

# **Extensive and Intensive Margins of India's Exports: Comparison with China**

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## **Abstract**

*Should India's export promotion policies be targeted at accelerating export growth at the extensive (new trading relationships) or at the intensive margin (increase in trade of existing relationships)? To help answer this question, we undertake a comparative study of exports from India and China by analysing the role of extensive and intensive margins in the export market penetration of the two countries during 1995-2011. We further decompose intensive margin into quantity and price margins. As far as extensive margin is concerned, our results show that the gap between the two countries is getting narrower as India is clearly catching up with China. By contrast, India lags significantly behind China in terms of intensive margin due to an abysmally low and stagnant quantity margin. Intensification, rather than diversification, has been the crucial driving force of China's export success. India's exports of capital-intensive products performed better compared to labour intensive products. The lacklustre performance in labour-intensive exports is entirely due to a lack of depth in India's market presence even as it expanded the range of its products and markets. Our analysis suggests that India can reap rich dividends by adopting policies aimed at accelerating export growth at the intensive margin. Contrary to the general perception, there exist a great potential for India to expand and intensify its export relationships with the traditional developed country partners.*

**Keywords: Exports, Extensive Margin, Intensive Margin, India, China**

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*Should India's export promotion policies be targeted at accelerating export growth at the extensive (new trading relationships) or at the intensive margin (increase in trade of existing relationships)? To help answer this question, we undertake a comparative study of exports from India and China by analysing the role of extensive and intensive margins in the export market penetration of the two countries during 1995-2011. We further decompose intensive margin into quantity and price margins. As far as extensive margin is concerned, our results show that the gap between the two countries is getting narrower as India is clearly catching up with China. By contrast, India lags significantly behind China in terms of intensive margin due to an abysmally low and stagnant quantity margin. Intensification, rather than diversification, has been the crucial driving force of China's export success. India's exports of capital-intensive products performed better compared to labour intensive products. The lacklustre performance in labour-intensive exports is entirely due to a lack of depth in India's market presence even as it expanded the range of its products and markets. Our analysis suggests that India can reap rich dividends by adopting policies aimed at accelerating export growth at the intensive margin. Contrary to the general perception, there exist a great potential for India to expand and intensify its export relationships with the traditional developed country partners.*

## **1. Introduction**

Since the early 1990s, India has undertaken important reforms with a view to transforming its economic system from an inward looking planned economy to one that is more market oriented. Trade and exchange rate policies have been liberalised and restructured in order to remove the anti-export bias endemic to import substitution policies. The focus of the export policy, by and large, shifted from product-specific incentives to more generalised incentives based primarily on the exchange rate. In keeping with the argument that a market determined

exchange rate would make exporting activities inherently more attractive, India adopted full current account convertibility in August 1994<sup>1</sup>. The quantitative restrictions (QRs) on importing capital goods and intermediates were mostly dismantled in 1992, although the ban on importing consumer goods continued, with some exceptions, until the late 1990s. Alongside the removal of QRs, customs duties in the manufacturing industries were gradually reduced. Following the new tariff reductions introduced in the March 2007 budget, India has emerged as one of the world's low protection and open industrial economies (Pursell et al 2007).

Did Indian exporters respond positively to changes in the incentive structure engendered by the reforms? A previous study, focusing on merchandise exports, showed that the first decade of reforms (from 1993-94 to 2001-02) was characterised by a relatively low growth rate of dollar export earnings at 8% per year, while the second decade (2002-03 to 2010-11) stands apart for its strong growth rate of 21% a year (Veeramani, 2012). Data for the more recent years, however, indicate that export growth has started to slow down. The value of exports declined to about \$300 billion in 2012-13 from \$306 billion in 2011-12, registering a negative growth of about 2%<sup>2</sup>.

Overall, despite the recent slowdown, since 2002, India has recorded a superior export performance compared to its own past record. It must be noted, however, that India's merchandise imports have been growing faster than exports throughout the post-reform period resulting in increasing merchandise trade deficit. During the period 2002-03 to 2012-13, while merchandise exports recorded a growth rate of about 20% per annum, merchandise imports grew faster at the rate of 23%. The surpluses in services trade and private transfers have helped to partially offset the growing deficit in the merchandise trade account. In 2012-13, for example, the merchandise account shows a huge deficit of \$195 billion, of which about \$107 billion was offset by the invisibles earning, leaving a high current account deficit

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<sup>1</sup>The government introduced a major downward adjustment in the rupee exchange rate against the major international currencies in July 1991. In February 1992, a dual exchange rate system was introduced, which allowed exporters to sell 60% of their foreign exchange earnings at the free market rate and 40% to the government at the official lower rate. In April 1993, a further move towards the deregulation of the external sector took place when the government adopted full convertibility on the trade account by unifying the official exchange rate with the market one. These steps culminated in India adopting full current account convertibility in August 1994.

<sup>2</sup>The average annual growth rate for the period 2002-03 to 2012-13 is about 20% per annum. The latest available data shows that India recorded an export of \$243 billion during April-January 2013-14, registering a growth rate of just 5.7% on a like-to-like basis.

of \$88 billion, or 4.8% of GDP. Faced with the situation of unsustainable current account deficit, the government has resorted to ad hoc policy measures, such as putting restriction on gold imports, to deal with the problem.

The long term solution to the problem of unsustainable current account deficit lies in ensuring that export growth keeps pace with the growth of imports. The crucial question is what type of policy interventions would help achieve faster export growth. The answer to this question, taking a cue from some recent studies, crucially hinges on whether policy makers should target export growth primarily at the extensive margin (new trading relationships) or at the intensive margin (increase in trade of existing relationships). The intensive margin of a country's export growth is attributable to its persistent export relationships – that is, exports of already exported products (old products) to already existing market destination for those products (old markets). Note that intensive margin growth can arise as a result of price growth, quantity growth or both. The extensive margin refers to changes in the value of exports due to diversification of old products to new market destinations and /or due to the exports of new products.

Trade models differ in terms of the emphasis placed on different margins as channels of export growth<sup>3</sup>. Traditional trade theory based on perfect competition considers industry as the unit of analysis while firms within an industry are assumed to be identical and produce homogenous products. Since products are not differentiated, horizontally or vertically, there is no extensive margin and export growth comes from quantity expansion alone. Theoretical analyses of intra-industry trade usually rest on the assumption of horizontal (different varieties are of a similar quality and same price) or vertical (varieties are of different qualities and prices) product differentiation. Thus, in horizontal models, pioneered by Krugman (1979), exports grow along the extensive margin – that is, expansion of variety. In vertical models, as found in Flam and Helpman (1987), exports can grow along the price and quantity margins as a result of improvement in quality. Finally, extensive margin is an important channel of export growth in trade models with heterogeneous firms and fixed exporting costs (Metilz, 2003). In these models, exposure to trade will induce only the more productive firms to enter the export market, as entry into these markets is costly and can only be afforded by

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<sup>3</sup> See Hummels and Klenow (2005) for a detailed discussion on the importance of different export margins in different trade models.

the more efficient firms. Exports along the extensive margin can grow with falling trade costs as new firms with horizontally differentiated variety enter the export market.

As to the empirical literature, the relative role of extensive and intensive margin in the growth of trade has been debated. Using a cross section data of 126 exporting countries in 1995, Hummels and Klenow (2005) found that larger economies export substantially more and that extensive margin accounts for 62 percent of the greater exports of larger economies. Similarly, Evenett and Venables (2002) found extensive margin to be quite important for growth in developing country exports. A number of more recent studies, however, conclude that intensive margin plays the dominant role (Helpman et al 2008, Amiti and Freund 2010, Felbermayr and Kohler 2006, Eaton et al, 2008, and Besedes and Prusa, 2011). Besedes and Prusa (2011, pp 371) notes that “a country's poor export performance is not because it struggles to start new relationships”, but mainly because it lags behind the better performing countries in terms of survival and deepening of existing export relationships.

Clearly, a proper understanding of trade growth along the different margins, as opposed to the usual focus on aggregate trade flows, would better inform policies. In order to decide whether export promotion policies be targeted at accelerating export growth at the intensive or at the extensive margin, we need to know the relative role that the two margins have played in determining India's past export growth. In addition, to provide a comparative perspective, it would be instructive to know the relative importance of the two margins in other countries which have already become successful exporters. China is a natural choice for comparison given its spectacular export growth during the recent decades and its similarities with India in terms of size, stage of development and relative resource endowments. In this paper, we decompose India's export performance during 1995-2011 into changes at the intensive and extensive margins. Intensive margin has been further decomposed into price and quantity margins. To put the analysis in proper perspective, India's performance at the two margins has been compared and contrasted with that of China for the same period. The decomposition analysis has been undertaken for aggregate merchandise trade as well as for disaggregated sectoral level.

Disentangling the price and quantity components of intensive margin is important from a policy perspective. For if export growth comes mainly from quantity expansion, it may imply that the country must use increasing amounts of its resources – capital, labour and natural

resources – to sustain the growth. Countries in the early stages of development, with large endowment of surplus labour and resources, may experience quantity, rather than price, driven export growth. On the other hand, price driven growth plays a critical role in sustaining export growth of advanced economies. If export growth is mainly driven by price growth and if price reflects product quality, it may imply that the country has to invest more in human capital and technological innovation in order to sustain growth.

The rest of the paper is structured as follows. Section 2 explains the decomposition methodology and the database used. Section 3 discusses the decomposition results for India while section 4 provides the comparison with China. Finally, Section 5 provides the concluding remarks.

## 2. Decomposition Methodology

Based upon the method proposed by Hummels and Klenow (2005), we analyze the structure of exports from the given country  $i$  (India and China, in our case) in year  $t$  to a destination group  $D$  (which consists of several partner countries  $j$ ). We suppose that country  $i$  competes with the ‘rest of the world’ ( $r$ ) in the markets of the destination group  $D$ . Export penetration of country  $i$  relative to  $r$  is denoted as  $S_{it}$  – that is, ratio of total exports from  $i$  and  $r$ :

$$S_{it} = \frac{X_{it}}{X_{rt}} = \frac{\sum_j \sum_{p \in N_{ij}^p} x_{ijt}^p}{\sum_{j \neq i} \sum_{p \in N_{rj}^p} x_{rjt}^p} \quad (1)$$

where

$X_{it}$  = value of total exports from country  $i$  to destination group  $D$  in year  $t$

$X_{rt}$  = value of total exports from  $r$  to destination group  $D$  in year  $t$

$x_{ijt}^p$  = value of exports from country  $i$  to partner  $j$  in product  $p$  and year  $t$

$x_{rjt}^p$  = value of exports from country  $r$  to partner  $j$  in product  $p$  and year  $t$

$N_{ij}^p$  = the set of partner-product pairs where country  $i$  records ‘export relationships’ (i.e., the set where  $x_{ijt}^p > 0$ )

$N_{rj}^p$  = the set of partner-product pairs where  $r$  records ‘export relationships’ (i.e., the set where  $x_{rjt}^p > 0$ )

It is clear that  $X_{it}$  ( $X_{rt}$ ) is equal to the sum of exports across all partner-product pairs where country  $i$  ( $r$ ) record ‘export relationships’. The export penetration ratio ( $S_{it}$ ) can be expressed as the multiplicative product of extensive and intensive margins. The intuition behind this decomposition is that  $S_{it}$  depends on: (i) the relative number of ‘export relationships’ by  $i$  and  $r$  (extensive margin), and (ii) the relative values of exports within the common set where both  $i$  and  $j$  record ‘export relationships’ (intensive margin). For example,  $i$ ’s exports could be lower than  $r$  because the former records fewer ‘export relationships’ than the latter (that is,  $N_{ijt}^p < N_{rjt}^p$ ) and/or because the value of exports from  $i$  is lower than that of  $r$  within the common set of partner-product pairs.

Intensive margin for the exporting country  $i$  for the year  $t$  can be expressed as:

$$IM_{it} = \frac{X_{it}}{\sum_{j \neq i} \sum_{p \in N_{ijt}^p} x_{rjt}^p} \quad (2)$$

The denominator of  $IM_{it}$  represents the total exports from  $r$  in those partner-product pairs where country  $i$  records ‘export relationships’ in the given year  $t$ . Therefore, intensive margin is the ratio of country  $i$ ’s exports to the total exports of  $r$  within the common set of partner-product pairs. The value of  $IM_{it}$  is always positive and can be below or above 1.

For the case when  $N_{ijt}^p$  is a subset of  $N_{rjt}^p$ , the extensive margin for the exporting country  $i$  is defined as<sup>4</sup>:

$$EM_{it} = \frac{\sum_{j \neq i} \sum_{p \in N_{ijt}^p} x_{rjt}^p}{X_{rt}} \quad (3)$$

The denominator of  $EM_{it}$  represents the total exports from  $r$  while the numerator is the sum of exports from  $r$  across the set of partner-product pairs where country  $i$  records ‘export relationships’. It is clear that  $EM_{it}$  is a measure of the fraction of  $r$ ’s exports that occur in those partner-product pairs where country  $i$  reports positive export values. For example, country  $i$  will have a lower extensive margin, but higher intensive margin, if its export relationships are fewer (that is, its exports are concentrated in a small number of products and

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<sup>4</sup> The assumption that  $N_{ijt}^p$  is a subset of  $N_{rjt}^p$  simply means that export relationships recorded by country  $i$  (India or China) is a sub set of the export relationships recorded by  $r$ . This is indeed the case in our data.



in a few partners). On the other hand, the country will have higher extensive margin and lower intensive margin, if it spreads its exports thinly over many products and partners.

It may be noted that the numerator of  $EM_{it}$  is equal to the denominator of  $IM_{it}$ . Therefore, the multiplicative product of the two margins provides  $S_{it}$ , which is the ratio of total exports from country  $i$  to total exports from  $r$ .

$$IM_{it} \times EM_{it} = \frac{X_{it}}{\sum_{j \neq i} \sum_{p \in N_{ijt}^p} x_{rjt}^p} \times \frac{\sum_{j \neq i} \sum_{p \in N_{ijt}^p} x_{rjt}^p}{X_{rt}} = \frac{X_{it}}{X_{rt}} = S_{it} \quad (4)$$

It is clear that the intensive margin captures the *depth* of a country's export profile, while extensive margin captures the *breadth*. The intensive margin ( $IM_{it}$ ) can be further decomposed into a price index ( $P_{it}$ ) and a quantity index ( $Q_{it}$ ). This decomposition makes use of the fact that  $IM_{it}$  captures changes in the value of exports due to changes in quantities and/or prices.

$$IM_{it} = P_{it} \times Q_{it}$$

The price index measures the weighted average ratio of  $i$ 's prices to  $r$ 's prices at each six-digit level product  $p$ , where the weights are the shares of each product category in total exports of the common set [see Hummels and Klenow (2005) for more details].

$$P_{it} = \prod_{p \in N_{ijt}^p} \left( \frac{uv_{ijt}^p}{uv_{rjt}^p} \right)^{w_{ijt}^p}$$

where,  $uv_{ijt}^p$  and  $uv_{rjt}^p$  are prices (proxied by unit value) of product  $p$  exported by  $i$  and  $r$  respectively to partner  $j$  and  $w_{ijt}^p$  is the logarithmic mean of  $s_{ijt}^p$  (the share of product  $p$  exported from  $i$  to  $j$  in  $i$ 's total exports) and  $s_{rjt}^p$  (the share of product  $p$  in  $r$ 's exports to  $j$ , where  $p \in N_{ijt}^p$ ):

$$s_{ijt}^P = \frac{x_{ijt}^P}{\sum_j \sum_{p \in N_{ijt}^P} x_{ijt}^P}, \quad s_{rjt}^P = \frac{x_{rjt}^P}{\sum_{j \neq i} \sum_{p \in N_{ijt}^P} x_{rjt}^P}$$

$$w_{ijt}^P = \left( \frac{s_{ijt}^P - s_{rjt}^P}{\ln s_{ijt}^P - \ln s_{rjt}^P} \right) / \sum \left( \frac{s_{ijt}^P - s_{rjt}^P}{\ln s_{ijt}^P - \ln s_{rjt}^P} \right)$$

## 2.1. Data

In order to measure intensive and extensive margins, we make use of finely disaggregated [at the 6-digit level of Harmonised System (HS)] trade data from UN-COMTRADE accessed using the WITS software. The database contains extensive information, on a bilateral basis, on value, quantity and number of export relationships. An ‘export relationship’ has been identified if  $x_{ijt}^P > 0$  – that is, if country  $i$  reports positive export value to partner  $j$  in product  $p$  (at the HS 6-digit level) and year  $t$ . Unit values (value of exports divided by quantity), required for the decomposition of intensive margin into price and quantity components, have been computed at the 6-digit level<sup>5</sup>.

We use export data reported by India, China and ‘rest of the world’ covering the period 1995-2011<sup>6</sup>. Exports by ‘rest of the world’ represents the sum of exports reported by all countries (excluding country  $i$ ) during the period. It may be noted that the number of countries that have reported data to the UN vary from year to year. In order to make sure that our estimates are strictly comparable over time, our definition of ‘rest of the world’ should comprise a homogenous set of countries that have consistently reported data during the entire period. We note that 79 countries (including India and China) have reported data for all years during 1995-2011.

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<sup>5</sup> A small number of 6-digit HS codes, for which data on quantity are not available, have been excluded from the analysis.

<sup>6</sup> Trade data, according to the HS classification, is available for India from 1988. However, China started reporting the HS based data only from 1995.

It must be noted that our calculation of extensive margin is sensitive to the level of data aggregation. In general, calculation based on relatively aggregate product categories would underestimate extensive margin by incorrectly relegating variety differences within categories into intensive margin. In this respect, we seek to do the best feasible job, given the availability of comparable data, by using the most disaggregated (6-digit HS level) data for India and China on a bilateral basis.

### 3. Decomposition Results for India

Table 1 reports the export penetration rate ( $S_{it}$ ), the extensive margin ( $EM_{it}$ ), the intensive margin ( $IM_{it}$ ), price index ( $P_{it}$ ) and quantity index ( $Q_{it}$ ) computed for the period 1995-2011 for aggregate merchandise exports. India's aggregate export penetration rate increased from 0.7% in 1995 to about 2% in 2011 with a growth rate of 7.5% per year. The relative importance of the two margins in driving the growth of export penetration can be measured by decomposing  $S_{it}$  into  $EM_{it}$  and  $IM_{it}$ . For example, in 1995,  $S_{it}$  (0.007) is the product of an extensive margin of 0.247 and an intensive margin of 0.027. The value of  $EM_{it}$  suggests that the partner-product pairs where India had an export presence (i.e.,  $x_{ijt}^p > 0$ ) accounted for a quarter of  $r$ 's exports. Put differently, in 1995, only 25% of  $r$ 's exports faced some degree of direct competition from India. During the subsequent years, however, India's extensive margin has increased significantly reaching 53% in 2000 and 67% in 2011, registering a growth rate of 5.6% per annum. Clearly, the *breadth* of India's market presence has increased over the years, and by 2011 as much as 67% of  $r$ 's exports did face a direct competition from India.

In contrast, the *depth* of India's market presence did not change much as reflected in the values of  $IM_{it}$  which increased marginally from 0.027 in 1995 to 0.033 in 2011, with an average annual growth rate of 2%. These estimates suggest that the value of India's exports amounted to 2.7% that of  $r$ 's within the common set in 1995, which has increased to 3.3% in 2011.

The increase in extensive margin notwithstanding, India's export penetration rates ( $S_{it}$ ) remained constant during the second half of the 1990s (Figure 1A). The rise in extensive margin, during this period, did not translate into an increase in export penetration due to an

offsetting decline in intensive margin. Thus, the values of  $IM_{it}$  and  $EM_{it}$  suggest that India's stagnant export penetration during the second half of the 1990s was not due to a lack of diversification but mainly due to a lack of intensification and specialisation.

Since the early 2000s, however, India's export penetration increased slowly but steadily, except for a decline in 2010. Until about the mid-2000s, this growth has been almost entirely driven by extensive margin while intensive margin remained mostly unchanged. Thereafter, however, both the margins have been responsible for driving India's overall export growth<sup>7</sup>. It may be summed up that while the positive contribution of diversification continued unabated throughout the period, export growth stemming from intensification began, albeit in a small way, only since the mid-2000s.

Now we turn to the decomposition of intensive margin into price ( $P_{it}$ ) and quantity ( $Q_{it}$ ) margins (see Table 1 and Figure 2A). Our results show that the quantity margin remained constant while the price margin showed a small increase (Figure 2A). The value of India price index ( $P_{it}$ ) has always been below 1, which means that Indian products are generally cheaper than those from the rest of the world. For the whole period, the price index recorded marginally higher growth (1.2% per annum) than the quantity index (0.9% per annum).

Having discussed the general trends at the aggregate level, we now turn to discuss the results from the decomposition analysis carried out separately for different commodity groups. Table 2 shows the results for three broad commodity categories – manufacturing, mineral fuels and other products<sup>8</sup>. Overall, manufacturing, the major commodity category, mimics the trends and patterns observed at the aggregate level. The growth of intensive margin has been even more sluggish for manufactured exports primarily due to a negative growth along the quantity margin. Yet, India's manufactured exports performed reasonably well in terms of overall export penetration on account of extensive margin growth.

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<sup>7</sup> The decline in the export penetration rate in 2010 was caused by extensive margin which declined from 65% in 2009 to 48% in 2010.

<sup>8</sup> This categorisation is done as follows. First, using a concordance table (available in WITS), we have matched the 6-digit HS codes with the corresponding Standard International Trade Classification (SITC) codes. Then, using data at the 6-digit HS level, we have decomposed the category-wise export penetration rates ( $S_{it}$ ) into the various components. Following the usual practice, the commodity categories are defined as: manufacturing (SITC 5 to 8 less 68 and 667), mineral Fuels (SITC 3) and other products (SITC 0 to 2 plus 4, 68 and 667). SITC 9 (Commodities and transactions not elsewhere classified) has been excluded.

There has been an exceptionally high export growth of refined petroleum products from India since the early 2000s (Veeramani, 2012). This is reflected in India's export penetration rate in 'mineral fuels', which increased noticeably from almost zero in 1995 to 4% in 2011. The high growth in 'mineral fuels' can be attributed mainly to extensive margin growth though price index also contributed positively.

A further disaggregated profile of these broad commodity categories is presented in Appendix Table A1 and A2. Within the category of non-manufactured products, India recorded impressive growth of export penetration in 'Non-ferrous metals' (SITC 68), which can be attributed almost entirely to growth along the quantity margin. Other non-manufactured product groups, which recorded a relatively high growth of export penetration are – 'Crude materials, inedible, except fuels' (SITC 2) followed by 'Beverages and tobacco' (SITC 1). Extensive margin has been the driving force of export growth in both these product groups.

Turning back to manufactured exports, export penetration rates in 'Machinery and transport equipment' (SITC 7) increased much faster than average from a meagre value of little above 0.1% during the second half of the 1990s to 0.9% in 2011. This has been driven by the fast growth of intensive and extensive margins, with a growth rate of about 6% per annum along each of the margins. Yet, India's overall export penetration rate in SITC 7 is paltry compared to a hefty 26% of China in 2011. India's traditional labour-intensive products, grouped under 'Manufactured materials' and 'Miscellaneous manufactured articles', showed poor performance compared to capital-intensive groups such as machinery, transport equipment and chemicals. This lacklustre performance of labour-intensive product groups is entirely due to a negative growth rate along the volume margin offsetting the gains from extensive margin growth.

A number of studies have noted a general bias in India's manufacturing specialisation pattern in favour of capital and skill intensive industries and against unskilled labour-intensive industries<sup>9</sup>. This is an anomaly given the fact that the country's true comparative advantage lies in unskilled labour-intensive activities. In order to shed further light on this, we compute

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<sup>9</sup> See for example, Kochhar et al (2006), Panagariya (2007), Krueger (2010), Veeramani (2012, 2013).

the margins for commodity groups classified according to the factor intensity of production in different industries<sup>10</sup>. The results are reported in Table 3<sup>11</sup>.

It is evident that the average annual growth rate of export penetration has been the fastest in ‘natural-resource intensive products’ (13.5%) followed by ‘human capital-intensive products’ (10.7%) and ‘technology-intensive products’ (9.9%). The growth rate has been the lowest in ‘unskilled labour-intensive products’ (2.6%). The high growth in ‘natural resource industries’ has been mainly driven by ‘nonferrous metals’ (SITC 68), which recorded a hefty growth rate of 16.6% per annum (see Table A1). In the case of technology and human-capital intensive products, the growth rates of intensive margin (about 4.5% in each group) has been noticeably higher than that for aggregate exports (about 2%) while the growth rates of extensive margins are not significantly different from that for aggregate exports. The high intensive margin growth in both these categories can be attributed to volume growth.

In the case of ‘unskilled labour-intensive products’, extensive margin recorded an impressive growth rate of about 7% per annum compared to 5.6% for aggregate exports. This superior performance along the extensive margin, however, did not translate into a high export penetration rate due to an offsetting negative growth rate (-6.2%) along the quantity margin. The high growth of India’s extensive margin in unskilled labour intensive industries implies that the country did succeed in establishing export relationships over many products and partners but the low and falling intensive margin means that its market presence has become increasingly thin or shallow. It is clear that India’s low export penetration in unskilled labour-intensive industries can be attributed to lack of intensification rather than lack of diversification. It has been argued that India’s labour laws create severe exit barriers and discourage large firms from choosing labour-intensive activities and technologies.

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<sup>10</sup> The Heckscher-Ohlin model, the workhorse model of international trade, postulates that the comparative advantage of a country is closely related to its relative resource (factor) endowments. According to this model, a country will specialize in and export products that are intensive in the use of the factor that is abundant in that country. Thus, India being a labour abundant country, trade liberalisation is expected to generate faster growth of labour-intensive, rather than capital-intensive, exports.

<sup>11</sup> Using the factor intensity classification of the International Trade Centre (ITC), adapted by Hinloopen and van Marrewijk (2008), we classify the traded products into five specific categories: natural resource-intensive, unskilled labour-intensive, human capital-intensive and technology-intensive. This classification is available at: (<http://www2.econ.uu.nl/users/marrewijk/eta/intensity.htm>) (Viewed on 19 September, 2013). A total number of 240 items, at the 3-digit SITC level, have been grouped into five categories (number of items in each category in parentheses): primary (83), natural-resource intensive (21), unskilled-labour intensive (26), human capital-intensive (43), technology-intensive (62), and unclassified (5).

The bias in India's incentive structure against labour-intensive manufacturing has a bearing on the geographical pattern of exports from the country<sup>12</sup>. Arguably, India's product specialisation patterns provide it with a comparative advantage in relatively poorer markets (such as Africa) but at the cost of losing market shares in the richer countries. Products from India with high technology and skill content are unlikely to make inroads into the quality conscious richer country markets. These products, however, may enjoy a competitive advantage in the relatively poorer country markets. At the same time, rich country markets provide a huge potential for labour-intensive exports from developing countries including India. Thus, specialisation out of traditional labour-intensive products implies a general loss of India's export potential to advanced country markets<sup>13</sup>.

In the past, the traditional developed country markets (comprising Australia & New Zealand, Europe, Japan and North America) accounted for the major share of India's export basket. But their dominance has been steadily declining over the last two decades. The aggregate share of these markets in India's merchandise exports declined from about 63% in 1993 to 35% in 2010 (Veeramani, 2012). The remaining group of countries (which include South & Central America, Caribbean and the various regions of Asia and Africa), account for nearly two-third of India's merchandise exports in 2010. The share of the high income OECD countries in India's total manufacturing exports declined sharply from 58% in 2000 to 41% in 2010.

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<sup>12</sup> There are several reasons to believe that the general incentive structure in India is biased against labour-intensive manufacturing. In this context, the role of India's labour laws is a highly controversial issue. Many argue that India's rigid labour laws are primarily responsible for the lack of dynamism in labour-intensive manufacturing (see Kochhar et al, 2006; Panagariya, 2007; and Krueger, 2010). Another group of scholars, however, question this argument (see Nagaraj, 2011 and Bhattacharjea, 2006). Though, there is no unanimity of opinion in this regard, a growing number of empirical studies suggest that the role of labour laws cannot be ignored (see, for example, Hasan et al, 2007 and Aghion et al, 2008). Other constraints that stand in the way of labour-intensive manufacturing include inadequate supply of physical infrastructure (especially power, road and ports) and a highly inefficient and cumbersome land acquisition procedure. Faced with power shortages, capital and skill-intensive industries, such as automobiles and pharmaceuticals, might be in a position to rely on the high-cost internal sources of power. This option, however, is not affordable to firms in the labour-intensive segments that generally operate with low margin. Similarly, one may argue that land acquisition procedures create a bias against large scale labour-intensive manufacturing.

<sup>13</sup>An illustrative example will make this point clearer. India's exports of passenger motor vehicles – a capital and skill intensive product group - increased remarkably from \$151 million in 2002 to \$4511 million in 2010, registering a growth rate of 44% a year. Low & middle income countries are the major destinations for these exports from India. In 2010, the high-income countries accounted for only 8% of the Indian exports of passenger motor vehicles while Sub-Saharan Africa accounted for 11%. By contrast, the high-income countries accounted for 58% of India's total exports of HS 6105 ('men's or boy's shirts, knitted or crocheted') - a traditional labour intensive group – while the Sub-Saharan Africa accounted for just 1%.

In order to reflect further on the changing market destination of India's export, we carry out the decomposition analysis for two broad groups of markets – high income OECD versus other countries (see Table 4). It is clear that India's export penetration to the high-income OECD countries grew much slower (5.5% per annum) compared to other market destinations (8.7% per annum). The slow pace of growth in high-income OECD can be attributed primarily to the negative growth rate of quantity margin. The different panels in Figure 3 depict a disaggregated profile, across market groups, for the three major factor intensity based commodity groups. These panel charts depict several interesting contrasts with China, a detailed discussion of which is provided in the next section.

#### 4. Comparison with China

China's overall merchandise export penetration rate has increased dramatically from 4% in 1995 to above 18% in 2011, registering a growth rate of 11.5% per year (Table 1). Turning to the decomposition results, China's extensive margin in aggregate merchandise exports had increased from 39% in 1995 to 75% in 2011. While China always recorded a higher  $EM_{it}$  value than India, the latter recorded a higher growth rate (5.6% per annum) than the former (4.9% per annum). Thus, India is catching up with China in terms of product and geographic breadth of export markets. Clearly, differences along the extensive margin growth cannot account for the vast gap between India and China in terms of overall export penetration rate. It is beyond doubt that China's performance has been mainly driven by growth along intensive margin, which had increased from about 10% in 1995 to as high as about 25% in 2011, with an impressive growth rate of 6.3% per annum (compared to 2% per annum for India)<sup>14</sup>.

China's export penetration rates grew somewhat slowly during the second half of the 1990s while the post-2000 period stands apart for the exceptionally high growth of export penetration rates (see Figure 1B). It is clear that this high growth during the post 2000 period has been brought about mainly by intensive margin. Extensive margin also contributed, to a lesser degree, during the first-half of the 2000s while intensive margin was entirely responsible for maintaining the growth during the second-half.

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<sup>14</sup> While comparing these growth rates, it is important to keep in mind the difference in the values of  $IM_{it}$  for the two countries in the beginning of the period. China started off with a high value of 10% compared to just 2.7% for India. Despite the high base effect, China's growth rate (6.3%) is more than three times as high as India's (2%).



Overall, it is clear that intensification, rather than diversification, has been the crucial driving force of China's export success. By contrast, India's low export penetration is due to a lack of intensification rather than lack of diversification. Having established that China's export expansion took place primarily along the intensive margin, the next pertinent question is whether the intensive margin growth has been driven by price increases or increases in export volumes. The price ( $P_{it}$ ) and quantity ( $Q_{it}$ ) components of China's intensive margin are shown in Table 1 and in Figure 2B. It is evident that China's intensive margin growth has been mainly driven by volume, which grew at 4.6% per annum during the entire period of 1995-2011 and at 9.2% per annum during the sub-period of 2000-2011<sup>15</sup>. In contrast, as noted above, India's  $Q_{it}$  index for aggregate merchandise exports remained almost unchanged during 1995-2011.

Values of China's price index ( $P_{it}$ ) have always been below 1, which means that Chinese products are generally cheaper than those of the rest of the world. Earlier, we noted a similar pattern for India vis-à-vis rest of the world. Interestingly, comparison between India and China reveals that the former record higher  $P_{it}$  values than the latter<sup>16</sup>. In other words, on an average, while both Indian and Chinese products get lower prices than those exported by rest of the world, Chinese products are generally sold cheaper than Indian products. But, India's relatively high price margin has not translated into high intensive margin due to an abysmally low and stagnant quantity margin.

While China's  $P_{it}$  values are lower than that of India, it must be noted that China's quantity penetration over the years has been achieved without exerting any downward pressure on the relative prices of its products<sup>17</sup>. In fact, prices contributed positively, albeit to a small extent, to China's overall export growth. For, as can be seen from Table 1, China's prices relative to the rest of the world have increased at 1.6% per annum compared to the annual growth rate of 1.2% for India. Clearly, China's export quantity expansion has not exerted a downward pressure on its prices.

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<sup>15</sup> This result is similar to Bingzhan (2011) who, using a different decomposition method, shows that China's export growth, between 2001 and 2007, was mainly driven by quantity growth accounting for about 70% of its overall export growth.

<sup>16</sup> Using finely disaggregated (10-digit level) U.S import data, another study showed that in a large majority of the cases, the 10-digit level export unit values of India are significantly higher than that of China (Veeramani and Saini, 2011). This is consistent with our finding that the  $P_{it}$  values are higher for India than for China.

<sup>17</sup> Amiti and Freund (2010), however, noted that, between 1997 and 2005, the average prices of goods exported from China to the United States fell by an average of 1.5 percent per year.

That China's export volumes have grown despite the increase in its relative price may suggest that non-price factors, such as product quality and product differentiation, might have played a role in bringing about the quantity expansion. Quantity expansion can accompany relative price increase if there has been an improvement in the quality of products being exported from China. Additionally, export variety growth within 6-digit product categories, which has not been taken into account in our calculation of extensive margin, can contribute to volume increase without a corresponding change in relative price<sup>18</sup>. In general, the simultaneous increase of quantity and prices could be driven by several factors such as changes in product quality, variety growth, productivity improvements in China, declining profit margins and exchange rate movements<sup>19</sup>. A detailed analysis of the relationship and interplay between these factors and their relative importance is beyond the scope of the present paper.

What factors explain the fact that the  $P_{it}$  values have been much higher for India as compared to China? Detailed and careful comparison of manufacturing industries in India and China by Van Ark et al (2010) shows that unit labour costs (nominal cost of labour required to produce one unit of output) was slightly higher for China relative to India for the year 2002<sup>20</sup>. Thus, relative cost differences is not the key factor that explains the difference in the values of  $P_{it}$  between India and China. It is also unlikely that the  $P_{it}$  values reflect differences in the quality of products being exported from the two countries; if superior quality had been the reason for India's higher  $P_{it}$ , it would have resulted in greater quantity penetration by India.

It is more likely that differences in the  $P_{it}$  values between India and China closely reflect certain fundamental differences in the nature of intra-product specialisation in the two countries. It is now well recognised that countries engage in production and trade by specialising in distinct varieties and process within a product. The product varieties sourced from different countries could be differentiated on the basis of quality, factor content, and

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<sup>18</sup> Use of more disaggregated data is unlikely to alter our results qualitatively. For example, Amiti and Freund (2010), using finely disaggregated data (8-digit level Chinese export data and 10-digit level U.S. import data) have established the primacy of intensive margin for China.

<sup>19</sup> The simultaneous increase of quantity and price imply that China's rapid export quantity growth might not have adversely affected its terms of trade – that is price of exports in relation to imports.

<sup>20</sup> The comparison is available for two years, 1995 and 2002. China recorded a higher unit labour cost than India both in 1995 and 2002 though the difference has declined significantly during 1995-2002. China recorded a noticeable decline in its unit labour cost as a result of a significant growth of labour productivity during this period. Despite its higher labour productivity, China's unit labour cost remained higher due to its relatively higher level of labour compensation. Van Ark et al (2010) also noted that before the early 2000s India recoded higher levels of labour productivity than China reflecting the high capital intensity in India's manufacturing production.

other attributes. For example, Scott (2004) notes that the United States increasingly sources the same product from both high-and low-wage countries and that the unit values of imported products vary widely even within finely detailed product categories<sup>21</sup>. It was also noted that, in general, capital and skill-abundant countries export varieties that command higher prices while the varieties exported from labour-abundant countries receive lower prices. Further, a variety's unit value increases with an increase in the capital intensity of the production technique used to produce it.

As mentioned earlier, India's specialisation patterns exhibit a general bias in favour of products/processes that are capital and skill intensive. Thus, if unit values of varieties are positively correlated with the capital and skill intensities of their production, India's relatively higher  $P_{it}$  values is a reflection of its intra-product specialisation in capital and skill-intensive varieties. A higher price that results from "distorted"<sup>22</sup> specialisation, however, does not translate into higher volume of exports as evident from the stagnant values of India's  $Q_{it}$ . By contrast, China's relatively lower  $P_{it}$  values reflect its high degree of intra-product specialisation in labour intensive varieties and processes. The values of China's  $Q_{it}$  index recorded a rapid growth since the pattern of its specialisation has been in alignment with its comparative advantage. Driven by its high level of specialisation, China has been able to capture a significant world market share in labour-intensive varieties (Amiti and Freund, 2010)<sup>23</sup>. At the same time, the high-income OECD countries have responded to the competition from China by specialising in more sophisticated varieties - that is, varieties that embody higher level of technology, skill and capital (Schott, 2008).

In order to explain the observed contrasts between India and China, it is important to closely look at the decomposition results for different commodity groups. The high growth of

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<sup>21</sup> For example, Schott (2004, p 647) notes that "men's cotton shirts from Japan are roughly 30 times as expensive as the identically classified variety originating in the Philippines".

<sup>22</sup> This pattern of specialization is "distorted" as it is inconsistent with India's comparative advantage in labour-intensive activities given its relative factor endowments. Based on a comparative analysis of relative resource endowments (physical capital, human capital and arable land), Veeramani (2013) notes that both India and China are abundantly endowed with unskilled labour while physical capital, skilled labour and land are relatively scarce in both the countries. For the more recent years, India's relative endowment of unskilled labour is significantly higher than that of China. It is beyond doubt that the true comparative advantages of both the countries, more so for India, rest in varieties and processes that intensively use unskilled labour rather than physical capital and skilled labour.

<sup>23</sup> Amiti and Freund (2010, pp 54-55), based on a detailed analysis of China's exports during 1992-2005, observes that "the skill content of China's manufacturing exports remained unchanged once processing trade is excluded. When examining the skill content of China's total manufacturing exports, it looks like there has been an increase over the sample period. However, it turns out that this is mainly due to the increased skill content of imported inputs that are then assembled for export—a practice known as processing trade".

China's overall export penetration has been almost entirely driven by manufactured products (Table 2). China's export penetration in manufactured products grew at the rate of 13.5% per year mainly on account of an impressive growth along the intensive margin. The high growth along the intensive margin, in turn, has been mainly brought about by a volume growth of about 5% per annum. By contrast, India's manufactured exports recorded a negative growth rate along the quantity margin (-0.8%). It may be reiterated that a China's high volume growth of manufactured exports has been achieved without any decline in prices – in fact, the price index recorded an increase at the rate of 2.1% per annum.

China's superior export performance is reflected across all product groups within manufacturing (Table A2). 'Machinery and transport equipment' (SITC 7) recorded the fastest growth of export penetration from about 2% in 1995 to as high as 26% in 2011 with a growth rate of about 20% per annum. This is followed by SITC 6 (11.5% per annum), SITC 8 (9.1% per annum) and SITC 5 (8.8% per annum). For all product groups, intensive margin growth has been brought about by volume growth and without any discernible decline in the price index. In the case of SITC 8, the traditional labour-intensive group, China's export penetration increased remarkably from about 12% in 1995 to as high as 48% in 2011. For this product group, the value of China's intensive margin for the latest year is a hefty 50% compared to just 3% for India, affirming the increasingly dominant role that the former plays in the world market for labour-intensive products<sup>24</sup>.

Turning to the factor-intensity based groups, Table 3 shows that China's average annual growth rate of export penetration has been the fastest in technology-intensive products (18.4%) followed by human capital-intensive products (12.8%) and unskilled labour-intensive products (10.8%). The group of 'primary products' experienced near stagnation in terms of export penetration. Perhaps, the most striking aspect of China's export performance is the phenomenal increase of its export penetration in unskilled labour-intensive industries from 15% in 1995 to little less than 70% in 2011. For the latest year, the value of China's intensive margin for this category is as high as 73% compared to a paltry 5% for India. For

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<sup>24</sup>In the case of non-manufactured product groups, Indian exports generally grew faster than China's. China's export penetration rate in 'mineral fuels' declined from about 4% in 1995 to 2% in 2011, due to a large negative growth (-7.2 per annum) along the quantity margin. Except for 'Non-ferrous metals' (SITC 68), and 'Food and live animals' (SITC 0), China's export penetration in other non-manufactured product groups recorded either negative growth or stagnation.

this category, China's extensive margin also is highly impressive with an  $EM_{it}$  value of 0.94 in 2011 compared to India's 0.73 for the same year.

China's high export penetration rates in technology and human capital-intensive products are driven by intensive margin, which grew faster than extensive margin in both the product categories. In the case of technology-intensive products, in particular, China's intensive margin grew at a remarkably faster rate of 12% per annum compared to the extensive margin growth rate of 5.7%. While both volume and price contributed positively to the intensive margin growth in technology and human capital intensive industries, the relative contribution of the former has been much higher. The pattern of growth in unskilled labour-intensive industries reveal some contrast in the sense that the growth of extensive margin (8.6% per annum) in this category has been higher than that of intensive margin (2% per annum). Further, intensive margin growth has primarily been a result of price increase rather than quantity increase. Overall, the results for China's unskilled labour-intensive industries indicate that while intensive margin played a crucial role in increasing its export penetration in the past, China maintained its high growth over the last few years by diversifying into new markets and products (as evident from the high extensive margin growth) and by improving quality of the existing products (as evident from the growth of price index). Thus, China's phenomenal export success in unskilled labour intensive industries stemmed from its ability to continually expand the breadth as well the depth of its market presence. In contrast, India's lacklustre performance in this category is entirely due to a lack of depth in its market presence even as it could expand the range of its products and markets.

In contrast to India, China's export composition shows a strong bias in favour of labour-intensive product groups. It is important to note that the above analysis underestimates the importance of labour-intensive exports from China. This bias arises due to China's significant presence in global production networks and fragmentation based trade in a range of manufactured products (Athukorala, 2012; Veeramani, 2013). China's export promotion policies since the 1990s relied heavily on a strategy of integrating its domestic industries with the global production networks<sup>25</sup>. In particular, based on imported parts and components,

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<sup>25</sup> Global production networks refer to the links between a lead or a key firm and its suppliers in different countries (Weiss, 2011). In certain industries, such as electronics and automobiles, technology makes it possible to sub-divide the production process into discrete stages. In such industries, the fragmentation of production process into smaller and more specialised components allows firms to locate parts of production in countries where intensively used resources are available at lower costs

China has emerged as a global hub for electrical and electronic goods assembly. Typically, China imports the parts and components from other parts of East Asia and exports the finished goods to the United States and Europe.

A manifestation of China's participation in global production networks is the growing importance of machinery items in its export basket<sup>26</sup>. Though, machinery as a whole may be considered as a capital-intensive category, certain stages of production or tasks (such as low-end assembly activities) within this category are highly labour-intensive and China largely specializes in the labour-intensive stages of the production process. As noted by Amiti and Freund (2010, p 36) "...on the surface, it appears that China is dramatically changing its comparative advantage, yet a closer examination reveals that it is continuing to specialize in labor-intensive goods". They observe that the labour intensity of China's exports remains unchanged once processing trade is accounted for and that its trade patterns are in accord with traditional trade theories, which place specialization and comparative advantage at the centre of the discourse on trade growth. While analysis based on official trade data generally underestimates the true importance of labour-intensive exports from China, this discrepancy is smaller for India since the latter is cut-off from the global production networks and it remains a minor player in fragmentation-based trade (Athukorala, 2013, Veeramani, 2013).

In the previous section, we noted a major change in the destination of India's exports with the share of high income OECD countries in India's total manufactured exports being declined sharply from 58% in 2000 to 41% in 2010. The share of high income OECD countries has declined for China as well but the pace of decline has been much slower from 62% of manufactured exports in 2000 to 53% in 2010. In contrast to India, China continues to show a high trade orientation with the traditional developed country markets. This pattern is consistent with China's high degree of specialisation in labour-intensive process and product lines.

The results of the decomposition analysis across the two market groups – high income OECD versus other countries – clearly bring out the contrasts between India and China in this regard (Table 4). As noted earlier, India's export penetration to the high-income OECD countries grew much slower (5.5% per annum) compared to other market destinations (8.7% per

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<sup>26</sup> In 2008, machinery contributed to about 45% of Chinese exports and China accounted for about 20% of the world exports in this product category.

annum). In contrast, China's export penetration to the two groups grew broadly at similar pace with the average annual rates of 11.1% and 11.5% respectively. India's slow pace of growth in high-income OECD can be attributed primarily to the negative growth rate of quantity margin. In sharp contrast to India, China's quantity margin in the high income OECD countries recorded a higher rate of growth at 4.5% per annum compared to 3.9% in non-OECD countries.

Figure 3 depicts a disaggregated profile for three major factor intensity based commodity groups – unskilled labour-intensive, technology-intensive and human capital-intensive. Several interesting patterns can be observed. First, India shows a more or less constant intensive margin in both market destination groups and across all commodity groups while China's intensive margins have grown significantly in both market groups and across all commodity groups.

Second, both China and India record relatively higher intensive margin in non-OECD countries than in high-income OECD. This is not surprising given the greater degree of competition in the OECD markets and a high level of intra-OECD trade. As noted above, China records an extremely high intensive margin in unskilled-labour-intensive industries. For the year 2011, China's intensive margin in this product category is as high as 0.6 in high-income OECD and above 1 for other countries<sup>27</sup>.

Third, as far as extensive margin is concerned, India is clearly catching up with China in different product categories and both the market groups and consequently the gap between the two countries is getting narrower. Yet there exists some further scope to improve India's extensive margin. This is particularly the case in non-OECD markets for unskilled labour-intensive industries where the value of India's  $EM_{it}$  in 2011 is much lower (about 0.5) than that of China (well above 0.8). Finally, in contrast to the pattern observed for intensive margin, for both India and China, extensive margin values are higher in high-income OECD group than non-OECD group. This is expected given the larger market size coupled with lower transaction costs of doing business in high income OECD.

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<sup>27</sup> When the value of  $IM_{it}$  is above 1, it implies that China's export value of unskilled labour intensive products in non-OECD countries exceeds the value of these exports (in the common set) by 'rest of the world'.

## 5. Conclusion and Implications

The sustainable solution to the problem of India's high current account deficit lies in ensuring that export growth keeps pace with the growth of imports. What type of policy interventions would help achieve faster export growth? Should export promotion policies be targeted at accelerating export growth at the intensive or at the extensive margin? To help answer these questions, we have undertaken a comparative study of exports from India and China by analysing the role of extensive and intensive margins in the export market penetration of the two countries during 1995-2011. We further decompose intensive margin into quantity and price margins. The comparison with China is important because knowing which of the two margins has been the prime driver of China's spectacular export growth may provide useful policy perspectives to other countries, such as India, aspiring to become major exporters.

India's exports performed relatively well since the early 2000s compared to its own past record. While extensive margin contributed to export growth throughout the period, growth along the intensive margin began only since the mid-2000s. India's export growth has been driven by product groups such as 'non-ferrous metals', 'refined petroleum', 'machinery', 'transport equipment' and 'chemicals'. While export of 'non-ferrous metals' has been driven by volume growth, extensive margin has been responsible for the export growth of 'refined petroleum'. In the case of the remaining product groups, both the margins contributed positively to the export expansion. Traditional labour-intensive products performed poorly compared to capital-intensive groups. The lacklustre performance in labour-intensive products is entirely due to a lack of depth in India's market presence even as it expanded the range of its products and markets. India's export penetration to the high-income OECD countries grew much slower compared to other market destinations, which is expected given the increasing bias in India's export specialisation in relatively skill and capital-intensive products.

China's export success has been essentially driven by volume growth in a range of product groups within manufacturing. Intensification, rather than diversification, has been the crucial driving force behind China's export success. By contrast, lack of intensification is the main reason why India lags behind China in terms of export market penetration. India lags significantly behind China in terms of intensive margin due to an abysmally low and stagnant quantity margin. As far as extensive margin is concerned, the gap between the two countries



is getting narrower as India is clearly catching up with China. By contrast to India, China's export composition shows a strong bias in favour of labour-intensive product groups and production process even within industries usually classified as technology-intensive.

A major misconception among the policy makers in India is that the country should necessarily diversify to new markets in the developing world if it has to increase its export volume. Based on this perception, the Indian government had recently announced an export incentive scheme providing explicit financial supports for market diversification<sup>28</sup>. Our analysis suggests that the country can reap rich dividends by adopting policies aimed at accelerating export growth at the intensive margin. Contrary to the general perception, there exist a great potential for India to expand and intensify its export relationships with the traditional developed country partners. However, this would necessitate India's greater participation in the vertically integrated global supply chains and a realignment of its specialization in labour-intensive processes and product lines. To this end, it is important to make the labour market more flexible, promote investment in physical infrastructure, remove market distortions, and reduce the administrative costs on business. An important lesson to be learned from China's experience is that sustained export expansion requires a policy framework which places specialization and comparative advantage at its centre.

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<sup>28</sup> See the "Foreign Trade Policy 2009-14", Ministry of Commerce and Industry, Department of Commerce, Government of India , Viewed on 1 November 2011 (<http://dgft.gov.in/exim/2000/policy/ftp-plcontent0910.pdf>)

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## Tables and Figures

Table 1: Export Decomposition of Aggregate Merchandise, India and China, 1995-2011

Year	India					China				
	$S_{it}$	$EM_{it}$	$IM_{it}$	$P_{it}$	$Q_{it}$	$S_{it}$	$EM_{it}$	$IM_{it}$	$P_{it}$	$Q_{it}$
1995	0.007	0.247	0.027	0.825	0.032	0.040	0.389	0.104	0.443	0.234
1996	0.007	0.306	0.024	0.760	0.031	0.040	0.374	0.107	0.508	0.210
1997	0.007	0.320	0.022	0.790	0.028	0.047	0.406	0.115	0.472	0.244
1998	0.007	0.331	0.020	0.769	0.026	0.047	0.409	0.116	0.444	0.261
1999	0.007	0.353	0.020	0.854	0.023	0.049	0.434	0.112	0.467	0.239
2000	0.009	0.529	0.016	0.933	0.017	0.055	0.679	0.081	0.488	0.167
2001	0.009	0.525	0.017	0.908	0.019	0.062	0.661	0.093	0.513	0.181
2002	0.010	0.546	0.018	0.839	0.021	0.071	0.694	0.102	0.491	0.208
2003	0.010	0.570	0.017	0.866	0.020	0.085	0.707	0.120	0.490	0.244
2004	0.011	0.607	0.017	0.871	0.020	0.095	0.724	0.132	0.490	0.269
2005	0.012	0.613	0.020	0.947	0.021	0.110	0.756	0.145	0.539	0.270
2006	0.013	0.627	0.021	0.963	0.022	0.124	0.767	0.161	0.541	0.298
2007	0.015	0.631	0.023	0.927	0.025	0.147	0.760	0.194	0.545	0.355
2008	0.016	0.635	0.026	0.865	0.030	0.153	0.742	0.207	0.566	0.365
2009	0.019	0.667	0.029	0.820	0.035	0.161	0.750	0.215	0.624	0.344
2010	0.015	0.484	0.031	1.209	0.026	0.185	0.750	0.246	0.551	0.447
2011	0.022	0.675	0.033	0.856	0.039	0.184	0.749	0.245	0.567	0.433
$r$	7.5	5.6	2.0	1.2	0.9	11.5	4.9	6.3	1.6	4.6

Note:  $r$  denotes average annual growth rates computed using semi-logarithmic regressions.

Source: Author's estimation using COMTRADE-WITS data.

Table 2: Export Decomposition for Broad Groups of Commodities, India and China, 1995-2011

<b>Manufacturing</b>										
	India					China				
Year	$S_{it}$	$EM_{it}$	$IM_{it}$	$P_{it}$	$Q_{it}$	$S_{it}$	$EM_{it}$	$IM_{it}$	$P_{it}$	$Q_{it}$
1995	0.006	0.263	0.022	0.784	0.028	0.043	0.391	0.109	0.378	0.289
2000	0.007	0.593	0.011	0.878	0.013	0.061	0.748	0.081	0.449	0.181
2005	0.009	0.667	0.014	0.860	0.016	0.131	0.841	0.156	0.498	0.314
2006	0.010	0.672	0.014	0.854	0.017	0.152	0.857	0.177	0.496	0.357
2007	0.011	0.690	0.015	0.874	0.018	0.186	0.855	0.218	0.506	0.431
2008	0.012	0.712	0.017	0.840	0.021	0.204	0.856	0.239	0.519	0.460
2009	0.015	0.755	0.020	0.866	0.023	0.213	0.862	0.247	0.585	0.422
2010	0.011	0.491	0.022	1.318	0.017	0.247	0.868	0.285	0.510	0.559
2011	0.017	0.768	0.022	0.839	0.026	0.257	0.882	0.291	0.521	0.558
<i>r</i>	6.4	5.7	0.6	1.5	-0.8	13.5	5.9	7.2	2.1	5.0
<b>Mineral Fuels</b>										
	India					China				
Year	$S_{it}$	$EM_{it}$	$IM_{it}$	$P_{it}$	$Q_{it}$	$S_{it}$	$EM_{it}$	$IM_{it}$	$P_{it}$	$Q_{it}$
1995	0.000	0.006	0.053	0.833	0.063	0.043	0.486	0.089	0.983	0.090
2000	0.005	0.135	0.035	1.309	0.027	0.027	0.397	0.068	1.078	0.063
2005	0.016	0.381	0.042	1.063	0.039	0.028	0.533	0.052	1.026	0.050
2006	0.023	0.508	0.045	1.102	0.041	0.023	0.565	0.041	1.126	0.036
2007	0.029	0.456	0.064	1.020	0.063	0.026	0.568	0.046	1.034	0.045
2008	0.027	0.422	0.063	0.971	0.065	0.026	0.567	0.046	1.159	0.040
2009	0.029	0.392	0.073	0.930	0.079	0.025	0.578	0.043	0.957	0.045
2010	0.036	0.555	0.066	1.305	0.050	0.026	0.573	0.046	1.013	0.045
2011	0.038	0.413	0.092	1.016	0.091	0.022	0.559	0.040	0.994	0.040
<i>r</i>	29.4	33.6	-3.2	6.0	-8.6	-3.2	3.5	-6.5	0.7	-7.2
<b>Other Products</b>										
	India					China				
Year	$S_{it}$	$EM_{it}$	$IM_{it}$	$P_{it}$	$Q_{it}$	$S_{it}$	$EM_{it}$	$IM_{it}$	$P_{it}$	$Q_{it}$
1995	0.012	0.230	0.053	0.955	0.055	0.031	0.375	0.082	0.833	0.098
2000	0.024	0.331	0.071	1.106	0.064	0.037	0.411	0.090	0.905	0.099
2005	0.030	0.440	0.069	1.301	0.053	0.047	0.451	0.105	1.087	0.097
2006	0.027	0.459	0.059	1.392	0.043	0.050	0.462	0.107	1.081	0.099
2007	0.029	0.437	0.065	1.125	0.058	0.048	0.476	0.100	0.945	0.106
2008	0.030	0.446	0.067	0.924	0.072	0.046	0.436	0.105	0.955	0.110
2009	0.033	0.457	0.072	0.678	0.106	0.046	0.448	0.104	1.026	0.101
2010	0.022	0.432	0.052	0.823	0.063	0.052	0.449	0.116	0.974	0.119
2011	0.038	0.490	0.078	0.838	0.093	0.052	0.462	0.113	1.023	0.111
<i>r</i>	6.9	4.4	2.4	-0.2	2.5	3.7	1.7	2.0	0.4	1.6

Note: (i) *r* denotes average annual growth rates computed using semi-logarithmic regressions.

(ii) Values for 1996-1999 are not reported to economise space, but are available upon request.

Source: Author's estimation using COMTRADE-WITS data.

Table 3: Export Decomposition for Factor Intensity Based Product Groups, India and China, 1995-2011

<b>Primary resource intensive</b>										
	India					China				
year	Sit	EMit	IMit	Pit	Qit	Sit	EMit	IMit	Pit	Qit
1995	0.011	0.189	0.058	0.954	0.061	0.034	0.391	0.086	0.871	0.099
2000	0.010	0.237	0.044	0.942	0.046	0.033	0.386	0.085	0.931	0.092
2005	0.018	0.394	0.046	0.987	0.047	0.035	0.470	0.075	0.959	0.078
2006	0.021	0.458	0.046	0.970	0.048	0.032	0.486	0.067	0.993	0.067
2007	0.024	0.424	0.058	0.982	0.059	0.034	0.493	0.069	0.933	0.074
2008	0.024	0.420	0.058	0.957	0.061	0.032	0.482	0.067	1.041	0.065
2009	0.024	0.408	0.059	0.927	0.064	0.035	0.486	0.071	0.970	0.073
2010	0.028	0.479	0.059	1.062	0.056	0.037	0.486	0.076	0.999	0.076
2011	0.031	0.444	0.070	0.959	0.073	0.034	0.485	0.071	1.008	0.070
r	7.3	6.5	0.8	0.9	-0.1	0.4	2.5	-2.0	0.3	-2.4
<b>Natural resource intensive</b>										
	India					China				
year	Sit	EMit	IMit	Pit	Qit	Sit	EMit	IMit	Pit	Qit
1995	0.009	0.249	0.036	1.048	0.035	0.046	0.453	0.102	0.704	0.145
2000	0.046	0.467	0.098	1.483	0.066	0.054	0.587	0.092	0.875	0.105
2005	0.050	0.582	0.086	1.914	0.045	0.102	0.666	0.153	1.050	0.145
2006	0.040	0.590	0.067	2.303	0.029	0.108	0.683	0.159	1.042	0.152
2007	0.043	0.562	0.077	1.379	0.056	0.105	0.658	0.160	0.914	0.174
2008	0.048	0.567	0.084	0.912	0.092	0.112	0.662	0.170	0.801	0.212
2009	0.065	0.607	0.108	0.512	0.210	0.103	0.660	0.156	0.985	0.158
2010	0.026	0.500	0.053	0.938	0.056	0.123	0.676	0.182	0.808	0.225
2011	0.075	0.581	0.130	0.761	0.170	0.122	0.699	0.175	0.925	0.189
r	13.5	4.8	8.2	-1.4	9.7	7.5	3.0	4.4	1.6	2.8
<b>Unskilled labour intensive</b>										
	India					China				
year	Sit	EMit	IMit	Pit	Qit	Sit	EMit	IMit	Pit	Qit
1995	0.020	0.227	0.090	0.817	0.111	0.150	0.301	0.497	0.451	1.103
2000	0.024	0.634	0.038	0.861	0.045	0.205	0.823	0.249	0.673	0.371
2005	0.027	0.715	0.037	0.850	0.044	0.361	0.917	0.394	0.569	0.692
2006	0.026	0.713	0.037	0.853	0.043	0.421	0.921	0.457	0.542	0.842
2007	0.026	0.699	0.038	0.893	0.042	0.479	0.914	0.524	0.610	0.858
2008	0.029	0.724	0.040	0.860	0.046	0.519	0.910	0.570	0.565	1.008
2009	0.032	0.718	0.045	0.986	0.046	0.518	0.892	0.581	0.828	0.701
2010	0.025	0.651	0.038	1.515	0.025	0.667	0.941	0.709	0.472	1.501
2011	0.036	0.731	0.050	0.891	0.056	0.687	0.937	0.734	0.545	1.345
r	2.6	7.0	-4.1	2.3	-6.2	10.8	8.6	2.0	1.5	0.6

Table Contd.

Table 3(Contd): Export Decomposition for Factor Intensity Based Product Groups, India and China, 1995-2011

<b>Technology intensive</b>										
	India					China				
year	Sit	EMit	IMit	Pit	Qit	Sit	EMit	IMit	Pit	Qit
1995	0.002	0.257	0.008	0.805	0.010	0.023	0.405	0.057	0.324	0.176
2000	0.003	0.625	0.004	0.815	0.005	0.042	0.792	0.054	0.361	0.148
2005	0.005	0.696	0.007	0.874	0.008	0.122	0.876	0.139	0.457	0.304
2006	0.006	0.701	0.008	0.875	0.009	0.141	0.884	0.160	0.459	0.349
2007	0.007	0.737	0.009	0.877	0.011	0.190	0.874	0.217	0.460	0.472
2008	0.009	0.742	0.012	0.905	0.013	0.211	0.886	0.239	0.489	0.488
2009	0.010	0.798	0.012	0.840	0.015	0.218	0.894	0.244	0.524	0.466
2010	0.005	0.396	0.013	1.307	0.010	0.254	0.905	0.280	0.507	0.553
2011	0.011	0.815	0.014	0.818	0.017	0.259	0.912	0.284	0.480	0.591
r	9.9	5.2	4.4	1.5	2.9	18.4	5.7	12.0	2.7	9.1
<b>Human capital intensive</b>										
	India					China				
year	Sit	EMit	IMit	Pit	Qit	Sit	EMit	IMit	Pit	Qit
1995	0.004	0.291	0.013	0.728	0.018	0.025	0.400	0.063	0.399	0.158
2000	0.005	0.520	0.010	1.006	0.010	0.037	0.639	0.058	0.461	0.125
2005	0.009	0.602	0.016	0.817	0.019	0.074	0.760	0.097	0.535	0.181
2006	0.010	0.609	0.017	0.806	0.021	0.087	0.795	0.110	0.546	0.201
2007	0.010	0.617	0.017	0.843	0.020	0.100	0.817	0.122	0.517	0.237
2008	0.011	0.668	0.017	0.735	0.023	0.111	0.806	0.138	0.539	0.256
2009	0.017	0.704	0.025	0.806	0.031	0.102	0.808	0.126	0.540	0.234
2010	0.014	0.596	0.024	1.228	0.019	0.117	0.793	0.148	0.532	0.278
2011	0.018	0.709	0.025	0.833	0.030	0.131	0.827	0.158	0.587	0.269
r	10.7	6.0	4.5	0.8	3.7	12.8	5.6	6.8	1.9	4.8

Note: (i)  $r$  denotes average annual growth rates computed using semi-logarithmic regressions.

(ii) Values for 1996-1999 are not reported to economise space, but are available upon request.

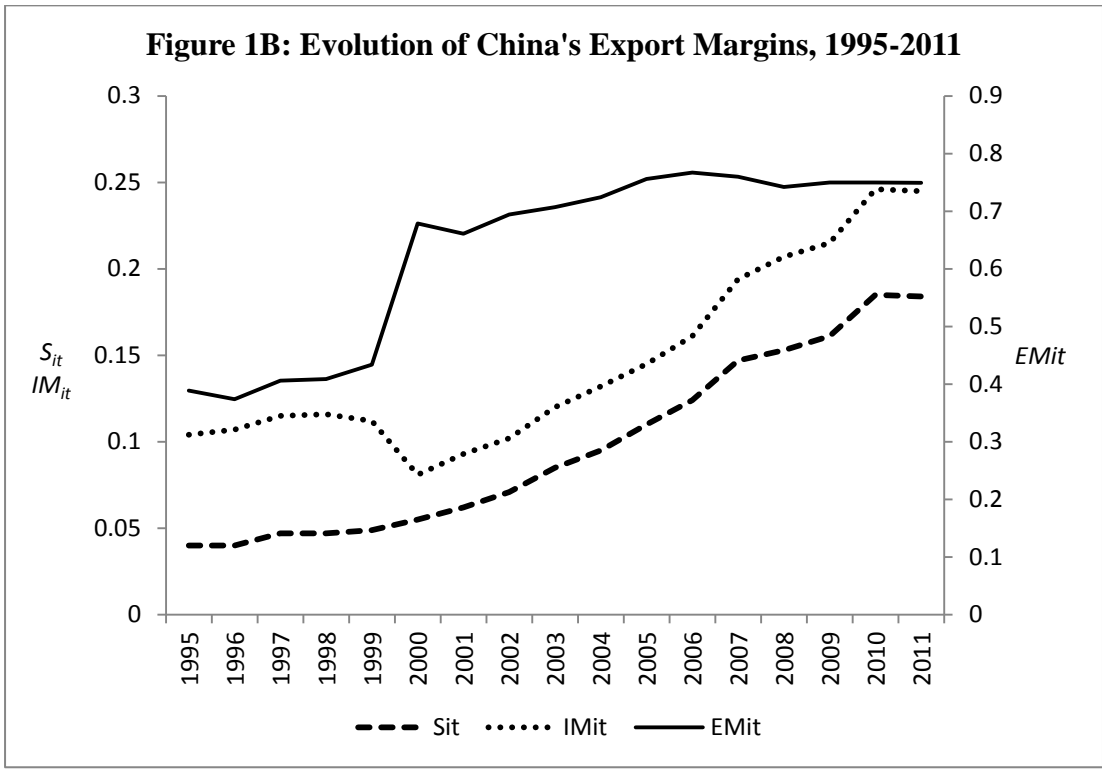
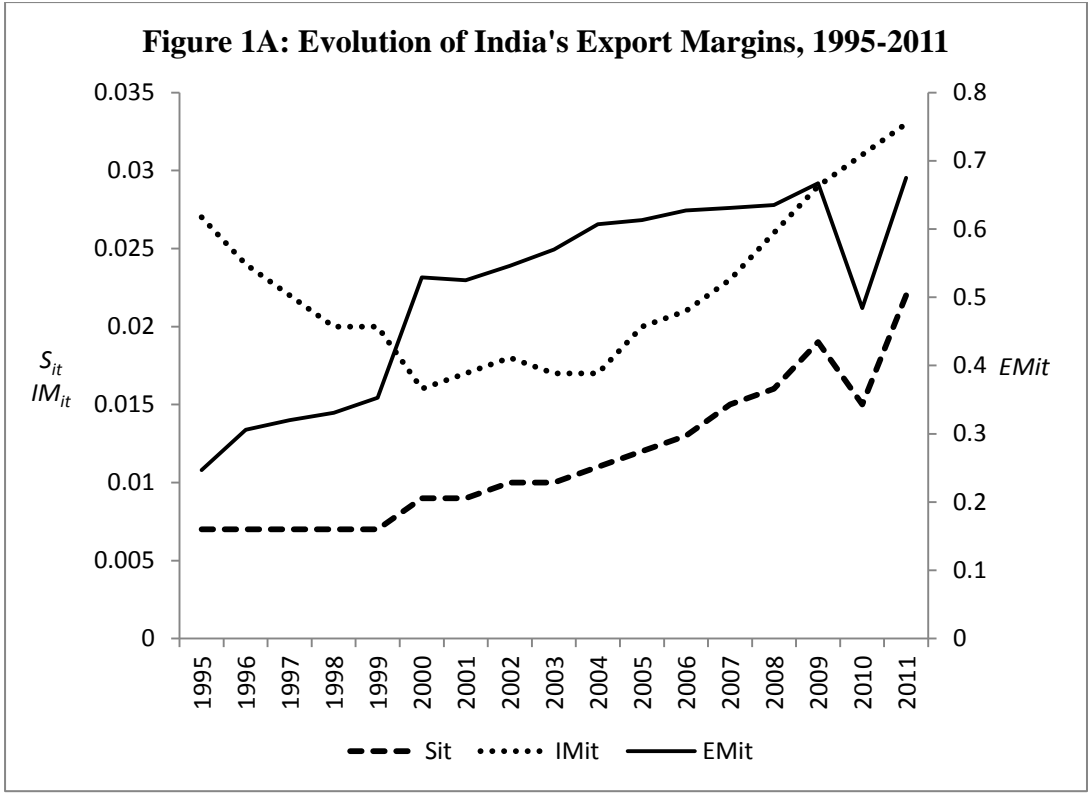
Source: Author's estimation using COMTRADE-WITS data.

Table 4: Export Decomposition across Different Market Destinations: High Income OECD versus Other Countries

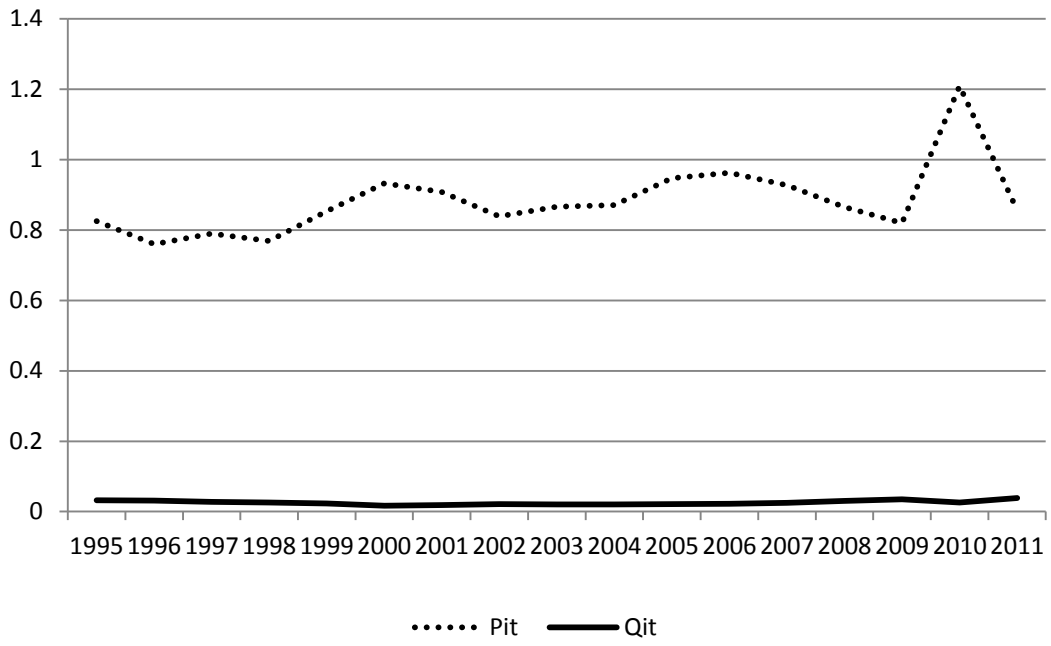
<b>Exports to high income OECD countries</b>										
	India					China				
year	Sit	EMit	IMit	Pit	Qit	Sit	EMit	IMit	Pit	Qit
1995	0.005	0.270	0.020	0.805	0.025	0.032	0.409	0.079	0.437	0.182
2000	0.007	0.565	0.012	0.888	0.013	0.046	0.699	0.066	0.495	0.134
2005	0.008	0.644	0.013	0.946	0.014	0.090	0.769	0.117	0.517	0.227
2006	0.009	0.663	0.013	1.004	0.013	0.099	0.778	0.127	0.530	0.240
2007	0.009	0.653	0.014	0.883	0.016	0.115	0.771	0.149	0.532	0.281
2008	0.010	0.664	0.015	0.843	0.018	0.122	0.755	0.161	0.560	0.288
2009	0.012	0.693	0.017	0.796	0.022	0.129	0.763	0.169	0.605	0.279
2010	0.009	0.520	0.017	1.273	0.014	0.148	0.759	0.194	0.534	0.364
2011	0.014	0.691	0.020	0.785	0.025	0.144	0.761	0.189	0.571	0.332
r	5.5	5.3	0.3	1.3	-1.1	11.1	4.7	6.1	1.5	4.5
<b>Exports to other countries</b>										
	India					China				
year	Sit	EMit	IMit	Pit	Qit	Sit	EMit	IMit	Pit	Qit
1995	0.009	0.199	0.047	0.871	0.053	0.060	0.343	0.173	0.457	0.380
2000	0.013	0.442	0.030	1.038	0.029	0.081	0.621	0.130	0.471	0.276
2005	0.021	0.546	0.038	0.973	0.039	0.163	0.724	0.225	0.588	0.382
2006	0.022	0.552	0.040	0.947	0.043	0.187	0.739	0.254	0.564	0.450
2007	0.025	0.587	0.043	0.999	0.043	0.227	0.733	0.310	0.569	0.545
2008	0.028	0.581	0.048	0.903	0.053	0.224	0.713	0.315	0.577	0.545
2009	0.031	0.625	0.050	0.871	0.058	0.229	0.722	0.317	0.654	0.485
2010	0.024	0.429	0.057	1.153	0.049	0.258	0.731	0.353	0.575	0.614
2011	0.036	0.651	0.055	0.933	0.059	0.260	0.724	0.359	0.560	0.641
r	8.7	6.7	1.9	0.9	1.0	11.5	5.6	5.6	1.6	3.9

Note: (i) *r* denotes average annual growth rates computed using semi-logarithmic regressions.  
(ii) Values for 1996-1999 are not reported to economise space, but are available upon request.  
Source: Author's estimation using COMTRADE-WITS data.





**Figure 2A: Evolution of Price and Quantity Margins, India, 1995-2011**



**Figure 2B: Evolution of Price and Quantity Margins, China, 1995-2011**

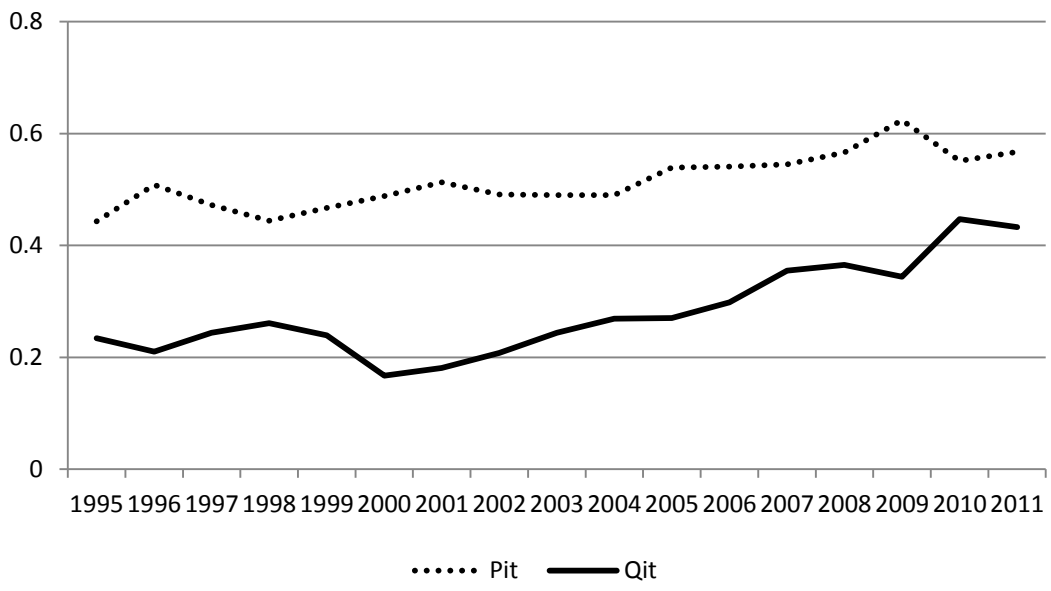


Figure 3: Evolution of Margins in Different Market Destinations, High Income OECD versus Other Countries, Factor Intensity Based Classification

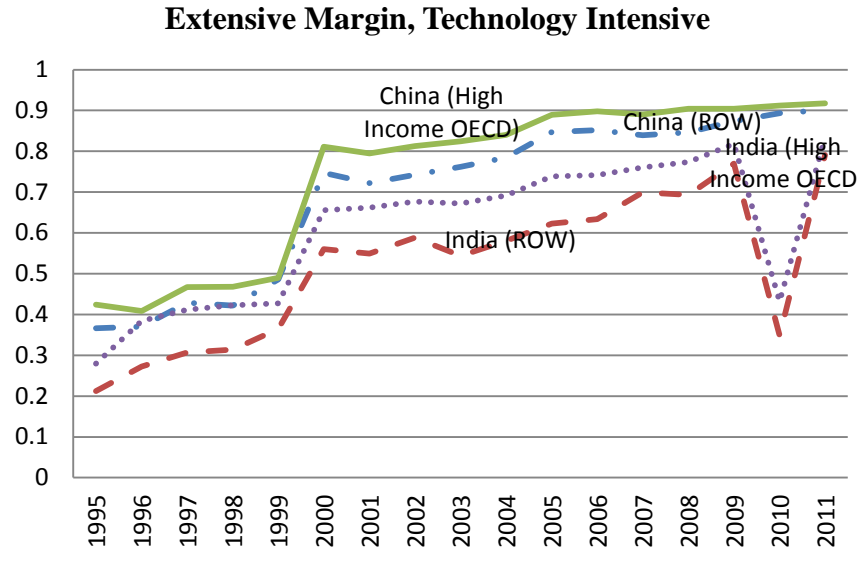
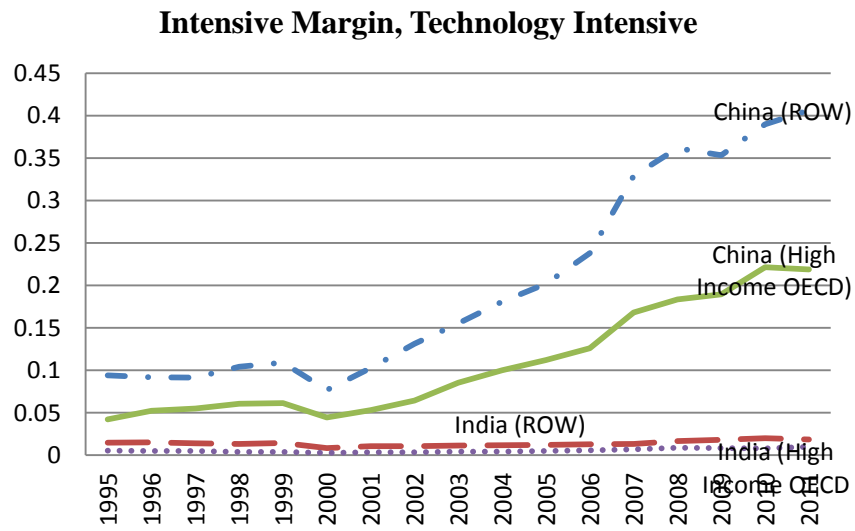
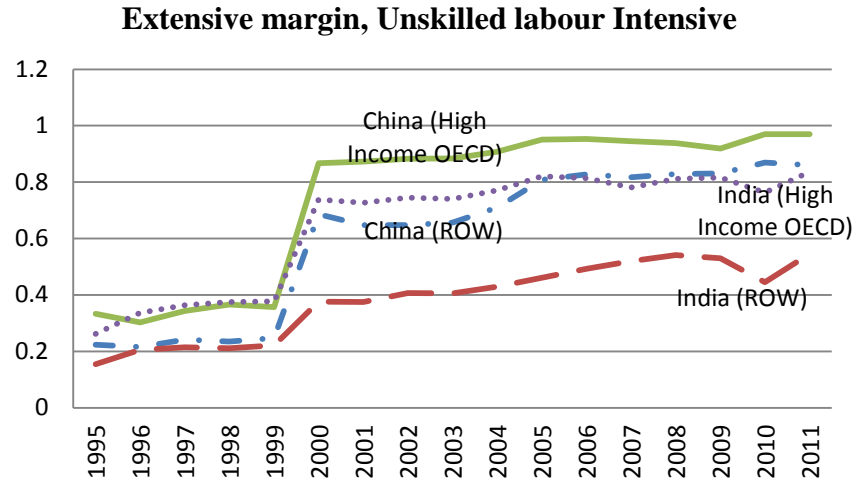
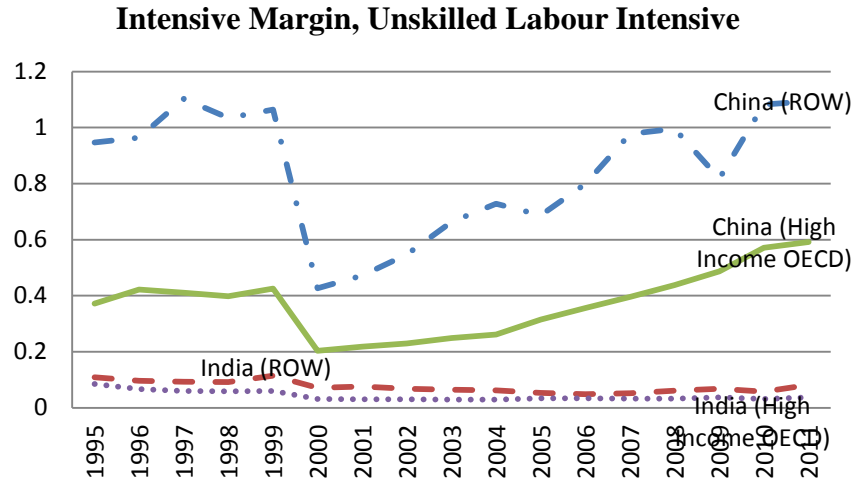
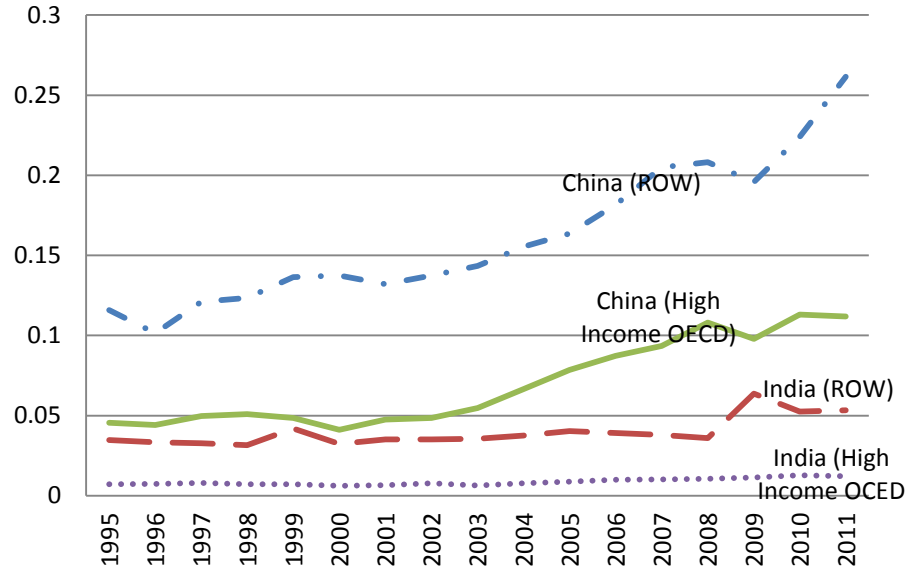
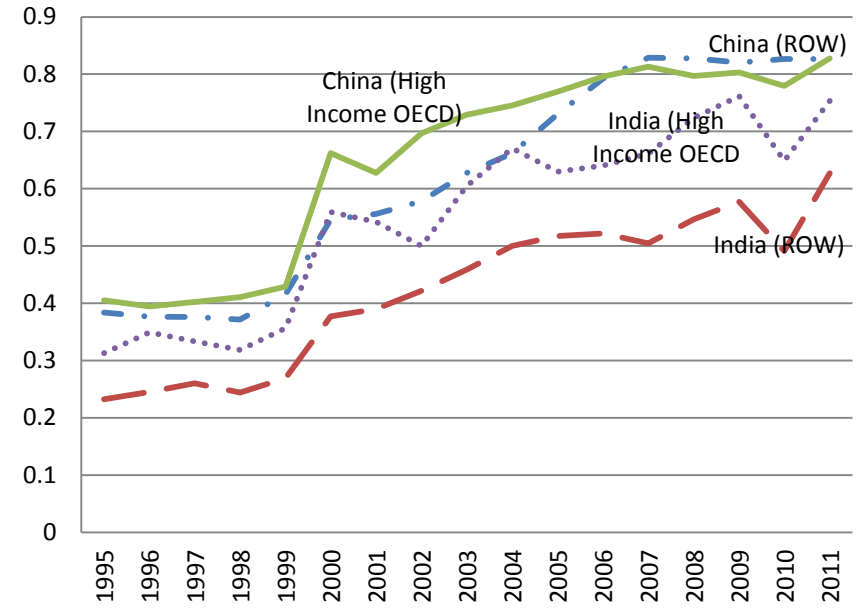


Figure 3 (contd): Evolution of Margins in Different Market Destinations, High Income OECD vs Other Countries, factor Intensity Based Classification

**Intensive Margin, Human Capital Intensive**



**Extensive Margin, Human Capital Intensive**



## Appendix

Table A1: Decomposition of Export Shares across Disaggregated Product Groups in 'other products', India and China

<b>Food and live animals (SITC 0)</b>										
	India					China				
year	Sit	EMit	IMit	Pit	Qit	Sit	EMit	IMit	Pit	Qit
1995	0.018	0.279	0.064	0.995	0.064	0.034	0.325	0.105	0.776	0.135
2000	0.017	0.316	0.053	0.877	0.060	0.045	0.365	0.123	0.780	0.158
2005	0.018	0.413	0.044	0.830	0.053	0.053	0.405	0.131	0.834	0.158
2006	0.019	0.406	0.047	0.816	0.057	0.055	0.406	0.136	0.851	0.160
2007	0.020	0.377	0.054	0.866	0.062	0.055	0.415	0.133	0.830	0.160
2008	0.023	0.413	0.055	0.890	0.062	0.049	0.385	0.127	0.873	0.145
2009	0.019	0.400	0.047	0.864	0.055	0.054	0.399	0.136	0.917	0.148
2010	0.022	0.412	0.053	1.043	0.051	0.062	0.390	0.159	0.961	0.165
2011	0.027	0.436	0.063	0.853	0.073	0.063	0.394	0.160	0.985	0.162
r	1.9	3.2	-1.2	-0.1	-1.2	3.8	1.5	2.3	1.1	1.2
<b>Beverages and tobacco (SITC 1)</b>										
	India					China				
year	Sit	EMit	IMit	Pit	Qit	Sit	EMit	IMit	Pit	Qit
1995	0.003	0.279	0.010	0.476	0.021	0.028	0.612	0.045	0.689	0.066
2000	0.004	0.379	0.011	0.493	0.022	0.010	0.591	0.017	0.723	0.024
2005	0.004	0.480	0.009	0.468	0.019	0.013	0.509	0.026	0.490	0.053
2006	0.005	0.510	0.009	0.464	0.020	0.012	0.540	0.023	0.489	0.046
2007	0.005	0.579	0.009	0.534	0.017	0.015	0.616	0.025	0.540	0.046
2008	0.007	0.602	0.012	0.565	0.022	0.015	0.573	0.027	0.557	0.048
2009	0.011	0.626	0.017	0.672	0.025	0.018	0.649	0.028	0.672	0.041
2010	0.010	0.584	0.017	0.936	0.018	0.020	0.642	0.031	0.713	0.043
2011	0.008	0.633	0.013	0.587	0.022	0.020	0.648	0.031	0.756	0.041
r	5.7	4.0	1.6	2.0	-0.3	-0.6	1.1	-1.7	-8.2	7.0
<b>Crude materials, inedible, except fuels (SITC 2)</b>										
	India					China				
year	Sit	EMit	IMit	Pit	Qit	Sit	EMit	IMit	Pit	Qit
1995	0.009	0.150	0.062	0.969	0.064	0.029	0.410	0.070	0.999	0.070
2000	0.011	0.259	0.041	0.978	0.042	0.033	0.370	0.088	1.071	0.082
2005	0.029	0.392	0.073	1.136	0.064	0.034	0.439	0.077	1.197	0.064
2006	0.026	0.423	0.061	0.943	0.065	0.028	0.429	0.066	1.044	0.063
2007	0.028	0.411	0.067	1.121	0.060	0.027	0.462	0.059	1.013	0.058
2008	0.028	0.417	0.067	1.074	0.062	0.032	0.419	0.076	1.164	0.065
2009	0.029	0.430	0.067	1.052	0.063	0.031	0.416	0.075	1.425	0.053
2010	0.026	0.426	0.061	0.631	0.096	0.031	0.437	0.071	1.142	0.063
2011	0.026	0.517	0.050	0.952	0.052	0.032	0.436	0.073	1.179	0.062
r	8.2	6.9	1.2	-0.7	1.9	0.5	1.0	-0.5	1.0	-1.5

Table Contd.

Table A1(Contd): Decomposition of Export Shares across Disaggregated Product Groups in 'other products', India and China

<b>Animal and vegetable oils, fats and waxes (SITC 4)</b>										
	India					China				
year	Sit	EMit	IMit	Pit	Qit	Sit	EMit	IMit	Pit	Qit
1995	0.012	0.108	0.108	1.122	0.096	0.022	0.062	0.359	1.287	0.279
2000	0.016	0.149	0.107	1.682	0.063	0.007	0.113	0.065	1.594	0.041
2005	0.011	0.236	0.046	1.266	0.036	0.009	0.156	0.057	1.381	0.041
2006	0.009	0.279	0.033	1.191	0.028	0.011	0.110	0.097	1.354	0.072
2007	0.009	0.267	0.033	1.253	0.027	0.007	0.120	0.056	1.538	0.037
2008	0.009	0.228	0.039	1.261	0.031	0.009	0.109	0.080	1.503	0.053
2009	0.012	0.212	0.055	1.272	0.043	0.007	0.089	0.078	1.431	0.055
2010	0.012	0.215	0.057	1.047	0.055	0.006	0.107	0.060	1.557	0.038
2011	0.014	0.269	0.051	1.206	0.042	0.007	0.112	0.060	1.701	0.035
r	0.7	5.6	-4.7	-0.2	-4.5	-6.3	1.1	-7.3	1.5	-8.7
<b>Non-ferrous metals (SITC 68)</b>										
	India					China				
year	Sit	EMit	IMit	Pit	Qit	Sit	EMit	IMit	Pit	Qit
1995	0.002	0.208	0.010	0.872	0.011	0.026	0.428	0.061	0.850	0.071
2000	0.004	0.431	0.009	0.898	0.010	0.040	0.489	0.083	0.945	0.088
2005	0.010	0.533	0.020	0.937	0.021	0.078	0.542	0.145	0.859	0.168
2006	0.015	0.559	0.027	0.980	0.028	0.085	0.592	0.144	0.866	0.166
2007	0.014	0.517	0.027	0.974	0.027	0.078	0.578	0.135	0.850	0.159
2008	0.013	0.524	0.024	0.955	0.025	0.080	0.574	0.140	0.857	0.163
2009	0.021	0.579	0.036	1.230	0.029	0.076	0.531	0.144	0.843	0.171
2010	0.027	0.543	0.050	0.810	0.062	0.082	0.584	0.141	0.900	0.157
2011	0.014	0.515	0.027	1.061	0.026	0.086	0.610	0.141	0.904	0.155
r	16.6	4.6	11.5	0.6	10.8	8.4	2.2	6.1	-0.2	6.3
<b>Pearls and precious or semiprecious stones (SITC 667)</b>										
	India					China				
year	Sit	EMit	IMit	Pit	Qit	Sit	EMit	IMit	Pit	Qit
2000	0.535	0.859	0.622	1.995	0.312	0.030	0.817	0.037	1.935	0.019
2005	0.480	0.954	0.503	4.207	0.120	0.043	0.807	0.053	16.339	0.003
2006	0.350	0.977	0.359	7.902	0.045	0.046	0.774	0.059	23.227	0.003
2007	0.400	0.970	0.412	2.177	0.189	0.044	0.816	0.054	4.364	0.012
2008	0.575	0.972	0.591	0.899	0.658	0.054	0.792	0.068	2.468	0.028
2009	0.427	0.935	0.457	0.297	1.538	0.030	0.858	0.035	2.124	0.017
2010	0.000	0.072	0.006	1.905	0.003	0.057	0.843	0.067	1.109	0.060
2011	0.686	0.950	0.722	0.613	1.177	0.041	0.871	0.048	1.432	0.033
r	-19.9	-6.8	-14.1	-8.8	-5.8	2.3	0.9	1.4	-4.0	5.6

Table A2: Decomposition of Export Shares across Disaggregated Product Groups in Manufacturing, India and China

<b>Chemicals (SITC 5)</b>										
	India					China				
year	Sit	EMit	IMit	Pit	Qit	Sit	EMit	IMit	Pit	Qit
1995	0.005	0.291	0.018	0.801	0.022	0.024	0.521	0.047	0.511	0.091
2000	0.009	0.576	0.016	0.629	0.025	0.027	0.662	0.040	0.510	0.079
2005	0.013	0.707	0.018	0.594	0.030	0.043	0.788	0.054	0.506	0.107
2006	0.014	0.702	0.020	0.590	0.034	0.047	0.798	0.059	0.488	0.121
2007	0.014	0.702	0.020	0.574	0.035	0.056	0.807	0.070	0.486	0.143
2008	0.016	0.721	0.023	0.558	0.041	0.068	0.813	0.084	0.537	0.156
2009	0.017	0.751	0.022	0.438	0.050	0.060	0.839	0.071	0.461	0.155
2010	0.010	0.421	0.023	0.969	0.024	0.073	0.848	0.087	0.500	0.173
2011	0.021	0.768	0.027	0.590	0.045	0.083	0.849	0.098	0.553	0.176
r	6.3	3.6	2.6	-0.9	3.5	8.8	3.1	5.5	-0.3	5.7
<b>Manufactured materials (SITC 6 less 68 and 667)</b>										
	India					China				
year	Sit	EMit	IMit	Pit	Qit	Sit	EMit	IMit	Pit	Qit
1995	0.013	0.263	0.050	0.828	0.060	0.059	0.408	0.144	0.479	0.301
2000	0.017	0.499	0.034	0.817	0.041	0.074	0.648	0.114	0.624	0.183
2005	0.021	0.620	0.033	0.862	0.039	0.144	0.800	0.180	0.590	0.305
2006	0.021	0.624	0.033	0.862	0.039	0.171	0.843	0.203	0.601	0.338
2007	0.020	0.619	0.033	0.886	0.037	0.192	0.863	0.222	0.588	0.378
2008	0.022	0.640	0.035	0.845	0.041	0.209	0.852	0.245	0.618	0.396
2009	0.022	0.645	0.035	0.793	0.044	0.203	0.856	0.237	0.654	0.362
2010	0.025	0.597	0.041	1.212	0.034	0.236	0.864	0.273	0.571	0.479
2011	0.026	0.666	0.039	0.811	0.049	0.254	0.865	0.294	0.631	0.466
r	4.0	5.1	-1.1	1.1	-2.2	11.5	5.6	5.5	1.4	4.1
<b>Machinery and transport equipment (SITC 7)</b>										
	India					China				
year	Sit	EMit	IMit	Pit	Qit	Sit	EMit	IMit	Pit	Qit
1995	0.001	0.258	0.006	0.694	0.008	0.020	0.361	0.055	0.303	0.182
2000	0.001	0.604	0.002	0.949	0.002	0.039	0.760	0.051	0.381	0.135
2005	0.003	0.649	0.005	1.034	0.005	0.121	0.841	0.144	0.504	0.286
2006	0.003	0.655	0.005	1.044	0.005	0.141	0.856	0.165	0.490	0.337
2007	0.004	0.693	0.006	1.094	0.006	0.185	0.846	0.219	0.516	0.424
2008	0.006	0.718	0.008	1.131	0.007	0.207	0.853	0.242	0.517	0.468
2009	0.008	0.779	0.010	1.168	0.009	0.230	0.857	0.268	0.587	0.457
2010	0.005	0.437	0.010	1.407	0.007	0.263	0.853	0.308	0.543	0.567
2011	0.009	0.789	0.011	0.962	0.012	0.263	0.881	0.299	0.516	0.579
r	12.4	6.1	6.0	2.9	3.0	19.9	6.5	12.6	3.8	8.5

Table Contd.

Table A2 (Contd): Decomposition of Export Shares across Disaggregated Product Groups in Manufacturing, India and China

<b>Miscellaneous manufactured articles (SITC 8)</b>										
	India					China				
year	Sit	EMit	IMit	Pit	Qit	Sit	EMit	IMit	Pit	Qit
1995	0.012	0.260	0.047	0.880	0.053	0.125	0.368	0.340	0.395	0.860
2000	0.014	0.656	0.022	1.000	0.022	0.163	0.874	0.186	0.480	0.388
2005	0.017	0.743	0.022	0.865	0.026	0.250	0.940	0.266	0.427	0.624
2006	0.018	0.754	0.023	0.834	0.028	0.286	0.941	0.304	0.447	0.681
2007	0.018	0.743	0.024	0.879	0.028	0.347	0.937	0.370	0.431	0.858
2008	0.018	0.768	0.023	0.742	0.031	0.368	0.930	0.396	0.441	0.898
2009	0.030	0.791	0.038	0.999	0.038	0.366	0.917	0.399	0.600	0.665
2010	0.019	0.633	0.029	1.594	0.018	0.446	0.953	0.468	0.405	1.156
2011	0.028	0.804	0.035	0.923	0.038	0.482	0.953	0.505	0.447	1.130
r	5.0	7.1	-2.0	1.2	-3.1	9.1	7.1	1.8	0.6	1.2