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Diversification of India's Exports in the Post-Reforms Period

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Abstract

The paper examines if there has been a qualitative change in India's export basket in the post reforms period. Comparisons are made between the biennia 1993/1994 and 2005/2006. Though there has been a small shift from low-end products to medium and high technology ones, three-fourths of our export basket is still dominated by primary, resource-based and low-technology products. There has been some geographical shift from developed to developing country markets, but the three major export markets, viz. developing Asia, developed Europe and developed America now account for even more than 80 per cent of our exports. Revealed relative dominance ratios computed in the paper show how the commodity-class wise distribution of exports has changed in relation to their geographical distribution between the two periods. The paper also shows that the exports have grown much more on the intensive margin than on the extensive margin – new products have not been substantially added to the basket.

Keywords: Export Diversification; Intensive Margin of Export; Indian Exports

JEL Codes: F10, F14

1. Introduction

It is generally accepted that the economy has opened up to international trade in the post-reforms period. The ratio of total merchandise trade to the gross domestic product, an indicator of openness, increased nearly three times from a little over 12 percent in the early 1990s to nearly 36 per cent toward the end of 2000s. Merchandise exports as a percentage of GDP have more than doubled from 5.5 per cent in the early 1990s to 13 per cent in the end 2000s³. Is this merely a quantitative change or has the external sector liberalisation also brought about a qualitative change in our export basket. Are we exporting new products and to new markets? Or are we largely exporting the same old products to existing markets? These are important questions that need to be answered to determine if the post-liberalization export scenario is qualitatively different from the earlier years.

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³ These ratios are computed from the data in *Economic Surveys* of the GOI.

In particular, the following questions are attempted to be answered in the paper:

1. Are there substantial changes in the commodity wise and geographical distribution of exports over the period 1993/1994 to 2005/2006?
2. What has happened to the patterns of region-wise and commodity-wise revealed relative dominance, a concept used in the paper?
3. To what extent are new goods being introduced in the commodity export basket? Does the intensive margin of our trade still dominate our extensive margins?
4. What are the commodity class/ geographical region wise patterns of trade in new goods?

These questions have been attempted to be answered by using the SITC Rev 3 disaggregated data at the 5-digit level obtained from the UN Comtrade database. Comparisons are drawn between the average of 1993 and 1994 with that of 2005 and 2006. The first biennium (referred to hereafter as 1991/1992) has been chosen to steer clear of the Indian crisis and recovery years around 1991-92, whereas the subsequent biennium, 2005/2006, precedes the global crisis around 2007-08. Biennia have been used for comparisons to average out erratic fluctuations of individual years and we find that the averaging does make a difference to the conclusions, especially with regard to the expansion of trade in new commodities as versus trade in existing commodities. Our broad conclusion is that the changes in commodity composition and geographical patterns of trade are in the direction of increasing sophistication and diversification, but not very substantially so. Most of the increase in trade has been obtained by expansion of existing commodity exports.⁴

The remaining part of the paper is organised as follows. Section 2 examines the changes in commodity-class wise and country-category wise distributions of exports and their intersection in the two biennia. Section 3 studies the country-commodity intersection through the computation of the revealed relative dominance (RRD) ratios. Section 4 examines commodity-class wise and category-wise distributions for the new export commodities that are in the export basket in 2005/2006 but not in 1993/1994. Section 4 also shows, through computations of extensive and intensive margins of trade, that only a small part of our export growth can be attributed to the introduction of new commodities in the export basket. Section 5 summarizes the main findings and offers some concluding comments.

⁴ It would also be interesting to examine the extent to which existing commodities are exported to new markets.

2. The Broad Contours in 1993/1994 and 2005/2006

The average annual value of India's exports increased at a compounded average rate of about 12 per cent per annum over a period of 12 years, from US \$ 19.6 billion on an average in the biennium 1993/1994 to an average of US \$ 77 billion in the biennium 2005/2006, measured in current US dollars. Changes in the commodity composition and geographical distribution of India's export trade however become more important to the study of diversification of Indian exports and these are analysed in the following sub-sections.

The change in the commodity composition of export trade is analyzed at two levels: at a more aggregative level wherein commodities are grouped into five classes, *viz.*, primary products, resource-based products, low technology products, medium technology products and high technology products⁵, and at a more disaggregated level wherein the resource-based, low technology and high technology categories are further sub-divided into two sub-categories each (RB1, RB2; LT1, LT2 and HT1, HT2, respectively), whereas the medium technology category is divided into three sub-categories (MT1, MT2 and MT3). The classification used is a slightly modified version of the classification provided in Lall (2000).

The analysis of change in geographical distribution too is also carried out at two levels: at a more aggregative level of nine country categories and a disaggregated level of 18 categories. The categories used are those of the UNCTAD Classification of countries/geographical regions, which is a two-way classification with the level of development as one dimension (developed/ developing) and the geographical continents as the other (Africa, America, Asia, and Oceania). The developing regions of the continents are further sub-divided geographically: Developing Africa is divided into five sub-categories, *viz.*, East, Middle, North, South and West Africa; whereas Developing America is divided into three including the Caribbean, the Central and South America and Developing Asia is divided into four geographical sub-categories (East, South, South-East and West Asia). An additional category of Transition Economies is also used.⁶

⁵ Some of the conclusions at the aggregative level are brought out by combining the primary and resource-based products into a single class.

⁶ The UN classification is available at www.un.org. The Transition Economies category in Europe implies that no country in Europe is classed as developing. Similarly, there is no developed country in Africa.

2.1 Diversification across Commodity Classes

The analysis is based on data tabulated in Table 1A and the more disaggregated Table 1B for the years 1993/1994 and 2005/2006.

As can be seen from the last row of the table, there has been a change, though a relatively small one, in the commodity composition of exports away from primary, resource-based and low technology products to medium and high technology products. The relative importance of primary and resource-based products in total exports declined from 47.33 percent to 41.59 per cent in the 12 year period from 1993/1994 to 2005/2006 and that of low technology products declined from 38.30 percent to 34.75 per cent in the same period. The importance of medium and high technology products in the export basket correspondingly increased from 14.38 per cent to 23.66 per cent over the period.

The changes within these three broad groups and especially in the first two are interesting. Almost the entire decline in the first group, the primary and resource-based products group, is due to the decline in the importance of primary products from 20.49 per cent to 14.96 per cent, whereas that of resource-based products has remained stable at close to 27 per cent. We are clearly vacating the lowest rung of the product category, *viz.*, primary product exports, though more than 40 per cent of our total exports are still clocked in the primary and resource-based category. Similarly, within the low technology group, the observed decline is due to the substantial relative decline in the exports of LT1 group from 28.99 per cent to 17.70 per cent, made up partly by the increase in the exports of LT2 from 9.31 per cent to 17.05 per cent, as can be seen from the last row of Table 1B. Both the low technology groups are now about equally important in the total low technology exports and together account for a little over one-third of our total merchandise exports. On the other hand, the increase in exports has been more all less uniform across the three medium technology and the two high technology groups. The share of the medium technology group as a whole increased over the years from 10.32 to 16.33 per cent of the total and that of the high technology group increased from 4.06 to 7.33 per cent, implying that the share of these two categories increased from 14.38 percent to 23.66 per cent and is now close to one fourth of the total. It follows that the share of resource-based and low technology exports together is still as high as three-fourths of the total.

Though the shift in relative importance from the resource-based/ low technology end of the spectrum to the medium/ high technology end is not spectacular over the twelve year period, the direction of the change is reinforced by the fact that, as seen from the last row of Table 1B, there is a rightward shift even within the groups – at the lower-end from primary products to resource-based and from LT1 to LT2. As expected, the place vacated by the lower end groups is being more or less uniformly occupied by the medium and high technology groups, though, even here, within these groups, the relative importance of MT3 has increased more than that of MT2 or of MT1 and that of HT2 has increased substantially more than that of HT1.

2.2 Diversification across Country Categories

The analysis in this sub-section is based on data tabulated in Table 2A and the more disaggregated Table 2B. As is known, the geographical distribution of India's exports is highly skewed – over 80 per cent of our exports are concentrated in Developing Asia, Developed America and Developed Europe. This concentration has actually increased from 80.69 per cent of the total in 1993/1994 to 83.23 per cent of the total in 2005/2006. Between these three groups, however, there has been a shift from Developed Europe to Developing Asia – the share of Developing Asia in total exports has increased over the years from 32.28 per cent to 40.56 per cent, whereas that of Developed Europe has declined from 29.20 per cent to 23.03 per cent of total exports, reflecting, perhaps, the emerging importance of China in global trade and the 'Look East' policy avowedly pursued by us over these years. Unlike Developed Europe, the Developed America has been able to maintain its share of nearly one-fifth in our total exports – 19.21 per cent in 1993/1994 and 19.64 per cent in 2005/2006.

Amongst the other development level/ geographical categories, the only ones that have managed to increase their shares are Developing Africa and Developing America, the former from 3.86 per cent to 7.12 per cent and the latter from 1.09 per cent to 2.44 per cent. The share of Developed Asia (Japan) has declined substantially from 8.48 per cent to 3.79 per cent and that of Transition Economies too has declined from 3.28 per cent to 1.47 per cent. The share of Developed Oceania (Australia and New Zealand) at 1.04 per cent of the total and that of Developing Oceania at 0.06 per cent continues to remain small and even miniscule.

At a more disaggregated level, as seen from Table 2B, within Africa the historically dominant position of East Africa as an export destination for India has been surrendered to

West Africa, though East Africa has been able to maintain its share at 1.75 per cent in the total exports of India. The increase in the share of Developing Africa is widespread across all the other sub-regions with most of these regions more than doubling their share. The share of West Africa in our exports, though from a low base, has actually increased two and a half times from 0.85 to 2.12 per cent.

The increase in the shares of sub-regions within Developing Asia, on the other hand, is not as uniform as in the sub-regions of Developing Africa. The increase, though in all sub-regions, is particularly skewed toward West Asia. West Asia, which continues to remain the most important export partner within Developing Asia, has actually increased its share from 10.11 to nearly 15 per cent of our total exports. The increase in the share of other sub-regions in Asia is relatively small, the total share of these regions having increased from 22.17 to 25.58.

What do these data indicate about the success of our 'Look East' policy in exports? Ignoring the base effects, the increase in the share of our exports going to East and South-East Asia is much less compared to the increase in the share of exports to developing countries to our west. Whereas the share of East and South-East Asia increased from 17.04 to 19.62 per cent, an increase of about 15 per cent in the share over the period, that of West Asia increased from 10.11 to 14.98 per cent, an increase of the order of nearly 50 per cent. The share of Developing Africa too increased by 85 per cent from 3.86 to 7.12 per cent, though here the effect of low base becomes even more important.⁷ The 'Look East' policy has surely succeeded in broader terms, as indicated above, in shifting our exports from the developed west to developing countries in general, though not necessarily to the developing east in particular. Thus, the share of developed countries in our exports has reduced from 58.29 per cent to 47.50 per cent and that of developing countries increased from 41.71 to 52.50 per cent, an increase of more than 25 per cent which is much more than the 15 per cent increase in the share of East and South-East Asia.

2.3 Country-Commodity Intersection

The region wise distribution of exports across commodity classes, as seen in Table 1A and the commodity class wise distribution of exports across country categories as seen in Table 2A, broadly remains the same between 1993/1994 and 2005/2006. We see this in three

⁷ Even within Developing Africa, our exports have shifted substantially from the East to other parts of Africa, a success of diversification efforts.

different ways. First, by examining the most important product classes exported to different geographical regions, respectively, in the two biennia. Secondly, we examine the changes in the distribution of individual product classes across geographical regions. Finally, in the next sub-section we develop the concept of revealed relative dominance (RRD) ratios and examine the extent to which these have changed between the two biennia.

As seen from Table 1A, the most important product class exported to any of the major regions from India remained unchanged between the two periods: low technology products to developed America and developed Europe and resource-based products to developing and developed Asia. More than 40 per cent of the total exports to developed Europe and America have been in the low technology category in both periods. Low technology products also dominated the exports to Developing Africa and Developing America in both the periods. Shifts were observed only in the relatively less important regions for India's exports: Developing Oceania shifted from domination of primary products in the first period to low technology products in the second, whereas Transition Economies shifted out of primary and low technology products into high technology products. These rightward shifts along the product category spectrum have however to be appreciated against the fact that the share of Transition Economies and Developing Oceania in our total exports even in the second biennium are as low as 1.47 per cent and 0.06 per cent, respectively.

Not only are there no changes at the level of the most important exports to the major regions, but even the next important product class remains unchanged for these regions – resource-based products for developed America and Europe, low technology products for developing Asia and primary products for developed Asia. There are some changes in the percentage importance of these first two commodity classes, but their ranks remain unchanged and in most cases these two classes are by far more important than the other commodity classes exported to these regions. It is perhaps not surprising that at the level of aggregation that we are considering, the first two commodity classes exported to major regions remain unchanged and an examination of the disaggregated Table 1B indicates that there are some reversals within the broad categories in the major regions. Thus LT2 has become more important as compared to LT1 in 2005/2006 in developed America and developing Asia suggesting a rightward movement. In the case of developed Europe too, though there is no reversal between LT1 and LT2, the relative importance of LT2 as compared to LT1 has increased over the period, the kind of rightward movement that we have commented on in Section 2.1 in the context of aggregate exports to all regions of the world.

Secondly, commodity class wise distribution of exports across country categories, as seen in Table 2A, also shows broadly similar patterns in the two periods. Developing Asian markets dominate in India's total exports and also in the exports of primary products, resource-based products, medium technology products and high technology products in both the periods. The dominant position goes to Developed European markets in low technology exports, though, in this commodity class, the shares of the two regions (Developed Europe and Developing Asia) in the second period are almost equal. Actually in the exports of all five broad commodity classes the first two largest export market regions remain unchanged: Developing Asia and Developed Europe in primary products, medium technology products and high technology products, Developing Asia and Developed America in resource-based products, and Developed Europe and Developing Asia in low technology products. Developing Asia is, however, becoming even more dominating in two of the four commodity classes it leads in, viz., primary products and resource-based products. Whereas in medium technology products its lead over Developed European markets has largely remained the same, it has reduced in the exports of high technology products. As indicated above, Developed Europe is reducing its lead over Developing Asia as markets for Indian exports of low technology products.

Though the structure in terms of exports to broad country categories has largely remained unchanged, there are some notable changes within these broad regions. Thus, West Asia and South-East Asia dominated in primary exports within Developing Asia in both periods, though the share of East Asia (China, Korea and Taiwan) has increased substantially from 3.95 per cent to 9.68 per cent of total primary exports to the world. West Asia dominates within Developing Asia as India's export market for primary products, resource-based products, low and medium technology products, and is the second-largest destination after South-East Asia in Developing Asia for high technology products.

3. Revealed Relative Dominance

The above observations regarding commodity class/ region wise distributions of exports can be formalised by calculating the region wise Balassa (1965)-kind revealed comparative advantage ratios for the commodity classes. In our context, such an index can be termed as revealed relative dominance (RRD) and defined as the share of a commodity class in total exports from India to a region in relation to the share of the commodity class in

India's total exports to the world. Alternatively, focussing on a region instead of on a commodity class, the index can equivalently be defined as the share of a region in the exports of a commodity from India to the world in relation to the share of the region in India's total exports. It can be easily shown that, in general, the two definitions lead to identical results..

Let X_{ij} be the exports from India of commodity class i to country category j . The RRD index can be defined as:

$$RRD = \frac{\frac{X_{ij}}{\sum_j X_{ij}}}{\frac{\sum_i X_{ij}}{\sum_i \sum_j X_{ij}}} = \frac{\frac{X_{ij}}{\sum_i X_{ij}}}{\frac{\sum_j X_{ij}}{\sum_i \sum_j X_{ij}}}$$

The term 'revealed' is used to suggest that it is an ex post index⁸ and it shows the dominance of a commodity in exports to the region in relation to the total exports to the region – the ratio will turn out to be high if the proportion of the commodity exported to the region is high when the proportion of total exports to the region is low. On the other hand the ratio will turn out to be low even if the proportion of the commodity exported to the region is high if the proportion of exports of all commodities to the region is higher. Following the general convention with respect to Balassa's revealed comparative index, a commodity class is said to relatively dominate exports to a region from India if the calculated ratio turns out to be greater than unity.⁹ An RRD value is, of course, greater than unity if the share of Indian exports of the commodity category to the region is greater than that to the world. The RRD indices are computed for 5 aggregated commodity classes and 9 regions in Table 3A for the periods 1993/1994 and 2005/2006. The RRD indices are also computed at the more disaggregated level of 9 commodity classes and 18 regions for the two periods and are tabulated in Table 3B1 and Table 3B2, respectively.

The difference between absolute and relative dominance is brought out by the fact that, e.g., developed Asia relatively dominates in the imports of primary products from India, the relevant RRDs being 1.72 and 1.29 in the two periods respectively, but does not dominate absolutely in these imports. As seen from Table 2A, it is developing Asia and developed Europe that dominate in these imports in absolute terms. The idea is that, given the exports of

⁸ The term is also used to bring out the similarity with Balassa's RRD indices. We have also referred to the RRD indices, in places, as revealed comparative dominance indices.

⁹ Values of the RRD index lower than but close to unity also denote importance of the commodity in the export basket to a region.

primary products from India to the world as a percentage of total exports of all commodity classes, the exports of primary products to developed Asia constitute a higher percentage of total exports to developed Asia. Alternatively, given the total exports from India to developed Asia as a percentage of India's exports to the world, primary product exports to developed Asia constitute a higher percentage of total exports of primary products from India.

Of the total 45 commodity classes/ country categories, RRD values greater than unity were seen in 22 cases in 1993/1994 and in 20 cases in 2005/2006. 17 of these cases were common between the two periods.¹⁰ Analysis of the changes region wise and commodity class wise helps in further showing that the RRD pattern has largely remained unchanged.

Considering the changes region wise, there has been no change in the relative dominance of three of our developed trading partner regions. Developed Asia continues to dominate in imports from India of primary and resource based products, whereas Developed Europe (and Developed Oceania) continues to dominate in low technology imports. There have been no gains or losses or even shifts in RRDs in these three regions. Developing America continues to reveal comparative dominance in the commodity classes of medium and high technology products though it has lost the dominance in the imports of our low technology products, without any corresponding gain in any other class/ category. Similarly Developing Asia continues to have its advantage in the medium technology class, and in the primary and resource-based products, though it has lost it in the imports of our high technology products without any corresponding gain elsewhere. Transition economies continue to have an advantage in the imports of our primary and high technology products, though they have lost their advantage in the imports of our medium technology products.

Looking at the same data commodity class wise, there is no change in the pattern of RRDs for resource-based exports – Developing and Developed Asia and Developed America continue to reveal a comparative dominance in resource-based products, though the advantage of Developed America has declined and that of Developed Asia has increased. There are smaller changes in the RRDs of primary products and medium and high technology products – in each case there is a single change. In the case of low technology exports, Developed America, Europe and Oceania continue to have revealed comparative dominance, though there is a shift from developing Africa and America to Developing Oceania.

¹⁰ Revealed relative dominance was lost in the case of five commodity classes/ regions and gained in three cases showing a net loss of two cases. In addition RRD shifted from one class-category to another in two cases.

At an aggregative level, therefore, and given the cut-off of $RRD = 1$, there are not many reversals in the relative dominance of commodity classes/ country categories. Out of the total 45 commodity-country combinations in Table 3A, there are only four cases where there is a clear reversal: RRD decreased to less than unity from above it in the cases of primary product/ developing Oceania, medium technology products/ transition economies and high technology products/ developing Asia, whereas the RRD increased in the case of low technology products/ developing Oceania.

That there are not many cross-over of RRDs across unity does not however mean that the values of RRDs have not changed. We try to gauge the extent of changes in the values of RRDs as follows. It is evident that if the distribution of the commodity classes across country categories is identical for all commodity classes, the RRDs would all be equal to unity. The deviations of RRDs from unity reflect the fact that the distributions of commodity classes differ between country categories. The greater the deviation from the world average distribution, the greater will be the deviation of the RRDs from unity. The standard deviations of the RRDs are reported in the last row and the last two columns of Table 3A for 1993/94 and 2005/06. As can be seen from the tables, the standard deviations have by and large decreased from 1993/94 to 2005/06 (or, at least, not increased much) showing that the distribution of each of the commodity class across country categories has moved closer to the world average distribution. Similar standard deviations of RRDs computed for the new commodities in 2005/06, as reported in Table 6, however show that these are higher than those reported in Table 3A for the total exports in 2005/06. This implies that, as expected, the distribution of new commodities in each of the country categories differs more substantially from the world average distribution of total exports in 2005/06.

4. The New Commodities and Their Distributions

In this section we examine the extent to which we have exported new commodities in the 2005/2006 period as compared to the 1993/1994 period. To what extent has the increase in export value of close to 300 per cent in current dollar terms over a period of 12 years been due to the export of the same old commodities and how much of it is due to the export of new commodities? Which are the new commodities that we have exported in 2005/ 2006 as compared to 1993/ 1994? To which commodity classes do they belong and to which country categories have these been exported to?

To answer these questions, we first identified a list of new commodities that were exported in 2005/ 2006. The list was defined to include commodities that were exported either in 2005 or in 2006 but neither in 1993 nor in 1994. This definition takes care to some extent of the problem of upward bias that would be imparted to the number of commodities in the list if only one year was considered in the earlier period, as also the problem of a downward bias that would be lent to the list if only one of the later years was considered. The list so estimated consisted of 229 commodities at 5-digit (SITC Rev. 3) level. These commodities are listed in Annexure I by the commodity classes to which they belong. We exported to the world a total of 2541 commodities at the 5-digit level in 1993 and/ or in 1994. Of these 75 commodities disappeared from our export basket in 2005/ 2006. But the list was augmented by 229 new commodities in 2005/ 2006 giving a total of 2695 commodities at the 5-digit level in 2005/2006. Thus around 8.50 per cent of the commodities exported in 2005/ 2006 were new in that year, i.e., not in our export basket in the previous period.¹¹ Nearly 70 per cent of these new commodities were either primary or resource-based commodities. Only about 20 per cent were in the medium and high technology class, whereas the remaining 10 per cent were in the low technology class.¹²

In the following sub-section we reinforce that not much of our export growth has been in the exports of new commodities by computing the extensive and intensive margins of trade. We then go on to examine the distribution of this trade in new commodities over commodity classes and country-categories that we used above.

4.1 The Extensive and Intensive Margins of Trade

We can analyse the total growth in exports over the period into two components, viz., intensive growth and extensive growth. Intensive growth refers to the growth in exports of the same commodities as exported hitherto, whereas extensive growth refers to growth in exports of new commodities. Account would also have to taken of commodities that were exported in 1993/ 1994 but had disappeared from our export basket in 2005/ 2006. Following Amiti and Freud (2010), the total absolute growth in exports can hence be analysed as:

$$(X_1 - X_0) = (X_{1c} - X_{0c}) + (X_1 - X_{1c}) - (X_0 - X_{0c})$$

¹¹ The value of the new commodities at SITC 5-digit level, US \$ 890 million, turns out to be only 1.16 per cent of the total value of exports of US \$ 77 billion in 2005/ 2006.

¹² The percentages of values exported in these classes are of course different these percentages of number of commodities and are computed in Section 4.2 below.

Where X_1 and X_0 refer to total exports in the current and the base year, whereas X_{1c} and X_{0c} refer to exports of common commodities in the current and the base year, respectively. Dividing the equation by the value of total exports in the base period on both sides, the right hand side gives the growth rate of total exports, whereas the three terms on the right hand side are, respectively, the intensive, the extensive and the disappearing margins of growth.

Computing these margins for the sets of commodities we find that of the total growth of 292 percent as much as 291 per cent is due to the growth in exports of existing commodities (intensive margin). Exports of new commodities are only 2.3 per cent of the value of exports in 1993/1994 (extensive margin), whereas the disappearing margin is 1.1 per cent of the value of exports in the base period. This shows that our export variety has increased only marginally over the 12 year period. We have also calculated the Feenstra (1994, 2006) index of change in variety given by $(X_{1c}/X_1) / (X_{0c}/X_0)$. The critical value of the index is unity – larger values denote an increase in variety and smaller a decrease. The Feenstra index so calculated works out to be 1.005 which denotes only a marginal increase in variety.

Our results differ sharply from those reported by Veeramani and Saini (2011), which reports an extensive margin of 46 per cent for India's exports to the US market over the period 1989-2006. Amiti and Freud (2010), undertaking a similar exercise, reports an extensive margin of 26 per cent for China over the period 1992-2005, whereas Veeramani and Saini estimate for China is as high as 70 per cent. Our estimate is obtained by making comparisons of two years in the mid-2000s with two years in the early 1990s, unlike Veeramani and Saini (2011) and Amiti and Freud (2010), both of which make a single year comparison. Experimentation with different years and markets suggests that if the base year chosen is pre-1991, the extensive margin tends to be higher. For a base year post-1991, the extensive margins are higher for exports to the US markets than for those to the world market. The differences in results could also be explained by the fact that we use SITC classification, whereas the other studies referred here use HS classification.

Though the higher trade is largely of the intensive than of the extensive kind, it does not follow that the existing commodities are more intensively going to the same old markets.

Section 2.2 brings out the extent to which trade has been diversified across markets from 1993/1994 to 2005/2006.¹³

4.2 Commodity Class-Country Category Profile of New Commodities

Tables 4A and 5A give the distribution of the values of exports of these new commodities, respectively, across the five broad commodity classes and nine country categories. Tables 4B and 5B give these distributions at the more disaggregated level of 10 commodity classes and 18 country categories.

As seen from the last row of Table 4A, a large percentage of new commodity exports, about 40 per cent, are in the medium technology class, followed by exports of low technology products, close to 30 per cent of the total new exports. Even within the medium technology class, as seen from the last row of Table 4B, more of the exports are in the MT3 class (engineering goods) followed by the MT2 class (manufacturing process goods), and not so much in MT1 class. Similarly, in the low technology category, the new exports are largely in the LT2, rather than LT1, class, i.e., the low technology exports are not so much in textile, garments and footwear group, but in other low technology products like iron and steel, glassware and metal including jewellery.

As seen from Table 5A, nearly 60 per cent of the new exports are going to Developing Asia, followed by Developed Europe which takes close to 25 per cent of the new exports.

Developing Asia ‘dominates’ in the imports of resource-based and low and medium technology products. Thus the absolute dominance of developing Asia in new exports is not necessarily in the same categories as in the structure of our total exports in 1993/ 1994 and 2005/ 2006.¹⁴ Surprisingly, our new exports are not so much going to Developed America – whereas the share of Developed America in our total exports has been maintained at around one-fifth, its share in new exports is a mere 5 per cent. On the other hand Developed Europe has maintained nearly the same share in new exports as in our total exports in 2005/ 2006.

¹³ It would be an interesting exercise to decompose the total growth in exports, commodity wise, into three terms: growth of common commodities in common markets, growth of common commodities in new markets and growth of new commodities net of the disappearing commodities. Common commodities here refer to those commodities which are traded in both periods.

¹⁴ From Table 2A, we know that developing Asia dominated in the imports of all categories except low technology products in which category it was the second important importer after developed Europe.

Though the Developed America has not maintained its share in the total new exports, 45 per cent of our new high technology exports are going to Developed America. Developed Europe, on the other hand, are taking in most of our new primary products exports, its share being over 50 per cent; though its share of our high technology products is also high at one-third of our total new high technology exports.

5. Summary and Conclusions

The major findings of the study can be summarized as follows:

1. More than 40 per cent of our total exports are still clocked in the primary and resource-based category, though, within these two categories at the lower end, we are clearly vacating the lowest rung of the product category, *viz.*, primary product exports, and shifting to resource-based products.
2. Low technology exports still clock about 35 per cent of our total exports. The small observed decline of about three percentage points in the low technology category is due to a decline in the LT1 category. The LT2 category has actually increased in importance. The two low technology groups are now about equally important in the export basket.
3. It follows that the share of resource-based and low technology exports together is still as high as three-fourths of the total.
4. The importance of medium and high technology products in the export basket increased from about 14 per cent to 24 per cent over the period and is thus still less than one-fourth of the total. Within these groups, though, the importance MT3 has increased more than that of MT1 or MT2 and that of HT2 is increased more than that of HT1.
5. It is interesting to note that though the rightward shift has not been substantial in terms of broad commodity classes, within these classes there is a shift in relative from the lower to the higher classes, *i.e.*, a shift to LT2 from LT1, to MT3 from MT1 and MT2, and to HT2 from HT1.
6. The geographical concentration of our exports in terms of broader regions has actually increased. Exports to the top three importing regions, *viz.*, Developing Asia, Developed Europe and Developed America have actually increased from 81 per cent of the total in 1993/1994 to 83 per cent of the total in 2005/2006.

7. Between these three groups, however, there has been a shift from Developed Europe to Developing Asia, though Developed America has been able to maintain its share at one-fifth of the total. The share of Developed Asia (which includes Japan) has more than halved from 8.48 per cent to 3.79 per cent.
8. Even in terms of geographical distribution of exports, as in the case of commodity composition, the shifts within the broader regions are interesting. Thus, within Developing Africa, the shift is from East to West Africa. Within Developing Asia too, the importance of West Asia has increased in relation to that of the other sub-regions like south-east Asia. The share of West Asia in total exports increased from around 10 per cent to 15 per cent of the total.
9. The 'Look East' policy can be said to have succeeded in broader terms in shifting our exports from the developed west to developing countries in general, though not necessarily to the developing east in particular.
10. On the intersection of commodity composition and geographical distribution, the top two product classes exported to the major regions covering more than 85 per cent of our exports have remained unchanged between the two periods: Resource-based and low technology products, in that order, to developing Asia, low technology and resource-based products to developed America and developed Europe, and resource based and primary products to developed Asia. Resource-based products dominate in each of the major regions, either as the most or next most important commodity export.
11. Similarly, the top two destinations of any major commodity class have also remained unchanged between the two periods. The major destination for most of the commodity classes is developing Asia and the second major one is developed Europe. One exception is low technology exports wherein the positions are reversed – developed Europe is the major destination and developing Asia comes next in both the periods. The other exception is resource-based products where developed America, and not developed Europe, is the second important destination. Developing Asia is, however, becoming even more dominating in two of the four commodity classes it leads in, viz., primary products and resource-based products, whereas developed Europe is reducing its lead over Developing Asia as a market for Indian exports of low technology products.
12. Our exports to the developed world markets of America, Europe and Oceania still consist largely of low technology exports.

13. The intersection of commodity classes and country categories can be better studied by using the concept of revealed relative dominance that we have introduced. At an aggregative level and given the cut-off of $RRD = 1$, there are not many reversals in the relative dominance of commodity classes/ country categories. In a classification involving five commodity classes and nine country categories, out of the total 45 commodity-country combinations, there are only four cases where there is a clear reversal. This reinforces the fact that over the 12 years RRD patterns have not changed much. There are indications though that the commodity class-wise and country category-wise distributions of these RRDs have become more equal to each other in the second biennium.
14. Our export variety has changed only marginally over the two biennia. Of the total growth of 292 percent in exports as much as 291 per cent is due to the growth in exports of existing commodities (intensive margin) leaving a small extensive margin.
15. About 8.5 per cent of the commodities exported in 2005/ 2006 were new in the sense that they did not exist in the export basket in 1993/1994. About 70 per cent of these were primary or resource-based. Only about 20 percent were in the medium and high technology category. In terms of value however, nearly 40 per cent of the new exports were in the medium technology category and close to 30 per cent in the low technology class, though the exports in the high-technology class were less than 3 per cent. The value of new exports in the primary and resource-based class was less than 30 per cent. The discordance between the distribution of the number of new commodities in different classes and of their values clearly points to the importance of increasing our exports in the high unit value medium and high technology classes.
16. Close to 60 per cent of our new exports went to developing Asia. Developed America took in only about 5 per cent, though developed Europe absorbed nearly one fourth. Close to 50 per cent of the new exports to developing Asia were in the medium technology category. New exports to developed Europe were much more diversified. More than one-fifth of the new exports to developed America were in the high technology category.

It is difficult to pass a judgement on the diversification of our exports over the 12 year period. Do we harp on the fact that more than three fourths of our exports still belong to primary, resource-based and low technology categories, or do we emphasize that the medium and high technology exports are now close to one-fourth of the total having increased from around 14

per cent in the earlier period? In terms of geographical diversification, do we point to the fact that the three broad regions of developing Asia, developed Europe and America now account for even more than 83 per cent of our exports, an increase of over 2.5 percentage points; or do we emphasize the fact that, between these regions, exports have shifted substantially from developed Europe to developing Asia? Perhaps the more interesting changes are within the broad commodity classes and the broad country categories. Thus exports have clearly shifted in relative terms from LT1 to LT2, from MT1 to MT2 and MT3 and from HT1 to HT2. These are the indicators of increasing sophistication of our exports. Similarly, both within Africa and Asia, the importance of west has increased in relation to the east. But neither the distribution over commodity classes, nor over the country categories has changed so much as to change the pattern of relative dominance of regions in commodities. The Indian export elephant moves surely but slowly!

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Table 1A: Distribution of India's Exports to Nine Regions across Five Commodity Classes in 1993-1994 (average) and 2005-2006 (average)
(Percentage of total exports to the region)

Commodity Class: Region	Primary Products (PP)		Resource-based Products (RB)		Low Technology Products (LT)		Med Technology Products (MT)		High Technology Products (HT)	
	1993/94	2005/06	1993/94	2005/06	1993/94	2005/06	1993/94	2005/06	1993/94	2005/06
Developing Africa	9.10	16.76	9.14	9.86	38.94	31.49	30.65	27.64	12.16	14.25
Developing America	2.81	2.46	16.18	19.67	39.83	31.38	34.97	27.67	6.21	18.82
Developing Asia	25.36	20.26	28.14	30.71	27.16	25.43	14.90	18.76	4.44	4.83
Developing Oceania	29.03	11.06	13.69	4.63	16.87	46.93	24.35	17.12	16.06	20.27
Transition Economies	33.75	21.06	5.16	9.76	33.86	16.20	11.88	13.15	15.35	39.83
Developed America	12.54	7.34	38.49	26.75	41.92	47.84	4.71	10.48	2.34	7.59
Developed Asia	35.23	19.34	42.64	53.92	17.16	13.32	4.30	9.22	0.67	4.19
Developed Europe	16.97	11.19	19.18	22.13	54.15	46.18	6.34	13.81	3.37	6.70
Developed Oceania	13.61	12.62	12.98	21.70	60.16	45.44	9.59	13.29	3.66	6.94
World	20.49	14.96	26.84	26.63	38.30	34.75	10.32	16.33	4.06	7.33

Source: Computations by the authors from the UN Comtrade database

Note: The rows add up to 100 for each year, but for rounding errors.

Table 1B: Distribution of India's Exports to Nine Regions across Ten Commodity Classes in 1993-1994 (average) and 2005-2006 (average)
(Percentage of total exports to the region)

Commodity Class:	Primary Products		Resource-based Products				Low Technology Products				Medium Technology Products						High Technology Products			
	PP		RB1		RB2		LT1		LT2		MT1		MT2		MT3		HT1		HT2	
Time Period:	93-94	05-06	93-94	05-06	93-94	05-06	93-94	05-06	93-94	05-06	93-94	05-06	93-94	05-06	93-94	05-06	93-94	05-06	93-94	05-06
Region																				
Developing Africa	9.10	16.8	1.84	2.55	4.60	5.82	28.5	13.8	10.5	17.7	9.75	6.23	6.51	9.36	14.4	12.1	2.93	2.38	9.24	11.9
Developing America	2.81	2.46	4.54	4.04	12.2	17.1	29.2	19.1	10.7	12.3	23.1	8.98	8.36	11.5	3.42	7.20	1.35	3.25	4.86	15.6
Developing Asia	25.4	20.3	3.96	2.76	25.1	28.0	15.8	9.31	11.4	16.1	2.02	2.46	8.03	9.58	4.85	6.72	2.05	2.16	2.39	2.66
Developing Oceania	29.0	11.1	3.02	2.04	12.1	2.58	13.1	18.0	3.82	28.9	9.97	0.78	1.39	7.59	13.0	8.75	1.98	2.11	14.1	18.2
Transition Economies	33.8	21.1	1.63	4.07	2.70	5.69	23.3	9.56	10.5	6.63	0.27	1.66	7.49	4.94	4.12	6.54	1.71	1.76	13.6	38.1
Developed America	12.5	7.34	2.46	1.62	37.6	25.1	30.7	22.5	11.2	25.3	1.26	2.04	1.62	3.18	1.84	5.26	1.05	4.40	1.29	3.19
Developed Asia	35.2	19.3	0.93	1.92	42.0	52.0	13.0	9.7	4.16	3.59	0.12	0.53	3.98	5.69	0.20	3.00	0.16	2.47	0.51	1.72
Developed Europe	17.0	11.2	0.61	2.47	18.2	19.7	47.7	31.3	6.48	14.9	1.06	2.09	3.15	4.84	2.12	6.87	0.69	3.31	2.68	3.39
Developed Oceania	13.6	12.6	1.03	4.33	11.2	17.4	46.8	22.3	13.3	23.2	1.78	1.94	4.51	4.58	3.30	6.77	2.02	2.49	1.64	4.45
World	20.5	15.0	1.84	2.55	25.0	24.1	29.0	17.7	9.31	17.1	1.89	2.62	5.08	7.03	3.35	6.68	1.32	2.92	2.75	4.41

Source: Computations by the authors from the UN Comtrade database

Note: The rows add up to 100 for each year, but for rounding errors.

Table 2A: Distribution of India's Commodity Class-wise Exports across Nine Regions in 1993-1994 (average) and 2005-2006 (average) (Percent)

Commodity Class:	Primary Products (PP)		Resource-based Products (RB)		Low Technology Products (LT)		Med Technology Products (MT)		High Technology Products (HT)		All Products	
	1993/94	2005/06	1993/94	2005/06	1993/94	2005/06	1993/94	2005/06	1993/94	2005/06	1993/94	2005/06
Region												
Developing Africa	1.72	7.97	1.32	2.63	3.93	6.45	11.48	12.05	11.57	13.83	3.86	7.12
Developing America	0.15	0.40	0.66	1.80	1.13	2.20	3.69	4.14	1.67	6.26	1.09	2.44
Developing Asia	39.95	54.93	33.85	46.78	22.89	29.69	46.63	46.62	35.25	26.72	32.28	40.56
Developing Oceania	0.02	0.05	0.01	0.01	0.01	0.08	0.03	0.07	0.05	0.17	0.01	0.06
Transition Economies	5.41	2.07	0.63	0.54	2.90	0.68	3.78	1.18	12.41	7.97	3.28	1.47
Developed America	11.75	9.64	27.55	19.72	21.02	27.03	8.78	12.60	11.06	20.34	19.21	19.64
Developed Asia	14.58	4.90	13.48	7.68	3.80	1.45	3.54	2.14	1.39	2.17	8.48	3.79
Developed Europe	24.18	17.22	20.87	19.13	41.28	30.60	17.93	19.48	24.21	21.05	29.20	23.03
Developed Oceania	0.93	0.88	0.68	0.85	2.20	1.36	1.30	0.85	1.26	0.98	1.40	1.04
NES	1.30	1.95	0.96	0.86	0.83	0.45	2.84	0.88	1.13	0.49	1.18	0.85
World	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: Computations by the authors from the UN Comtrade database

Table 2B: Distribution of India's Commodity Class-wise Exports across 18 Regions in 1993-1994 (average) and 2005-2006 (average)

(Percent)

Commodity Class:	Primary Products (PP)		Resource-based Products (RB)		Low Technology Products (LT)		Med Technology Products (MT)		High Technology Products (HT)		All Products	
	1993/94	2005/06	1993/94	2005/06	1993/94	2005/06	1993/94	2005/06	1993/94	2005/06	1993/94	2005/06
East Africa	0.59	0.98	0.46	0.72	2.27	1.59	4.97	3.28	4.10	4.39	1.79	1.75
Mid Africa	0.02	0.82	0.04	0.10	0.08	0.19	0.12	0.51	0.72	1.25	0.09	0.39
North Africa	0.62	1.35	0.41	0.43	0.41	1.96	2.54	3.15	1.88	1.72	0.73	1.64
South Africa	0.21	1.32	0.11	0.78	0.60	1.09	0.67	1.91	0.61	1.75	0.40	1.23
West Africa	0.27	3.50	0.30	0.60	0.56	1.62	3.19	3.20	4.25	4.71	0.85	2.12
Developing Africa	1.72	7.97	1.32	2.63	3.93	6.45	11.48	12.05	11.57	13.83	3.86	7.12
Caribbean America	0.01	0.07	0.02	0.10	0.09	0.20	0.11	0.25	0.07	0.66	0.06	0.19
Central America	0.05	0.13	0.19	0.49	0.60	0.69	0.92	1.02	0.49	1.60	0.41	0.67
South America	0.09	0.21	0.44	1.21	0.44	1.32	2.66	2.87	1.11	4.00	0.62	1.57
Developing America	0.15	0.40	0.66	1.80	1.13	2.20	3.69	4.14	1.67	6.26	1.09	2.44
East Asia	3.95	9.68	20.66	20.07	4.53	6.17	6.62	8.72	6.36	4.10	9.03	10.66
South Asia	5.09	9.25	2.95	4.75	4.93	3.84	10.36	9.21	8.30	6.44	5.13	5.96
South-East Asia	14.42	15.45	6.24	10.61	3.93	3.47	12.51	12.24	14.39	8.45	8.01	8.96
West Asia	16.50	20.55	4.00	11.35	9.49	16.21	17.13	16.45	6.20	7.72	10.11	14.98
Developing Asia	39.95	54.93	33.85	46.78	22.89	29.69	46.63	46.62	35.25	26.72	32.28	40.56
Developing Oceania	0.02	0.05	0.01	0.01	0.01	0.08	0.03	0.07	0.05	0.17	0.01	0.06
Transition Economies	5.41	2.07	0.63	0.54	2.90	0.68	3.78	1.18	12.41	7.97	3.28	1.47
Developed America	11.75	9.64	27.55	19.72	21.02	27.03	8.78	12.60	11.06	20.34	19.21	19.64
Developed Asia	14.58	4.90	13.48	7.68	3.80	1.45	3.54	2.14	1.39	2.17	8.48	3.79
Developed Europe	24.18	17.22	20.87	19.13	41.28	30.60	17.93	19.48	24.21	21.05	29.20	23.03
Developed Oceania	0.93	0.88	0.68	0.85	2.20	1.36	1.30	0.85	1.26	0.98	1.40	1.04
NES	1.30	1.95	0.96	0.86	0.83	0.45	2.84	0.88	1.13	0.49	1.18	0.85
World	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: Computations by the authors from the UN Comtrade database

Table 3A: Revealed Relative Dominance Indices across Five Commodity Classes and Nine Regions in 1993-1994 (average) and 2005-2006 (average)

Commodity Class:	Primary Products (PP)		Resource-based Products (RB)		Low Technology Products (LT)		Med Technology Products (MT)		High Technology Products (HT)		SD	
	1993/94	2005/06	1993/94	2005/06	1993/94	2005/06	1993/94	2005/06	1993/94	2005/06	1993/94	2005/06
Region												
Developing Africa	0.44	1.12	0.34	0.37	1.02	0.91	2.97	1.69	2.99	1.94	1.33	0.63
Developing America	0.14	0.16	0.60	0.74	1.04	0.90	3.39	1.70	1.53	2.57	1.26	0.93
Developing Asia	1.24	1.35	1.05	1.15	0.71	0.73	1.44	1.15	1.09	0.66	0.27	0.30
Developing Oceania	1.42	0.74	0.51	0.17	0.44	1.35	2.36	1.05	3.95	2.77	1.47	0.97
Transition Economies	1.65	1.41	0.19	0.37	0.88	0.47	1.15	0.81	3.78	5.44	1.36	2.13
Developed America	0.61	0.49	1.43	1.00	1.09	1.38	0.46	0.64	0.58	1.04	0.41	0.35
Developed Asia	1.72	1.29	1.59	2.02	0.45	0.38	0.42	0.56	0.16	0.57	0.73	0.69
Developed Europe	0.83	0.75	0.71	0.83	1.41	1.33	0.61	0.85	0.83	0.91	0.31	0.23
Developed Oceania	0.66	0.84	0.48	0.81	1.57	1.31	0.93	0.81	0.90	0.95	0.41	0.21
NES	1.10	2.28	0.81	1.00	0.71	0.53	2.40	1.03	0.96	0.57	0.69	0.71
SD	0.56	0.42	0.49	0.55	0.39	0.39	1.12	0.42	1.43	1.57	-	-

Source: Computations by the authors from the UN Comtrade database using the formula developed in the text

Table 3B1: Revealed Relative Dominance Indices across 10 Commodity Classes and 18 Regions in 1993-1994 (average)

Region	PP	RB1	RB2	LT1	LT2	MT1	MT2	MT3	HT1	HT2	Total
EF	0.33	2.10	0.12	1.27	1.26	4.87	1.49	3.52	0.96	2.92	1.00
MF	0.22	5.48	0.05	1.09	0.56	4.13	0.76	0.77	0.09	12.07	1.00
NF	0.85	4.57	0.26	0.45	0.92	6.03	1.04	5.67	5.88	0.97	1.00
SF	0.53	1.57	0.19	1.50	1.55	1.72	1.44	2.02	1.45	1.60	1.00
WF	0.32	1.54	0.26	0.59	0.89	6.67	1.04	6.19	2.32	6.27	1.00
RM	0.17	1.29	0.35	1.68	1.34	6.47	0.61	1.22	0.34	1.62	1.00
CM	0.12	2.61	0.30	1.52	1.38	7.01	1.63	0.55	0.50	1.52	1.00
SM	0.14	1.93	0.62	0.61	0.97	16.20	1.75	1.31	1.43	1.95	1.00
ES	0.44	0.36	2.43	0.39	0.85	0.25	1.15	0.38	0.51	0.80	1.00
SS	0.99	2.84	0.41	0.98	0.91	3.04	1.30	2.54	1.63	1.61	1.00
SES	1.80	0.80	0.78	0.29	1.11	0.95	1.64	1.79	3.41	1.02	1.00
WS	1.63	2.84	0.22	0.66	1.81	0.89	2.07	1.59	0.99	0.43	1.00
OC	1.42	0.89	0.48	0.45	0.41	5.26	0.27	3.88	1.51	5.13	1.00
TR	1.65	1.33	0.11	0.80	1.13	0.14	1.48	1.23	1.30	4.97	1.00
DM	0.61	0.50	1.50	1.06	1.20	0.67	0.32	0.55	0.80	0.47	1.00
DS	1.72	0.33	1.68	0.45	0.45	0.06	0.78	0.06	0.12	0.18	1.00
DE	0.83	0.56	0.73	1.64	0.70	0.56	0.62	0.63	0.53	0.97	1.00
DO	0.66	0.97	0.45	1.62	1.43	0.94	0.89	0.99	1.54	0.60	1.00
NES	1.10	0.60	0.83	0.41	1.64	0.59	4.38	0.42	1.59	0.66	1.00
Total	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Source: Computations by the authors from the UN Comtrade database using the formula developed in the text

Table 3B2: Revealed Relative Dominance Indices across 10 Commodity Classes and 18 Regions in 2005-2006 (average)

Region	PP	RB1	RB2	LT1	LT2	MT1	MT2	MT3	HT1	HT2	Total
EF	0.56	1.89	0.25	0.75	1.07	2.35	1.44	2.16	0.89	3.59	1.00
MF	2.10	1.61	0.11	0.33	0.67	1.48	1.42	1.10	0.34	5.08	1.00
NF	0.83	1.03	0.18	1.22	1.18	1.68	1.97	1.96	0.93	1.14	1.00
SF	1.08	1.51	0.55	0.76	1.02	4.77	0.81	1.10	0.81	1.83	1.00
WF	1.65	1.80	0.12	0.56	0.98	1.73	1.04	1.93	0.76	3.20	1.00
RM	0.34	0.99	0.46	0.62	1.44	0.43	1.23	1.65	0.63	5.25	1.00
CM	0.19	1.41	0.65	1.10	0.94	4.00	1.21	0.85	1.20	3.17	1.00
SM	0.13	0.85	0.76	1.13	0.54	3.56	1.87	1.11	1.14	3.47	1.00
ES	0.91	0.25	2.05	0.56	0.60	0.27	1.45	0.37	0.51	0.30	1.00
SS	1.55	3.70	0.49	0.68	0.61	2.57	1.61	1.08	0.82	1.25	1.00
SES	1.72	0.59	1.25	0.26	0.51	0.94	1.33	1.57	1.08	0.85	1.00
WS	1.37	0.93	0.74	0.60	1.58	0.78	1.22	1.09	0.67	0.41	1.00
OC	0.74	0.80	0.11	1.02	1.69	0.30	1.08	1.31	0.72	4.12	1.00
TR	1.41	1.60	0.24	0.54	0.39	0.64	0.70	0.98	0.60	8.63	1.00
DM	0.49	0.64	1.04	1.27	1.48	0.78	0.45	0.79	1.51	0.72	1.00
DS	1.29	0.76	2.16	0.55	0.21	0.20	0.81	0.45	0.85	0.39	1.00
DE	0.75	0.97	0.82	1.77	0.87	0.80	0.69	1.03	1.13	0.77	1.00
DO	0.84	1.70	0.72	1.26	1.36	0.74	0.65	1.01	0.85	1.01	1.00
NES	2.28	0.62	1.04	0.62	0.42	0.31	1.93	0.36	0.80	0.41	1.00
Total	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Source: Computations by the authors from the UN Comtrade database using the formula developed in the text

**Table 4A: Distribution of India's Exports of New Commodities to Nine Regions across Five Commodity Classes in 2005-2006 (average)
(Percentage of total exports to the region)**

Commodity Class:	Primary Products (PP)	Resource-based Products (RB)	Low Technology Products (LT)	Med Technology Products (MT)	High Technology Products (HT)
Region					
Developing Africa	9.07	26.69	54.48	9.15	0.61
Developing America	5.18	6.71	30.55	53.76	3.78
Developing Asia	5.29	16.58	28.09	49.18	0.86
Developing Oceania	0.00	92.14	4.14	2.44	1.28
Transition Economies	9.75	11.52	68.30	9.91	0.51
Developed America	6.20	22.43	22.28	27.32	21.78
Developed Asia	58.93	8.34	14.57	17.88	02.9
Developed Europe	25.75	15.84	27.21	27.32	3.88
Developed Oceania	20.09	27.98	33.13	15.80	3.00
World	12.19	16.74	28.96	39.24	2.87

Source: Computations by the authors from the UN Comtrade Database

Note: The rows add up to 100, but for rounding errors.

Table 4B: Distribution of India's Exports of New Commodities to 18 Regions across 10 Commodity Classes in 2005-2006 (average)
(Percentage of total exports to the region)

Region	PP	RB1	RB2	LT1	LT2	MT1	MT2	MT3	HT1	HT2
East Africa	5.69	17.90	10.77	0.05	51.23	2.83	2.50	7.43	1.30	0.30
Mid Africa	1.24	0.11	74.33	4.08	15.59	0.00	4.27	0.32	0.01	0.04
North Africa	29.45	3.65	0.67	3.71	59.29	0.00	2.58	0.00	0.37	0.28
South Africa	3.61	10.52	3.71	0.66	67.67	0.00	12.57	0.27	0.92	0.06
West Africa	0.92	3.44	17.19	0.00	64.35	0.00	8.51	5.39	0.18	0.03
Caribbean America	1.28	0.08	2.24	0.00	96.14	0.00	0.05	0.00	0.23	0.00
Central America	4.69	5.86	7.38	2.26	43.72	0.00	31.20	1.87	0.05	2.97
South America	6.09	2.27	3.87	0.48	13.18	0.00	68.09	1.33	2.63	2.05
East Asia	2.92	2.60	18.81	3.08	61.57	0.00	9.93	0.01	1.05	0.04
South Asia	10.17	33.81	9.53	0.85	22.91	0.33	18.96	0.48	0.85	2.12
South-East Asia	4.70	1.57	2.19	0.31	5.16	0.01	3.94	81.72	0.31	0.09
West Asia	9.48	16.09	23.59	0.33	39.94	0.19	3.53	5.75	0.85	0.26
Developing Oceania	0.00	28.88	63.26	0.00	4.14	0.00	2.44	0.00	1.28	0.00
Transition Economies	9.75	0.11	11.41	0.51	67.79	0.00	8.25	1.66	0.04	0.48
Developed America	6.20	8.23	14.20	0.43	21.84	0.03	26.38	0.91	20.83	0.95
Developed Asia	58.93	6.82	1.52	0.05	14.52	0.00	15.99	1.89	0.26	0.02
Developed Europe	25.75	2.71	13.12	5.18	22.02	1.03	25.74	0.56	1.44	2.44
Developed Oceania	20.09	21.10	6.88	15.04	18.09	2.88	10.57	2.35	0.52	2.48
NES	49.41	0.69	14.84	0.11	0.00	0.00	34.20	0.00	0.29	0.46
World	12.19	5.32	11.42	2.11	26.85	0.32	13.71	25.21	2.01	0.86

Source: Computations by the authors from the UN Comtrade database

Note: The rows add up to 100, but for rounding errors.

**Table 5A: Distribution of India's Commodity Class-wise Exports of New Commodities across Nine Regions in 2005-2006 (average)
(Percent)**

Commodity Class:	Primary Products (PP)	Resource-based Products (RB)	Low Technology Products (LT)	Med Technology Products (MT)	High Technology Products (HT)	Total
Region						
Developing Africa	3.17	6.79	8.01	0.99	0.90	4.26
Developing America	0.87	0.82	2.17	2.82	2.71	2.05
Developing Asia	25.23	57.62	56.40	72.90	17.51	58.16
Developing Oceania	0.00	0.04	0.00	0.00	0.00	0.01
Transition Economies	1.14	1.21	4.15	0.44	0.32	1.76
Developed America	2.98	7.86	4.51	4.09	44.60	5.87
Developed Asia	11.87	1.22	1.24	1.12	0.25	2.46
Developed Europe	51.43	23.08	22.92	16.99	33.03	24.40
Developed Oceania	0.85	0.87	0.59	0.21	0.54	0.52
NES	2.08	0.48	0.00	0.45	0.13	0.51
World	100.00	100.00	100.00	100.00	100.00	100.00

Source: Computations by the authors from the UN Comtrade database

Note: The rows add up to 100, but for rounding errors.

**Table 5B: Distribution of India's Commodity Class-wise Exports of New Commodities across 18 Regions in 2005-2006 (average)
(Percent)**

Region	PP	RB1	RB2	LT1	LT2	MT1	MT2	MT3	HT1	HT2	Total
East Africa	0.32	2.29	0.64	0.02	1.30	6.00	0.12	0.20	0.44	0.24	0.68
Mid Africa	0.08	0.02	4.94	1.47	0.44	0.00	0.24	0.01	0.00	0.03	0.76
North Africa	2.52	0.72	0.06	1.84	2.30	0.00	0.20	0.00	0.19	0.34	1.04
South Africa	0.16	1.07	0.18	0.17	1.37	0.00	0.50	0.01	0.25	0.04	0.54
West Africa	0.09	0.80	1.86	0.00	2.96	0.00	0.77	0.26	0.11	0.04	1.24
Caribbean America	0.03	0.00	0.06	0.00	1.05	0.00	0.00	0.00	0.03	0.00	0.29
Central America	0.12	0.36	0.21	0.35	0.53	0.00	0.74	0.02	0.01	1.12	0.32
South America	0.72	0.61	0.49	0.33	0.71	0.00	7.14	0.08	1.88	3.45	1.44
East Asia	3.81	7.77	26.22	23.25	36.49	0.00	11.52	0.01	8.31	0.68	15.92
South Asia	3.21	24.42	3.21	1.54	3.28	4.00	5.32	0.07	1.62	9.52	3.85
South-East Asia	11.44	8.77	5.68	4.35	5.71	1.13	8.53	96.26	4.57	3.06	29.69
West Asia	6.77	26.33	18.00	1.35	12.96	5.21	2.24	1.99	3.69	2.65	8.71
Developing Oceania	0.00	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Transition Economies	1.41	0.04	1.76	0.43	4.44	0.00	1.06	0.12	0.03	0.98	1.76
Developed America	2.98	9.07	7.30	1.20	4.77	0.56	11.29	0.21	60.83	6.51	5.87
Developed Asia	11.87	3.15	0.33	0.06	1.33	0.01	2.86	0.18	0.32	0.06	2.46
Developed Europe	51.53	12.43	28.05	59.94	20.01	78.42	45.80	0.54	17.49	69.51	24.40
Developed Oceania	0.85	2.05	0.31	3.69	0.35	4.66	0.40	0.05	0.13	1.50	0.52
NES	2.08	0.07	0.67	0.03	0.00	0.00	1.28	0.00	0.07	0.27	0.51
World	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: Computations by the authors from the UN Comtrade database