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Export Dependence in Developing Countries

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Abstract

In this paper, we examine the goods developing countries export and the markets they export to over the period 1996 to 2008. Low income countries rely on four resource intensive sectors – food products, petroleum, apparel, and iron and steel – for three quarters of their current exports and recent export growth. Middle income countries, in contrast are more diversified in terms of their exports (and nearly as diversified as high income countries). They have had relatively high export growth in skill and capital intensive sectors, including iron and steel, machinery, electronics, and transport equipment. Despite the greater export diversification of middle and high income countries, it is low income countries that have experienced the greatest increase in diversification, closing a significant part of the gap that exists between them and richer nations in the last dozen years. The recent phase of globalization has helped low income nations branch out in terms of the range of goods they produce for foreign markets.

Regarding destination markets, there has been a dramatic increase in the share of exports lower income countries send to other low and middle income nations. Developing economies absorbed half of the recent increase in exports by low and lower middle income countries, with this trade concentrated in food products, petroleum, and iron and steel. Though the BRICs are an important source of import demand for other developing regions, they account for less than half of this absorption. The growing role of middle income countries in global import demand appears to be associated with the rapidly rising GDP growth, as evidence from estimation of a gravity model of trade attests. The role of the United States as a destination market for developing country products has diminished, with the country absorbing less than 20 percent of their recent export growth. Still, the US remains a major destination for Latin America and the Caribbean, oil exporting countries, and apparel exports from East and South Asia. Together, the US and EU absorbed over 75 percent of apparel and footwear export growth by low income countries, making them significant destinations for low end manufactures.

What do these events portend for the future of globalization? The diversification of middle income country exports across sectors leaves them dependent on low income countries to supply petroleum, food products, iron ore, and other mineral based products. Their increasing specialization in skill and capital intensive products has opened the door for low income countries to expand their apparel sectors. China, which had relied heavily on apparel in the early stages of its export growth, has seen the sector's share of its total exports fall from one fifth to one tenth in the last dozen years. Thus, not only are low income countries succeeding in exporting natural resources they are also moving into labor intensive manufacturing. One striking feature of the recent evolution of developing country exports is that the US does not appear to be a central actor. Rather, income growth in middle income countries appears to be a driving factor behind changes in the international pattern of specialization. If we believe that internally generated productivity advances are largely responsible for these income gains, concerns about weak consumption growth in the United States undermining the viability of export led development are exaggerated.

1 Introduction

The fall in world trade during the ongoing economic crisis has been remarkable. As impressive as the much cited GDP decline in affected countries has been, the collapse in trade has been even more striking. Between the fourth quarter of 2007 and the second quarter of 2009, world merchandise imports dropped by a whopping 36%. While trade levels began a modest recovery in the third quarter of 2009, they are still far below pre-crisis highs.

There is a worry among policymakers that this recession may be different in terms of its impact on development strategy. Over the course of the last three decades, many developing countries came to see exports as an elixir for growth, leading to reforms to reduce barriers to foreign trade and investment and ease regulations on industries and labor markets. But there is a fear that the spell has been broken. If the global economic recovery is delayed, productivity growth in key countries does not resume, or global imbalances in current accounts derail multilateral economic cooperation, globalization may not deliver the same gains in the future as it has in the past. Conceivably, the response of some countries could be a shift in strategy away from openness to trade and investment.

The argument to justify greater inward orientation would go something like the following. US import demand, which helped sustain export growth in developing countries during the last two decades, may not recover fully from the great recession of 2007-2009. With high levels of public and private indebtedness, the US government and US consumers will be forced to tighten their belts, lowering consumption and increasing savings. Countries following an export-led development strategy may find themselves producing goods for which there are insufficient foreign buyers to sustain steady increases in their per capita GDPs (Rodrik, 2009). Extending the argument, developing countries may be better served by a more active industrial

policy that sought to support sectors subject to external economies of scale, emanating from knowledge spillovers or other sources, which would provide an internal basis for growth and industrial development (e.g., Hausmann, Hwang, and Rodrik, 2007).

Despite the alarm, it is easy to overstate the potential for deglobalization. No prominent international economists are advocating a wholesale rejection of openness as a foundation for economic development and the countries that have adopted more inward oriented development strategies of late, such as Argentina, Bolivia, and Venezuela, began doing so well before the crisis hit. Still, there is an unmistakable uneasiness among developing country policy makers that they are too reliant on the world economy and on the US, in particular. The United States appears to be the sick man among the world's developed economies, or at least the sickest in a room full of ill patients, creating the perception that too much dependence on the US economy in the coming decade is a risky proposition.¹

In considering the future for globalization in the developing world, it is useful to take stock of recent changes in the world economy. What do we know exactly about the importance of the United States for developing country export growth? How dependent are developing countries on particular markets or particular goods for their exports? Have countries that export manufactures done better in terms of trade expansion than those that produce primary products? If the typical developing country were to lose any single national or regional export market (be it the US or somewhere else) would it spell disaster for them?

In this paper, we examine the goods developing countries export and the markets they export to, covering the period 1996 to 2008. We select the sample based on the earliest year for which we can obtain a consistent series on bilateral exports at a high level of product

¹ Interestingly, dependence on the US does not appear to have been a predictor for which countries suffered most from the economic crisis (Rose and Spiegel, 2009).

disaggregation. As a starting point, 1996 is not too bad, as it comes just after the initiation of trade reform in India, the completion of the Uruguay Round of the WTO, and the implementation of the North American Free Trade Agreement; about the same time the European Union began negotiations to admit countries from Central and Eastern Europe; on the eve of the Asian financial crisis and the ensuing changes in Asian financial policies; and a bit before China's accession to the WTO. The period 1996 to 2008 therefore spans a time when the current phase of globalization had reached a relatively mature state, with most major trade agreements either in place or about to be enacted.

In section 2 of the paper, we consider the concentration of developing country exports by sector. The degree of concentration varies by income level, with low income countries relying on just four sectors – food products, petroleum, apparel, and iron and steel – for three quarters of their current exports and recent export growth. These goods are each intensive in the use of resources: raw labor, in the case of apparel, agricultural land, in the case of food products, or sub-soil minerals, in the case of oil and iron ore. Individual low income countries tend to specialize in one or two of these products, leaving their exports concentrated in a handful of sectors. In all low income regions, except South Asia, a single four digit product accounts for at least a quarter of total exports. Middle income countries, in contrast, are more diversified in terms of their exports, with no sector, except petroleum and related products, accounting for more than 15 percent of their shipments abroad. As a group, middle income nations have had relatively high export growth in human and physical capital intensive sectors, including iron and steel, machinery, electronics, and transport equipment, and relatively low growth in the labor-intensive apparel sector. These growth patterns are also manifest in two of the BRIC nations, China and India. The degree of export diversification in middle income countries is quite similar

to high income countries, with richer nations being only modestly more diversified. Yet, despite the greater export diversification in middle and high income countries, it is low income countries that have experienced the greatest increase in diversification, closing a significant part of the gap that exists between them and richer nations in the last dozen years. The recent phase of globalization therefore appears to have helped low income nations branch out in terms of the range of goods they produce for foreign markets.

In section 3 of the paper, we consider the concentration of developing country exports by destination market. There has been a dramatic increase in the share of exports by low and middle income countries going to other low and middle income nations. High income countries now absorb less than 60 percent of the goods low and lower middle income countries ship abroad. Moreover, other developing nations absorbed half of the recent increase in exports by low and lower middle income countries (though less than a third of the export growth of upper middle income countries), with this trade concentrated in food products, petroleum, and iron and steel. Though the BRICs are an important source of import demand for other developing regions, they account for less than half of this absorption. Other middle income countries are also important. The role of the United States as a destination market for developing country products has diminished, with the country absorbing less than 20 percent of their recent export growth. Still, the US remains a major destination for Latin America and the Caribbean, oil exporting countries, and apparel exports from East and South Asia. Together, the US and EU absorbed over 75 percent of export growth in apparel and footwear by low income countries, making them significant markets for low end manufactures.

Econometric evidence supports the conclusion of significant role for low and middle income country destination markets in developing country export growth. We estimate a time-

difference version of the gravity model of trade and use the results to decompose export growth in developing countries over the period 2000 to 2008 into portions associated with GDP growth in exporting countries and GDP growth in importing countries. Increases in import demand associated with GDP growth in low and middle income countries (primarily in the BRICs) can account for over 20 percent of export growth in low income countries in Europe and Central Asia, the Middle East and North Africa, and Sub-Saharan Africa. GDP growth in the United States, in contrast, accounts for less than 3 percent of export growth in these countries. Import demand growth in the BRICs is less important for export growth in South Asia, East Asia and the Pacific, and Latin America and the Caribbean. Only in the Western Hemisphere does import demand growth in the United States accounts for over 10 percent of export growth.

One note of caution in interpreting these results is that they only capture partial equilibrium relationships between growth in importer GDP and growth in exports by developing countries. That is, the gravity model allows one to examine the direct impact of GDP growth in an importing country on the growth in bilateral imports from one of its trading partners. Missing in the analysis is the impact of the indirect effects of GDP growth on trade, which may result from global production networks. Income growth in the United States, for instance, may increase demand for apparel imports from Vietnam, which may in turn increase Vietnam's demand for textile imports from Malaysia. The gravity model does not pick up the indirect impact of US GDP growth on textile exports from Malaysia. A further qualification is that the gravity model says nothing about where GDP growth in importers and exporters comes from. Nothing in the analysis is informative about whether rapid GDP growth in low and middle income countries is sustainable. All we know is that if this growth continues it is likely to generate further increases in demand for exports from other developing countries.

What do these changes trade patterns mean for the future of development strategy? Far from being a hindrance, reliance on resource based sectors for export growth has been hugely important for low income economies. Rather than leading to ever greater specialization in their exports, focusing on resource intensive sectors has allowed low income countries to diversify the set of goods they ship abroad and the markets to which they ship. Key to this diversification is demand for natural resources from middle income countries, including but not limited to the BRICs. The diversification of middle income country exports across sectors leaves them ever more dependent on low income countries to supply petroleum, food products, iron ore, and other mineral based products. The increasing specialization of middle income countries on more skill and capital intensive products, including machinery and electronics, has opened the door for low income countries to expand their apparel sectors. China, which had relied heavily on apparel in the early stages of its export growth, has seen the sector's share of its total exports fall from one fifth to one tenth in the last dozen years. Thus, not only are low income countries succeeding in exporting natural resources they are also moving into labor intensive manufacturing.

The role of the United States in the changing pattern of international specialization is not immediately apparent. The US does absorb large amounts of oil from the Middle East and other petroleum exporters and is a major destination market for Latin America and the Caribbean. But what is perhaps most striking about the recent evolution of developing country exports is that the United States does not appear to be the central actor, outside of oil and apparel. More than anything, it is income growth in middle income countries that appears responsible for changes in specialization patterns. If we believe that internally generated productivity advances are largely responsible for the rising incomes of middle income nations, then concerns about a consumption bust in the United States threatening global economic cooperation are exaggerated. Were US

import demand growth to slow, Latin America and the Caribbean would be negatively affected (Mexico and Central America in particular), and China would have to find other markets for its goods. (With the potential for growth in domestic consumption in China, the displacement of Chinese goods from the US market is perhaps not a grave concern.)

Further relieving concerns about weakening US import demand growth is that the two sectors where US demand has been important for low income countries are oil and apparel. If the US does tighten its belt, inelastically demanded oil and semi-durable apparel would seem unlikely candidates for major reductions in US consumption growth. More likely candidates would be durable goods in the machinery, electronics, and transportation equipment sectors, which are major exports for upper middle income countries. For low income and lower middle income countries outside of the Western Hemisphere, a weaker United States would not be as important as weak demand from middle income countries. For Latin America and the Caribbean, of course, a weaker United States would mean a potentially sharp reduction in the growth in demand for their exports.

2 What goods do developing countries export?

To examine trade patterns among developing countries, we first group countries according World Bank income classifications. Low income countries (those with 2008 GNI per capita of \$975 or less) include most of Sub-Saharan Africa, plus a few countries in South Asia (Afghanistan, Bangladesh, Nepal), Central Asia (Kyrgyz Republic, Tajikistan, Uzbekistan), East Asia (Cambodia, Laos, Myanmar, North Korea, Vietnam), the Caribbean (Haiti), and the Middle East (Yemen). Lower middle income (GNI per capita of \$976-\$3,855) and upper middle income (GNI per capita \$3,856-\$11,905) countries include the rest of Southeast Asia and Central Asia, a

few Sub-Saharan African countries, most Pacific island nations, most of Latin America and the Caribbean, most of Central and Eastern Europe, and the Middle East and North Africa, except for a handful of high income Gulf States. For completeness, we also examine high income countries (GNI per capita of \$11,906 or higher). See Appendix A for country groups.

To provide a sense of the economic size of different country groups, Table 1a shows the share of merchandise exports accounted for by each country income category. Over 1996 to 2008, low income countries share of world exports rose from 0.7% to 1.1%. Despite their expanding trade, these countries remain small players in global commerce. Lower middle and upper middle income countries (excluding the BRICs) saw their combined export share rise from 13% to 18%. We list the BRICs (Brazil, Russia, Indonesia, and China) as a separate category, given their economic size and growing importance in global trade. Their global export share shows an impressive rise from 9% to 17%, with these countries now exporting nearly as much as all other low and middle income countries combined.² With all developing regions seeing their export shares grow, the global export share for high income countries must have fallen, as it did from 77% to 65%. For the first time since early in the 20th century, high income countries account for less than two-thirds of world exports, with their share likely to continue to fall in the coming years.

Just as there have been changes in export shares across countries, there have been sizable changes in import shares, as well. Table 1b shows the shares of global merchandise imports for countries by income group. Low and middle income countries share of world imports nearly tripled over the sample period, rising from 12% to 31%, owing in large part to their sharply rising income and consumption levels. Within this group, the BRICs world import share more

² Among the BRICs, China and India are classified as lower middle income countries and Brazil and Russia are upper middle income countries.

than tripled, from 4% to 12%. Consequently, high income countries now account for less than 70% of world imports.

In presenting the data, it is helpful to group products according to factor intensity. Using four digit 1996 HS product classification codes, we construct 12 aggregates:

- raw and processed food products (HS 1-24),
- petroleum products (HS 27),
- chemicals (HS 28-40),
- textiles (HS 41, 50-60),
- wood and paper products (HS 44-49),
- apparel and footwear (HS 42-43, 61-67),
- non-metallic minerals (HS 25, 68-71),
- iron and steel (HS 26, 72-83),
- machinery (HS 84),
- electronics (HS 85),
- transportation equipment (HS 86-89), and
- other manufactures (HS 90-97).³

These product aggregates are similar to those in Leamer (1984), who examines industry factor intensity more formally. Food products are intensive in the use of agricultural land; petroleum is intensive in the use of oil-based mineral resources; chemicals, textiles, and iron and steel are intensive in the use of physical capital and sub-soil minerals; wood and paper products are intensive in the use of forestry land; non-metallic minerals are intensive in non-oil mineral

³ Other manufactures include optical instruments, clocks, musical instruments, arms, furniture, toys and games, miscellaneous goods, and works of art.

resources; apparel and footwear are intensive in the use of raw labor; and machinery, electronics, and transportation equipment are intensive in the use of human and physical capital.

Within industries, production stages often vary in their factor intensity. In apparel, footwear, machinery, electronics, and transportation equipment, for instance, firms increasingly fragment production stages across national borders (whether through foreign direct investment or subcontracting arrangements with independent suppliers), locating low skill tasks in low wage countries and high skill tasks in high wage countries. Production in these industries involves, among other activities, the assembly of inputs into final output, which tends to be intensive in the use of unskilled labor, and product design and the production of sophisticated components, which tend to be intensive in human or physical capital. While some poor countries have sizable exports in machinery and electronics, their role in the production chain is mostly limited to labor intensive tasks surrounding assembly and input processing and tends not to involve component manufacture or design (Feenstra and Hanson, 2003).

Table 2 shows the share of world merchandise exports accounted for by the 12 product aggregates. The increase in oil prices after the Second Gulf War is apparent, with the share of petroleum in world exports doubling over the sample period. The sectors with marked declines in export shares are food products, textiles, and apparel and footwear, which are goods exported heavily by low income countries. Yet, in Table 1a we see that despite declining relative exports in these sectors the low-income country share of world exports has risen.

2.1 Sector export patterns in developing countries

We begin the analysis by considering the pattern of specialization across broad product groups at the beginning and end of the sample period. We then consider the contribution of individual product aggregates to export growth for each country income group.

How dependent are developing countries on particular products for their exports? Which products are most important for which sets of countries? The answers to these questions depend heavily on the income level of the country. Table 3 shows the share of exports accounted for by each product group for country income groups. In 1996, exports by low income countries were concentrated in two major products (food products, apparel and footwear) and three minor products (textiles, petroleum, iron and steel), which together accounted for 86% of the shipments they sent abroad. Twelve years later, these five products continued to account for nearly 80 percent of low-income country exports, but their relative importance had changed. Apparel, petroleum, and iron and steel became even more important, while textiles and food products became less important. Indeed, by 2008 apparel, petroleum, and iron and steel alone accounted for nearly 60 percent of low-income country exports. These goods are intensive either in raw labor (apparel) or natural resources (petroleum, iron ore). Low income countries export little in the way of chemicals, electronics, machinery, or transportation equipment, all of which are goods intensive in capital, whether human or physical in nature.

What might account for the changing sector mix of low income country exports evident in Table 3? Evidence we present in section 3 suggests an answer: a shift in import demand away from Europe, which is a strong source of demand for food products from low income countries, and toward middle income countries, and the BRICs in particular, which are a strong source of demand for oil, iron, and steel. We present preliminary evidence on this hypothesis below and consider more formal empirical evidence in section 3.

Relative to low income countries, middle income countries are more diversified in terms of their exports. Petroleum is clearly an important sector, given the presence the MENA region among middle income nations, but in 2008 no other product accounts for more than 10 percent of exports among lower middle income countries or for more than 13 percent of exports among upper middle income countries. Of course, diversification for a country aggregate may hide specialization among individual countries. In the next subsection, we examine export specialization at the country level in more detail.

Other than the increase in the oil share among exports, the only other notable pattern for middle income countries is a shift away from apparel, among both lower and upper middle income countries. One possible explanation for this shift is that productivity growth in middle income countries is putting upward pressure on their wages, pricing them out of the labor intensive apparel sector and causing the apparel export share to decline. This phenomenon has been occurring in high income countries for several decades, although import barriers in these countries have prevented them from losing apparel production entirely. The relative decline in apparel exports among middle income countries may have contributed to the relative expansion in apparel exports among low income countries, as low wage nations move in to supply markets higher wage countries cannot.

Table 3 also shows that the BRICs look similar to other middle income countries in terms of their sector export patterns, with the strong exception of apparel. In 1996, apparel accounted for 23% of BRIC exports, due almost entirely to the contribution of China. Yet, by 2008 the apparel export share had fallen to 11%, as China experienced more rapid export growth in other sectors. China, as well, is moving away from apparel and footwear (at least in a relative sense), opening the way for lower income nations to fill global demand for these goods.

The changing sector export patterns in Table 3 are seen more clearly in Table 4, which shows the share of total export growth for each country group accounted for by each product. For low income countries, the concentration of exports in a handful of sectors is striking. Just two products, apparel and petroleum, account for 51% of export growth, with the next two, food products and iron and steel, bringing the total to 76%. For low income countries, export growth appears to be almost entirely resource dependent, relying on raw labor (apparel), mineral resources (petroleum, iron ore), or agricultural land (food products). We will see in Section 3 that demand for each of these goods emanates from different groups of countries, with the BRICs and other middle income countries absorbing much of the growth in low income country oil and iron and steel exports and the US absorbing much of the growth in low income country apparel exports (with EU also low income country apparel exports).

In Table 4, we again see evidence of the greater export diversification of middle income countries as a group. While oil is hugely important for the MENA region, and therefore accounts for a large share of middle income country export growth, no other product accounts for more than 10 percent of export growth among lower middle income countries or 13 percent among upper middle income countries. The BRICs are even more diversified across products, exhibiting a pattern of sector growth that looks similar to high income countries, though with some notable exceptions, including apparel and electronics, for which BRICs have relatively high shares, and chemicals and transportation equipment, for which BRICs have relatively low shares. The first two sectors are intensive in less skilled labor (while electronics is skill intensive overall, China specializes in product assembly, which is a non-skill intensive task), whereas the second two sectors are relatively intensive in physical capital.

The data we have examined so far group countries by income level, ignoring potentially important differences across geographic regions. Table 5 provides a breakdown of export growth by product for each geographic region within each developing country income group. The regional breakdown permits a first look at the degree of export specialization among individual countries. Not surprisingly, for the MENA region, at all income levels, petroleum is the primary source of export growth, accounting for over 70% of the region's increase in exports from 1996 to 2008. Petroleum is also dominant for Russia, among the BRICs, and for Nigeria, which is the largest exporter in lower middle income Sub-Saharan Africa.

In low income Sub-Saharan Africa, export growth is concentrated in three resource intensive industries: food products, petroleum, and iron and steel. Latin America and the Caribbean demonstrate a mix of resource abundance and labor abundance in the goods it ships abroad. Lower middle income countries in the region rely on food products, petroleum, and apparel for over three quarters of their export growth, while upper middle income countries rely on food products, petroleum, iron and steel, and electronics. In South Asia, apparel is the most significant source of export growth, with lower middle income countries in the region also enjoying growth in exports of food products and non-metallic minerals. In East Asia and the Pacific, low income countries have concentrated export growth in apparel, while middle income countries in the region are specialized in machinery and electronics. The region has also had significant export growth in petroleum and food products. Patterns of export growth within East and Central Europe are relatively similar across income levels, with heavy reliance on petroleum, iron and steel, and chemicals, reflecting the importance of heavy industry in the region.

The BRIC countries have little in common in their export patterns except for scale. Export growth in Brazil is concentrated in food products and iron and steel, in Russia, as

mentioned, in oil, in India in chemicals, non-metallic minerals and iron and steel (at least for merchandise exports; service exports associated with the offshoring of call center services and other back room business operations, which are important in India's total exports, are not included in the data we use), and in China in machinery and electronics. Thus, while the BRICs as a group resemble other middle income countries, individually they are heterogeneous.

The pattern that emerges is one of strong reliance on resource-based exports in low income regions, with countries specializing in either mineral-intensive products or labor-intensive products, depending on which factor they have in most abundant supply. Middle income countries have more diversified exports, reflecting the relative capital and skill abundance of some nations. Next, we see what these patterns imply about the overall extent of specialization among developing country exporters.

2.2 Export diversification among developing countries

The results of the last section suggest that low income countries tend to be specialized in a handful of resource intensive activities, while middle and high income countries are relatively diversified in the types of goods they ship abroad. These results are roughly consistent with recent literature that finds that from the 1970s to the mid 1990s countries became more diversified in terms of the allocation of employment across sectors as their income rose from low levels to higher levels. Imbs and Wacziarg (2003) document that the relationship between the sector concentration of employment and per capita GDP is U shaped. Countries become more diversified during initial phases of development and less diversified in later stages. So far, our results are consistent with at least the first part of the Imbs-Wacziarg regularity. We now consider more detailed data whether such patterns hold in the most recent phase of globalization.

To begin the analysis, we examine how important are individual products to the exports of individual countries. A simple way to characterize export specialization is the fraction of trade accounted for by the largest single exported good. Table 6 shows the average share of a country's most important export good in its total exports at the level four digit HS 1996 products (of which there are 1241 in the data). We show these shares for two periods, a centered moving average for 1996-1998, and a centered moving average for 2006-2008, loosely referring to the first period as 1997 and the second as 2007. We average the maximum shares across years rather than show shares for individual years in order to account for the impact of temporary global price shocks on export values. The data are weighted by country shares of global exports.

The reliance of developing countries on individual exports products is striking. To begin with a part of the world where export specialization is expected, countries in the MENA region depend heavily on individual products, following from the importance of oil production in the Middle East. In 2007, the dominant export product for low income MENA countries (in all cases oil or oil related products) accounted for 92% of shipments abroad and for middle income MENA countries accounted for over 60 percent of export shipments. Here, we see initial evidence that in richer countries the reliance on a single dominant export products is lower, a pattern that holds for all regions except South Asia (owing to middle-income Pakistan being more specialized than low-income Bangladesh) and Sub-Saharan Africa (owing to the presence of oil-exporting Nigeria among middle income countries in the region).

Even outside of the Middle East and North Africa, low income countries rely heavily on individual products, with the export share of the dominant four digit product equal to or exceeding 25 percent on average in all regions except South Asia. In lower middle income countries, the average export share of the dominant four digit product exceeds 20 percent in all

regions, while among upper middle income countries it exceeds 13 percent in all regions. Thus, not until countries exceed a GNI per capita of around \$4,000 does their most important export account for less than a fifth of total shipments abroad.

Of course, which good is the dominant export varies across countries, regions, and income levels. Table 7 shows the number of countries that have particular four digit products as their dominant export. The most common dominant export good is crude petroleum (HS 2709), which meets the criterion for 6 low income countries, 18 middle income countries, and 8 high income countries, followed by:

- refined petroleum (HS 2710), for 3 low income, 9 middle income, and 13 high income countries;
- frozen fish (HS 303), for 7 middle income countries and 1 high income country;
- petroleum gases (2711), for 2 low income and 3 middle income countries;
- passenger and transport ships (HS 8901), for 1 low income, 3 middle income, and 2 high income countries;
- rough lumber (HS 4403), for 1 low income and 3 middle income countries;
- tea (HS 902), for 2 low income and 1 middle income countries;
- refined copper (HS 7403), for 2 low income and 1 middle income countries;
- cotton (HS 5201), for 3 low income countries; and
- ferro-alloys (HS 7204), for 3 middle income countries;
- hot rolled steel (HS 7208), for 3 middle income countries; and
- electronic integrated circuits (8542), for 3 middle income countries.

No other product is the dominant export for more than two low or middle income countries, indicating the wide array of goods that serve as dominant exports. Notice that all of these goods

except passenger and transport ships, hot rolled steel, and integrated circuits, are intensive in the use of natural resources of some kind. Export specialization likely follows from resource abundance, especially for low income countries.

To examine export specialization patterns more systematically, we calculate the export Herfindahl-Hirschman Index (HHI) for each country, which measures the concentration of exports in individual products. This provides a scalar measure for each country's export specialization. The HHI for country j is defined as,

$$H_j = \sum_i s_{ij}^2$$

where s_{ij} is the share of product i in the exports of country j at a particular moment in time. An HHI of one indicates complete specialization, while an HHI with a value near zero indicates complete diversification. To gain a sense of what HHI values imply about diversification, consider the following examples. There are 1241 HS four digit products in the data. A country that had its exports equally divided among five products would have an HHI of 0.2, among 10 products would have an HHI of 0.1, and among 20 products would have an HHI of 0.05.

The table below summarizes HHIs for non-oil exporting countries in 1997 and 2007, where I take means across countries by income group and weight individual countries by their share of global trade in each year. HHIs have fallen for low income countries, from value of 0.25 to 0.16 over the ten year period. This is equivalent to these countries going from a situation in which exports are spread equally across just four products to being spread equally across about seven products (out of the over 1200 products they could export). While either case represents a high degree of specialization, the movement toward greater diversification among low income countries is pronounced. The increasing diversification among low income countries is especially notable in light of the fact that all other country income groups become

somewhat *more* specialized in their exports over the period. In 2007, the average HHI for lower middle income countries is 0.12, equivalent with exports for these countries being spread out equally among about eight products, for upper middle income countries is 0.07, equivalent with exports for these countries being spread out among 15 products.

Average export HHIs by exporter income level (weighted by exports)

Exporter income level	1997	2007
Low income	0.246	0.158
Lower middle income	0.098	0.120
Upper middle income	0.056	0.069
BRICs	0.016	0.023
High income	0.014	0.032

Sample means for HHIs are not informative about the range of values represented in the data. From the table alone, we do not know whether the decrease in mean HHIs for low income countries is driven by a few large countries (in which case the variance in export diversification across countries would be rising over time) or is common to many low income economies. Figures 1a and 1b show HHIs for countries grouped by income level. To summarize the indices visually, we estimate kernel densities for HHIs across countries for each income group, weighting by each country's share of world exports. The resulting kernels approximate the probability density functions of the HHI for countries grouped by income level (which means that they integrate to one). Again, the HHI for 1997 is the average over 1996 to 1998 and for 2007 is the average over 2006 to 2008.

We see further evidence in Figure 1a that specialization falls (i.e., the HHI falls) as a country's income level rises. Low income countries are the most specialized, while high income countries are the least. This is additional evidence consistent with the findings in Imbs and Wacziarg (2003). Interestingly, the difference between low income countries and all other countries is much larger than the difference between middle and high income countries. Distinct from Imbs and Wacziarg, much of the diversification in exports appears to occur in the early stages of economic development. There is little apparent increase in specialization as one moves from the middle income to the high income country group.

When comparing the figures for 1997 and 2007, it appears that the high degree of specialization in low income countries relative to other countries has diminished over time. To examine this issue more closely, Figure 2a shows the HHIs for low income countries in 1997 and 2007 in a single graph. It is clear that the distribution of HHIs has shifted to the left, indicating more diversification of exports across products for low income countries. Over time, low income nations have thus become less specialized. Figures 2b-2d show similar graphs for lower middle, upper middle and high income countries. Interestingly, there is no temporal decrease in specialization for these countries. Indeed, for each income group the distribution of HHIs has shifted to the right modestly over time, indicating *less* diversification, opposite of the trend for low income countries and consistent with the above table. It should be emphasized that the changes in the HHI distributions for middle and high income countries are slight and therefore unlikely to be statistically significant. Still, the pronounced increased export diversification of low income countries stands in stark contrast to changes for middle and high income countries.

The reason behind rising export diversification in low income countries is apparent in Tables 3 and 4. In 1996, food products accounted for nearly one third of low income country

exports. By 2008, their share had fallen to 17%. The movement out of food products and into other goods, especially petroleum, apparel, and iron and steel, appears to have helped make low income countries more diversified, though they are still more specialized than higher income countries.

One might imagine that the distribution of HHIs would depend on whether oil exporters are included in the data. These countries tend to be highly specialized in crude petroleum and petroleum refining. However, when the 20 major oil exporters are dropped from the sample (defined as countries for which petroleum or petroleum related products were the dominant export in both 1997 and 2007 and for which the share of the dominant export in a country's total export exceeded 25 percent), the plots look essentially the same as those in Figures 1 and 2. The phenomenon of increasing diversification among low income countries and modestly decreasing diversification among middle and high income countries thus holds for non-oil exporters.

To examine further the relationship between the level of development and export diversification, Figures 3a and 3b plot the export HHI against log per capita GDP, first in 1997 and then in 2007. We exclude the 20 major oil exporters, given the likelihood that they exhibit excess export specialization relative to other countries (though in practice their exclusion does not matter much for how the graphs appear). There is a clear negative relationship between the export HHI and per capita income, which is highly statistically significant. Countries with higher average incomes have lower export HHIs, indicating they are more diversified in terms of the goods they ship abroad. (When we allow for a quadratic relationship, the fitted values shown in the graphs exhibit only mild curvature, suggesting that a linear relationship fits the data reasonably well.) However, it is also apparent that the negative relationship weakens over time. The line plotting fitted values for 2007 is flatter than for 1997. While statistically significant in

either year, the slope coefficient on log per capita GDP falls in absolute value from -0.065 in 1997 to -0.047 in 2007. This is further evidence that the relative export specialization of low income countries has diminished over time.

Summary

The exports and export growth of low income countries are concentrated in four resource intensive sectors: food products, oil, apparel, and iron and steel. This pattern of specialization is consistent with these countries being relatively abundant in their supplies of natural resources (and relatively scarce in their supplies of human and physical capital). What is perhaps surprising is that low income countries have become more diversified over time in terms of their export shipments. At any moment in time, middle income countries are much more diversified than low income countries in terms of their exports, approaching the level of diversification exhibited by high income countries. But despite middle income countries having enjoyed export growth in a broad range of sectors, low income countries have closed part of the export diversification gap. Middle and high income countries have actually become modestly less diversified in their exports in recent years. The proximate causing of rising absolute and relative export diversification in low income countries is a movement away from heavy reliance on food products toward other sectors.

3 To which markets do developing countries export?

We turn next to the geographic pattern of exports for developing countries. Which are the primary markets for developing country shipments? Have these markets changed over time?

How important is the United States as a destination? Has its importance risen or fallen in the most recent phase of globalization?

3.1 Destination markets for developing country exports

To begin the analysis, Table 8 shows the share of merchandise exports going to destination regions organized by the income level of the importer and exporter. The data present one complication that requires us to use a shorter time span for exports by destination market than exports by product. Over time, the number of countries reporting imports at the four digit level increases markedly, with high income nations reporting data in all years and lower income nations increasing their reporting with each passing year. To include as many importers in the analysis as possible, we use 2000 as the initial year (keeping 2008 as the final year).

For developing nations, the change in destination markets has been dramatic. In 2000, low income countries sent just 28% of their exports to low and middle income economies; by 2008, this figure had reached 41%. Of the 13% increase in market share for low and middle income nations, the BRICs account for 5% and other countries account for 8%. The diversification of low income country exports away from high income markets is therefore not just about the BRICs increasing their imports. Other low and middle income countries are also an important source of new demand.

For middle income countries, the shift away from reliance on high income destination markets is equally pronounced. For lower middle income countries, the share of exports going to low and middle income countries rises from 23% to 41%, and for upper middle income countries it rises from 18% to 31%. For these two groups, as well, low and middle income countries other than the BRICs are the main source of the increase in demand.

When we examine which high income countries are decreasing their relative absorption of developing country exports, there is not a common pattern across exporters. For low income countries, the share of exports absorbed by the United States rises, while it falls for the European Union and other high income nations; for lower middle income countries, the share of exports going to high income countries declines across the board; and for upper middle income countries, the share of goods going to the EU rises but the share going to the US and other high income countries falls. The varied changes in bilateral absorption patterns suggest that the story is not just about differential rates of income growth across high income countries. Were this the case, then the logic of the gravity model of trade (Feenstra, 2004) would suggest that countries increase or decrease their consumption of goods across exporters in constant proportion. Other factors (e.g., bilateral trade or investment agreements, the strategies of multinational firms, the effect of income levels and income distribution on patterns of import demand) are clearly at work to account for why the share of goods going to the US or the EU rises for some groups but falls for others.

To provide country level detail on the export destinations, Table 8b repeats the exercise in Table 8 showing four individual exporting countries from each of the six developing geographic regions. In Europe and Central Asia, we see diversification of export destinations away from the EU and the US and toward low and middle income countries, including the BRICs (at least for Bulgaria and Poland). In countries from the Middle East and North Africa, Sub-Saharan Africa, and South Asia, there is a shift in exports toward the BRICs and low and middle income countries in general, with the changes being the weakest for Jordan. In East Asia, there is a strong shift toward the BRICs and other low and middle income economies in all countries except Cambodia. And in Latin America, there is also a shift in exports toward other

low and middle income countries, but it is more modest than in the other regions. The United States remains the dominant destination for proximate Guatemala and Mexico.

Table 9 provides another perspective on changing export destinations for developing countries by showing the shares of export growth accounted for by different destination markets. Low and middle income countries absorb a high of 51% of export growth (for lower middle income countries) and a low of 35% of export growth (for the BRICs). The United States absorbs a high of 19% of export growth (for low income countries) and a low of 15% (for lower middle income countries). For low and lower middle income countries, therefore, half of their export growth is being absorbed by other low and middle income countries, while less than one fifth is being absorbed by the United States. The US is clearly remains an important market for developing countries, but other countries, as a group, have become far more important. The dominance of the US market may be more perceived than real.

Repeating the exercise in Table 9 for individual countries, Table 9b shows the share of export growth over 2000 to 2008 going to particular regions for the 24 countries shown in Table 8b. Naturally, there is variation across individual countries but several clear patterns emerge. The US absorbs more than 15 percent of export growth for just seven of the 24 countries: Jordan, Nigeria, Pakistan, Cambodia, Vietnam, Guatemala, and Mexico. Low and middle income countries, in contrast, absorb more than 25 percent of export group in all countries except four: Tunisia, Bangladesh, Cambodia, and Mexico.

Further perspective on the nature of the broadening of import demand is provided by breaking income groups for exporters into their geographic components. Table 10 reports the share of export growth by income and region of the exporter absorbed by different country income groups. Of the 22 regional-income group exporters shown, the United States absorbs for

more than 20 percent of recent export growth in just seven: three are in Latin America and the Caribbean and the others are low income East Asia and the Pacific (due to apparel exporters in the region), lower middle income Sub-Saharan Africa (due primarily to Nigeria's oil exports), the upper middle income MENA region (due to primarily to oil exports from the Gulf), and China. Thus, the importance of the US market as a source of import demand growth is primarily an issue for the Western Hemisphere, lower middle income East Asian countries, and oil exporters. Due to geography, the dependence of Latin America and the Caribbean on the United States is inescapable. The dependence of oil exporters on the US market is also unsurprising, given the high consumption per capita of petroleum related products in the United States. The dependence of East Asia may in part reflect the tendency of these economies to emphasize fixed exchange rates and the accumulation of foreign exchange reserves, which has lead to trade surpluses vis-à-vis the United States.

Finally, Table 11 shows export growth by product and destination market, broken out by developing country exporter income groups. For a given exporting region, each entry shows the share of export growth over the 2000-2008 period accounted for by a production-destination pair. The table presents a great deal of information to digest so we focus on one particular issue. Where is the United States a significant source of absorption for recent developing country export growth? The answer turns out to be for a few select products in a few select regions. For low income countries, the US absorbs 20% of their export growth over the sample period. But 14% of this total is in just two sectors, petroleum and apparel. Similarly, the US absorbs 15% of export growth in lower middle income countries, with 13% of this in petroleum. Only for upper middle income countries and the BRICs is US absorption of export growth spread across more than two sectors, reflecting the diversification in these countries' exports. It thus appears that a

contraction in US import demand growth would most adversely affect two primary categories: oil exports and low income country apparel exports. Absorption by the European Union, while also concentrated, is not as extreme as the United States. The EU absorbs 20% of low income country exports, with 10% of this in apparel and 5% in food products. The EU and the US together absorb 79% $((9.6+9.6)/24.9)$ of export growth in apparel and footwear for low income countries, making these destination markets overwhelmingly important for exporters of low end manufactures.

In contrast to US import patterns, low and middle income countries absorb a far wider array of the products than low income countries export. Low and middle income countries, including the BRICs, absorb 63% $(15.7/24.9)$ of low income country exports of petroleum, 70% $(8.8/12.6)$ of their exports of iron and steel, and 52% $(7.7/14.9)$ of their exports of food products. The only sectors with minimal absorption are in electronics and other products (which include capital intensive instruments and arms). Low and middle income countries thus appear to have done more to help low income exporters diversify their exports than has the US or EU.

Table 11b provides data on individual exporters to complement the regional summaries in Table 11. Naturally, at the level of individual countries we see more specialization in specific products and destinations when it comes to absorption of export growth over the 2000 to 2008 period. In Europe and Central Asia, Bulgaria (BGR) and Poland (POL) are relatively diversified, while iron and steel shipments to low and middle income (LMI) countries account for 20% of Ukraine's (UKR) export growth and oil shipments to LMI's accounting for 35% of Uzbekistan's (UZB) export growth. In the Middle East and North Africa, oil exports to LMIs account for 18% of Egypt's (EGY) export growth, and chemical exports to LMIs account for 20% of Jordan's (JOR) export growth and 15% of Morocco's (MAR) export growth. Tunisia (TUN) is relatively

diversified. In Sub-Saharan Africa, food shipments to the EU account for 29% of Ghana's (GHA) export growth and 20% of Kenya's (KEN) export growth, while iron ore shipments to the EU account for 28% of Mozambique's (MOZ) export growth and oil shipments to the US account for 25% of Nigeria's (NGA) export growth. In South Asia, iron ore shipments to the BRICs (primarily India and China) account for 45% of Nepal's export growth, while apparel shipments to high income (HI) countries (primarily the EU) account for 43% of Bangladesh's (BGD) export growth and 23% of Pakistan's (PAK) export growth. India is relatively diversified across sectors and destinations. In East Asia, apparel shipments to high income (HI) countries account for 48% of Cambodia's (CMB) export growth and 16% of Vietnam's export growth, while electronics exports to the BRICS (primarily China) account for 36% of the Philippines' (PHL) export growth. For Indonesia (IDN), oil shipments to high income countries account for 14% of its export growth. In Latin America, food exports to the BRICs (primarily Brazil) account for 27% of Argentina's (ARG) export growth, oil exports to the BRICs (Brazil, again) absorb 36% of Bolivia's (BOL) export growth, and food exports to the US account for 21% of Guatemala's (GTM) export growth. Mexico (MEX) is diversified across sectors but heavily dependent on the US, which absorbs 74% of the country's export growth.

3.2 Using the gravity model to interpret change trade patterns

The results discussed in section 3.1 create the impression that low and middle income countries have become a much more important source of import demand for developing country exporters, while the United States and the European Union appear to be playing a less important role. One obvious explanation for the expanding role of low and middle income countries as a source of import demand is their rapid growth in GDP. As these economies grow relative to rich

countries, their expanding import demand will absorb an ever larger share of global exports. To provide formal evidence on this hypothesis, we estimate a gravity model of trade and use the results to decompose sources of developing country export growth in to portions associated with their own GDP growth and the GDP growth of their trade partners.

Following Anderson and van Wincoop (2004) and Feenstra (2004), log bilateral imports by importing country i from exporting country j of good k at time t can be written as,

$$\ln x_{ijkt} = \beta_0 + \beta_1 \ln Y_{it} + \beta_2 \ln Y_{jt} + \beta_3 \ln \tau_{ijkt} + \beta_4 \Pi_{ikt} + \beta_5 \Pi_{jkt} + \varepsilon_{ijkt}, \quad (1)$$

where x_{ijkt} is bilateral trade, Y_{ht} is GDP in country h , τ_{ijkt} is the iceberg trade cost between i and j , and Π_{ht} is the multilateral resistance to trade in country h . Theory implies restrictions on parameter values (namely that coefficients on GDP equal one and that coefficients on trade costs equals one minus the sector elasticity of substitution), which we do not impose. Owing to data constraints and our interest in how GDP affects trade, we cannot estimate the full version equation (1). To derive an estimable model, we make the following simplifying assumption on trade costs:

$$\ln \tau_{ijkt} = \rho_{ijk} + t\rho_j + t\rho_k, \quad (2)$$

that is, that trade costs can be written as a function of a time-invariant term (ρ_{ijk}) that varies by importer, exporter, and sector (which captures tariffs, transport costs, and other trade costs that change slowly over time), plus an exporter specific time trend ($t\rho_j$) and a sector specific time trend ($t\rho_k$), which capture dynamic changes in trade costs. Similarly, we assume that multilateral resistance to trade can be written as,

$$\Pi_{hkt} = \pi_{hk} + t\pi_h + t\pi_k, \quad (3)$$

or as a function of a time-invariant term that varies by country and sector (π_{hk}), a country specific time trend ($t\pi_h$), and a sector specific time trend ($t\pi_k$). Plugging (2) and (3) into (1)

and taking first differences (which sweeps away the importer-exporter-sector fixed effects in trade costs and multilateral resistance and converts time trends into fixed effects), we obtain the following gravity specification:

$$\Delta \ln x_{ijkt} = \beta_1 \Delta \ln Y_{it} + \beta_2 \Delta \ln Y_{jt} + \alpha_j + \alpha_k + \alpha_t + \Delta \varepsilon_{ijkt} , \quad (4)$$

where Δ indicates the one year time difference operator. Equation (4) says that the change in log bilateral trade between two countries is a function of the change in log GDP for the importer, the change in log GDP for the exporter, an exporter fixed effect, a sector fixed effect, and a year fixed effect (which we add in order to deflate the data). Ideally, we would also include importer fixed effects in the regression, but the data we have aggregate importers into nine groups (Brazil, China, India, Russia, other low and middle income countries, the US, the EU 25, and other high income countries), meaning we have too little variation across importers to be able to do so. The data are from WITS and cover all exporters, the nine importer groups, the HS sector aggregates as shown in the tables, and the time period 2000 to 2008.

The table below reports the coefficient estimates on the log changes in importer and exporter GDP, where all data are in annual changes. Column (1) includes controls for year fixed effects only and does not weight the data; column (2) weights the data by each observation's share in global trade in a given year; column (3) adds controls for sector fixed effects; and column (4) adds controls for exporter fixed effects. The coefficient on importer GDP growth is quite stable across specifications, with an estimate of between 1.2 and 1.3 that is high statistically significant. The coefficient on exporter GDP is sensitive to whether trade weights are used. Without weights, the coefficient is low by conventional standards. With weights, the coefficients are larger and highly significant, being close to one in value once sector and exporter fixed effects are included in the estimation in column (4).

Gravity model estimation results, one year time differences

	(1)	(2)	(3)	(4)
change in log exporter GDP	0.227 (0.156)	1.279** (0.079)	1.282** (0.077)	0.966** (0.148)
change in log importer GDP	1.194** (0.161)	1.271** (0.089)	1.262** (0.091)	1.300** (0.095)
Year controls	Yes	Yes	Yes	Yes
Sector controls	No	No	Yes	Yes
Exporter controls	No	No	No	Yes
Trade weights	No	Yes	Yes	Yes
Adj. R squared	0.003	0.118	0.149	0.183
Observations	113,068	113,068	113,068	113,068

Robust standard errors in (). ** indicates significance at 1% level.

With the coefficient estimates in hand, we proceed to the exercise of interest, which is to see how much of developing country export growth is accounted for by growth in importer GDP (which captures changes in import demand) and growth in exporter GDP (which captures changes in exporter supply capacity). To adapt (4) for the decomposition exercise, note that by the rules of log differentiation we can state the aggregate change in exports for country j as,

$$\Delta \ln x_{jt} = \sum_i \sum_k s_{ijk} \Delta \ln x_{ijkt}, \quad (5)$$

where s_{ijk} is the share of exports to country i in sector k in country k 's total exports. The projected contribution of country j 's own GDP growth to its total export growth is then

$$\sum_i \sum_k s_{ijk} \hat{\beta}_2 \Delta \ln Y_{jt} / \Delta \ln x_{jt}, \quad (6)$$

where $\hat{\beta}_2$ is the estimated regression coefficient from equation (4). The value in (6) collapses to $\hat{\beta}_2 \Delta \ln Y_{jt} / \Delta \ln x_{jt}$, as the trade shares sum to one and there is no j term in the summation expressions. The contribution of importer GDP growth to country j 's total export growth is

$$\sum_i \sum_k s_{ijk} \hat{\beta}_1 \Delta \ln Y_{it} / \Delta \ln x_{jt}. \quad (7)$$

As our interest is gauging the contribution of GDP growth in different groups of importers, we break the expression in (7) into components associated with GDP growth in the BRICs, other low and middle income countries, the US, the EU 25, and other high income countries.

Table 12 shows the results from using equations (6) and (7) to decompose export growth in developing countries, where we group exporters by their income level and geographic region.⁴ The first column shows the share of export growth associated with exporter GDP growth, based on equation (6). The second column shows the share of export growth associated with GDP growth in different importing regions, based on equation (7). Not surprisingly, growth in exporter GDP is a very important source of export growth, as expanding economies sell more goods abroad. The share of export growth associated with exporter GDP growth ranges from a low of 27% in upper middle income countries in the Middle East and North Africa to a high of 55% in lower middle income East Asia and the Pacific. It is difficult to give these results a causal interpretation, as a country's exports and GDP are jointly determined.

Of greater interest in Table 12 is seeing the contribution of GDP growth in different importing regions to developing country export growth. From equation (7), the contribution of GDP growth in an importing region to export growth in another region is due to a combination of the magnitude of GDP growth in the importer and the fraction of exports the exporter sends to the importer. Over 2000 to 2008, GDP growth averages 2.2% in the US, versus 1.9% in the

⁴ We exclude low income Latin America and the Caribbean as a category as it is comprised of a single country, Haiti.

EU25. Despite their similar growth performances, they make vary different contributions to export growth in developing regions, owing to differences in the strength of their trade ties. In Europe and Central Asia and the Middle East and North Africa, the contribution of US GDP growth to regional export growth is less than 3 percent. US GDP makes a larger contribution to export growth in lower middle income Sub-Saharan Africa (owing in part to strong trade ties between the US and Nigeria), low income South Asia, and upper middle income East Asia and the Pacific, with contributions above 5 percent in each case. Not surprisingly, the most important US contribution is in Latin America and the Caribbean, in which it accounts for 13% of export growth. Relative to the US, GDP growth in the EU 25 makes a larger contribution to export growth in Europe and Central Asia, the Middle East and North Africa, and South Asia but smaller contributions in East Asia and the Pacific and Latin America and the Caribbean. Europe has relatively strong trade ties with proximate North Africa, Central and Eastern Europe, and Central and South Asia, but relatively weak ties with more distant East Asia and Latin America.

What really stands out in Table 12 is the projected contribution of low and middle income importers to developing country export growth. GDP growth in low and middle income economies (summing the contribution of the BRICs and other LMIs) accounts for 51% of export growth in low income Middle East and North Africa, 42% of export growth in low income Europe and Central Asia, and 21% of export growth in low income Sub-Saharan Africa, all figures that exceed the contribution of the US and EU combined. In middle income countries, the contribution of LMI GDP growth to export growth is smaller, but still above 10 percent in all regions except upper middle income Middle East and North Africa and lower middle income East Asia and the Pacific. The results in Tables 8 to 11, which indicate the importance of low and middle income countries in absorbing export growth in developing nations, thus have a

strong foundation in the gravity model. A substantial fraction of the increase in exports by developing countries, in particular those in the low income category, is associated with growth in import demand emanating from increases in GDP in low and middle income nations.

Surging import demand growth in low and middle income countries comes from surging GDP growth. Over the period 2000 to 2008, average annual real GDP growth is 9.7% in China, 7.3% in India, 6.5% in Russia, and 3.5% in Brazil. In other low and middle income countries it is 4.3%. Hence, the greater projected contribution of GDP growth in LMIs versus the United States and European Union to export growth in developing countries comes in large part from their much strong growth performance in the last decade.

3.3 Offshoring and global trade patterns

How do offshoring and the creation of global production networks affect the way we interpret data on bilateral trade patterns? One possibility is that the figures in Tables 8-12 give a misleading impression of changes in import demand because they mix exports of final goods with exports of intermediate goods. Suppose, for instance, that through global production networks developing countries ship goods back and forth multiple times during processing before sending them on to final consumers, most of whom reside in the United States, the European Union, Japan, or other high income economies. In the production of apparel, raw cotton may be shipped from Egypt to Thailand to be processed into cloth before being sent to Vietnam to be assembled into a man's shirt, with the ultimate destination for the item being the United States. The value of the Egyptian cotton would then be counted three times, once at entry into Thailand, a second time embodied in cloth at entry into Vietnam, and a third time at entry into the United States as a finished shirt; Thailand's value added would be counted twice (at

entry in Vietnam and the US); and Vietnam's value added would be counted once (at entry in the US). The conceptually correct way to measure exports would be as the value added in the country, excluding the value of the good attributable to imports, but no nation follows this convention in measuring trade flows. As a result, observed trade overstates the shipment of value added between nations. Absent data for each country on input-output relationships that include the quantities of imports used in production, there is no simple way to address this problem. While it is a valid concern, the amount of double counting would have to be immense to explain away the increase in absorption of exports by low and middle income countries.

Summary

In the last decade, there has been an important shift in the destination markets for developing country exports away from high income countries and toward developing economies. Since 2000, low and middle income countries have absorbed half of the export growth by low income and lower middle income nations (though less than one third of export growth by upper middle income nations). Their import demand is concentrated in resource intensive products, including food products, oil, and iron and steel. The United States, in contrast, has become a less important market for developing country exports. Still, it remains a major destination for Latin America and the Caribbean (and Mexico and Central America, in particular), oil exporters worldwide, and low income countries in East and South Asia. The importance of the US market for low income Asia appears to be due to apparel. The US and the EU absorbed over three quarters of recent export growth in apparel for low income nations, with East and South Asia being the location of the major apparel producers.

4 Conclusion

In this paper, we have examined the goods developing countries export and the markets they export to, covering the period 1996 to 2008. The main findings are the following:

- The exports and export growth of low income countries are concentrated in four resource intensive sectors: food products, oil, apparel, and iron and steel. The exports and export growth of middle income countries are more diversified, with greater presence in skill and capital intensive sectors, including machinery, electronics, and transportation equipment.
- Low income countries are the least diversified in terms of their exports, with middle income countries being only slight less diversified than high income countries. Yet, low income countries have the greatest recent increase in export diversification. Greater export diversification in low income countries appears due to a relative shift away from food products and an expansion in the share of their exports going to low and middle income countries.
- There has been a shift in the destination of developing country exports away from high income countries and toward developing economies. Since 2000, low and middle income countries have absorbed half of the export growth by low income and lower middle income nations (though less than one third of export growth by upper middle income nations). Their import demand is concentrated in resource intensive products, including food products, oil, and iron and steel.
- The United States has become a less important market for developing country exports. It remains a major destination for Latin America and the Caribbean, oil

exporters worldwide, and apparel exports by income countries in East and South Asia, but absorbed less than 15 percent of export growth from other regions.

- In low end manufactures, high income countries continue to be major destination markets. The US and the EU absorbed over three quarters of export growth in apparel for low income nations (most of which comes from East and South Asia).

The major storyline from this analysis is that middle income countries (including but not limited to the BRICs) have become an important source of demand for exports from low income and lower middle income countries. This demand shift has induced greater diversification in low income country exports, both in terms of the regions they supply and the types of goods they produce. Perhaps surprisingly, the United States is not a central actor in these changes, though it remains an important source of absorption for developing country exports of oil and apparel and goods coming from the Western Hemisphere.

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Appendix: Country income groups (World Bank Definitions, 2008)

Low income

Cambodia	East Asia & Pacific	Gambia, The	Sub-Saharan Africa
Korea, Dem. Rep.	East Asia & Pacific	Ghana	Sub-Saharan Africa
Lao PDR	East Asia & Pacific	Guinea	Sub-Saharan Africa
Myanmar	East Asia & Pacific	Guinea-Bissau	Sub-Saharan Africa
Vietnam	East Asia & Pacific	Kenya	Sub-Saharan Africa
Kyrgyz Republic	Europe & Central Asia	Liberia	Sub-Saharan Africa
Tajikistan	Europe & Central Asia	Madagascar	Sub-Saharan Africa
Uzbekistan	Europe & Central Asia	Malawi	Sub-Saharan Africa
Haiti	Latin America & Caribbean	Mali	Sub-Saharan Africa
Yemen, Rep.	Middle East & North Africa	Mauritania	Sub-Saharan Africa
Afghanistan	South Asia	Mozambique	Sub-Saharan Africa
Bangladesh	South Asia	Niger	Sub-Saharan Africa
Nepal	South Asia	Rwanda	Sub-Saharan Africa
Benin	Sub-Saharan Africa	Senegal	Sub-Saharan Africa
Burkina Faso	Sub-Saharan Africa	Sierra Leone	Sub-Saharan Africa
Burundi	Sub-Saharan Africa	Somalia	Sub-Saharan Africa
Central African Republic	Sub-Saharan Africa	Tanzania	Sub-Saharan Africa
Chad	Sub-Saharan Africa	Togo	Sub-Saharan Africa
Comoros	Sub-Saharan Africa	Uganda	Sub-Saharan Africa
Congo, Dem. Rep.	Sub-Saharan Africa	Zambia	Sub-Saharan Africa
Eritrea	Sub-Saharan Africa	Zimbabwe	Sub-Saharan Africa
Ethiopia	Sub-Saharan Africa		

Lower middle income

China	East Asia & Pacific
Indonesia	East Asia & Pacific
Kiribati	East Asia & Pacific
Marshall Islands	East Asia & Pacific
Micronesia, Fed. Sts.	East Asia & Pacific
Mongolia	East Asia & Pacific
Papua New Guinea	East Asia & Pacific
Philippines	East Asia & Pacific
Samoa	East Asia & Pacific
Solomon Islands	East Asia & Pacific
Thailand	East Asia & Pacific
Timor-Leste	East Asia & Pacific
Tonga	East Asia & Pacific
Vanuatu	East Asia & Pacific
Albania	Europe & Central Asia
Armenia	Europe & Central Asia
Azerbaijan	Europe & Central Asia
Georgia	Europe & Central Asia
Kosovo	Europe & Central Asia
Moldova	Europe & Central Asia
Turkmenistan	Europe & Central Asia
Ukraine	Europe & Central Asia
Belize	Latin America & Caribbean
Bolivia	Latin America & Caribbean
Ecuador	Latin America & Caribbean
El Salvador	Latin America & Caribbean
Guatemala	Latin America & Caribbean
Guyana	Latin America & Caribbean
Honduras	Latin America & Caribbean

Upper middle income

American Samoa	East Asia & Pacific
Fiji	East Asia & Pacific
Malaysia	East Asia & Pacific
Palau	East Asia & Pacific
Belarus	Europe & Central Asia
Bosnia and Herzegovina	Europe & Central Asia
Bulgaria	Europe & Central Asia
Kazakhstan	Europe & Central Asia
Latvia	Europe & Central Asia
Lithuania	Europe & Central Asia
Macedonia, FYR	Europe & Central Asia
Montenegro	Europe & Central Asia
Poland	Europe & Central Asia
Romania	Europe & Central Asia
Russian Federation	Europe & Central Asia
Serbia	Europe & Central Asia
Turkey	Europe & Central Asia
Argentina	Latin America & Caribbean
Brazil	Latin America & Caribbean
Chile	Latin America & Caribbean
Colombia	Latin America & Caribbean
Costa Rica	Latin America & Caribbean
Cuba	Latin America & Caribbean
Dominica	Latin America & Caribbean
Dominican Republic	Latin America & Caribbean
Grenada	Latin America & Caribbean
Jamaica	Latin America & Caribbean
Mexico	Latin America & Caribbean
Panama	Latin America & Caribbean

Nicaragua	Latin America & Caribbean	Peru	Latin America & Caribbean
Paraguay	Latin America & Caribbean	St. Kitts and Nevis	Latin America & Caribbean
Djibouti	Middle East & North Africa	St. Lucia	Latin America & Caribbean
Egypt, Arab Rep.	Middle East & North Africa	St. Vincent	Latin America & Caribbean
Iran, Islamic Rep.	Middle East & North Africa	Suriname	Latin America & Caribbean
Iraq	Middle East & North Africa	Uruguay	Latin America & Caribbean
Jordan	Middle East & North Africa	Venezuela, RB	Latin America & Caribbean
Morocco	Middle East & North Africa	Algeria	Middle East & North Africa
Syrian Arab Republic	Middle East & North Africa	Lebanon	Middle East & North Africa
Tunisia	Middle East & North Africa	Libya	Middle East & North Africa
West Bank and Gaza	Middle East & North Africa	Botswana	Sub-Saharan Africa
Bhutan	South Asia	Gabon	Sub-Saharan Africa
India	South Asia	Mauritius	Sub-Saharan Africa
Maldives	South Asia	Mayotte	Sub-Saharan Africa
Pakistan	South Asia	Namibia	Sub-Saharan Africa
Sri Lanka	South Asia	Seychelles	Sub-Saharan Africa
Angola	Sub-Saharan Africa	South Africa	Sub-Saharan Africa
Cameroon	Sub-Saharan Africa		
Cape Verde	Sub-Saharan Africa		
Congo, Rep.	Sub-Saharan Africa		
Côte d'Ivoire	Sub-Saharan Africa		
Lesotho	Sub-Saharan Africa		
Nigeria	Sub-Saharan Africa		
São Tomé and Príncipe	Sub-Saharan Africa		
Sudan	Sub-Saharan Africa		
Swaziland	Sub-Saharan Africa		

High income, non-OECD

Andorra
Antigua and Barbuda
Aruba
Bahamas, The
Bahrain
Barbados
Bermuda
Brunei Darussalam
Cayman Islands
Channel Islands
Croatia
Cyprus
Equatorial Guinea
Estonia
Faeroe Islands
French Polynesia
Greenland
Guam
Hong Kong, China
Isle of Man
Israel
Kuwait
Liechtenstein
Macao, China
Malta
Monaco
Netherlands Antilles

New Caledonia
Northern Mariana Islands
Oman
Puerto Rico
Qatar
San Marino
Saudi Arabia
Singapore
Slovenia
Trinidad and Tobago
United Arab Emirates

High income, OECD

Australia
Austria
Belgium
Canada
Czech Republic
Denmark
Finland
France
Germany
Greece
Hungary
Iceland
Ireland
Italy
Japan
Korea, Rep.
Luxembourg
Netherlands
New Zealand
Norway
Portugal
Slovak Republic
Spain
Sweden
Switzerland
United Kingdom
United States

Table 1a: Share of world exports by exporter income group

Exporter income group	1996	1998	2000	2002	2004	2006	2008
Low income	0.007	0.007	0.008	0.008	0.009	0.010	0.011
Lower middle income (excl. BRICs)	0.051	0.051	0.058	0.055	0.059	0.065	0.070
Upper middle income (excl. BRICs)	0.080	0.088	0.094	0.095	0.097	0.104	0.108
BRICs	0.089	0.091	0.101	0.117	0.136	0.155	0.165
High income	0.773	0.763	0.739	0.725	0.700	0.666	0.646

Table 1b: Share of world imports by importer income group

Importer income group	1996	1998	2000	2002	2004	2006	2008
Low & middle income countries	0.119	0.190	0.203	0.224	0.247	0.267	0.312
BRICs	0.038	0.056	0.054	0.062	0.078	0.091	0.122
Other countries	0.081	0.134	0.149	0.162	0.169	0.176	0.190
High income countries	0.881	0.810	0.797	0.776	0.753	0.733	0.688
EU 25	0.478	0.446	0.383	0.395	0.401	0.388	0.378
USA	0.193	0.193	0.201	0.188	0.170	0.164	0.152
Other countries	0.210	0.171	0.213	0.193	0.182	0.181	0.158

Table 2: Share of world exports by product aggregate

Product aggregate	1996	1998	2000	2002	2004	2006	2008
Food products	0.096	0.091	0.076	0.082	0.077	0.070	0.076
Petroleum	0.088	0.066	0.105	0.095	0.113	0.150	0.177
Chemicals	0.119	0.122	0.122	0.137	0.138	0.133	0.134
Textiles	0.033	0.030	0.026	0.026	0.023	0.018	0.015
Wood & paper products	0.045	0.041	0.039	0.038	0.035	0.030	0.027
Apparel	0.061	0.057	0.051	0.052	0.046	0.041	0.037
Non-metallic minerals	0.033	0.034	0.036	0.036	0.035	0.034	0.036
Iron & steel	0.076	0.076	0.070	0.069	0.082	0.093	0.097
Machinery	0.151	0.160	0.146	0.142	0.138	0.132	0.127
Electronics	0.125	0.138	0.155	0.140	0.138	0.134	0.120
Transport equipment	0.110	0.120	0.113	0.120	0.115	0.107	0.099
Other products	0.064	0.065	0.062	0.064	0.061	0.058	0.055

Table 3: Share of exports by product group and income level of exporter

Product Group	Exporting Country Income Group									
	Low Income		Low Mid Income		Upper Mid Income		BRICs		High Income	
	1996	2008	1996	2008	1996	2008	1996	2008	1996	2008
Food products	0.312	0.171	0.167	0.103	0.136	0.108	0.095	0.051	0.086	0.072
Petroleum	0.122	0.227	0.280	0.432	0.189	0.262	0.089	0.141	0.064	0.144
Chemicals	0.020	0.039	0.060	0.070	0.059	0.073	0.072	0.079	0.135	0.167
Textiles	0.107	0.035	0.050	0.015	0.026	0.012	0.046	0.020	0.030	0.014
Wood & paper products	0.027	0.021	0.046	0.017	0.036	0.023	0.030	0.022	0.048	0.030
Apparel	0.237	0.256	0.137	0.054	0.081	0.033	0.230	0.107	0.033	0.015
Non-metallic minerals	0.040	0.034	0.026	0.030	0.043	0.044	0.039	0.039	0.032	0.035
Iron & steel	0.084	0.105	0.043	0.071	0.096	0.125	0.101	0.114	0.073	0.091
Machinery	0.007	0.025	0.060	0.062	0.074	0.082	0.060	0.138	0.176	0.140
Electronics	0.009	0.032	0.090	0.095	0.153	0.129	0.112	0.176	0.127	0.109
Transport equipment	0.020	0.021	0.005	0.031	0.069	0.075	0.018	0.029	0.133	0.130
Other products	0.013	0.033	0.037	0.018	0.040	0.034	0.109	0.085	0.063	0.055

Other products include optical equip, clocks, musical instruments, arms, furniture, toys, misc. products, and works of art.

Table 4: Share of growth in exports 1998-2006 attributable to each product group, by income level of exporter

Product Group	Exporting Country Income Group				
	Low Income	Lower mid income	Upper mid Income	BRICs	High Income
Food products	0.141	0.086	0.100	0.042	0.065
Petroleum	0.250	0.472	0.281	0.150	0.185
Chemicals	0.043	0.073	0.077	0.081	0.184
Textiles	0.019	0.006	0.008	0.015	0.005
Wood & paper products	0.019	0.009	0.019	0.021	0.021
Apparel	0.261	0.033	0.020	0.084	0.006
Non-metallic minerals	0.033	0.031	0.044	0.039	0.036
Iron & steel	0.109	0.078	0.133	0.117	0.100
Machinery	0.029	0.063	0.085	0.153	0.121
Electronics	0.036	0.097	0.123	0.188	0.100
Transport equipment	0.021	0.038	0.076	0.031	0.128
Other products	0.038	0.013	0.032	0.080	0.050

Table 5: Share of growth in exports 1998-2006 attributable to each product group, by income level of exporter and region

	Low income countries						Upper middle income countries				
	EAP	ECA	LAC	MENA	SA	SSA	EAP	ECA	LAC	MENA	SSA
Food products	0.143	0.130	0.004	0.018	0.057	0.213	0.095	0.084	0.143	0.004	0.065
Petroleum	0.217	0.382	-0.001	0.953	0.006	0.224	0.195	0.169	0.288	0.952	0.130
Chemicals	0.043	0.109	0.032	0.005	0.025	0.047	0.091	0.106	0.063	0.013	0.072
Textiles	0.014	-0.049	-0.016	0.001	0.028	0.048	0.000	0.018	0.005	0.000	0.004
Wood & paper products	0.025	0.003	-0.004	0.001	0.002	0.024	0.009	0.032	0.017	0.002	0.020
Apparel	0.296	0.034	0.921	0.000	0.839	0.028	0.004	0.055	0.005	0.000	0.004
Non-metallic minerals	0.022	0.075	-0.001	0.020	0.007	0.065	0.025	0.030	0.027	0.010	0.276
Iron & steel	0.046	0.180	0.066	0.002	0.021	0.310	0.039	0.174	0.140	0.013	0.248
Machinery	0.050	0.004	0.004	0.001	0.004	0.006	0.173	0.092	0.067	0.002	0.069
Electronics	0.063	0.014	0.007	0.000	0.003	0.005	0.328	0.080	0.128	0.002	0.019
Transport equipment	0.014	0.115	0.001	0.001	0.006	0.026	0.009	0.117	0.082	0.001	0.084
Other products	0.068	0.003	-0.011	-0.001	0.002	0.003	0.032	0.042	0.035	0.001	0.010
	Lower middle income countries						BRICs				
	EAP	ECA	LAC	MENA	SA	SSA	Brazil	Russia	India	China	
Food products	0.110	0.095	0.330	0.032	0.224	0.022	0.265	0.023	0.072	0.016	
Petroleum	0.128	0.367	0.351	0.730	0.021	0.942	0.113	0.698	0.109	0.010	
Chemicals	0.116	0.067	0.041	0.077	0.068	0.005	0.075	0.074	0.145	0.076	
Textiles	0.010	0.002	0.013	0.003	0.044	0.000	0.015	-0.001	0.041	0.016	
Wood & paper products	0.012	0.018	0.019	0.003	0.005	0.004	0.045	0.024	0.006	0.018	
Apparel	0.020	0.016	0.116	0.037	0.412	0.003	0.004	0.000	0.081	0.117	
Non-metallic minerals	0.039	0.021	0.021	0.035	0.112	0.012	0.017	0.026	0.181	0.028	
Iron & steel	0.074	0.291	0.040	0.035	0.039	0.009	0.267	0.115	0.211	0.087	
Machinery	0.154	0.034	0.016	0.006	0.010	0.001	0.059	0.015	0.049	0.214	
Electronics	0.234	0.030	0.025	0.028	0.013	0.000	0.034	0.006	0.056	0.272	
Transport equipment	0.075	0.051	0.020	0.009	0.023	0.001	0.096	0.013	0.032	0.027	
Other products	0.028	0.008	0.008	0.005	0.030	0.000	0.009	0.004	0.017	0.117	

EAP=East Asia & Pacific, ECA=Europe & Central Asia, LAC=Latin America & Caribbean, SA=South Asia, SSA=Sub-Saharan Africa.

Table 6: Largest four digit export product as share of exports, averages by country (weighted by country exports)

	EAP		ECA		LAC		MENA		SA		SSA	
	1997	2007	1997	2007	1997	2007	1997	2007	1997	2007	1997	2007
Low income	0.274	0.263	0.499	0.248	0.316	0.260	0.950	0.924	0.181	0.113	0.460	0.334
Lower middle income	0.170	0.227	0.130	0.212	0.227	0.289	0.623	0.648	0.282	0.201	0.732	0.904
Upper middle income	0.191	0.230	0.101	0.132	0.134	0.192	0.479	0.611			0.154	0.146
BRICs	0.034	0.065	0.237	0.355	0.054	0.155			0.073	0.159		

EAP=East Asia & Pacific, ECA=Europe & Central Asia, LAC = Latin America & Caribbean, SA = South Asia, SSA = Sub-Saharan Africa.

BRICs = China (EAP), Russia (ECA), Brazil (LAC), India (SA).

Table 7: Number of countries for which product is the dominant export, 2007

HS Product	Low income	Lower middle income	Upper middle income	BRICs	High income	Total
104	1	1	0	0	0	2
201	0	1	0	0	0	1
202	0	0	1	0	0	1
303	0	5	2	0	1	8
306	0	0	0	0	1	1
402	0	0	0	0	2	2
801	2	0	0	0	0	2
806	1	0	0	0	0	1
809	1	0	0	0	0	1
901	1	0	0	0	0	1
902	2	1	0	0	0	3
1001	0	0	0	0	1	1
1006	0	1	0	0	0	1
1101	0	0	1	0	0	1
1201	0	1	1	0	0	2
1207	2	0	0	0	0	2
1511	0	2	0	0	0	2
1701	0	2	0	0	0	2
1801	1	1	0	0	0	2
2203	0	0	2	0	0	2
2208	0	1	0	0	0	1
2401	1	0	0	0	0	1
2601	0	0	0	2	1	3
2603	0	1	1	0	0	2
2604	1	0	0	0	0	1
2605	1	0	0	0	0	1
2610	1	1	0	0	0	2
2615	1	0	0	0	0	1
2701	1	0	0	0	0	1
2707	0	0	1	0	0	1
2709	6	10	7	1	8	32
2710	3	1	6	0	13	23
2711	2	3	0	0	0	5
2809	0	1	0	0	0	1
2818	0	0	1	0	0	1
2844	1	0	0	0	0	1
3004	0	1	0	0	3	4
3104	0	1	0	0	0	1
3105	0	1	0	0	0	1
3401	0	0	1	0	0	1
4001	1	0	0	0	0	1
4104	0	1	0	0	0	1
4403	1	3	0	0	0	4
5201	3	0	0	0	0	3
5205	0	1	0	0	0	1
5208	1	0	0	0	0	1
6109	1	0	1	0	1	3

6110	1	0	0	0	0	0	1
6204	0	0	0	0	0	1	1
7101	0	0	0	0	0	1	1
7102	0	0	0	0	0	1	1
7108	0	0	1	0	0	1	2
7202	0	0	1	0	0	1	2
7204	0	2	1	0	0	0	3
7208	0	1	2	0	0	0	3
7210	1	0	0	0	0	0	1
7213	0	1	0	0	0	0	1
7403	2	0	1	0	0	0	3
7408	0	1	0	0	0	0	1
7501	0	0	1	0	0	0	1
7601	1	0	1	0	0	0	2
8471	0	1	0	1	0	0	2
8517	0	0	0	0	0	1	1
8525	0	0	0	0	0	2	2
8542	0	1	2	0	0	7	10
8703	0	0	1	0	0	7	8
8708	0	0	1	0	0	0	1
8802	0	0	0	0	0	1	1
8901	1	1	2	0	0	2	6
8902	0	0	0	0	0	1	1
8908	1	0	0	0	0	0	1

Table 8: Share of exports by destination market

Importing region	Exporting Country Income Group									
	Low Income		Lower middle income		Upper middle income		BRICs		High Income	
	2000	2008	2000	2008	2000	2008	2000	2008	2000	2008
Low & middle income nations	0.279	0.413	0.226	0.410	0.183	0.313	0.169	0.301	0.208	0.302
BRICs	0.109	0.160	0.089	0.227	0.061	0.128	0.025	0.079	0.054	0.120
Other countries	0.170	0.253	0.137	0.183	0.122	0.185	0.144	0.222	0.154	0.182
High income nations	0.721	0.587	0.774	0.590	0.817	0.687	0.831	0.699	0.792	0.698
EU25	0.362	0.248	0.256	0.210	0.263	0.308	0.248	0.284	0.427	0.434
USA	0.149	0.180	0.252	0.188	0.400	0.265	0.237	0.196	0.167	0.118
Other countries	0.210	0.159	0.266	0.192	0.154	0.114	0.346	0.219	0.198	0.146

Table 8b: Share of exports by destination market, selected exporters

Exporter	Importing Country Income Group									
	BRICs		Low Mid Income		EU25		USA		High Income	
	2000	2008	2000	2008	2000	2008	2000	2008	2000	2008
Bulgaria	0.033	0.060	0.262	0.415	0.664	0.557	0.056	0.023	0.738	0.585
Poland	0.031	0.063	0.167	0.294	0.810	0.718	0.035	0.018	0.833	0.706
Ukraine	0.309	0.291	0.663	0.749	0.280	0.247	0.070	0.037	0.337	0.251
Uzbekistan	0.317	0.260	0.650	0.827	0.276	0.121	0.016	0.044	0.350	0.173
Egypt	0.071	0.128	0.208	0.352	0.539	0.423	0.143	0.104	0.792	0.648
Jordan	0.294	0.398	0.596	0.563	0.098	0.069	0.068	0.227	0.404	0.437
Morocco	0.068	0.183	0.144	0.346	0.707	0.517	0.059	0.056	0.856	0.654
Tunisia	0.026	0.060	0.091	0.143	0.888	0.811	0.017	0.040	0.909	0.857
Ghana	0.041	0.096	0.182	0.403	0.592	0.455	0.159	0.061	0.818	0.597
Kenya	0.016	0.043	0.350	0.448	0.489	0.376	0.069	0.080	0.650	0.552
Mozambique	0.112	0.087	0.327	0.511	0.459	0.464	0.070	0.007	0.673	0.489
Nigeria	0.083	0.211	0.180	0.296	0.266	0.189	0.507	0.477	0.820	0.704
Bangladesh	0.019	0.044	0.056	0.135	0.460	0.544	0.401	0.254	0.944	0.865
India	0.050	0.146	0.208	0.361	0.277	0.235	0.257	0.152	0.792	0.639
Nepal	0.352	0.671	0.362	0.718	0.219	0.134	0.332	0.095	0.638	0.282
Pakistan	0.069	0.093	0.192	0.301	0.309	0.307	0.281	0.222	0.808	0.699
Cambodia	0.041	0.016	0.086	0.076	0.227	0.252	0.579	0.559	0.914	0.924
Indonesia	0.092	0.163	0.217	0.335	0.179	0.136	0.181	0.120	0.783	0.665
Philippines	0.044	0.311	0.141	0.423	0.156	0.122	0.337	0.135	0.859	0.577
Vietnam	0.074	0.095	0.214	0.259	0.314	0.216	0.064	0.227	0.786	0.741
Argentina	0.327	0.367	0.620	0.692	0.202	0.190	0.126	0.091	0.380	0.308
Bolivia	0.173	0.578	0.600	0.776	0.126	0.062	0.205	0.099	0.400	0.224
Guatemala	0.002	0.007	0.272	0.328	0.092	0.069	0.575	0.528	0.728	0.672
Mexico	0.009	0.033	0.047	0.096	0.042	0.059	0.835	0.761	0.953	0.904

Table 9: Share of export growth, 2000-2008, by destination market

Importing region	Exporting Country Income Group				
	Low Income	Lower middle income	Upper middle Income	BRICs	High Income
Low & middle income nations	0.473	0.509	0.391	0.349	0.394
BRICs	0.183	0.302	0.168	0.098	0.183
Other countries	0.290	0.207	0.223	0.251	0.211
High income nations	0.527	0.491	0.609	0.651	0.606
EU25	0.196	0.185	0.336	0.297	0.440
USA	0.194	0.153	0.185	0.181	0.070
Other countries	0.137	0.153	0.088	0.173	0.096

Table 9b: Share of export growth, 2000-2008, by destination market for selected exporters

Exporter	Importing Country Income Group				
	BRICs	Low, Mid Income	EU25	USA	High Income
Bulgaria	0.070	0.468	0.520	0.012	0.532
Poland	0.071	0.327	0.694	0.014	0.673
Ukraine	0.286	0.772	0.239	0.028	0.228
Uzbekistan	0.231	0.917	0.041	0.059	0.083
Egypt	0.148	0.400	0.384	0.090	0.600
Jordan	0.426	0.554	0.061	0.271	0.446
Morocco	0.284	0.525	0.349	0.054	0.475
Tunisia	0.079	0.172	0.767	0.054	0.828
Ghana	0.126	0.518	0.384	0.010	0.482
Kenya	0.057	0.501	0.315	0.086	0.499
Mozambique	0.082	0.543	0.465	-0.004	0.457
Nigeria	0.257	0.338	0.161	0.466	0.662
Bangladesh	0.061	0.191	0.603	0.150	0.809
India	0.177	0.412	0.221	0.118	0.588
Nepal	1.916	2.108	-0.199	-0.831	-1.108
Pakistan	0.116	0.402	0.304	0.167	0.598
Cambodia	0.004	0.071	0.265	0.550	0.929
Indonesia	0.221	0.430	0.102	0.072	0.570
Philippines	0.794	0.934	0.060	-0.230	0.066
Vietnam	0.101	0.271	0.188	0.274	0.729
Argentina	0.391	0.735	0.183	0.070	0.265
Bolivia	0.668	0.815	0.047	0.075	0.185
Guatemala	0.017	0.449	0.018	0.428	0.551
Mexico	0.066	0.161	0.081	0.662	0.839

Table 10: Share of export growth, 2000-2008, absorbed by importing region

Importing region	Low income exporters						Upper middle income exporters				
	EAP	ECA	LAC	MENA	SA	SSA	EAP	ECA	LAC	MENA	SSA
Low & middle income nations	0.336	0.972	0.232	1.016	0.227	0.632	0.458	0.409	0.346	0.154	0.463
BRICs	0.117	0.364	0.024	0.463	0.101	0.232	0.242	0.109	0.169	0.097	0.195
Other countries	0.219	0.608	0.208	0.553	0.126	0.400	0.216	0.300	0.177	0.057	0.268
High income nations	0.664	0.028	0.768	-0.016	0.773	0.368	0.542	0.591	0.654	0.846	0.537
EU25	0.188	0.003	-0.005	-0.002	0.505	0.109	0.086	0.570	0.111	0.496	0.277
USA	0.238	0.015	0.703	-0.003	0.196	0.154	0.079	0.026	0.462	0.228	0.101
Other countries	0.238	0.010	0.070	-0.011	0.072	0.105	0.377	-0.005	0.081	0.122	0.159
Importing region	Lower middle income exporters						BRIC exporters				
	EAP	ECA	LAC	MENA	SA	SSA	Brazil	Russia	India	China	
Low & middle income nations	0.485	0.631	0.534	0.460	0.403	0.441	0.547	0.513	0.408	0.256	
BRICs	0.258	0.207	0.154	0.312	0.143	0.342	0.220	0.076	0.167	0.066	
Other countries	0.227	0.424	0.380	0.148	0.260	0.099	0.327	0.437	0.241	0.190	
High income nations	0.515	0.369	0.466	0.540	0.597	0.559	0.453	0.487	0.592	0.744	
EU25	0.115	0.311	0.063	0.231	0.297	0.125	0.219	0.474	0.200	0.254	
USA	0.076	0.067	0.374	0.160	0.194	0.359	0.144	0.071	0.135	0.240	
Other countries	0.324	-0.009	0.029	0.149	0.106	0.075	0.090	-0.058	0.257	0.250	

EAP=East Asia & Pacific, ECA=Europe & Central Asia, LAC=Latin America & Caribbean, SA=South Asia, SSA=Sub-Saharan Africa.

Table 11: Export growth by sector and destination region for developing countries, 2000-2008

	Importing region							
	Low & middle income	BRICs	Others	High income	EU25	USA	Others	Total
Low income exporting countries								
Food products	0.077	0.031	0.046	0.072	0.051	0.011	0.010	0.149
Petroleum	0.157	0.053	0.104	0.092	0.003	0.043	0.046	0.249
Chemicals	0.024	0.010	0.014	0.019	0.008	0.009	0.002	0.043
Textiles	0.023	0.009	0.014	-0.006	-0.006	0.000	0.000	0.017
Wood & paper	0.011	0.009	0.002	0.006	0.002	0.002	0.002	0.017
Apparel	0.035	0.010	0.025	0.209	0.096	0.096	0.017	0.244
Non-metallic minerals	0.011	0.004	0.007	0.015	-0.005	0.002	0.018	0.026
Iron & steel	0.088	0.040	0.048	0.038	0.027	0.004	0.007	0.126
Machinery	0.015	0.005	0.010	0.017	0.005	0.004	0.008	0.032
Electronics	0.009	0.005	0.004	0.026	0.004	0.005	0.017	0.035
Transport equipment	0.018	0.006	0.012	0.003	0.002	0.001	0.000	0.021
Other products	0.005	0.001	0.004	0.036	0.010	0.019	0.007	0.041
Total	0.473	0.183	0.290	0.527	0.197	0.196	0.134	1.000
Lower middle income exporting countries								
Food products	0.050	0.017	0.033	0.044	0.026	0.010	0.008	0.094
Petroleum	0.223	0.160	0.063	0.281	0.087	0.127	0.067	0.504
Chemicals	0.045	0.025	0.020	0.032	0.012	0.007	0.013	0.077
Textiles	0.006	0.003	0.003	-0.002	0.000	0.000	-0.002	0.004
Wood & paper	0.005	0.002	0.003	0.000	0.001	0.000	-0.001	0.005
Apparel	0.005	0.001	0.004	0.019	0.012	0.006	0.001	0.024
Non-metallic minerals	0.010	0.005	0.005	0.020	0.003	0.002	0.015	0.030
Iron & steel	0.054	0.022	0.032	0.028	0.014	0.003	0.011	0.082
Machinery	0.034	0.023	0.011	0.017	0.007	0.000	0.010	0.051
Electronics	0.045	0.036	0.009	0.030	0.014	-0.002	0.018	0.075
Transport equipment	0.026	0.007	0.019	0.015	0.006	0.001	0.008	0.041
Other products	0.005	0.002	0.003	0.007	0.003	0.000	0.004	0.012
Total	0.508	0.303	0.205	0.491	0.185	0.154	0.152	0.999

Table 11: Continued

Importing region

	Low & middle income	BRICs	Others	High income	EU25	USA	Others	Total
Upper middle income exporting countries								
Food products	0.054	0.021	0.033	0.058	0.040	0.014	0.004	0.112
Petroleum	0.081	0.035	0.046	0.220	0.086	0.100	0.034	0.301
Chemicals	0.045	0.017	0.028	0.036	0.025	0.009	0.002	0.081
Textiles	0.005	0.001	0.004	0.002	0.004	0.000	-0.002	0.007
Wood & paper	0.010	0.002	0.008	0.008	0.007	0.001	0.000	0.018
Apparel	0.007	0.001	0.006	0.005	0.014	-0.009	0.000	0.012
Non-metallic minerals	0.014	0.007	0.007	0.032	0.009	0.009	0.014	0.046
Iron & steel	0.074	0.040	0.034	0.076	0.045	0.013	0.018	0.150
Machinery	0.024	0.007	0.017	0.044	0.031	0.013	0.000	0.068
Electronics	0.045	0.025	0.020	0.055	0.027	0.019	0.009	0.100
Transport equipment	0.024	0.009	0.015	0.049	0.036	0.009	0.004	0.073
Other products	0.007	0.002	0.005	0.024	0.013	0.007	0.004	0.031
Total	0.390	0.167	0.223	0.609	0.337	0.185	0.087	0.999
BRIC exporters								
Food products	0.022	0.009	0.013	0.021	0.012	0.004	0.005	0.043
Petroleum	0.065	0.011	0.054	0.093	0.079	0.016	-0.002	0.158
Chemicals	0.037	0.011	0.026	0.045	0.017	0.015	0.013	0.082
Textiles	0.009	0.003	0.006	0.005	0.002	0.001	0.002	0.014
Wood & paper	0.007	0.003	0.004	0.013	0.005	0.004	0.004	0.020
Apparel	0.013	0.004	0.009	0.068	0.034	0.021	0.013	0.081
Non-metallic minerals	0.008	0.002	0.006	0.026	0.008	0.004	0.014	0.034
Iron & steel	0.058	0.025	0.033	0.064	0.030	0.017	0.017	0.122
Machinery	0.046	0.011	0.035	0.110	0.039	0.037	0.034	0.156
Electronics	0.055	0.012	0.043	0.132	0.043	0.036	0.053	0.187
Transport equipment	0.015	0.002	0.013	0.015	0.007	0.004	0.004	0.030
Other products	0.013	0.003	0.010	0.060	0.021	0.021	0.018	0.073
Total	0.348	0.096	0.252	0.652	0.297	0.180	0.175	1.000

Table 11b: Share of export growth by sector and destination, 2000-08, selected exporters

		BRIC	LMI	EU25	USA	HI			BRIC	LMI	EU25	USA	HI
BGR	Food	0.005	0.059	0.035	0.002	0.035	EGY	Food	0.007	0.022	0.024	0.001	0.030
	Petroleum	0.000	0.034	0.014		0.029		Petroleum	0.052	0.094	0.099	0.031	0.177
	Chemicals	0.011	0.044	0.014	0.002	0.016		Chemicals	0.009	0.043	0.034	0.008	0.047
	Textiles	0.000	0.004	0.011	0.000	0.010		Textiles	0.005	0.010	0.000	0.001	0.000
	Wood	0.000	0.006	0.004	0.000	0.004		Wood	0.000	0.004	0.002	0.000	0.003
	Apparel	0.002	0.009	0.052	-0.002	0.052		Apparel	0.001	0.004	0.018	0.014	0.033
	NM Min.	0.001	0.010	0.008	-0.001	0.007		NM Min.	0.006	0.022	0.008	0.001	0.017
	Iron/Steel	0.009	0.073	0.094	-0.001	0.083		Iron/Steel	0.001	0.022	0.038	0.000	0.042
	Machinery	0.011	0.023	0.034	0.002	0.036		Machinery	0.001	0.004	0.002	0.000	0.003
	Electron.	0.003	0.014	0.030	0.001	0.030		Electron.	0.000	0.004	0.007	0.000	0.013
	Transport	0.002	0.012	0.009	0.000	0.008		Transport	0.009	0.012	0.002	0.000	0.003
ocmaftma	0.001	0.006	0.021	0.002	0.022	ocmaftma	0.000	0.005	0.002	0.000	0.002		
POL	Food	0.003	0.023	0.050	0.001	0.044	JOR	Food	0.000	-0.001	0.002	0.001	0.012
	Petroleum	0.000	0.009	0.017		0.018		Petroleum		0.018	0.000		0.000
	Chemicals	0.008	0.031	0.047	0.001	0.042		Chemicals	0.157	0.199	0.016	0.002	0.037
	Textiles	0.000	0.002	0.003	0.000	0.003		Textiles	0.000	0.001	0.000	0.000	0.000
	Wood	0.003	0.012	0.016	0.000	0.015		Wood	0.000	-0.001	-0.001	0.000	0.002
	Apparel	0.001	0.003	0.002	0.000	0.002		Apparel	0.000	0.001	-0.001	0.139	0.141
	NM Min.	0.002	0.007	0.008	0.000	0.007		NM Min.	0.062	0.081	0.015	0.010	0.045
	Iron/Steel	0.005	0.027	0.052	0.000	0.049		Iron/Steel	0.002	0.003	0.002	0.000	0.005
	Machinery	0.006	0.022	0.056	0.002	0.059		Machinery	0.000	0.002	0.001	0.001	0.007
	Electron.	0.005	0.019	0.050	0.001	0.048		Electron.	0.000	0.002	0.000	0.000	0.002
	Transport	0.006	0.021	0.061	0.001	0.063		Transport	0.002	0.011	-0.001	0.000	0.002
ocmaftma	0.002	0.009	0.027	0.001	0.028	ocmaftma	0.000	-0.001	0.000	0.000	0.001		
UKR	Food	0.017	0.063	0.031	0.000	0.028	MAR	Food	0.020	0.040	0.070	0.006	0.072
	Petroleum	0.011	0.044	0.014	0.002	0.016		Petroleum	0.003	0.005	-0.004	-0.002	-0.002
	Chemicals	0.026	0.050	0.009	0.004	0.013		Chemicals	0.100	0.150	0.034	0.004	0.044
	Textiles	0.001	0.001	0.000	0.000	0.000		Textiles	0.000	-0.001	-0.001	0.000	-0.001
	Wood	0.006	0.014	0.006	0.000	0.003		Wood	0.000	0.002	-0.001	0.000	-0.001
	Apparel	0.000	0.002	0.004	-0.001	0.003		Apparel	0.006	0.019	0.030	0.000	0.035
	NM Min.	0.007	0.011	0.002	0.000	0.002		NM Min.	0.013	0.053	0.025	0.023	0.066
	Iron/Steel	0.048	0.204	0.065	0.012	0.070		Iron/Steel	0.009	0.017	0.003	0.002	0.005
	Machinery	0.019	0.027	0.004	0.000	0.003		Machinery	0.000	0.002	0.008	0.000	0.008
	Electron.	0.010	0.025	0.013	0.000	0.006		Electron.	0.018	0.023	0.031	-0.002	0.044
	Transport	0.037	0.053	0.003	0.000	0.002		Transport	0.000	0.001	0.007	0.000	0.007
ocmaftma	0.002	0.003	0.002	0.000	0.002	ocmaftma	0.000	0.000	0.004	0.000	0.004		
UZB	Food	0.019	0.021	0.001	0.000	0.001	TUN	Food	0.001	0.003	0.020	0.005	0.028
	Petroleum	0.002	0.352	0.040		0.016		Petroleum		0.001	0.075	0.016	0.094
	Chemicals	0.011	0.048	0.043	0.048	0.072		Chemicals	0.036	0.054	0.025	0.001	0.028
	Textiles	0.025	0.024	-0.051	-0.003	-0.068		Textiles	0.000	0.001	0.003	0.000	0.004
	Wood	0.001	0.001	0.000	0.000	0.000		Wood	0.000	0.001	0.002	0.000	0.002
	Apparel	0.005	0.006	0.003	-0.001	0.002		Apparel	0.003	0.008	0.101	0.003	0.108
	NM Min.	0.005	0.025	-0.012	0.000	0.033		NM Min.	0.000	0.009	0.010	0.002	0.009
	Iron/Steel	0.006	0.085	0.005	0.000	0.005		Iron/Steel	0.000	0.001	0.016	0.000	0.016
	Machinery	-0.001	-0.001	0.000		0.000		Machinery	0.000	0.001	0.016	0.000	0.017
	Electron.	0.009	0.011	0.000	0.000	0.000		Electron.	0.001	0.010	0.106	0.001	0.102
	Transport	0.090	0.116	0.000		0.000		Transport		0.001	0.013	0.000	0.012
ocmaftma	0.000	0.000	0.000	0.000	0.001	ocmaftma	0.000	0.000	0.016	0.000	0.016		

Table 11b: Continued

		BRIC	LMI	EU25	USA	HI			BRIC	LMI	EU25	USA	HI	
GHA	Food	0.056	0.145	0.294	-0.009	0.320	BGD	Food	0.006	0.006	0.009	0.000	0.009	
	Petroleum		0.004	0.000	0.019	0.019		Petroleum	0.001	0.001				0.002
	Chemicals	0.000	0.008	0.005	0.000	0.005		Chemicals	0.006	0.008	0.002	0.000	0.000	0.000
	Textiles		-0.002	-0.001	0.000	-0.001		Textiles	0.006	0.014	-0.002	0.000	0.000	-0.002
	Wood	0.022	0.026	-0.004	0.004	0.000		Wood	0.000	0.000	0.000	0.000	0.000	0.000
	Apparel		0.000	0.000	0.000	0.000		Apparel	0.011	0.069	0.319	0.084	0.431	
	NM Min.	-0.001	-0.003	-0.002	-0.009	0.004		NM Min.	0.001	0.002	0.001	0.000	0.001	0.001
	Iron/Steel	0.007	0.159	-0.038	0.001	-0.030		Iron/Steel	0.001	0.002	0.000	0.000	0.000	0.001
	Machinery	0.000	0.002	0.002	0.000	0.002		Machinery	0.000	0.001	0.000	0.000	0.000	0.001
	Electron.	0.000	0.000	0.000	0.001	0.002		Electron.	0.000	0.001	0.000	0.000	0.000	0.001
	Transport		0.001	-0.003	0.000	-0.003		Transport	0.000	0.003	0.002	0.000	0.000	0.002
ocmaftma	0.000	0.002	-0.001	0.000	-0.001	ocmaftma	0.000	0.000	0.001	-0.001	0.000	0.000		
KEN	Food	0.021	0.155	0.202	0.008	0.229	IND	Food	0.003	0.023	0.009	0.003	0.024	
	Petroleum		-0.009			0.003		Petroleum	0.009	0.033	0.016	0.001	0.046	
	Chemicals	0.008	0.051	0.000	0.000	0.000		Chemicals	0.012	0.045	0.020	0.018	0.049	
	Textiles	0.004	0.009	0.001	0.000	0.003		Textiles	0.008	0.018	0.004	0.002	0.006	
	Wood	0.000	0.012	0.001	0.000	0.001		Wood	0.000	0.002	0.001	0.001	0.002	
	Apparel	0.000	0.005	0.000	0.051	0.052		Apparel	0.002	0.007	0.031	0.011	0.045	
	NM Min.	0.001	0.018	0.001	0.000	0.037		NM Min.	0.004	0.009	0.011	0.013	0.102	
	Iron/Steel	0.005	0.029	0.002	0.000	0.006		Iron/Steel	0.074	0.099	0.020	0.012	0.049	
	Machinery	0.000	0.006	0.006	0.000	0.006		Machinery	0.002	0.012	0.011	0.006	0.021	
	Electron.	0.000	0.004	0.001	-0.001	0.001		Electron.	0.002	0.014	0.010	0.006	0.024	
	Transport	0.000	0.062	0.001	0.000	0.001		Transport	0.000	0.009	0.008	0.003	0.013	
ocmaftma	0.000	0.002	0.002	0.001	0.003	ocmaftma	0.001	0.002	0.004	0.002	0.008			
MOZ	Food	0.023	0.061	0.028	-0.007	0.023	NPL	Food	0.117	0.168	0.031	0.003	0.058	
	Petroleum		0.157			-0.001		Petroleum	0.001	0.001				
	Chemicals	0.000	0.021	0.000		0.000		Chemicals	0.090	0.090	0.002	0.000	0.000	
	Textiles	-0.002	0.007	-0.005	0.000	-0.004		Textiles	0.217	0.227	-0.146	0.045	-0.096	
	Wood	0.026	0.027	0.000	0.000	-0.005		Wood	-0.004	-0.002	0.003	0.000	0.008	
	Apparel		0.000	0.000	0.000	0.000		Apparel	0.086	0.096	-0.002	-0.493	-0.563	
	NM Min.		0.003	0.005	0.000	0.006		NM Min.	0.056	0.057	0.006	-0.003	0.008	
	Iron/Steel		0.025	0.276	0.004	0.279		Iron/Steel	0.441	0.445	0.003	0.001	0.003	
	Machinery	0.000	-0.002	0.000	0.000	0.000		Machinery	0.002	0.005	-0.001	0.000	0.002	
	Electron.	0.000	0.000	0.000	0.000	0.000		Electron.	0.005	0.016	0.000	0.001	0.002	
	Transport		0.052	0.000		0.000		Transport	0.003	0.007	0.000		0.001	
ocmaftma	0.000	0.000	0.000	0.000	0.000	ocmaftma	0.003	0.007	-0.003	0.005	-0.011			
NGA	Food	0.000	0.001	0.003	0.000	0.004	PAK	Food	0.005	0.062	0.020	0.003	0.062	
	Petroleum	0.136	0.177	0.081	0.246	0.343		Petroleum	0.009	0.005		0.001	0.011	
	Chemicals	0.000	0.001	0.001	0.001	0.002		Chemicals	0.000	0.008	0.011	0.002	0.014	
	Textiles	0.000	0.000	0.000	0.000	0.001		Textiles	0.030	0.082	0.028	-0.014	-0.028	
	Wood	0.000	0.000	0.000	0.000	0.000		Wood	0.000	0.000	0.000	0.000	0.000	
	Apparel	0.000	0.000	0.000	0.000	0.000		Apparel	0.004	0.032	0.114	0.103	0.226	
	NM Min.	0.000	0.000	0.000	0.000	0.001		NM Min.	0.006	0.033	0.001	0.001	0.056	
	Iron/Steel	0.000	0.001	0.000	0.000	0.000		Iron/Steel	0.016	0.019	0.004	0.001	0.012	
	Machinery	0.000	0.000	0.000	0.000	0.000		Machinery	0.000	0.004	0.000	0.000	0.001	
	Electron.	0.000	0.000	0.000	0.000	0.000		Electron.	0.000	0.001	0.002	0.000	0.002	
	Transport	0.000	0.000	0.000	0.000	0.000		Transport	0.000	0.002	0.001	0.000	0.001	
ocmaftma	0.000	0.000	0.000	0.000	0.000	ocmaftma	0.002	0.006	0.009	0.008	0.019			

Table 11b: Continued

		BRIC	LMI	EU25	USA	HI			BRIC	LMI	EU25	USA	HI
CMB	Food	0.001	0.008	0.001	0.001	0.001	ARG	Food	0.146	0.271	0.093	0.007	0.100
	Petroleum		0.000					Petroleum	0.013	0.028	0.001	0.017	0.017
	Chemicals	0.001	-0.003	0.000	0.002	-0.001		Chemicals	0.023	0.042	0.004	0.016	0.023
	Textiles	0.000	0.000	0.000	0.000	0.000		Textiles	0.000	0.003	0.002	-0.003	0.000
	Wood	-0.007	-0.009	0.000	0.000	-0.001		Wood	0.002	0.005	0.000	0.001	0.001
	Apparel	0.007	0.036	0.131	0.300	0.483		Apparel	0.000	0.002	0.000	0.000	0.000
	NM Min.	0.000	0.000	0.000	0.000	0.015		NM Min.	0.001	0.002	0.000	0.000	0.001
	Iron/Steel	0.000	0.005	0.002	0.000	0.002		Iron/Steel	0.005	0.019	0.005	0.005	0.013
	Machinery	0.000	0.000	0.000	0.000	0.000		Machinery	0.003	0.012	0.001	0.001	0.002
	Electron.	0.000	0.000	0.000	0.000	0.000		Electron.	0.001	0.003	0.000	0.000	0.001
	Transport	0.000	0.001	0.012	0.000	0.012		Transport	0.043	0.058	0.003	0.000	0.005
ocmaftma	0.000	0.000	0.000	0.000	0.000	ocmaftma	0.001	0.003	0.000	-0.002	-0.001		
IDN	Food	0.044	0.086	0.027	0.012	0.049	BOL	Food	0.006	0.055	0.013	0.005	0.022
	Petroleum	0.037	0.067	0.013	0.003	0.144		Petroleum	0.351	0.364		0.019	0.019
	Chemicals	0.019	0.035	0.011	0.020	0.055		Chemicals	0.000	0.004	0.000	0.000	0.001
	Textiles	0.003	0.007	-0.001	0.001	-0.003		Textiles	0.001	0.004	0.002	0.000	0.002
	Wood	-0.002	-0.001	0.000	-0.001	-0.008		Wood	0.003	0.006	0.002	0.001	0.003
	Apparel	0.002	0.008	0.006	0.014	0.023		Apparel	0.000	0.003	0.000	0.000	0.000
	NM Min.	0.001	0.003	0.001	0.000	0.016		NM Min.	0.001	0.003	-0.001	0.006	0.007
	Iron/Steel	0.032	0.048	0.001	0.000	0.041		Iron/Steel	0.012	0.015	0.008	0.010	0.049
	Machinery	0.008	0.017	0.001	-0.001	0.025		Machinery	0.000	0.000	0.000	0.000	0.000
	Electron.	0.012	0.018	0.010	0.000	0.046		Electron.	0.000	0.000	0.000	0.000	0.000
	Transport	0.001	0.016	0.001	0.000	0.009		Transport	-0.001	-0.001	0.000	0.000	-0.001
ocmaftma	0.002	0.004	0.004	0.002	0.013	ocmaftma	0.000	0.002	0.001	0.000	0.001		
PHL	Food	0.004	0.015	0.013	0.016	0.047	GTM	Food	0.001	0.122	0.006	0.213	0.285
	Petroleum	0.004	0.010		0.000	0.017		Petroleum		-0.014		0.069	0.069
	Chemicals	0.010	0.017	0.004	0.003	0.014		Chemicals	0.004	0.088	0.002	-0.012	-0.010
	Textiles	0.001	0.002	0.000	-0.002	0.000		Textiles	0.000	0.020	0.000	0.001	0.001
	Wood	0.001	0.002	0.001	-0.001	0.004		Wood	0.000	0.010	0.001	0.004	0.005
	Apparel	0.001	0.002	-0.003	-0.024	-0.027		Apparel	0.000	0.009	0.004	-0.031	-0.023
	NM Min.	0.001	0.005	-0.002	-0.001	0.008		NM Min.	0.000	0.045	0.000	0.043	0.043
	Iron/Steel	0.021	0.034	0.004	0.001	0.022		Iron/Steel	0.006	0.020	0.001	0.004	0.006
	Machinery	0.075	0.083	-0.013	-0.043	-0.095		Machinery	0.000	0.003	0.000	0.002	0.002
	Electron.	0.364	0.381	0.022	-0.089	0.021		Electron.	0.000	0.002	0.000	0.001	0.001
	Transport	0.001	0.011	0.006	0.000	0.017		Transport	0.000	-0.003	0.000	0.000	0.000
ocmaftma	0.005	0.013	0.005	-0.003	0.012	ocmaftma		0.005	0.000	-0.001	-0.001		
VNM	Food	0.012	0.046	0.027	0.014	0.051	MEX	Food	0.000	0.002	0.002	0.029	0.036
	Petroleum	0.016	0.029	0.000	0.014	0.087		Petroleum	0.004	0.007	-0.003	0.136	0.135
	Chemicals	0.004	0.013	0.006	0.007	0.019		Chemicals	0.005	0.014	0.002	0.016	0.020
	Textiles	0.003	0.008	0.001	0.001	0.003		Textiles	0.000	0.000	0.000	-0.001	-0.001
	Wood	0.002	0.003	0.002	0.002	0.008		Wood	0.000	0.001	0.000	0.002	0.002
	Apparel	0.007	0.023	0.051	0.093	0.157		Apparel	0.000	0.000	0.000	-0.023	-0.021
	NM Min.	0.002	0.003	0.002	0.001	0.012		NM Min.	0.001	0.002	0.001	0.016	0.020
	Iron/Steel	0.004	0.013	0.004	0.004	0.014		Iron/Steel	0.006	0.015	0.005	0.022	0.030
	Machinery	0.006	0.018	0.007	0.005	0.022		Machinery	0.002	0.007	0.004	0.034	0.045
	Electron.	0.006	0.009	0.004	0.007	0.037		Electron.	0.008	0.023	0.010	0.085	0.110
	Transport	0.000	0.002	0.001	0.001	0.006		Transport	0.007	0.015	0.017	0.028	0.053
ocmaftma	0.001	0.005	0.014	0.026	0.050	ocmaftma	0.001	0.003	0.008	0.020	0.035		

Table 12: Gravity-projected export growth due to GDP growth in exporters and importers (%)

Exporter region	Exporter income	Importer	Exporter GDP	Importer GDP
Europe & Central Asia	Low income	BRIC	50.15	23.82
		Other LMI	50.15	18.08
		USA	50.15	0.56
		EU25	50.15	4.29
		Other HI	50.15	0.61
	Lower middle income	BRIC	34.68	8.18
		Other LMI	34.68	9.94
		USA	34.68	0.39
		EU25	34.68	3.44
		Other HI	34.68	0.17
	Upper middle income	BRIC	30.70	4.04
		Other LMI	30.70	8.37
		USA	30.70	0.86
		EU25	30.70	7.44
		Other HI	30.70	0.43
Middle East & No. Africa	Low income	BRIC	27.86	35.14
		Other LMI	27.86	15.52
		USA	27.86	0.03
		EU25	27.86	0.45
		Other HI	27.86	3.18
	Lower middle income	BRIC	31.81	9.01
		Other LMI	31.81	6.73
		USA	31.81	2.65
		EU25	31.81	7.89
		Other HI	31.81	3.12
	Upper middle income	BRIC	26.55	1.43
		Other LMI	26.55	3.21
		USA	26.55	2.72
		EU25	26.55	10.86
		Other HI	26.55	1.22
Sub-Saharan Africa	Low income	BRIC	33.84	7.24
		Other LMI	33.84	14.02
		USA	33.84	1.75
		EU25	33.84	9.85
		Other HI	33.84	1.49
	Lower middle income	BRIC	37.88	10.25
		Other LMI	37.88	3.71
		USA	37.88	6.46
		EU25	37.88	3.78
		Other HI	37.88	0.88

Exporter region	Exporter income	Importer	Exporter GDP	Importer GDP
Sub-Saharan Africa	Upper middle income	BRIC	31.33	8.19
		Other LMI	31.33	10.94
		USA	31.33	3.29
		EU25	31.33	7.62
		Other HI	31.33	3.00
South Asia	Low income	BRIC	48.76	5.43
		Other LMI	48.76	3.11
		USA	48.76	7.73
		EU25	48.76	11.83
		Other HI	48.76	1.51
	Lower middle income	BRIC	41.55	6.32
		Other LMI	41.55	6.88
		USA	41.55	3.80
		EU25	41.55	4.08
		Other HI	41.55	2.50
East Asia & Pacific	Low income	BRIC	32.48	5.97
		Other LMI	32.48	5.17
		USA	32.48	2.77
		EU25	32.48	3.22
		Other HI	32.48	3.18
	Lower middle income	BRIC	54.53	3.53
		Other LMI	54.53	4.79
		USA	54.53	4.53
		EU25	54.53	3.29
		Other HI	54.53	4.86
	Upper middle income	BRIC	53.79	17.61
		Other LMI	53.79	8.68
		USA	53.79	6.30
EU25		53.79	3.76	
Other HI		53.79	8.23	
Latin America & Carib.	Lower middle income	BRIC	39.05	3.71
		Other LMI	39.05	14.83
		USA	39.05	13.65
		EU25	39.05	3.01
		Other HI	39.05	1.28
	Upper middle income	BRIC	30.08	7.21
		Other LMI	30.08	8.90
		USA	30.08	13.41
		EU25	30.08	3.42
		Other HI	30.08	1.91

Figure 1a: Export specialization, 1997

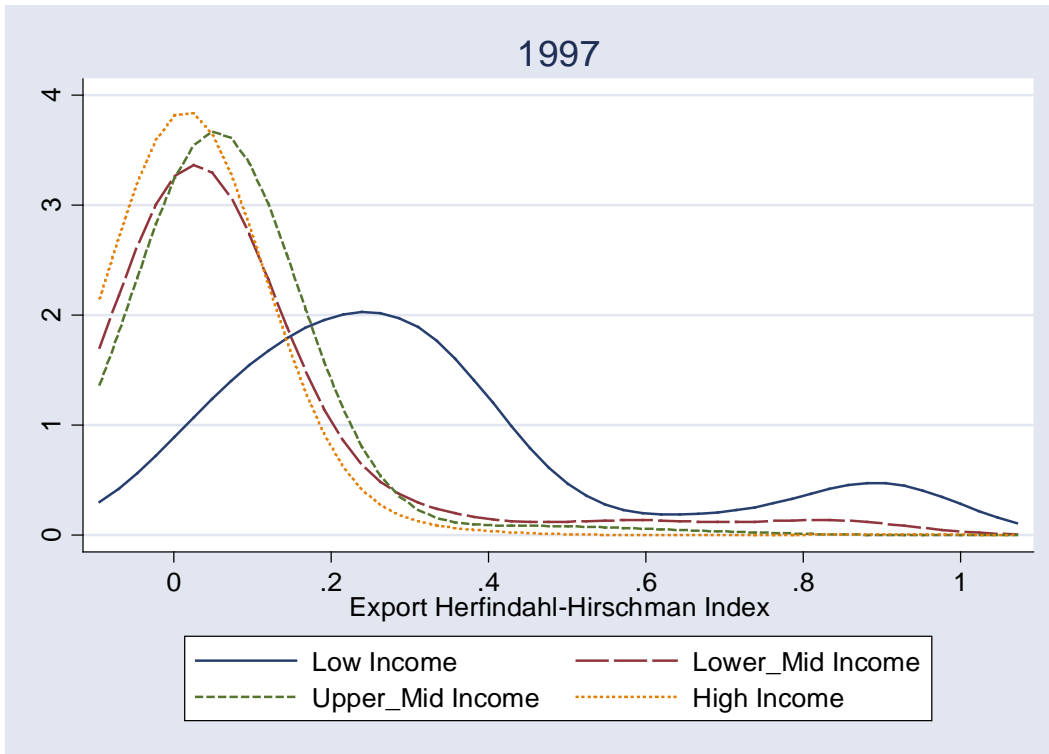


Figure 1b: Export specialization, 2007

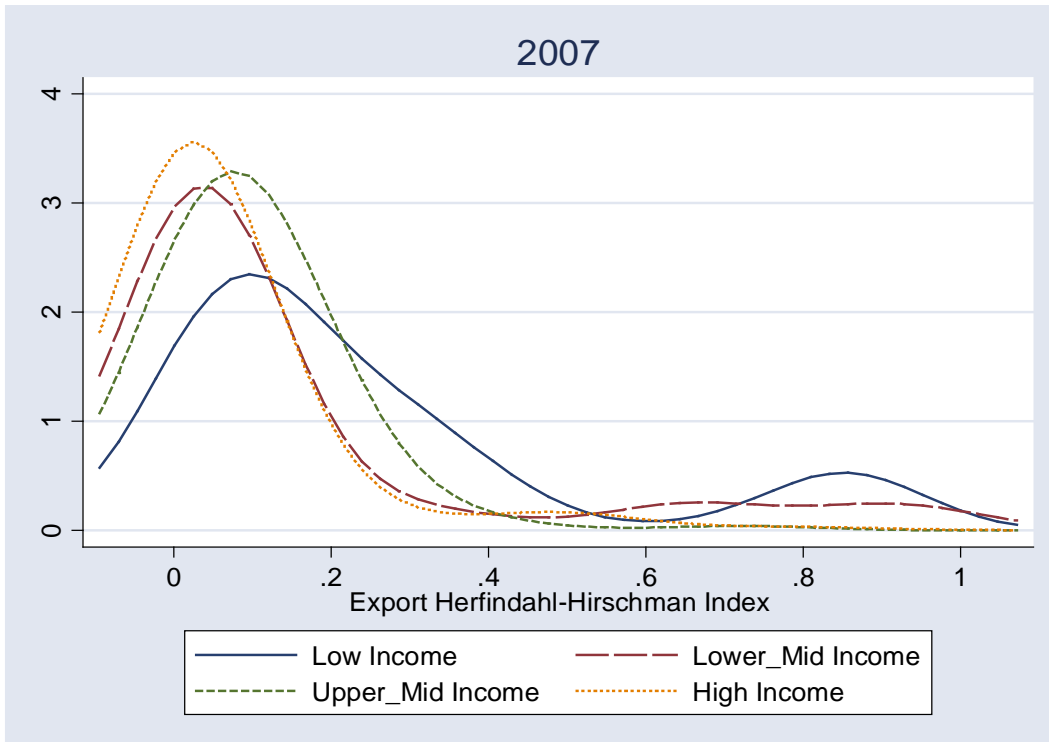


Figure 2a: Export specialization, low income countries

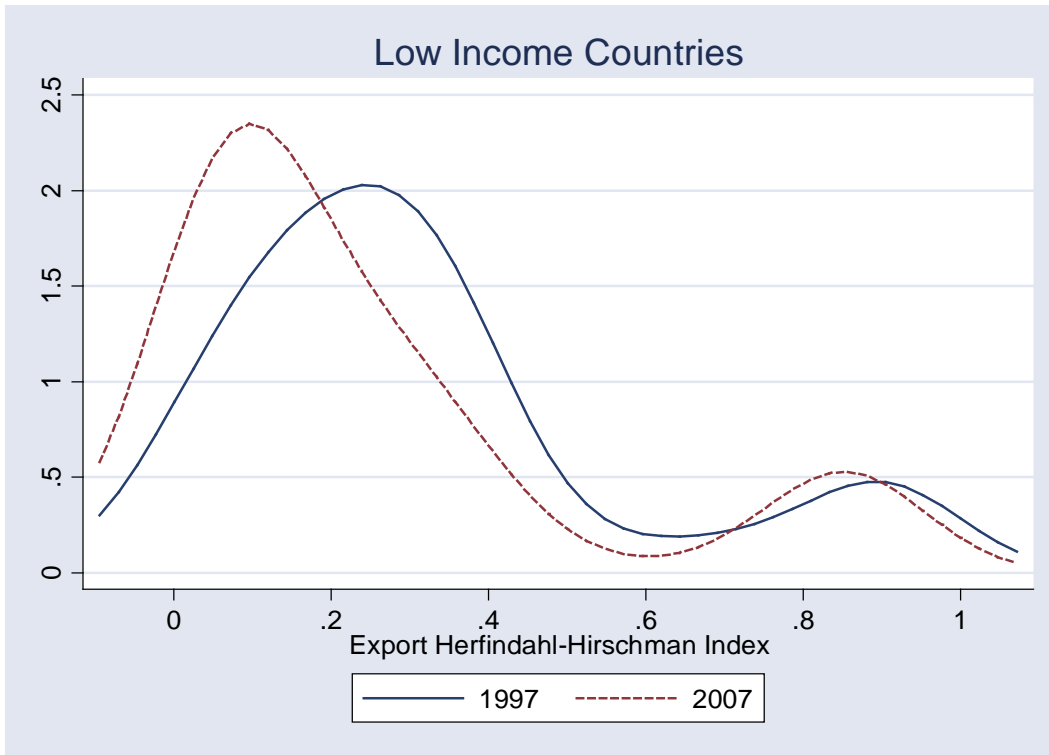


Figure 2b: Export specialization, lower middle income countries

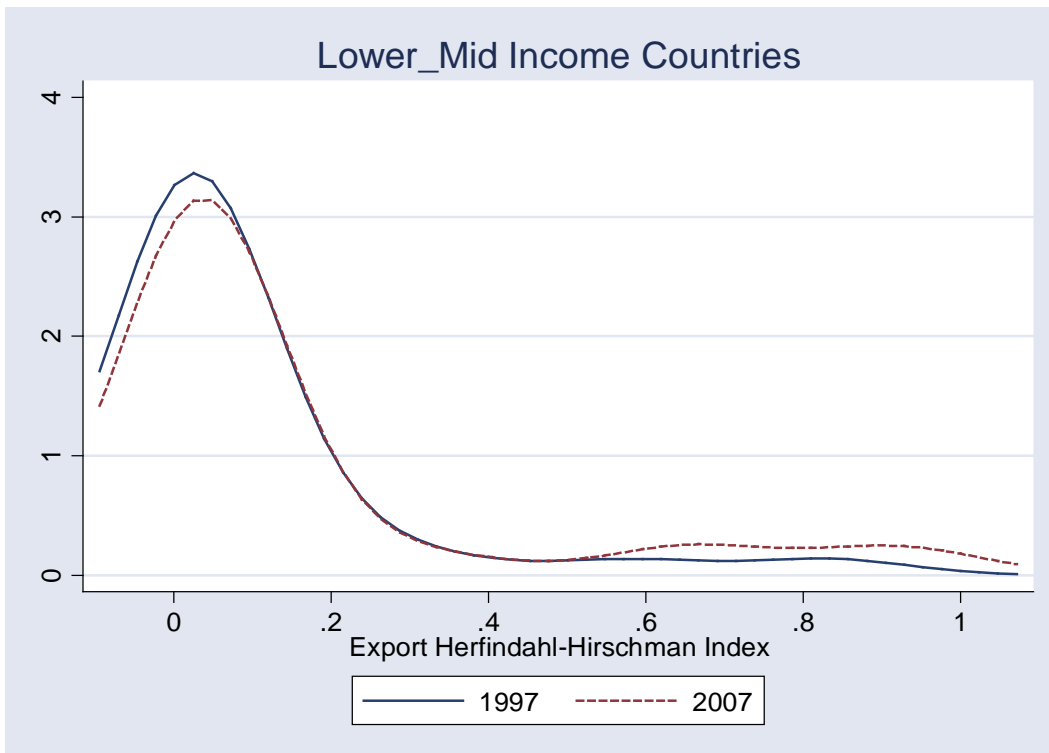


Figure 2c: Export specialization, upper middle income countries

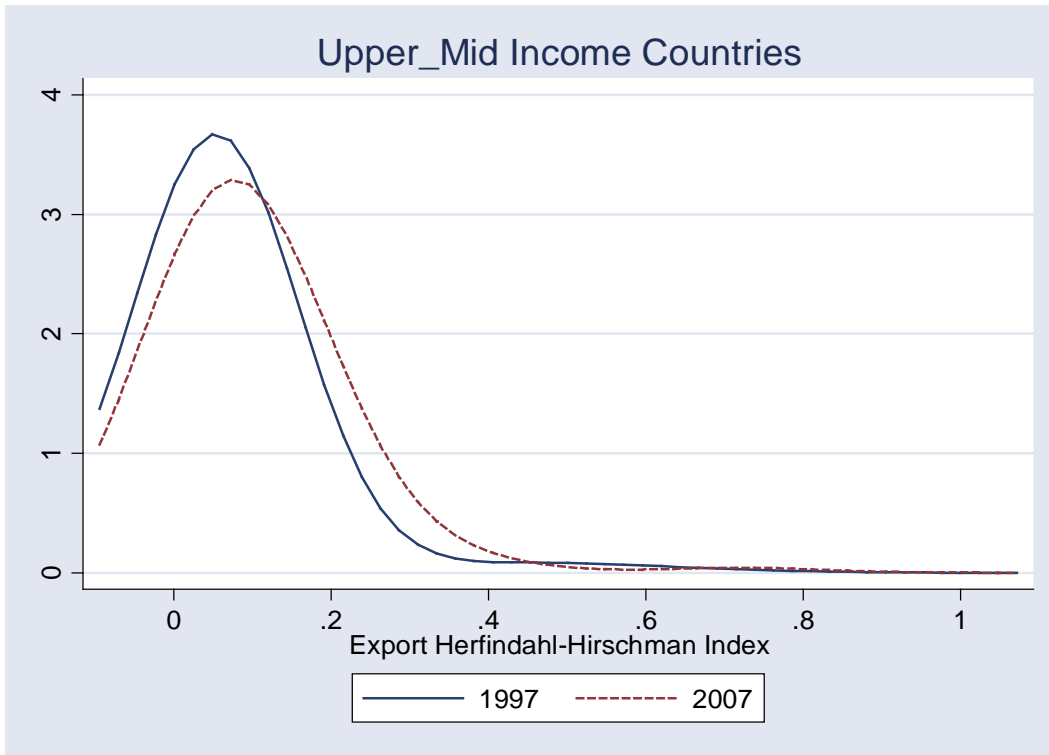


Figure 2d: Export specialization, high income countries

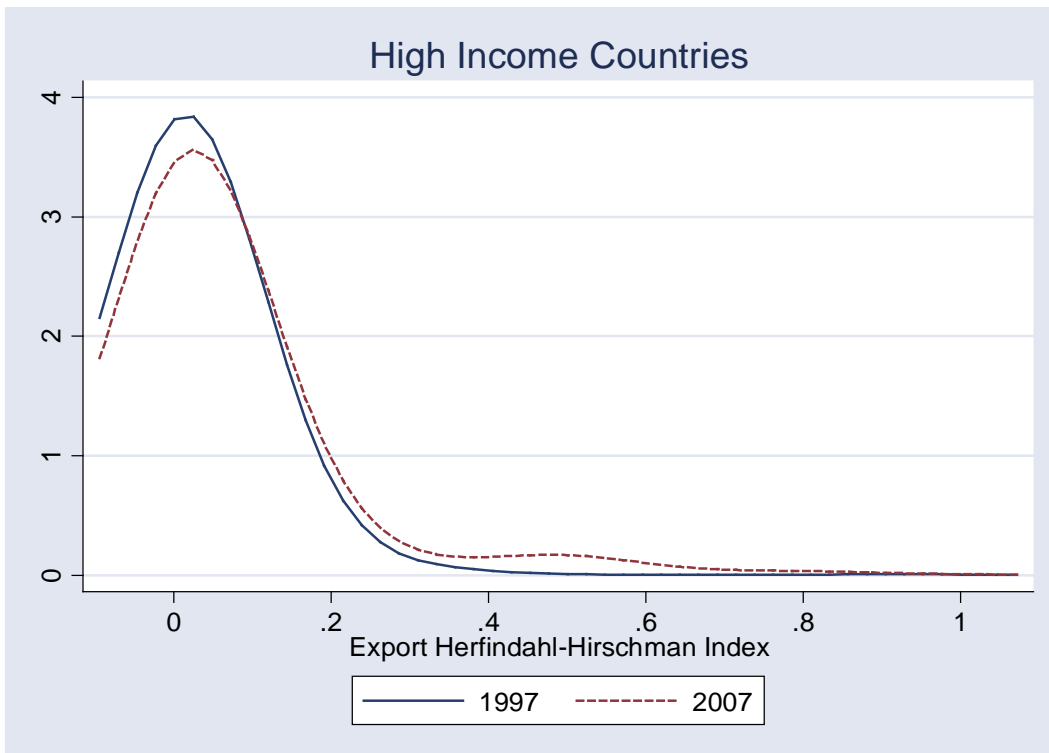


Figure 3a: Export diversification versus average income, 1997

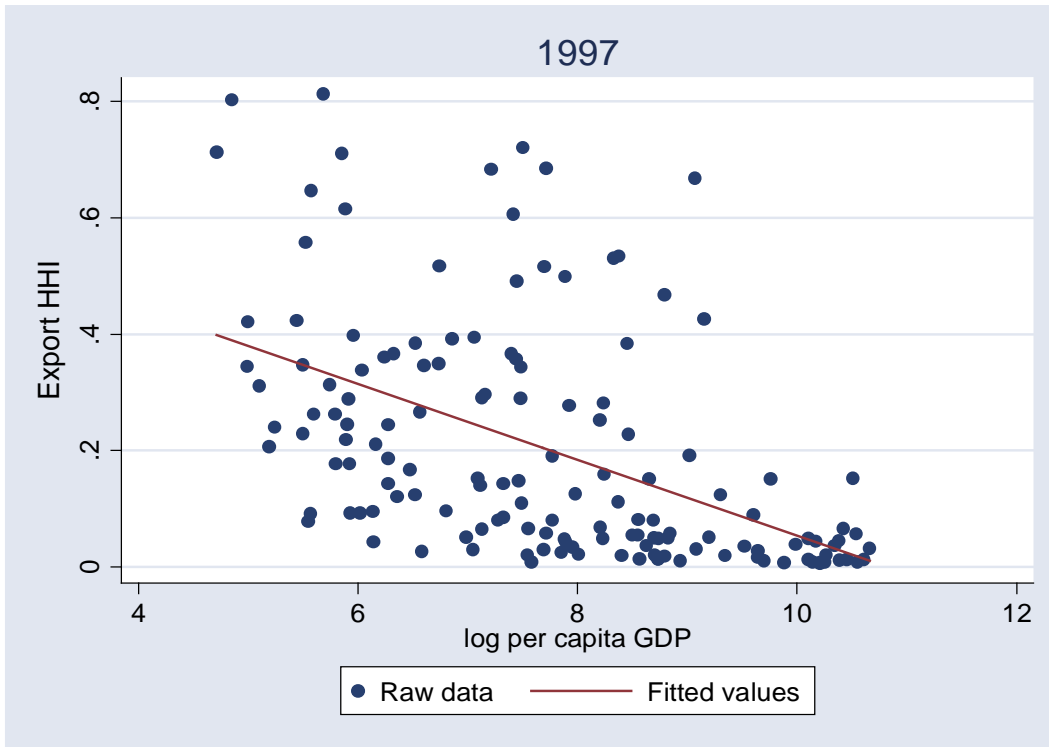


Figure 3b: Export diversification versus average income, 2007

