Website of International Trade Centre: http://www.intracen.org/ [accessed at February 2011]

Graph 4: Lorenz Index of total exports of manufacturing products of India in 2001-2009 and in the sub-periods 2001-2004 and 2005-2009



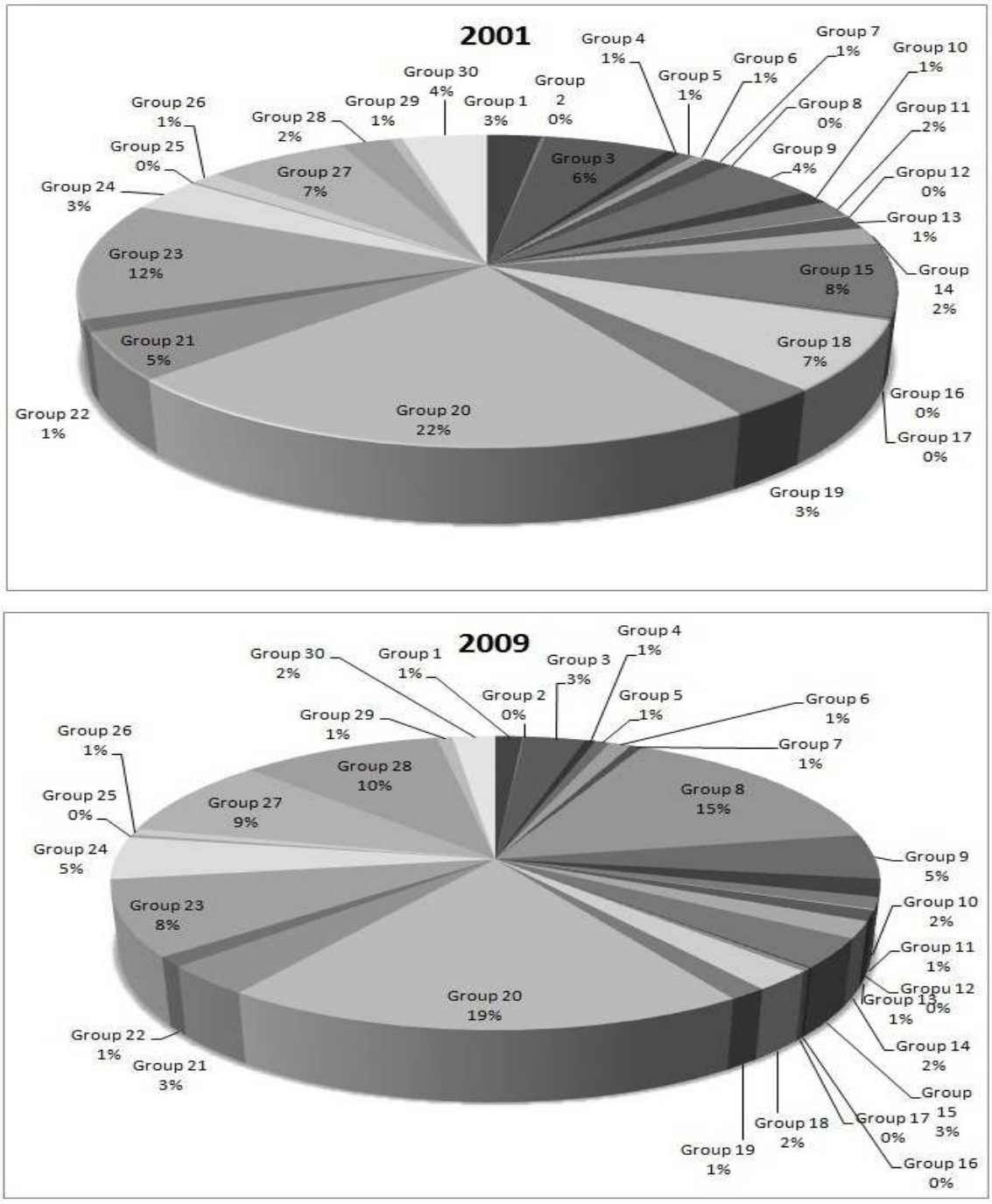
Source: Own calculations using data available at the Website of International Trade Centre: http://www.intracen.org/ [accessed at February 2011]

Graph 5: Share of exports of China to EU15 over the total exported per groups in 2001 and in 2009



Source: Own calculations using data available at the Website of International Trade Centre: http://www.intracen.org/ [accessed at February 2011]

Graph 6: Share of exports of India to EU15 over the total exported per groups in 2001 and in 2009



Source: Own calculations using data available at the Website of International Trade Centre: http://www.intracen.org/ [accessed at February 2011]

Table 2: The Revealed Comparative Advantage of China to EU15 per groups between 2001 and 2009

RCAij,a									
Groups	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
Group 1	0.91217	0.77278	0.66297	0.63606	0.52783	0.46824	0.37779	0.36299	0.44579
Group 2	0.58649	0.49017	0.40421	0.39627	0.34214	0.29055	0.24728	0.27791	0.24065
Group 3	0.77955	0.75453	0.71935	0.48983	0.50801	0.44998	0.40384	0.31339	0.36249
Group 4	0.65907	0.50039	0.36985	0.33754	0.38821	0.34685	0.23998	0.17174	0.17415
Group 5	0.96778	0.87204	0.75066	0.75622	0.72817	0.74271	0.70518	0.66132	0.51467
Group 6	0.35002	0.31852	0.25365	0.23245	0.18732	0.19337	0.16691	0.18409	0.19820
Group 7	0.65017	0.53565	0.43840	0.34525	0.36520	0.28140	0.19626	0.18723	0.12592
Group 8	0.27962	0.24232	0.21950	0.18933	0.15171	0.11226	0.10814	0.11389	0.10375
Group 9	0.83775	0.78471	0.70956	0.67482	0.70015	0.68174	0.70520	0.86931	0.74992
Group 10	0.19064	0.12608	0.13336	0.13831	0.10555	0.09683	0.15470	0.15870	0.12738
Group 11	0.48227	0.44029	0.38741	0.37935	0.39434	0.39258	0.38195	0.37276	0.34659
Group 12	0.76591	0.73499	0.68992	0.78349	0.76918	0.76997	0.77825	0.90159	0.78112
Group 13	0.60447	0.54344	0.52354	0.58573	0.58952	0.51003	0.51724	0.62710	0.52888
Group 14	0.77663	0.73816	0.67321	0.67673	0.71427	0.72242	0.70015	0.70802	0.70552
Group 15	4.20057	4.06688	4.06030	3.91850	3.75485	2.95253	2.55756	2.72625	2.93130
Group 16	0.74624	0.75635	0.70535	0.74190	0.77273	0.85577	0.78808	0.79703	0.78079
Group 17	0.34675	0.33456	0.32753	0.33379	0.37054	0.42367	0.44565	0.46476	0.49382
Group 18	2.37777	2.38477	2.42787	2.39725	2.50375	2.59919	2.42411	2.57463	2.74199
Group 19	1.66322	1.80643	1.84712	1.99963	2.29503	2.46217	2.85178	3.48922	3.20806
Group 20	4.41096	4.22609	4.19456	4.17242	4.29953	5.09993	5.29595	5.22184	4.78958
Group 21	5.65944	5.14922	4.79662	4.73235	4.86613	4.72543	4.65207	5.09639	5.15547
Group 22	1.49033	1.56870	1.49409	1.57424	1.67426	1.73920	1.61165	1.83729	1.98429
Group 23	0.47281	0.43571	0.39256	0.38639	0.36374	0.35843	0.32643	0.27701	0.26377
Group 24	0.82833	0.77085	0.72506	0.92058	0.94285	1.08647	1.12370	1.24254	0.84661
Group 25	0.90431	0.85745	0.90697	0.99605	0.88811	0.90086	0.80540	0.94557	0.78486
Group 26	1.89218	1.90591	1.79788	1.88691	1.93531	1.97973	1.88898	1.79746	1.81217
Group 27	1.11482	1.28338	1.46125	1.58522	1.63666	1.69988	1.77155	1.89719	1.86361
Group 28	0.31091	0.27599	0.30696	0.31509	0.35032	0.37964	0.42572	0.50876	0.53842
Group 29	0.91038	0.84570	0.84190	0.90734	1.09215	1.09471	1.04714	1.10867	1.03327
Group 30	1.36677	1.39571	1.27961	1.12621	1.23309	1.05671	1.07308	1.09297	1.12603

Source: Own calculations using data available at the Website of International Trade Centre: http://www.intracen.org/ [accessed at February 2011]

Table 3: The Revealed Comparative Advantage of India to EU15 per groups between 2001 and 2009

RCAij,a									
Groups	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
Group 1	2.17857	2.10679	1.74503	1.57764	1.57928	1.47048	1.37819	1.18163	1.04233
Group 2	0.49558	0.42141	0.37834	0.44003	0.59375	0.43822	0.45126	0.53710	0.25894
Group 3	2.97402	3.05239	2.67165	2.78459	2.52330	2.22717	2.25327	2.09639	1.62294
Group 4	0.95631	0.61197	0.64460	0.82379	0.66934	0.55544	0.53614	0.49436	0.46787
Group 5	0.96030	0.78023	0.64642	0.43466	0.44899	0.82100	0.87916	1.00496	0.33563
Group 6	1.22826	0.78838	1.20634	1.31717	1.02483	1.28827	1.30616	1.73072	1.15507
Group 7	2.80150	3.91811	3.85806	4.50337	5.30654	3.84690	3.54262	2.68971	2.79941
Group 8	0.49155	0.53659	0.56286	0.68695	0.75986	1.01964	1.15851	1.03818	0.96021
Group 9	1.18343	1.33672	1.41514	1.43609	1.42350	1.55589	1.41761	1.46121	1.23514
Group 10	1.14659	1.00777	0.92089	0.91644	0.85030	0.92628	0.92942	0.93787	0.81150
Group 11	1.34799	1.21501	1.15153	1.01530	0.99754	1.06487	1.06640	1.15827	0.92254
Group 12	0.59671	0.57320	0.55152	0.61205	0.80246	0.71006	0.94511	0.85449	0.62390
Group 13	0.86539	0.77719	0.77499	0.78511	0.98970	0.88383	0.88508	1.01089	0.82772
Group 14	0.66104	0.70326	0.75089	0.83487	0.75892	0.76634	0.63853	0.61746	0.48713
Group 15	3.65941	3.15090	3.25466	3.27222	2.85365	2.62795	2.47920	2.55627	2.02428
Group 16	0.05384	0.06384	0.07084	0.08295	0.08051	0.08655	0.09193	0.10070	0.08737
Group 17	0.27281	0.29165	0.28220	0.29417	0.32099	0.30872	0.29260	0.29217	0.26591
Group 18	4.48868	4.52917	4.64188	4.49308	4.04925	4.52131	4.96624	4.77957	4.01597
Group 19	4.69339	3.78127	3.73737	3.70039	3.87384	4.06251	3.59369	3.19802	2.58489
Group 20	3.90918	3.76819	3.61801	3.50937	3.59837	3.42139	3.02760	2.85729	2.71137
Group 21	1.66263	1.34347	1.47277	1.52186	1.46987	1.50080	1.55737	1.48122	1.23295
Group 22	1.06383	1.07052	1.06769	0.91881	0.93936	1.02686	0.99940	0.95401	0.82744
Group 23	9.50896	9.45453	9.75866	9.50905	9.08756	7.34669	7.23611	5.81815	9.39379
Group 24	1.23092	1.62224	1.72827	1.69499	1.63399	1.68748	1.52099	1.49613	1.17565
Group 25	0.58829	0.56388	0.53305	0.44438	0.52208	0.69816	0.58574	0.67038	0.64116
Group 26	0.99542	0.84982	0.95155	0.93514	0.91760	0.92677	0.76215	0.76614	0.58950
Group 27	0.22360	0.21266	0.24834	0.23395	0.24556	0.26885	0.28196	0.32192	0.36226
Group 28	0.21045	0.22288	0.27372	0.32542	0.38505	0.37640	0.39317	0.60124	0.67330
Group 29	0.23365	0.23397	0.24404	0.23334	0.21747	0.20428	0.19899	0.20888	0.21495
Group 30	0.65434	0.52979	0.46376	0.41879	0.41984	0.35344	0.37852	0.41003	0.90225

Source: Own calculations using data available at the Website of International Trade Centre: http://www.intracen.org/ [accessed at February 2011]

Table 4: The Total Effect for exports of China to EU15, in percentage, between 2001 and 2009 and in the sub-periods 2001-2004 and 2005-2009

	Total Effect		
	2001-2009	2001-2004	2005-2009
Group 1	0.6258	0.1977	1.0419
Group 2	0.1442	-0.1396	0.2488
Group 3	0.5688	0.3778	0.7684
Group 4	0.0440	0.0211	0.0483
Group 5	0.4680	0.3121	0.3558
Group 6	0.1765	0.0568	0.3361
Group 7	0.0282	0.4939	-0.8449
Group 8	0.1267	1.7352	-0.7836
Group 9	2.4925	2.0504	2.7595
Group 10	0.4617	0.0776	0.8535
Group 11	0.3518	0.3709	0.2955
Group 12	0.1381	0.2506	0.0146
Gropu 13	0.4790	0.2814	0.6397
Group 14	2.3064	2.2604	2.1824
Group 15	1.2714	1.1561	1.3560
Group 16	0.9764	1.1083	0.7183
Group 17	0.7057	0.1534	1.2544
Group 18	0.9903	1.2926	0.5871
Group 19	0.4078	0.4502	0.2366
Group 20	15.2327	6.9589	20.8958
Group 21	2.7388	1.7514	3.2174
Group 22	1.6856	1.2967	1.9261
Group 23	0.4223	0.6350	0.3559
Group 24	2.7619	4.5848	0.9927
Group 25	0.9023	0.8275	1.0544
Group 26	1.2809	1.5837	0.8647
Group 27	46.5217	57.8139	39.9963
Group 28	5.4317	3.7268	7.5655
Group 29	1.8065	1.8149	1.0220
Group 30	8.4526	6.4995	10.0408
Total	100.0000	100.0000	100.0000

Source: Own calculations using data available at the Website of International Trade Centre: http://www.intracen.org/ [accessed at February 2011]

Table 5: Constant Market Share analysis for China per group between 2001 and 2009, and the sub-periods 2001-2004 and 2005-2009

	Total Effect			Scale Effect			Product Effect			Market Effect			Competitiveness Effect		
	2001-2009	2001-2004	2005-2009	2001-2009	2001-2004	2005-2009	2001-2009	2001-2004	2005-2009	2001-2009	2001-2004	2005-2009	2001-2009	2001-2004	2005-2009
Group 1	100.00	100.00	100.00	38.31	159.36	19.98	259.49	708.39	152.30	-265.59	-760.67	-147.16	67.80	-7.09	74.89
Group 2	100.00	100.00	100.00	90.33	-151.15	39.38	224.91	-321.96	137.48	-207.99	312.48	-133.36	-7.25	260.64	56.49
Group 3	100.00	100.00	100.00	56.11	102.34	53.43	537.02	636.10	680.70	-549.42	-657.49	-683.03	56.29	19.06	48.90
Group 4	100.00	100.00	100.00	40.43	97.89	69.94	1495.38	2861.34	1714.25	-1514.77	-2923.20	-1704.55	78.96	63.96	20.36
Group 5	100.00	100.00	100.00	78.47	147.86	143.49	497.31	773.46	956.02	-506.46	-793.41	-968.85	30.68	-27.91	-30.66
Group 6	100.00	100.00	100.00	20.10	84.86	13.15	464.65	1199.63	328.76	-468.27	-1226.99	-326.63	83.52	42.50	84.71
Group 7	100.00	100.00	100.00	443.38	49.28	8.89	2315.39	211.45	34.46	-2260.31	-146.58	26.18	-398.46	-14.15	30.47
Group 8	100.00	100.00	100.00	456.21	37.42	-45.55	7541.55	609.71	-883.99	-7754.29	-576.49	955.31	-143.46	29.36	74.24
Group 9	100.00	100.00	100.00	38.21	70.36	22.05	163.11	255.91	136.76	-170.62	-272.19	-139.72	69.30	45.92	80.91
Group 10	100.00	100.00	100.00	35.02	291.66	16.92	245.43	1134.10	201.85	-254.16	-1294.85	-193.63	73.71	-30.91	74.86
Group 11	100.00	100.00	100.00	45.75	73.05	50.27	139.77	230.19	206.12	-169.90	-263.79	-247.81	84.38	60.55	91.42
Group 12	100.00	100.00	100.00	32.51	33.65	387.24	160.79	81.17	3233.16	-133.36	-66.87	-2912.49	40.06	52.05	-607.91
Gropu 13	100.00	100.00	100.00	43.18	107.86	33.24	149.99	309.34	186.68	-166.09	-346.87	-182.75	72.92	29.67	62.84
Group 14	100.00	100.00	100.00	29.76	56.29	17.03	160.50	229.15	217.03	-160.28	-235.75	-200.29	70.02	50.31	66.24
Group 15	100.00	100.00	100.00	27.24	46.70	16.57	207.33	431.21	67.70	-142.74	-301.18	-26.61	8.17	-76.74	42.35
Group 16	100.00	100.00	100.00	10.54	29.89	-22.74	84.71	155.35	-16.95	-76.94	-147.62	33.69	81.68	62.38	106.01
Group 17	100.00	100.00	100.00	10.61	105.57	3.65	88.89	565.64	76.37	-84.53	-563.39	-71.84	85.03	-7.81	91.81
Group 18	100.00	100.00	100.00	-8.53	15.72	-105.36	82.26	284.20	-314.85	-84.41	-288.38	304.62	110.68	88.47	215.59
Group 19	100.00	100.00	100.00	6.02	22.35	-36.00	78.42	176.10	-52.92	-83.13	-182.51	5.41	98.68	84.06	183.52
Group 20	100.00	100.00	100.00	11.47	38.21	17.41	95.46	249.26	95.11	-95.08	-250.24	-93.84	88.15	62.77	81.32
Group 21	100.00	100.00	100.00	26.99	60.25	28.73	205.30	252.13	293.05	-201.52	-249.51	-282.18	69.23	37.13	60.40
Group 22	100.00	100.00	100.00	13.95	35.64	9.03	99.92	197.36	92.10	-103.54	-203.64	-99.55	89.67	70.64	98.41
Group 23	100.00	100.00	100.00	46.14	46.45	32.23	482.24	294.39	938.12	-495.55	-265.34	-1028.80	67.18	24.51	158.45
Group 24	100.00	100.00	100.00	29.99	44.35	-21.02	227.40	211.42	615.72	-227.32	-221.50	-560.56	69.93	65.73	65.86
Group 25	100.00	100.00	100.00	14.76	40.12	-7.61	209.47	333.34	79.90	-193.70	-333.50	-44.07	69.47	60.04	71.78
Group 26	100.00	100.00	100.00	23.75	34.90	25.70	92.17	132.52	95.67	-94.64	-132.39	-106.44	78.71	64.97	85.07
Group 27	100.00	100.00	100.00	8.33	15.62	-3.63	57.56	85.70	17.67	-60.79	-85.72	-37.47	94.90	84.40	123.43
Group 28	100.00	100.00	100.00	12.97	52.65	-2.81	94.16	222.22	67.47	-72.72	-221.76	-40.61	65.59	46.89	75.96
Group 29	100.00	100.00	100.00	35.52	59.01	60.06	135.27	168.33	723.92	-159.87	-183.76	-887.11	89.09	56.42	203.13
Group 30	100.00	100.00	100.00	30.29	77.84	41.29	74.04	92.52	130.82	-84.66	-125.55	-119.08	80.33	55.19	46.96
Total	100.00	100.00	100.00	16.45	31.78	10.41	108.40	152.49	106.32	-109.80	-153.95	-111.91	84.95	69.68	95.18

Source: Own calculations using data available at the Website of International Trade Centre: http://www.intracen.org/ [accessed at February 2011]

Table 6: The highest results of the Total Effect, at 4-digit level, for China exports to EU15 in 2001-2004 and 2004-2009, and its share over the total exported by China to EU(15).

Product	Total Effect			Share of China exports to EU(15) over the total per groups (%)		
	2001-2009	2001-2004	2005-2009	2001	2004	2009
8471	13.94	22.16	6.26	8.57%	16.59%	12.89%
8517	5.69	1.20	11.41	1.74%	1.42%	4.92%
6110	2.21	0.23	3.90	0.60%	0.38%	1.90%
6204	1.88	0.68	2.56	0.77%	0.72%	1.67%

Source: Own calculations using data available at the Website of International Trade Centre: http://www.intracen.org/ [accessed at February 2011]

Table 7: The Total Effect for Exports of India to EU15, in percentage, between 2001 and 2009 and in the sub-periods 2001-2004 and 2005-2009

	Total Effect		
	2001-2009	2001-2004	2005-2009
Group 1	0.8352	0.7425	0.3411
Group 2	0.0368	0.2252	-0.0229
Group 3	1.8301	2.9571	0.4236
Group 4	0.4606	1.2731	0.4484
Group 5	0.7320	0.4827	0.8160
Group 6	1.2778	0.5823	2.2671
Group 7	0.2451	1.7787	-1.0600
Group 8	21.1686	8.8671	25.2671
Group 9	5.1183	5.1807	5.5631
Group 10	2.1893	2.3645	2.3804
Group 11	1.0610	0.9502	0.9519
Group 12	0.1134	0.1087	0.1397
Gropu 13	1.0750	1.0338	1.0794
Group 14	1.8699	3.7021	0.5103
Group 15	1.4526	1.9984	1.2119
Group 16	0.1441	0.1693	0.1925
Group 17	0.3939	0.5339	0.1795
Group 18	0.2129	2.6711	-1.3407
Group 19	0.6936	1.1220	-0.2163
Group 20	17.6376	16.0016	15.4636
Group 21	2.7177	2.4527	2.8962
Group 22	1.0497	0.9677	1.1234
Group 23	6.7745	7.2339	6.8409
Group 24	5.2052	15.7829	1.5021
Group 25	0.4098	0.5770	0.2655
Group 26	0.4070	0.7888	0.0778
Group 27	9.6327	8.5296	11.2864
Group 28	13.0578	8.4908	19.3183
Group 29	0.8372	1.0488	0.8301
Group 30	1.3608	1.3825	1.2636
Total	100.0000	100.0000	100.0000

Source: Own calculations using data available at the Website of International Trade Centre: http://www.intracen.org/ [accessed at February 2011]

Table 8: The Constant Market Share analysis for India per group between 2001 and 2009, and the sub-periods 2001-2004 and 2005-2009

	Total Effect			Scale Effect			Product Effect			Market Effect			Competitiveness Effect		
	2001-2009	2001-2004	2005-2009	2001-2009	2001-2004	2005-2009	2001-2009	2001-2004	2005-2009	2001-2009	2001-2004	2005-2009	2001-2009	2001-2004	2005-2009
Group 1	100.00	100.00	100.00	117.25	237.34	216.70	264.47	435.00	726.69	-314.14	-494.99	-889.54	32.43	-77.35	46.15
Group 2	100.00	100.00	100.00	185.20	67.16	-258.22	1022.44	220.04	-3486.99	-956.99	-188.89	3335.21	-150.66	1.69	509.99
Group 3	100.00	100.00	100.00	141.06	144.85	648.36	804.24	479.33	5232.31	-781.01	-499.68	-5065.13	-64.29	-24.50	-715.54
Group 4	100.00	100.00	100.00	114.46	66.01	104.68	151.14	95.95	54.72	-183.85	-117.24	-97.72	18.25	55.28	38.32
Group 5	100.00	100.00	100.00	53.38	139.32	57.27	410.64	420.54	200.13	-417.26	-440.95	-206.08	53.23	-18.92	48.68
Group 6	100.00	100.00	100.00	19.79	80.82	10.41	325.07	640.46	347.26	-333.13	-702.17	-342.85	88.27	80.89	85.19
Group 7	100.00	100.00	100.00	175.76	64.63	14.74	5215.45	518.18	-3826.96	-5370.45	-546.46	3847.63	79.24	63.64	64.58
Group 8	100.00	100.00	100.00	0.07	0.27	13.37	106.87	289.17	97.66	-106.89	-289.25	-90.12	99.96	99.82	79.09
Group 9	100.00	100.00	100.00	33.79	69.26	17.37	176.39	309.99	124.28	-161.02	-296.25	-87.92	50.84	17.00	46.27
Group 10	100.00	100.00	100.00	66.31	117.65	55.91	390.05	527.48	374.30	-377.25	-471.26	-385.39	20.89	-73.88	55.18
Group 11	100.00	100.00	100.00	62.52	160.94	44.96	121.17	313.67	69.62	-169.94	-404.38	-118.73	86.25	29.77	104.15
Group 12	100.00	100.00	100.00	27.61	74.12	15.83	78.29	169.12	108.34	-89.21	-193.26	-110.32	83.31	50.02	86.15
Gropu 13	100.00	100.00	100.00	47.61	99.52	44.45	136.95	214.43	217.18	-129.20	-200.87	-208.31	44.64	-13.08	46.69
Group 14	100.00	100.00	100.00	33.06	42.39	69.31	282.19	263.57	813.42	-280.60	-264.58	-788.15	65.35	58.61	5.42
Group 15	100.00	100.00	100.00	69.03	107.14	36.84	-45.99	-108.63	-25.80	12.70	32.10	58.39	64.27	69.39	30.57
Group 16	100.00	100.00	100.00	9.57	35.90	-6.74	40.14	122.48	-32.78	-31.05	-111.73	41.05	81.34	53.35	98.48
Group 17	100.00	100.00	100.00	12.71	27.79	29.75	137.42	247.94	284.65	-131.76	-247.66	-218.99	81.63	71.94	4.58
Group 18	100.00	100.00	100.00	-217.35	57.06	123.36	1036.95	555.63	224.47	-1026.81	-552.10	-221.34	307.21	39.41	-26.49
Group 19	100.00	100.00	100.00	40.92	142.03	174.20	180.71	185.31	-411.31	-182.08	-208.65	286.84	60.45	-18.68	50.27
Group 20	100.00	100.00	100.00	44.83	102.99	48.99	70.03	138.34	46.60	-66.95	-130.43	-39.55	52.08	-10.90	43.95
Group 21	100.00	100.00	100.00	62.12	134.59	41.80	8.23	-19.61	24.80	-35.19	-17.90	-47.39	64.84	2.92	80.79
Group 22	100.00	100.00	100.00	30.67	89.58	11.21	161.91	309.73	84.29	-156.25	-305.19	-85.36	63.67	5.88	89.86
Group 23	100.00	100.00	100.00	55.01	106.82	23.23	402.66	842.86	195.84	-429.62	-757.54	-282.05	71.95	-92.14	162.97
Group 24	100.00	100.00	100.00	26.03	28.87	-22.35	192.23	146.42	623.04	-191.61	-152.88	-567.25	73.35	77.59	66.56
Group 25	100.00	100.00	100.00	10.73	26.02	-13.59	254.33	387.41	170.09	-251.88	-387.08	-134.37	86.82	73.65	77.86
Group 26	100.00	100.00	100.00	83.42	107.09	164.65	173.56	186.94	620.63	-157.34	-164.58	-635.10	0.37	-29.45	-50.19
Group 27	100.00	100.00	100.00	12.44	44.85	-1.99	87.76	193.00	90.97	-75.08	-188.48	-72.88	74.88	50.63	83.90
Group 28	100.00	100.00	100.00	4.35	25.52	-1.25	19.42	72.97	36.36	-5.87	-62.07	41.26	82.10	63.58	23.63
Group 29	100.00	100.00	100.00	20.12	36.72	18.76	161.94	217.01	166.18	-161.37	-222.23	-157.37	79.31	68.50	72.43
Group 30	100.00	100.00	100.00	158.82	423.09	113.91	737.01	1072.42	393.62	-724.42	-1001.40	-454.81	-71.40	-394.11	47.28
Total	100.00	100.00	100.00	30.62	71.55	21.36	165.33	271.89	177.79	-164.45	-266.57	-162.00	68.50	23.13	62.85

Source: Own calculations using data available at the Website of International Trade Centre: http://www.intracen.org/ [accessed at February 2011]

Table 9: The highest results of the Total Effect, at 4-digit level, for India exports to EU15 in 2001-2004 and 2004-2009, and its share over the total exported by India to EU(15).

Product	Total Effect			Share of India exports to EU(15) over the total per groups (%)		
	2001-2009	2001-2004	2005-2009	2001	2004	2009
2710	21.05	8.83	25.18	0.00%	3.35%	14.84%
8703	7.49	5.23	12.01	0.51%	2.30%	5.43%
8803	1.65	-0.19	3.35	0.43%	0.19%	1.29%
8901	1.61	0.10	2.93	0.00%	0.04%	1.13%

Source: Own calculations using data available at the Website of International Trade Centre: http://www.intracen.org/ [accessed at February 2011]

Table 10: TCI of exports of China per groups during 2001 and 2009

TCI									
	2001	2002	2003	2004	2005	2006	2007	2008	2009
Group 1	0.920962	0.794879	0.733695	0.757915	0.657639	0.61169	0.48623	0.476605	0.575584
Group 2	1.485544	1.22194	1.149413	1.100159	0.901526	0.746833	0.621689	0.718555	0.662703
Group 3	0.763046	0.773141	0.741278	0.494049	0.542594	0.477961	0.408485	0.304849	0.354381
Group 4	0.715971	0.522877	0.355903	0.336075	0.436293	0.405731	0.247704	0.180767	0.182904
Group 5	1.332926	1.263676	1.109315	1.155128	1.085539	1.078001	1.059809	1.069646	0.813243
Group 6	0.545696	0.528788	0.433713	0.390819	0.320565	0.326017	0.276376	0.307336	0.322205
Group 7	0.44295	0.362523	0.270348	0.196884	0.206547	0.15828	0.10073	0.08123	0.049677
Group 8	0.165673	0.144126	0.124974	0.104793	0.093926	0.071339	0.065951	0.072627	0.068978
Group 9	0.983663	0.954556	0.849384	0.800133	0.875422	0.877735	0.883562	1.081318	0.938736
Group 10	0.40576	0.320729	0.324376	0.347062	0.260817	0.240311	0.363954	0.339369	0.315648
Group 11	0.847958	0.790625	0.731824	0.712515	0.751264	0.739439	0.718375	0.696676	0.615437
Gropu 12	1.139862	1.100412	1.075146	1.211862	1.19964	1.176995	1.190304	1.359491	1.164892
Group 13	0.76206	0.691413	0.674677	0.765958	0.776269	0.668195	0.66895	0.890905	0.73721
Group 14	0.926509	0.858308	0.787846	0.793439	0.83338	0.844921	0.839211	0.849951	0.783255
Group 15	3.510712	3.431972	3.297459	3.118326	3.152266	2.658296	2.446806	2.754745	2.87888
Group 16	0.677579	0.687371	0.653245	0.660711	0.719791	0.855234	0.859655	0.90892	0.849409
Group 17	0.540034	0.544105	0.549848	0.568628	0.610816	0.704037	0.72394	0.786614	0.835692
Group 18	1.811317	1.721327	1.697164	1.620217	1.679251	1.762578	1.654457	1.680201	1.618394
Group 19	1.871156	1.929654	2.002894	2.144686	2.369583	2.595382	2.985299	3.661028	3.11381
Group 20	3.735949	3.683691	3.770659	3.931988	4.213536	5.131994	5.561375	5.998679	5.35586
Group 21	5.251333	4.95775	4.755324	4.909571	5.220898	5.12912	5.213966	6.046801	6.052383
Group 22	2.056978	2.108416	1.991215	2.069045	2.121132	2.153954	2.050136	2.383737	2.477548
Group 23	0.326524	0.329666	0.249605	0.235432	0.231745	0.230803	0.208439	0.162872	0.136658
Group 24	0.923805	0.829063	0.760323	0.955494	0.966786	1.212984	1.252856	1.303658	0.794709
Group 25	1.012824	0.954662	0.974596	0.98431	0.898737	0.952026	0.874495	1.043728	0.824944
Group 26	2.332127	2.283042	2.183837	2.269412	2.361765	2.398009	2.304233	2.369322	2.225573
Group 27	0.985284	1.064301	1.18215	1.273708	1.337126	1.385195	1.414457	1.561996	1.388676
Group 28	0.426615	0.388024	0.456097	0.472372	0.527546	0.551414	0.61323	0.729498	0.788768
Group 29	0.862254	0.808332	0.768259	0.797217	0.993573	0.989322	0.877704	0.998824	0.948536
Group 30	1.66264	1.521068	1.708169	1.956175	1.802981	1.440352	1.690502	1.873432	2.09612

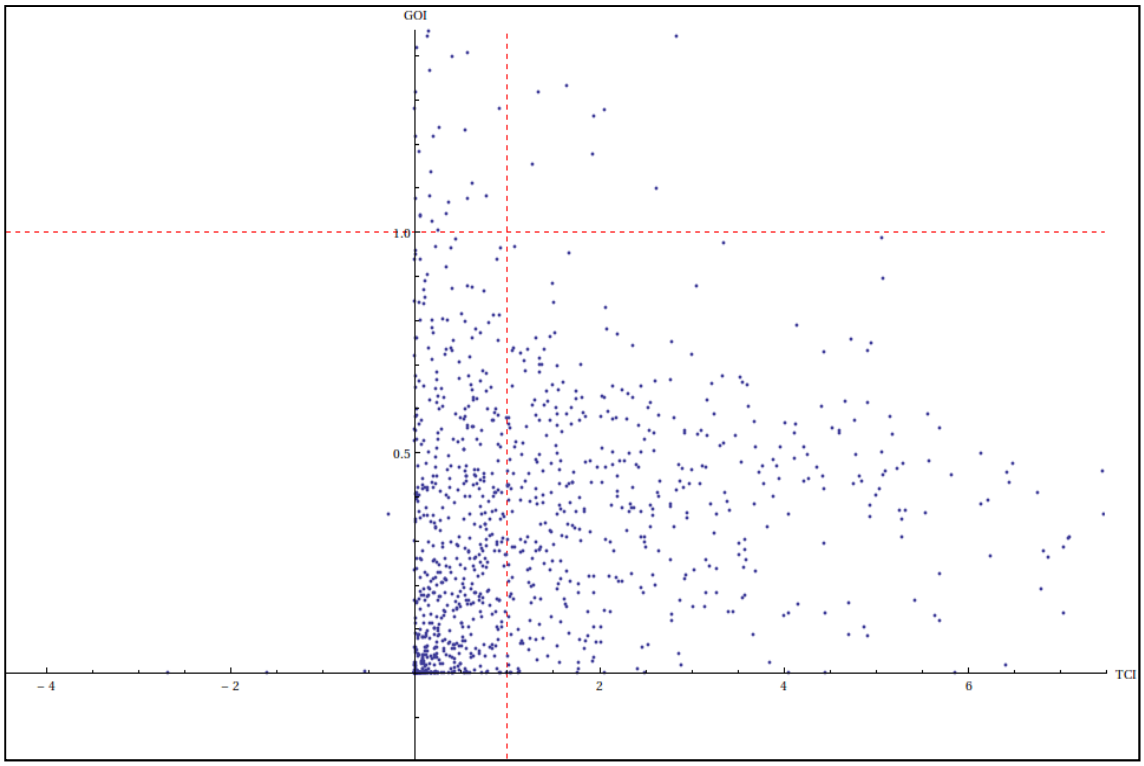
Source: Own calculations using data available at the Website of International Trade Centre: http://www.intracen.org/ [accessed at December 2010]

Table 11: GOI of exports of China per groups during 2001 and 2009

GOI									
	2001	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
Group 1	0.29353	0.15133	0.21848	0.24689	0.30184	0.36720	0.43662	0.52035	0.44267
Group 2	0.54852	0.35965	0.23341	0.23915	0.43743	0.48360	0.43940	0.48177	0.58634
Group 3	0.26344	0.21247	0.20695	0.27396	0.26578	0.29702	0.30449	0.40238	0.32922
Group 4	0.05464	0.04426	0.09248	0.07100	0.09240	0.17345	0.07713	0.08329	0.16749
Group 5	0.26903	0.23243	0.23912	0.19950	0.25946	0.26721	0.29104	0.25182	0.24225
Group 6	0.11186	0.12531	0.12879	0.11721	0.13983	0.17554	0.19752	0.26969	0.24112
Group 7	0.59296	0.69691	0.77625	0.97243	1.08587	1.06313	1.26708	1.23778	0.78714
Group 8	0.23037	0.20325	0.25403	0.40191	0.26781	0.25474	0.26178	0.29304	0.13015
Group 9	0.52645	0.48952	0.52905	0.49221	0.46823	0.45314	0.45035	0.44049	0.43682
Group 10	0.21377	0.26480	0.19581	0.12349	0.20831	0.22090	0.14110	0.17431	0.30970
Group 11	0.41695	0.36822	0.35513	0.39407	0.40138	0.42539	0.40859	0.41833	0.37893
Gropu 12	0.55116	0.53728	0.58083	0.57165	0.62301	0.58883	0.59931	0.48236	0.41375
Group 13	0.51400	0.42597	0.37640	0.34250	0.36093	0.38451	0.40999	0.49468	0.39204
Group 14	0.42626	0.41854	0.43353	0.41287	0.41461	0.39305	0.39177	0.38984	0.40945
Group 15	0.59212	0.57865	0.53138	0.48851	0.49230	0.55253	0.58703	0.59576	0.57503
Group 16	0.46840	0.44271	0.45701	0.51385	0.57139	0.55303	0.56635	0.57310	0.58306
Group 17	0.31470	0.24423	0.18875	0.21237	0.24023	0.25231	0.32116	0.31416	0.34621
Group 18	0.27917	0.28841	0.27427	0.29446	0.32850	0.32947	0.34941	0.36404	0.33017
Group 19	0.30569	0.35355	0.31311	0.30668	0.35127	0.28221	0.24283	0.25188	0.24993
Group 20	0.22132	0.22517	0.22942	0.23159	0.33036	0.28388	0.27319	0.36483	0.38304
Group 21	0.28661	0.28313	0.28309	0.26900	0.30595	0.29874	0.29802	0.29314	0.29013
Group 22	0.38776	0.33761	0.34801	0.37146	0.41452	0.42152	0.44359	0.40641	0.40342
Group 23	0.66337	0.57636	0.63607	0.71147	0.62845	0.63404	0.52039	0.63324	0.74413
Group 24	0.43555	0.44708	0.45260	0.40371	0.40061	0.44476	0.46387	0.40558	0.37418
Group 25	0.33557	0.25088	0.28204	0.28812	0.32317	0.31601	0.42676	0.46642	0.43605
Group 26	0.52337	0.49672	0.51117	0.52858	0.54950	0.54060	0.55378	0.53519	0.50749
Group 27	0.53552	0.50741	0.57191	0.60029	0.60881	0.57387	0.59799	0.59451	0.56458
Group 28	0.53960	0.45992	0.50056	0.46635	0.46161	0.46020	0.48305	0.49450	0.44533
Group 29	0.52154	0.53297	0.43361	0.41456	0.40731	0.46231	0.36750	0.35334	0.33031
Group 30	0.41273	0.45989	0.44545	0.37490	0.45431	0.46233	0.44343	0.44835	0.45604

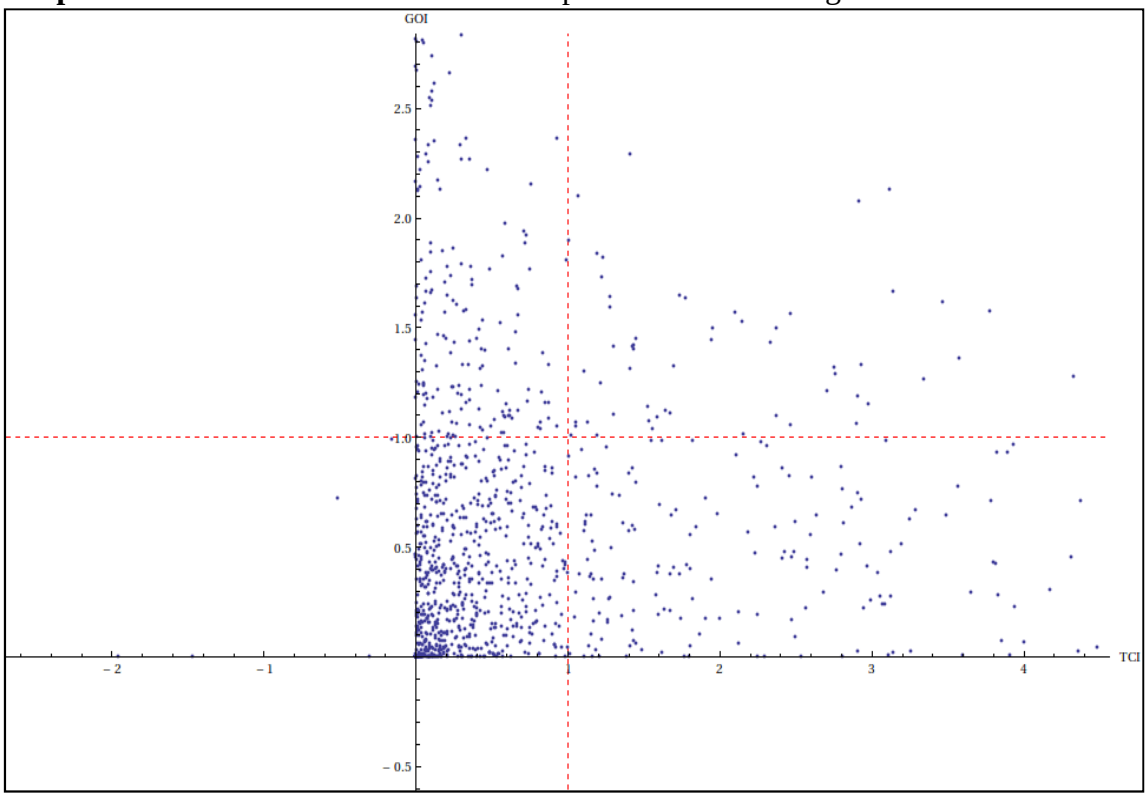
Source: Own calculations using data available at the Website of International Trade Centre: http://www.intracen.org/ [accessed at December 2010]

Graph 7: Crossover of TCI and GOI for China exports at 4-digit level in 2009



Source: Own calculations using data available at the Website of International Trade Centre: http://www.intracen.org/ [accessed at February 2011]

Graph 8: Crossover of TCI and GOI for exports of India at 4-digit level in 2009



Source: Own calculations using data available at the Website of International Trade Centre: http://www.intracen.org/ [accessed at February 2011]

Table 12: Tariffs applied by the European Union on Exports of China

Products	Tariff until 2001 (%)[1]	Tariff in 2011 (%)[2]
Vegetables Prepared or preserved	Maximum 20/25	Maximum 25
Mineral Waters and aerated Waters	No information	No tariff in quite all products
Mineral substances	Maximum 2	Maximum 3, but almost all products don't have tariff
Chemical products	Maximum 3/6	Maximum 6, but almost all products don't have tariff or in other cases it's zero with specific certificates
Zinc and Iron oxide or peroxide and others	Maximum 3/4	Maximum 4/5
Articles of Plastic	Maximum 6/7	No tariffs with specific conditions, being in maximum 6/7
Articles of vulcanised Rubber	Maximum 3/6	Maximum 3, being zero with specific certificates
Articles of Leather or Wood	Maximum 3/6	Maximum 9, but it is zero with specific conditions
Articles of fur skin	No information	No tariffs
Paper and paperboard products	Maximum 4	No tariffs, excluding the products with anti-dumping duty
Cotton, Fibres, Silk, Wool	No information	No tariff in quite all products or with a specific certificates
Textile products and carpets	Maximum 22	Maximum 8, but it can be suspended with specific certificates
Man and Woman Clothing	Maximum 30	Maximum 12, but there is no tariff in several products with a specific certificates
Footwear and others accessories	Maximum 8/9	Maximum 17, but in several products there are no tariffs or it is suspended with specific certificates
Ceramic and Glass articles	Maximum 5/6	Maximum 5/7, in particular cases with anti-dumping duty
Iron, Steel or Aluminium products	Maximum 3/5	Maximum 3/8, in particular cases with anti-dumping duty
Hand tools used in Agriculture, Horticulture or Forestry	No information	Maximum 1/2
Machines tools of base metal	No information	Maximum 2/3
Office equipment and apparatus	Maximum 1	Maximum 1/2
Household Machines	Maximum 1/2	Maximum 2
Television and other electronic apparatus	Maximum 8/9	Maximum 14, but in several products there are no tariffs or it is suspended with a specific certificates
Motorcycles, Cycles and similar	Maximum 10	Maximum 6/8
Photographic Cameras and other optical apparatus	No information	Maximum 3/4
Clocks	No information	Maximum 3/5
Music Instruments	No information	Maximum 3/4

Source: [1]Global tariff applied by European Community in 1999-2000, according to Messerlin, P.(2002); [2]According to European Commission Taxation in 2011, available on the website: http://ec.europa.eu/taxation_customs/dds2/taric/taric_consultation.jsp?Lang=en&Expand=true&SimDate=20110908 [accessed at August 2011].

Table 13: TCI of India exports per groups during the time period 2001 and 2009

TCI									
	2001	2002	2003	2004	2005	2006	2007	2008	2009
Group 1	2.199566	2.16703	1.931202	1.879873	1.96767	1.920992	1.773763	1.551461	1.345808
Group 2	1.25529	1.050534	1.075841	1.221633	1.564496	1.126387	1.134502	1.388715	0.713085
Group 3	2.91106	3.127677	2.75311	2.808574	2.695079	2.36568	2.279161	2.039238	1.586635
Group 4	1.038869	0.639468	0.620298	0.82022	0.752251	0.649737	0.553397	0.520355	0.491389
Group 5	1.322621	1.130634	0.955268	0.663951	0.669346	1.191627	1.321289	1.62545	0.530329
Group 6	1.91489	1.308834	2.062738	2.214521	1.753769	2.171998	2.162739	2.889456	1.877754
Group 7	1.90862	2.651717	2.379119	2.56812	3.001217	2.163753	1.818244	1.166953	1.104363
Group 8	0.291241	0.31915	0.320475	0.380222	0.470439	0.647962	0.706502	0.662018	0.638417
Group 9	1.38955	1.626047	1.694013	1.702781	1.779863	2.003184	1.776155	1.81758	1.546113
Group 10	2.440464	2.563542	2.239936	2.299641	2.101152	2.298829	2.18654	2.005607	2.010949
Group 11	2.370107	2.181794	2.175271	1.906975	1.900419	2.005725	2.005717	2.164757	1.638173
Group 12	0.888052	0.858184	0.859475	0.946683	1.251544	1.085413	1.445504	1.288461	0.930428
Group 13	1.091004	0.98881	0.998721	1.026682	1.303214	1.157908	1.144675	1.436146	1.153769
Group 14	0.788607	0.817726	0.878745	0.978861	0.885482	0.896279	0.765355	0.741229	0.540805
Group 15	3.058428	2.658994	2.643183	2.604015	2.395696	2.366064	2.37184	2.582987	1.988085
Group 16	0.048885	0.058014	0.065604	0.073875	0.074991	0.086495	0.100277	0.114832	0.095053
Group 17	0.424888	0.474323	0.473739	0.501145	0.529133	0.513019	0.475311	0.494504	0.449992
Group 18	3.41935	3.269158	3.244827	3.036715	2.715808	3.066013	3.389461	3.119141	2.370327
Group 19	5.280154	4.039216	4.052554	3.968833	3.999682	4.282301	3.761944	3.355496	2.508946
Group 20	3.310957	3.284563	3.252372	3.307146	3.526398	3.442898	3.179337	3.28236	3.031932
Group 21	1.542735	1.29351	1.460093	1.578853	1.577035	1.62901	1.745475	1.757443	1.447449
Group 22	1.46832	1.438827	1.422948	1.207602	1.190086	1.271737	1.271313	1.237752	1.03313
Group 23	6.566957	7.1534	6.204886	5.793973	5.789856	4.730784	4.620579	3.420816	4.866815
Group 24	1.372792	1.74475	1.812323	1.759269	1.675467	1.88397	1.6958	1.569723	1.103574
Group 25	0.658877	0.627806	0.57279	0.439143	0.528324	0.737819	0.635988	0.73997	0.6739
Group 26	1.226871	1.017976	1.15582	1.124706	1.119792	1.122578	0.929692	1.009888	0.723979
Group 27	0.197621	0.176359	0.200905	0.18798	0.200621	0.219081	0.225125	0.265047	0.269938
Group 28	0.28877	0.313354	0.406708	0.487867	0.579845	0.546707	0.566337	0.862108	0.98636
Group 29	0.221296	0.223634	0.222697	0.205022	0.197839	0.184617	0.166789	0.188182	0.197326
Group 30	0.79599	0.577378	0.619083	0.727417	0.613875	0.481763	0.596312	0.70282	1.679556

Source: Own calculations using data available at the Website of International Trade Centre: http://www.intracen.org/ [accessed at December 2010]

Table 14: GOI of India exports per groups during the time period 2001 and 2009

GOI									
	2001	2002	2003	2004	2005	2006	2007	2008	2009
Group 1	0.4420	0.4756	0.4442	0.4424	0.4688	0.5221	0.5399	0.4650	0.4237
Group 2	0.2991	0.4159	0.3963	0.3429	0.1994	0.3374	0.2206	0.2394	0.2235
Group 3	0.4917	0.4106	0.4152	0.4151	0.4684	0.4977	0.4065	0.4230	0.3780
Group 4	0.9834	1.1973	1.1186	1.2280	0.9752	0.8114	1.0769	1.1642	0.9002
Group 5	0.2540	0.2385	0.3343	0.4397	0.5039	0.3426	0.3452	0.2455	0.5379
Group 6	0.2000	0.2938	0.2097	0.1755	0.1786	0.1589	0.1820	0.1946	0.3133
Group 7	0.4178	0.3917	0.3046	0.2640	0.2034	0.2234	0.2037	0.1583	0.1568
Group 8	0.0031	0.1148	0.3058	0.3232	0.6623	0.4104	0.4682	0.5005	0.7242
Group 9	0.5959	0.5804	0.5347	0.4946	0.4787	0.4909	0.5201	0.5608	0.5519
Group 10	0.2810	0.2700	0.2757	0.2822	0.3119	0.2438	0.2712	0.3923	0.2680
Group 11	0.5413	0.5548	0.5489	0.5465	0.5982	0.6056	0.6663	0.5959	0.5057
Group 12	0.4344	0.2664	0.3889	0.4082	0.3054	0.3342	0.3939	0.3021	0.4249
Group 13	0.7824	0.7299	0.7360	0.7583	0.6349	0.5686	0.6403	0.6886	0.6095
Group 14	0.3971	0.4263	0.4027	0.4093	0.4859	0.5111	0.6259	0.6087	0.5189
Group 15	1.7327	1.6793	1.6198	1.6801	1.6845	1.6101	1.5798	1.6196	1.7064
Group 16	0.7660	0.7471	0.6746	0.6524	0.5703	0.6003	0.6279	0.6628	0.7889
Group 17	0.2356	0.2510	0.3417	0.3248	0.4227	0.3785	0.4959	0.3816	0.3898
Group 18	0.7132	0.7080	0.6555	0.6788	0.7108	0.6431	0.5516	0.5192	0.4972
Group 19	1.1030	1.1016	1.1209	1.1382	1.2051	1.1841	1.1800	1.1930	1.2454
Group 20	0.9951	1.0002	0.9640	0.9618	1.0760	1.0502	1.0796	1.0491	1.1073
Group 21	1.9620	1.8495	1.8023	1.7373	1.7359	1.7441	1.6880	1.6620	1.6715
Group 22	0.6549	0.6564	0.6662	0.6870	0.7003	0.7242	0.7548	0.7307	0.7724
Group 23	0.5587	0.4870	0.4750	0.4805	0.4562	0.4804	0.4927	0.5858	0.3777
Group 24	0.4222	0.3361	0.3608	0.5655	0.4867	0.5285	0.6072	0.6519	0.5157
Group 25	0.1500	0.1961	0.2499	0.3181	0.3236	0.8048	0.6163	0.3175	0.2378
Group 26	0.9773	0.9742	0.9008	0.8946	0.8746	0.9077	0.9856	0.8919	0.8817
Group 27	0.7272	0.8245	0.8101	0.8051	0.8228	0.8192	0.8737	0.9538	0.6806
Group 28	0.5658	0.5428	0.7298	0.6618	0.6243	0.4580	0.5162	0.6567	0.7899
Group 29	0.4698	0.5216	0.5368	0.6180	0.6792	0.6628	0.7342	0.6889	0.6589
Group 30	0.6407	0.8740	0.6834	0.5574	0.6062	0.6908	0.5216	0.5105	0.1723

Source: Own calculations using data available at the Website of International Trade Centre: http://www.intracen.org/ [accessed at December 2010]

Table 15: Tariffs applied by the European Union on Exports of India

Products	Tariff until 2001 (%)	Tariff in 2011 (%)
Animal Derivates	Maximum 110	Limited entrance with high taxes when exceed the limited value
Vegetables fresh or chilled	Maximum 20	Maximum 6/12
Rice	No information	Maximum 7/15
Ginger, Saffron, Turmeric, Thyme and Curry	No information	No tariff in quite all products
Coffee, Tea and other vegetable products	No information	Maximum 9/12
Pipe, chewing and snuff tobaccos	Maximum 48	Maximum 18/20
Mineral substances and its products	Maximum 2	Maximum 2, but almost all products don't have tariff
Antibiotic and Pharmaceutical preparations	No information	No tariffs
Perfumes and Toilet Waters	No information	No tariffs
Articles of vulcanised Rubber	Maximum 3/6	Maximum 3
Leather further prepared after tanning or crusting	Maximum 6	Maximum 6/7
Paper or Paperboard products	Maximum 4	No Tariffs
Cotton and Woven fabrics of Cotton	No information	Maximum 5/8, but there is several products without tariffs
Synthetic filaments	No Information	Maximum 4
Carpets and Textile covers	Maximum 22	Maximum 8, but it can be zero in particular cases
T-shirts, singles and other vests, knitted or crocheted	Maximum 30	Maximum 12
Men and Women clothing	Maximum 30	Maximum 12, but there is no tariff in several products by a specific certificate
Slate, Mica and its articles	No information	Maximum 1/2
Ceramic products	Maximum 6	Maximum 5/6
Articles of Glass	Maximum 5	Maximum 3
Diamonds and precious stones	No information	No tariffs
Iron, Steel and Copper products	Maximum 3/5	No tariffs in quite all products
Articles of Aluminium, Nickel or Zinc	Maximum 3/5	Maximum 5/7
Hand tools used in Agriculture, Horticulture or Forestry	No information	Maximum 1/2
Machinery parts and accessories	Maximum 1/2	Maximum 1/2
Tractors, Motor vehicles, Motorcycles and its accessories	Maximum 10	Maximum 6, but there is no tariff in several products and others have special treatment
Cruise ship, Cargo ship, Barges, Tugs and Pusher Craft	Maximum 1/2	Maximum 2/3, but there is no tariff in several products

Source: Global tariff applied by European Community in 1999-2000, according to Messerlin, P.(2002); According to European Commission Taxation in 2011, available on the website: http://ec.europa.eu/taxation_customs/dds2/taric/taric_consultation.jsp?Lang=en&Expand=true&SimDate=20110908 [accessed at August 2011].