Avenues for Export Diversification: Issues for Low-Income Countries

Brenton, Paul and Newfarmer, Richard and Walkenhorst, Peter

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Paul Brenton
Richard Newfarmer
Peter Walkenhorst [1]

Abstract

While diversification of exports is often a desirable trade objective, it is far from clear how best to tap into new opportunities. This paper discusses the range of avenues of diversification, including (i) expanding the range of markets into which existing products are sold (geographic diversification); (ii) upgrading the value of existing products, including agricultural exports (quality diversification); and (iii) taking advantage of opportunities to expand nonmerchandise exports (services diversification), in addition to introducing entirely new export products. All offer opportunities for cost-effective positive policies relating to the incentive regime, backbone services, and export support institutions.

Keywords

Exports, trade, services, growth, low income countries, world markets

JEL Classification

F14; O24

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[1] The authors work in the International Trade Department, The World Bank. The findings, interpretations, and conclusions expressed in this study are entirely those of the authors. They do not necessarily represent the view of the World Bank, its Executive Directors, or the countries they represent.

1. Introduction

Achieving strong economic growth is critical to objectives regarding poverty reduction in low-income countries. Spence (2007) presents the consensus view that "probably the most important feature of sustained high growth is that it involves leveraging the demand and resources of the global economy". Jones and Olken (2008) find that growth take-offs are strongly associated with a large and steady expansion of international trade. Berg et al. (2006) conclude that, in addition to stimulating growth, trade liberalization is also important in sustaining growth, especially when accompanied by competitive exchange rates.

Export diversification is widely seen as a positive trade objective in sustaining economic growth. Diversification makes countries less vulnerable to adverse terms of trade shocks by stabilizing export revenues (Ghosh and Ostry, 1994); makes it easier to channel positive terms of trade shocks into growth, knowledge spillovers, and increasing returns to scale; and creates learning opportunities that lead to new forms of comparative advantage (Amin Gutiérrez de Piñeres and Ferrantino, 2000). The issue is not that exports are concentrated, but that they are usually concentrated on homogeneous products with individual exporting countries facing significant price volatility and often suffering terms of trade shocks that adversely affect investment and even consumption (see Jansen, 2004). Moreover, volatility in income terms of trade has depressed long-term growth (Lutz and Singer 1994; Easterly and Kraay, 2000). Indeed, though the evidence is not universal, several cross country studies have shown that greater diversification is correlated with more rapid growth of per capita income (see Lederman and Maloney, 2007, and Hesse, 2007).

If diversification is a positive trade objective, it is far from clear how best to promote it. Effective export growth and competitiveness strategies nowadays need to be framed in a context in which the global economy is highly dynamic. The increasing spread and importance of global production chains, the rapid growth of new sources of demand in large emerging economies (such as Brazil, China, and India), and the rising importance of trade in services driven by higher incomes and the outsourcing of more and more services activities are important trends that shape the international economic environment.

This paper builds on recent studies to argue that a narrow approach to export diversification and growth that focuses solely on increasing exports of particular types of products such as manufactures, or that targets one particular phase of the export cycle such as product "discovery", may miss other important opportunities for driving export growth that are now available in the global economy. In particular diversification can also take the form of (i) diversifying the range of geographic markets into which existing products are sold; (ii) upgrading the quality of existing products, including agricultural exports, and (iii) taking advantage of opportunities to expand exports of services. Individual

countries thereby have to find their particular niches in the global economy, and design a portfolio of policies accordingly.

The following discussion falls into five parts. The next section reviews recent analysis on diversification into new products. Then each of the three nontraditional forms of export development—geographical diversification, quality diversification, and services diversification—are discussed in turn. Finally, some reflections on an appropriate policy framework to take advantage of previously untapped opportunities for export diversification and growth conclude the analysis.

2. Discovering New Goods

Products typically follow a path from birth, rapid growth through market expansion, maturity, and then senescence as new technologies push consumers into replacement products. Products for exports typically follow a similar pattern (see Wells, 1971; Feenstra and Rose, 2000). "Discovery" is the first phase of the export cycle, when a firm realizes it can profitably sell a new product abroad, and is thus critical for diversification into new products. Hausmann and Rodrik (2003) contend that firms in developing economies tend to underinvest in discovery because would-be first movers into export markets fear their initially high returns would be eroded by subsequent new entry, resulting in an underinvestment in searching for new export activities. A policy corollary is that governments can usefully deploy industrial policies by subsidizing initial entrants so as to stimulate discovery of new higher-productivity products and hence diversification.

Klinger and Lederman (2004) find that overall export diversification increases at low levels of development, and have created a model to test the hypothesis that the threat of imitation inhibits the rate of "discovery." They proxy barriers to entry by using the average time it takes to register a formal firm (from the *Doing Business* surveys of the World Bank), and find that indeed the higher are administrative barriers to registering a firm, the more appearances of new exports in the portfolio of developing countries. This higher barrier to entry protects successful incumbents and provides reward to investment in discovery. Rather than increase barriers to entry to promote exports—an obviously inefficient policy—they deduce that some type of subsidy to the discovery process is warranted, presumably through a carefully designed industrial policy.

However, there are reasons to examine these conclusions carefully before embarking on this policy path. First, it is not clear that aggregate data affecting all markets apply equally across industries and hence to the individual industry failing to export. Second, it is not clear methodologically that time to register a firm is an adequate proxy for barriers to entry; it would seem existing producers in the same or related product lines would be the most logical entrants, and their

firms are already registered. Moreover, barriers to entry—in absolute cost advantages, scale, or product differentiation—vary enormously across product lines, and it is not clear that a single proxy should apply similarly to all. Third, most new exporters sell into a virtually infinite pool of global demand, so a second or third entrant would rarely have any impact on the incumbents' marginal revenue. Finally, and more importantly, imitating entry may actually raise incumbents' profits by creating economies of agglomeration. Anecdotal evidence and an increasingly voluminous literature suggests that new entry broadens the market through agglomeration and industrial-level economies of scale, which affects key inputs and lowers transportation costs for all firms in the industry. In fact, an earlier strand of literature stressed the importance of economies of agglomeration.

In this view, the presence of a critical mass of firms producing similar products or using common inputs allowed firms to move down the long-run cost curve and expand and diversify exports. In Peru, for example, the fact that initially successful asparagus producers demonstrated the industry's viability attracted many new farmers into the industry, and the greater scale lowered costs of transportation, standards administration, and logistics for all farmers. In Kenya, pioneer call center operators reported that new entry would help them by widening the pool of available, flexible labor to respond to fluctuating demand. The main constraints seemed to be that the high cost of telecommunications that constrained entrepreneurs to niche markets and whose small aggregate profits discouraged new entry and expansion.

Irrespective of whether the market failure in the birth phase of exports is private underinvestment in discovery for fear of rapid imitative entry or impeded export expansion absent imitative entry with attendant economies of agglomeration, compatible policy responses can be designed to cope with both. If lack of discovery is a genuine problem, then public efforts to improve access to information about technologies and markets as well as subsidies and investment in upstream innovation capacities can aid the process. Similarly, imitative investment can be encouraged to attain economies of scale through policies to promote market broadening, perhaps by establishing "clusters" via provision of infrastructure, improved transportation or marketing arrangements.

3. Choosing Promising Export Markets

The Importance of Survival and the "Acceleration" Phase

Even if market failures constrain discovery or birth of new products, policy makers concerned about competitiveness have to balance scarce resources devoted to this problem against resources spent to support rapid acceleration in the subsequent stage of the export cycle. Assessing where to invest marginal

public resources begins by examining the sources of dynamism—and shortcomings—in export performance.

Several empirical studies have addressed the question of whether countries with rapidly growing exports are performing well because they are intensifying existing exports to existing markets, because they are bringing new products to market, or because they are extending their markets to third countries more rapidly. Studies that decompose export growth over time typically find that growth of exports in developing countries has been driven mainly by the growth of the intensive margin and that the extensive margin has grown primarily due to the export of existing products to new markets. This contrasts with cross-section studies that seek to explain differences in the structure of the exports between large and small countries, which give primacy to the extensive margin of trade (Pham and Martin, 2007).

Evenett and Venables (2002) decompose the export growth of 23 developing countries (to 92 importers) over 1970 to 1997 for around 200 product categories and found that selling existing products to new markets accounted for around one third of export growth for their smaller set of developing countries. Besedes and Prusa (2006a) investigate the exports of 27 developing countries for the period of 1975 and 2003 for 380 manufacturing categories and conclude that although developing countries have seen larger growth in exports at the extensive margin, they have been less effective than developed countries in the performance of the intensive margin. In their more limited sample, they suggest that a critical issue for developing countries in achieving higher growth on the intensive margin is higher survival rates of trade relationships and longer trade relationships.

Brenton and Newfarmer (2007) decompose the growth of exports of 99 developing countries to 102 developed and developing country markets over the period 1995 to 2004 for over 3000 product categories. They show that in aggregate the contribution to growth of the intensive margin (80.4 percent) dominates that of the extensive margin (19.6 percent). What matters most of all is the intensification of existing bilateral trade flows. This accounts for about 105 percent of the change in exports between 1995 and 2004. This contribution to growth is offset to some extent by a decline in the intensity of some existing flows (equivalent to around 20 percent of total export growth) and the extinction of some flows, although this only amounted to 4 percent of total export growth. Within the extensive margin, it is the export of existing products to new markets that is most important, accounting for about 18 percent of total export growth.

For the high-income countries in their sample, export growth was dominated by the intensive margin. New exports are relatively unimportant. But for low-income countries, the extensive margin is more important than for higher income groups. Nevertheless, growth on the intensive margin still dominates, accounting for around two thirds of the overall export growth of this group. Expanding exports of existing products to existing markets dominated export

growth for all income groups. The decomposition of export growth found that from 1995 to 2004, low-income countries and especially countries in Africa have been more active than more advanced developing countries in introducing new export products.

Amurgo-Pacheco and Pierola (2007) utilize a data set with more product detail (around 5,000 products) over the longer period of 1990 to 2005, but with smaller country detail (24 developed and developing countries). Their study confirms that export growth is dominated by the expansion of the intensive margin. Finally, Amiti and Freund (2007) investigate the factors underlying China's phenomenal export growth of 450 percent between 1992 and 2006. They find that nearly all of China's export growth came from the intensification of existing flows. Brenton and Newfarmer (2007) conclude that a growth strategy that ignores the scope for expanding exports at the intensive margin will miss important opportunities for export expansion.

Differing Performance in Penetrating Markets

These analyses show that poorly performing developing countries are not markedly inferior to stronger performing countries with regard to the introduction of new products and in starting to export new products. On the other hand they remain less diversified. Besedes and Prusa (2006a) suggest that the opportunities for many countries to further exploit this aspect of the extensive margin are enormous.

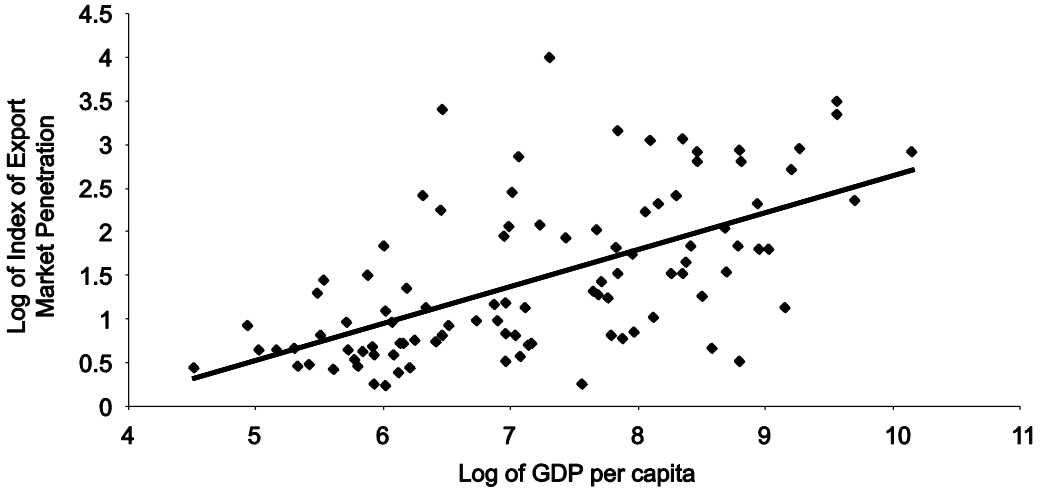
Many countries may import the products that a given developing country may export; however, typically, a given developing country will reach only a small fraction of those importing countries. Brenton and Newfarmer (2007) develop this by deriving an *index of export market penetration* (IEMP) that measures the extent to which a country is actually exploiting the market opportunities from the existing set of export products. For the given range of products that a country exports, the IEMP will be higher for countries that reach a large proportion of the number of international markets that import those products. Countries that only export to a small number of the overseas markets that import the products that the country exports will have a low value of the index.

Figure 1 shows that this index is positively correlated with GDP per capita. Countries with relatively low per capita incomes tend to do less well in exploiting the available markets for the goods that they export. Figure 2 provides a dynamic view of the evolution of IEMP comparing Kenya (income per head of $560 in 2005) and the Republic of Korea (income per head of $16,388). The figure shows that Korea has been much more effective in covering those markets that import the products that it exports. In this exercise, which utilizes data for 1,270 products and for 56 importing markets for the period 1985 to 2005, the value of the IEMP for Korea increased from 21.3 percent in the initial year to 42 percent in

1985. Over the same period the index for Kenya increased from just 5.9 percent to 8.5 percent, with much of this increase occurring on the past 5 years.

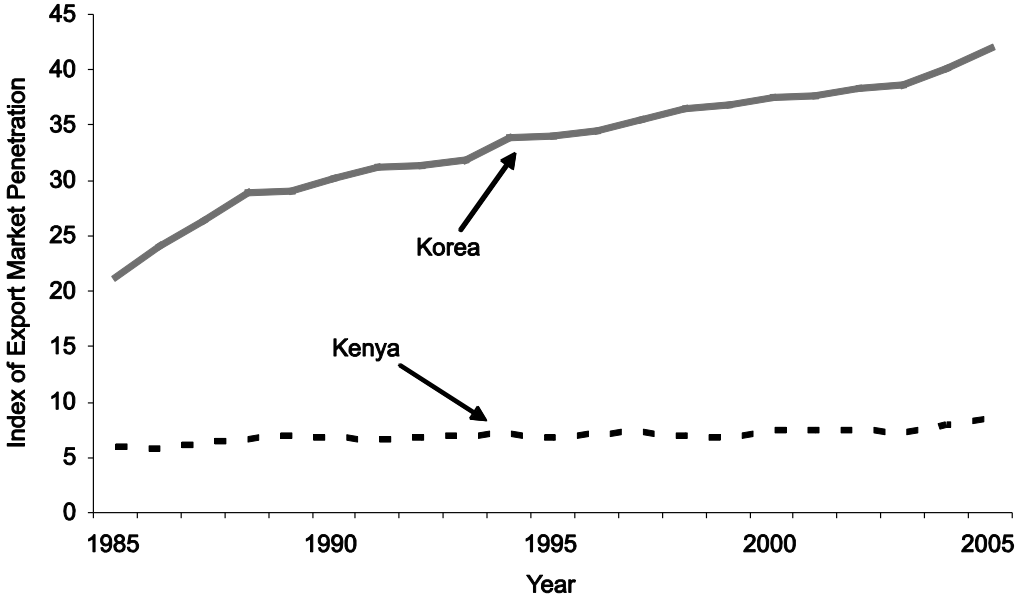
Obviously a small economy will have greater difficulty reaching all those markets that it potentially could serve because of its size. However, assuming an adequate incentive framework and domestic business climate that would otherwise allow for rapid growth in exports, increasing geographical reach with existing exports would seem an easier way to expand exports than investing in discovering wholly new products for exports. From a policy point of view, public efforts to overcome information gaps and other cost obstacles to exploiting the potential to diversify at the extensive margin via geographic market extension would seem far more productive than focusing public policy primarily on new products and discovery.

Figure 1: Export Market Penetration and Per Capita Income



Source: Brenton and Newfarmer (2007).

Figure 2: Export Market Penetration 1985 to 2005; Kenya and Korea



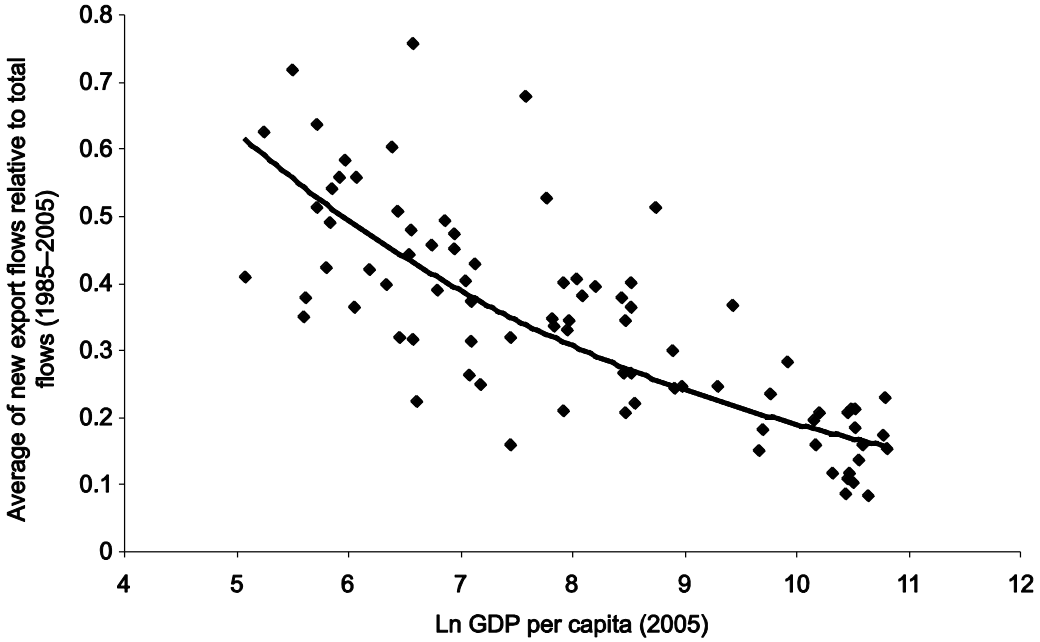
Source: Own calculations.

The Death of Trade Flows Undermines Diversification

What could explain why countries such as Kenya exhibit a much lower number of bilateral trade flows for the given products that they export than countries with higher levels of income per capita? Said differently, why do low-income countries, with apparent success in introducing new products remain less diversified in export composition? Recent work by Besedes and Prusa (2006a,b) provide the beginnings of an insight into this question. They find that a large proportion of U.S. bilateral import flows at a detailed product level are short-lived with a median duration of between two and four years. They conclude that for developing countries in Latin America and Asia "the key element to achieving higher aggregate export growth are longer relationships and hence higher relationship survival rates."

Exporting, it turns out, is extremely perilous. Brenton et al (2007) take up this issue and find survival rates for export flows (that is exports of a product to a particular market) are low—and that sustaining new exports is particularly difficult for low income countries. Figure 3 shows the average number of export flow births per year between 1985 and 2005 for the exports for 84 countries at differing levels of development to 56 importers for around 1,300 product categories. An export birth occurs when positive exports are recorded for a product-country flow that was zero in the previous year. The data tend to confirm that lower income countries do not have a problem with introducing new export flows.

Figure 3: Average Export Birth Rate and Log of GDP per Capita (2005)

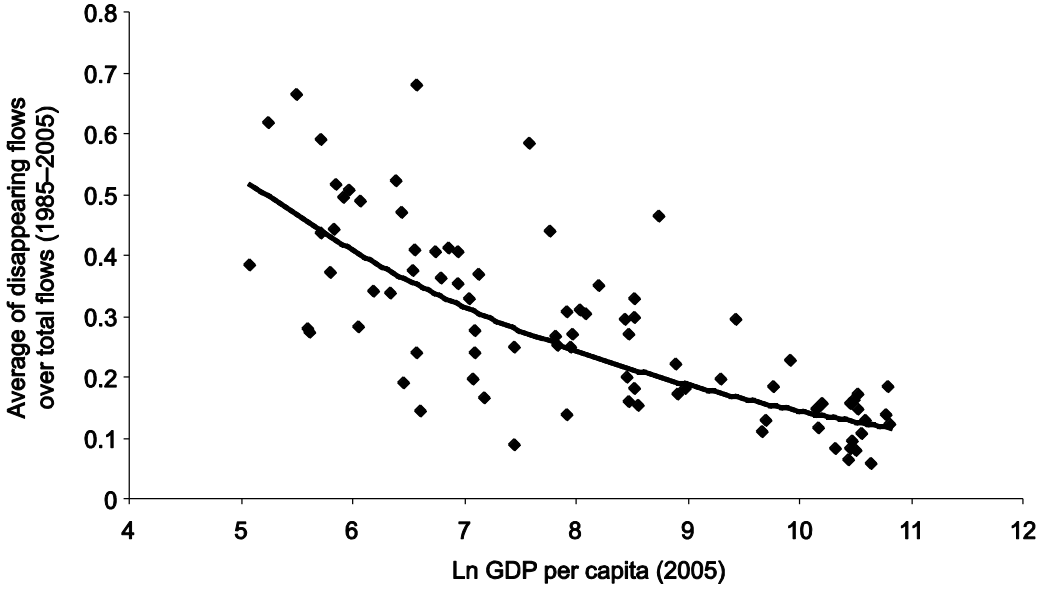


Source: Brenton et al (2007).

On the other hand, as shown in Figure 4, low-income countries experience much greater rates of mortality of trade flows. This is reflected in much lower rates of survival. The figure shows the average number of trade flows that cease during the period 1985 to 2005 and plots this against GDP per capita. For example, for the economy of Taiwan, China and the country of Korea, around 60 percent of trade flows survive for more than one year. For Malawi just 35 percent of flows survive beyond a year. The survival rate at 10 years is around 30 percent for the economy of Taiwan, China and the country of Korea, and around 15 percent for the low-income countries in Africa.

Issues relating to the information and market knowledge needed for successful entry into exporting are likely to be important in explaining exit. If firms have less than perfect information about the fixed costs of exporting a product to a particular market or there is some uncertainty about the value of these costs, then firms with relatively low productivity that are marginal entrants into exporting may subsequently find that they are unable to survive. Indeed, in the absence of full market information, firms may use entry into export markets as a mechanism for discovering the exact nature of the costs of exporting to that market and withdraw if it is found to be not profitable to incur the fixed costs of exporting. In this case initial entry is likely to take place on a small scale and exit is likely to be prevalent. Short-term entry may reflect the search processes that are necessary to match suppliers and buyers in the overseas market. "Sometimes their product isn't right for the market, or the country they chose was not a good fit, or their approach or agents are not right (export consultant quoted in Rauch (1996)).

Figure 4: Average Export Death Rate and Log of GDP per Capita (2005)



Source: Brenton et al (2007).

When information on the costs of exporting is well known or can be obtained at little cost then we are more likely to observe entry on a larger scale and exit after a short period should be less prevalent. Such information is likely to be more easy to obtain the greater the presence of exporters of other products to the particular overseas market and the greater the overall experience in exporting the specific product. A number of recent papers have sought to formalize the role of imperfect information in influencing the dynamics of entry and exit into exporting.

Rauch and Watson (2003) look at the initiation of export flows from the perspective of buyers in developed country markets where there is some uncertainty concerning the prospect of success of the partnership that they commence with developing country suppliers. Such uncertainty arises from whether the supplier will be able to deliver large orders to the buyer's specification. The buyer must invest to provide training to the developing country supplier to enable it to produce large orders but that training may or may not work. The buyer may also glean information about the capacity of the supplier before making such an investment by starting with small orders that generate no profits but which reveal whether the training will be successful. In other words, the buyer has the choice of starting small or big. Finally, the buyer has the option of whether to continue or to abandon a relationship with a particular supplier and to search for a new supplier. Importantly, once a successful relationship has been started the buyer is able to access a network of other suppliers and can obtain information on new firms without incurring search costs.

The model suggests that buyers in importing countries are more likely to start a relationship with an exporter with small orders the higher is the search cost and the lower the probability that the supplier will be able to meet the buyer's requirements. The model also predicts that export flows that commence with large orders will tend to have longer duration. This is because buyers will tend to initiate large orders with suppliers that have lower production costs and will be less likely to look for an alternative supplier.

The high hazard rate for initially small flows suggests caution in public policy interventions that are aimed specifically at exporters that start small. Reasoning along similar lines to Rauch (2007), broad institutional changes that favor small firms relative to large firms in an economy are likely to have a relatively small impact on trade relative to reforms that favor entry of large firms. Brenton et al. (2007) also find some evidence that total exports of a product are important in sustaining entry into new markets and that the overall level of trade between two countries is important in allowing new entrants to survive in that market. Hence, the expansion of exports of existing products is important in allowing for future export growth and diversification. Policy measures that create a bias against exports of existing key products may be undermining opportunities for new exports. For example, an export tax on a raw material or intermediate export, designed to support exports of the finished product, may actually act to constrain export diversification by limiting the flow of information from overseas markets and limiting experience of exporting. Similarly, taxing existing exports to fund an export promotion agency may not be appropriate.

4. Upgrading Product Quality

Export Diversification through Quality Differentiation

Increasing export growth at the intensive margin—that is, of existing products to old markets—usually requires some combination of productivity improvements to lower costs relative to competitors and quality improvements to differentiate products from those of competitors. Improving the quality of existing products is an important route to higher value-added and higher productivity that avoids the costs and constraints that face the development of entirely new products. Much of the discussion concerning export diversification in developing countries centers on increasing exports of differentiated products, especially manufactures, and reducing the importance of apparently homogenous products, particularly commodities. Rauch (1999) presents evidence, albeit tentative, that search costs are higher and matching more difficult for differentiated products and that proximity and common language and colonial links are more important for differentiated than for homogenous products that are traded on organized international exchanges.

However, an important element of a diversification strategy open to many low-income countries is to improve the quality and to brand and differentiate agricultural products. Box 1 discusses the case of upgrading the quality of coffee in Rwanda. Indeed, many of the Diagnostic Trade Integration Studies that have been undertaken in the least developed countries highlight similar opportunities, such as for cocoa in Sierra Leone.

Box 1: Rwandan Coffee—Challenges, Opportunities, and the Role of Aid for Trade

Agriculture is the dominant activity for the 90 percent of the population living in rural areas in Rwanda and coffee is the key export crop. The industrial sector is very small. According to the 2002/3 survey of enterprises, total employment in the industrial sector was just 36,000, most of it in the public sector enterprises. This is a very small industrial base in relation to the almost half a million farmers who grow, at least some, coffee. So, in the short run policies that enhance returns to coffee and other traditional exports and support farmers to shift out of subsistence activities into commercial production (those employed in producing traditional commercial crops for export tend to be less poor than farmers involved in nonmarket production) will have the greatest impact on poverty. Access to transport, for example, is a key factor affecting the propensity to shift into commercial production. Nevertheless, for sustainable long-term growth, it is necessary to complement such a strategy by pursuing diversification. Rwanda is typical of many poor countries in Africa, where poverty reduction in the short term is inextricably linked with the export of traditional agricultural products.

In 2003, an aggressive strategy was developed to both increase total exports of coffee and move the industry into the high quality, specialty end of the market. This was estimated to require an investment of $69 million: $24.75 million from donors/NGOs, $23 million from the private sector, and $21.25 million from the Rwandan government. Two long-term, donor-funded projects have been assisting producers in developing buyer-seller relationships and assisting growers in upgrading quality. Aid projects have also helped farmers to form cooperatives to meet the requirements of "fair trade" coffee or to experiment with organic or shade grown coffees (all of which earn a substantial premium over regular coffee). This together with increased access to washing stations has also led to increases in farmer income by up to 55 percent. Washing and grading the coffee cherries has enabled those of higher quality to earn higher prices, giving farmers an incentive to increase quality. Regulatory reform has also allowed individual Rwandan cooperatives or private owners to negotiate directly with specialty roasters in the United States and Europe, enabling them to sell to specialty markets at more than twice the market rate.

The quality and the image of Rwandan coffee have improved markedly. Rwandan exports of unroasted coffee to the United States in 2006 were 282 percent higher than in 2003. This increase in the value of exports was driven by an 18 percent increase in quantity and a 225 percent increase in the average price for Rwandan coffee exported to the United States. During this period the average import price of unroasted coffee into the United States increased by 65 percent and the ratio of the Rwandan import price to the average import price of coffee increased for 0.58 to 1.16. Rwandan exports of coffee to the European Union (the principal market with exports in 2006 being around 6 times larger than to the United States—€34 million versus $6.6 million) were 230 percent higher in 2006 compared to 2003. This increase reflects a 103 percent increase in the quantity of coffee exports and a 64 percent increase in the average price of Rwandan coffee exported to the EU. During this time the average price of unroasted coffee imported by the EU increased by 57 percent and the ratio of the average price if imports of coffee from Rwanda to the overall average import price of coffee into the EU increased from 1.10 to 1.14.

Source: World Bank/IF, 2005

The Rwanda example demonstrates that there are often numerous constraints to the upgrading of quality of agricultural products from low-income countries that require interventions to address infrastructure, regulatory, informational, and logistical weaknesses. Many of these constraints are amenable to 'aid for trade' initiatives between low-income countries and development partners.

Movement up the ladder of higher-quality agricultural produce typically requires a structure of incentives that encourages farmers to produce better-quality goods. In other words, farmers must reap some of the reward from the higher-quality produce. In addition, higher quality will often require larger inputs of services than traditional production, such as access to water, electricity, improved transport and communications, and access to finance. In addition to ensuring an appropriate structure of incentives and addressing infrastructure constraints and weaknesses in the provision of backbone services, there may also be a role for government in assisting producers in overcoming market failures that limit their ability to export the higher-quality produce, for instance, by providing information that allows for the effective matching with buyers in overseas.

Further, the importance of quality introduces an additional set of institutions that may be important in influencing bilateral trade. Poor-quality metrology, testing, and conformity assessment facilities in developing countries entail either that additional costs will have to be incurred in sending products to more-developed countries to assess quality and conformity with private or public standards, or that there will be a degree of uncertainty concerning these issues. There maybe additional uncertainty regarding the ability of the exporter to consistently deliver the quality of product specific by the buyer. Rauch (2007) argues for institutional reform that targets reducing the costs of entry into high-quality production and reduces search costs related to quality to support exporters in finding and sustaining matches with overseas buyers.

Export-promotion agencies can play a key role in reducing search costs for exporters and in linking with domestic-standards institutions to raise the supply capabilities of domestic firms to meet the requirements of overseas markets in terms of design, quality, packaging, and marketing. However, there appears to be little analysis of how export-promotion agencies can best provide such services in developing countries. Evidence from developed countries such as the United Kingdom suggests that export promotion "should include an element of targeting, specifically on the smaller firms with some experience of exporting" and that there should be "caution in providing trade support to very inexperienced or very inexperienced exporting businesses" (SQW, 2005). This review distinguishes three types of export promotion activity: (i) the provision of market information, (ii) advisory services that help inexperienced exporters estimate the costs and risks of exporting, and (iii) in-country support, such as overseas trade missions. It concludes that the impact of in-country support in

generating additional exports can be much lower than the other two forms of assistance. It is important to assess whether such conclusions also pertain to export-promotion agencies in developing countries.

Does the Sophistication of Exports Matter for Diversification?

Although concentration of exports creates vulnerabilities, two opposing strands of thought have emerged on whether the composition of exports—controlling for the level of concentration—matters for trade performance. The first, represented by de Ferranti et al. (2004) studied Latin America's export performance—including supplementary studies worldwide—and concluded that it was not important *what* a country produced but *how* it produced it. This study emphasized the importance of both productivity improvements in production to keep export prices competitive while providing ever higher return to workers and of quality improvements.

A recent and slightly different argument suggests that diversification should focus on moving resources into more-sophisticated products and those countries that export goods that are associated with higher productivity levels will grow more rapidly. Hausmann et al. (2006) measure this notion of the productivity of products in terms of the income levels of countries that export a particular product, weighted by each countries revealed comparative advantage in that product (define as the variable PRODY). For each exporter they then calculate a measure of the overall productivity of their export bundle by weighting each of the PRODYs by the share of the product in that country's total exports. They find a strong correlation between this measure of the productivity of a country's export bundle and per capita income and between initial values of the measure and subsequent growth.

Rodrik (2006) suggests, on the basis of this measure, that China is an outlier in terms of export sophistication and that it exports products that are normally associated with countries that have per capita incomes three times higher than China. This apparent capacity to produce advanced high-productivity products is then seen as having been an important factor in China's strong recent growth.

However, some new studies show the importance of taking into account differences in product quality—and that by ignoring the quality of products the Hausmann et al. measure tends to overestimate the importance of sophisticated products in low-income country exports. Since product quality is correlated with income there is likely to be a bias in correlations between the measure of export productivity and per capita income. For example, Xu (2006) conditions the Hausmann et al. measure by relative unit values of exports, which are used to proxy relative quality. This analysis shows that once product quality is taken into account the structure of China's exports appears consistent with its level of development. Minondo (2007) finds that the relationship between initial export sophistication and subsequent economic growth no longer holds once differences in quality are accounted for.

In addition, an issue with all measures of export structure and diversification, including the Hausmann measure, is the increasing importance of global production chains. Technological change and declining transport costs have led to the splitting up of the production chain of many processed products and the reallocation of production throughout the world. Successful exporting in many developing countries, especially those in East Asia, has been driven by the importing of parts and components for further processing and assembly. However, the trade data used in these measures of diversification and export sophistication relate to gross exports and do not capture the impact of outsourcing. For example, China exports iPods, a sophisticated product that would be grouped together in the export statistics with other advanced electronic products exported by high-income countries. But to what extent does China produce iPods? Box 2 shows that most of the sophisticated, high-productivity activities that are combined to produce the iPod take place in other countries and that it is mainly assembly that is undertaken in China. Similarly, Moldova has exported Max Mara coats, which are very expensive products, but most of the value is embodied in the fabrics, which are temporarily imported into Moldova and assembled into the final product and then exported.

Hence, the presence of sophisticated products in a developing country's exports may reflect more the result of foreign direct investment (FDI) and integration into global production chains than specific industrial policies. This suggests a relevant focus for policy makers should be whether the domestic policy environment encourages FDI and allows domestic firms to integrate into global production chains. In addition to a sound business climate, investment promotion can be effective in attracting FDI. Harding and Smarzynska Javorcik (2007) find that autonomous agencies accountable to an external entity tend to perform better than bodies located within a government ministry. In addition, they find that investment promotion in one country may take FDI away from neighbors, suggesting a potential for beneficial regional coordination.

Box 2: Global Production and the iPod

The iPod is a highly complex product whose production involves a large number of components that are furnished by suppliers from around the world. Take for example just one component of the iPod nano, the central microchip that is provided by the U.S. company PortalPlayer. The core technology of the chip is licensed from British firm ARM, and is modified by PortalPlayer's programmers in California, Washington State, and Hyderabad. PortalPlayer then works with microchip design companies in California who send the finished design to a "foundry" in Taiwan, China that produces "wafers" (thin silicon disks) imprinted with hundreds of thousands of chips. These wafers are then cut up into individual disks and sent elsewhere in Taiwan, China where each one is tested. The chips are then encased in plastic and readied for assembly by Silicon-Ware in Taiwan, China and Amkor in Korea. The finished microchip is then warehoused in Hong Kong, China before being transported to mainland China where the iPod is assembled.

Sources: Joseph 2006; *Business Trends* 2006.

5. Moving into Services Exports

Services have become a major—and unfortunately often ignored—source of diversification. It is one of the stylized facts of economic development that the share of services in GDP and employment rises as per capita incomes increase. Developing countries are also catching up quickly with respect to the intensity and extent of international services transactions. Advances in information and communication technologies are increasingly permitting cross-border services trade, turning services exports into a more and more important component in the balance of payment and potentially a major source of economic growth.

Developing trade in services is a complicated process and many countries do not have an explicit trade in services policy or a detailed, overall plan to develop services trade. This lack of a strategic outlook can be partly explained by the general paucity of data on services trade and the resulting absence of rigorous policy advice. The data problems are also afflicting economic analysis and inducing researchers to restrict their tools to merchandise trade data and, thus, losing focus on developments in international services transactions. Yet, services can contribute to growth and export diversification in several ways: (i) by expanding exports of existing services activities to existing markets and thereby growing the generally small services export sector relative to agricultural, mining, and manufacturing exports; (ii) by developing new services exports or starting to export existing services activities to new markets; and (iii) by lowering input and transaction costs to make merchandise products more competitive in international markets.

Expanding Services Relative to Goods Exports

In discussions of diversification, services exports rarely enter into the consciousness of policy makers and their economic advisors. However, services exports are now driving growth in many economies. For example, tourism has been a vehicle for diversification in many developing countries, based on their favorable labor and natural resource endowment. Cattaneo (2007) recently explored the experience of three countries in completely different positions regarding tourism, namely Nigeria, Mauritius, and Zambia. The case examples show how countries at different stages of development and trade integration have tried to use tourism as a vehicle for export growth and diversification. At the same time, the study stresses that this opportunity is not equally available to all and explores the conditions that are required to enter the tourism market, thereby underlining the opportunity cost of investment in tourism development in countries with few natural endowments or security and political stability problems. Tourism-led development also raises issues of diversification within and outside the tourism sector.

Tourism activity generally needs to be private-sector driven. But there is a clear role for government in this particular sector and in services more generally.

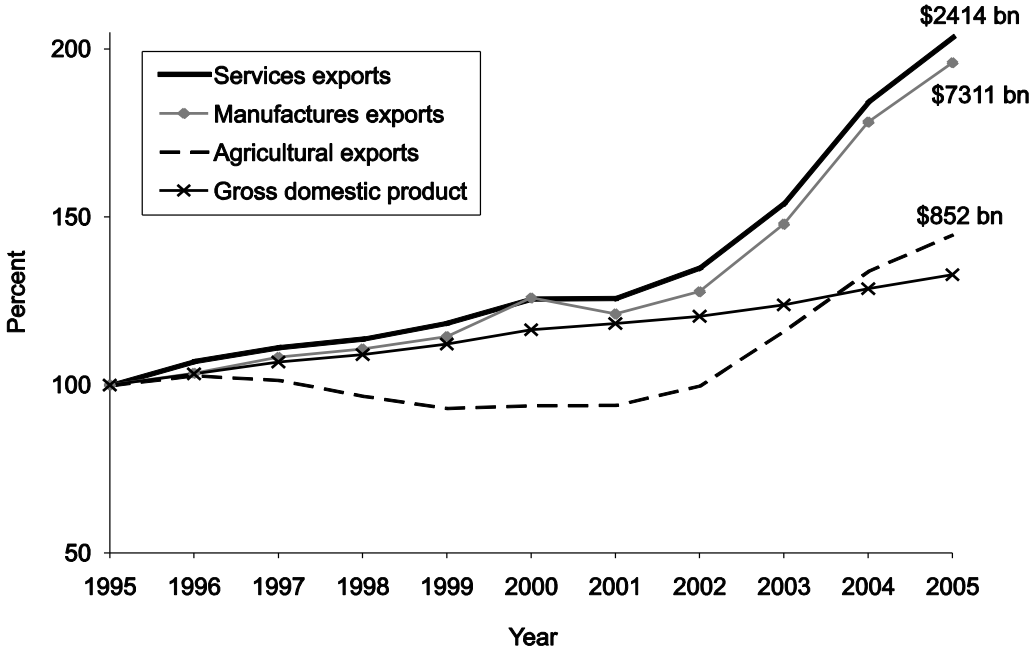
Mattoo and Payton (2007) conclude from a detailed study of Zambia that the relatively poor performance of the services sector and the diminishing faith in reform are attributable to the fact that the government and donor organizations behaved as if they had complete confidence in the power of markets. They moved aggressively, but unevenly, on the elimination of barriers to entry, sluggishly on the development of regulations to deal with market failure, and only notionally on the implementation of access-widening policies.

In other cases, governments are playing a more active role. Some countries have shown interest in using regional trade agreements to open markets for their services providers. Although such agreements can not replace supportive domestic policies towards diversification into services, they can play a complementary role, in particular if they are ambitious and based on a "negative list" approach, as first practiced in NAFTA. Other proactive international policies include efforts to conclude and develop through bilateral open skies agreements, as in the case of Dubai.

Conquering New Markets for Services

Services exports have grown dynamically across all modes of supply. These developments are reflected in services trade statistics (Figure 5), even though the latter do not capture dynamic services exports under mode 3, i.e. FDI. The ongoing trend to outsource back office and information technology functions to take advantage of advanced skills and lower labor costs of specialized service providers has opened new export paths for a growing number of developing countries.

Figure 5: World Exports of Merchandise and Services Have Expanded Rapidly (1995 = 100)



Source: WTO, 2006.

Most of the contracting-out is still undertaken with companies in the country of origin ("onshoring"), but cross-border arrangements ("offshoring") have been becoming increasingly common. Some observers predict that the value of offshoring activities to low-wage locations will have almost quintupled over the period from 2003 to 2008 (McKinsey Global Institute, 2005).

However, services exports to new markets are often hampered by regulatory diversity. Regulatory measures affect the fixed cost of entering a market as well as the variable costs of servicing that market. Moreover, differences in regulations among countries often imply that firms have to incur entry costs in every new market. Kox and Nordås (2007) introduce indicators of regulatory intensity and heterogeneity into a gravity model, and estimate the impact of these indicators on market entry and subsequent trade flows for total services, business services, and financial services. They find that regulatory heterogeneity has a relatively large negative impact on both market entry and subsequent trade flows. Further, regulatory barriers have a negative effect on the local services sectors' export performance. Finally, it is found that regulations that aim at correcting market failure can have a positive impact on trade. Hence, services trade liberalization and regulatory reforms are complementary in creating competitive services markets.

Catalyzing Diversification in Other Sectors

There are many interactions between services and manufacturing to the extent that the distinction between the two sectors is getting blurred. Indeed, up to 50 percent of manufacturing workers in industrialized countries are performing service jobs (Pilat and Wölfl, 2005). Moreover, many services, such as finance, telecommunications, and transport, provide vital inputs to manufacturing firms that have a substantial influence on the latter's international competitiveness, and, hence, their potential to export and grow.

Efficient services are also crucial for taking advantage of modern distribution channels. Chinese producers have shown the way in which developing countries' firms can advertise their products over the Internet, or even sell directly to consumers in industrialized countries through Web-based outlets such as eBay. This type of direct selling greatly reduces the costs of establishing an elaborate distribution infrastructure overseas or paying a foreign partner for their distribution services. On the other hand, it requires an internationally integrated financial system, reliable postal delivery, and well-performing telecommunications operators.

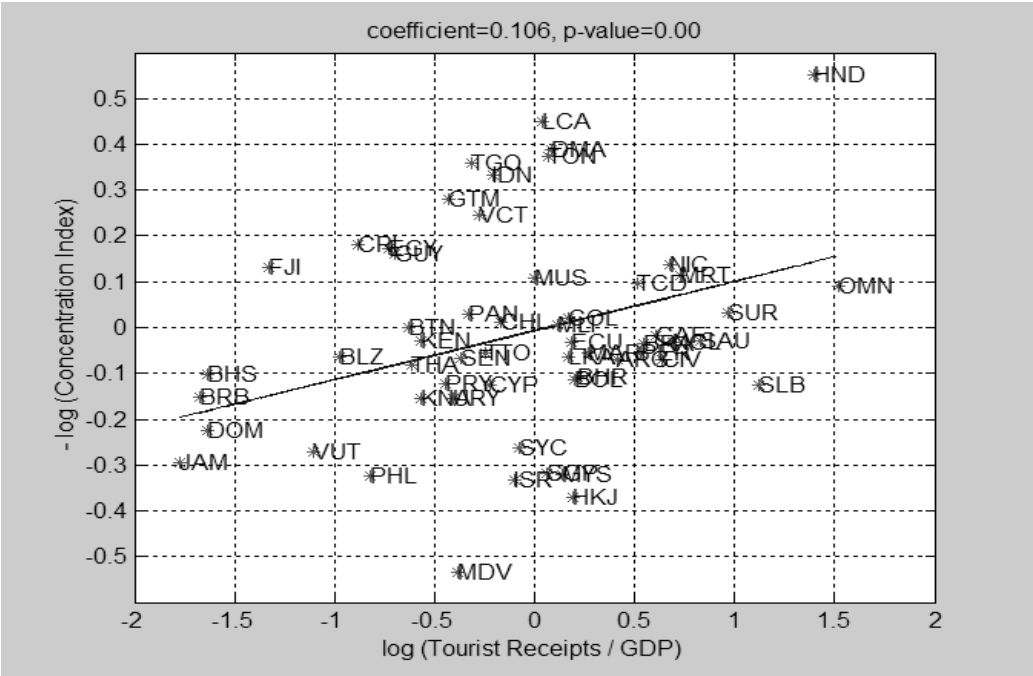
In addition to the physical linkages between services and manufacturing, there can also be important demonstration effects. Lejárraga and Walkenhorst (2007) argue that this is notably the case for tourism, where services exports not only offer income, employment opportunities, and foreign exchange to developing countries; but linkages also represent a low-cost means for discovering what goods and services local entrepreneurs could produce for sale

abroad. Indeed, the tourist economy represents a within-the-border international market. Tourist-suppliers enjoy free information about foreign demand, a low-cost 'trial and error' process for testing new products, and attractive cost savings for establishment and internationalization.

If local businesspeople can successfully sell to tourists from overseas, they are in a strong position to similarly satisfy foreign demand abroad. Examples of tourism-related export discoveries include Macadamia nuts from Hawaii, butterfly chrysalises from Costa Rica, and traditional spices from Jamaica. Many other export discoveries, ranging from agricultural products (such as organic fruit from the Dominican Republic) to handicraft (such as Tinga-Tinga paintings from Tanzania) have their likely origin in tourist demand, even though the links that inspired the innovators are difficult to pin down over time. Moreover, statistical panel data analysis shows a positive correlation between tourism receipts and export diversification (Figure 6).

The findings suggest that policy makers may want to devote increased attention to fostering linkages between the tourism sector and the domestic economy in order to stimulate the discovery process and promote economic diversification and growth. What country-specific factors matter most for creating or enhancing linkages?

Figure 6: Tourism Specialization and Export Diversification (1993–2003)



Source: Lejárraga and Walkenhorst (2007).

Note: Herfindahl index for 63 developing countries with tourism receipts of at least 0.05 percent of GDP.

Lejárraga and Walkenhorst (2007) address this question empirically by drawing on the Tourism Satellite Accounts research from the World Travel and Tourism Council. They find that fixed or semifixed factors of production, such as land, labor, or capital, have less influence on the extent of tourism linkages than is generally supposed. By contrast, variables related to entrepreneurial capital and the business environment of the host economy are of notable explanatory significance. In particular, the level of corporate taxes in the host economy has the most significant adverse effect on the formation of linkages, in conformity with the lower-cost motivation underlying tourism-led discovery. Also, a widespread use of the Internet has a positive effect on the ability to orchestrate coordination. Another notable observation concerns institutions for policing and vigilance. As would be expected, the results show that countries with higher incidence of violence or crime have significantly less linkages. Indeed, the coordination of discoverers in tourism clusters depends fundamentally on trust among local entrepreneurs—and trust can hardly flourish in an environment characterized by social conflict. Finally, the results suggest that maintaining an open trade regime is critical for the emergence of linkages. This underscores the importance of not protecting inefficient activities and opening potential products for tourism demand to competition. Although trade barriers may indeed serve to prod investors in the tourism economy to procure domestic goods, they will also hinder the competitiveness of local producers. Shielded from imports, local producers will not have the incentives to meet the international quality standards of the products needed by the tourism economy. Quality standards, and not just costs, will likely inform the procurement decisions of the tourism economy.

Promoting Services-Driven Diversification and Growth

Increasing evidence shows that services liberalization is a major potential source of welfare gain, and that the performance of service sectors, and thus services policies, may be an important determinant of trade volumes, the distributional effects of trade, and economy-wide growth (Hoekman, 2006). Yet, the development of trade in services entails a fundamental shift in economic thinking. Changes in policy might be required at all levels—not just in relation to trade negotiations or the development of an appropriate supply capacity, but also in building an appropriate domestic regulatory framework. Moreover, state-business relations need to be strengthened so that the private sector benefits further from and inform the initiatives undertaken by the government. Engagement with the international economy is crucial so that important lessons can be learned from the experiences of other countries in general and successful countries in particular (Qureshi and te Velde, 2007). In this context it is noteworthy to remember that any tariff protection of agricultural or manufacturing sectors implicitly places a burden on the development of other parts of the economy, including services providers. Hence, lowering

merchandise tariffs not only reduces the anti-export bias and domestic market focus of goods producers, but also opens up opportunities for services exporters.

6. Policy Reforms and Institutional Innovations for Export Diversification

The global economy is extremely dynamic. Technological change and falling transport costs have led to the emergence of global production chains. Falling transport and communications costs are also propelling strong growth in trade in services—in all four modes. Meanwhile, consumers in developed countries are increasingly demanding higher quality and looking for product variety—often achieved through differentiation. Moreover, there are enormous changes in the structure of world demand as incomes in large emerging countries such as Brazil, China, and India grow at fast rates. If elasticities of demand differ with levels of income then there will be substantial change in the structure of world demand. Tariff liberalization, declining transport costs, and growing incomes all entail that new markets are appearing both for existing and new exporters. All of these are creating opportunities for export growth in the global economy.

How can countries best position themselves to take advantage of these possibilities? We suggest a strategy that focuses attention to policies that facilitate trade and improve competitiveness. Three critical elements of a *general framework* are clearly essential in shaping a country's ability to compete in international markets and to successfully diversify into new activities and markets:

The incentives regime. By definition, successful export diversification requires movement of resources: to new export activities, such as services; from less productive to more productive exporting firms as the latter expand the range of markets into which they sell as well as exports per market; and to facilitate the export of higher-quality products, which will tend to a have a somewhat different input mix than traditional or lower-quality products. Hence, a key challenge for policy makers is to ensure that land, labor, capital, and technology are moving to (i) sectors in which the country has a long-term capacity to compete and (ii) to the most productive firms within sectors. This necessitates a clear understanding of how trade, tax, the business environment, and labor market policies interact to affect investment, output, and trade decisions. In many small, low-income countries the economy tends to be dominated by a small number of sectors, so that many of the key issues regarding the allocation of resources can be unearthed by analyses that focus on these sectors.

Lowering the costs of backbone services and, generally, of doing business. Of particular importance in today's globalized economy is that domestic firms have access to efficiently produced critical backbone services inputs. Firms that have to pay more than their competitors for energy, telecommunications, transport and logistics, finance, and security will find it hard to compete in both the domestic and overseas markets. Export diversification into products of higher quality will tend to increase the importance of activities that require the more intensive use of these backbone services than traditional activities. Exports of services rely heavily on the use of other services as inputs. For example, telecommunications are a critical input into call centers and other business-processing activities. Transport is vital to tourism.

Reducing policy barriers to competition and improving regulatory effectiveness in these services industries lies at the heart of the policy challenge. In many developing countries lack of infrastructure is a critical constraint on the availability and cost of backbone services. Other critical services are those related to education and training that are necessary to ensure supply of the type of labor required by the more-productive, expanding sectors in the economy and to foster a process by which value is increasingly added to the products and services produced in the country.

Proactive policies to support trade. Both market and government failures tend to afflict low-income countries as they seek to expand exports and growth. Policies that focus solely on achieving low tariffs are rarely sufficient to prompt dynamic export drives or overcome obstacles in other areas. In many cases these constraints to competitiveness impinge more on higher quality and differentiated products and require specific interventions and institutions. Consider the following examples:

- In identifying the role of product deaths and weak performance in the index of export market penetration, this study underscores the importance of *export promotion agencies*—and even economic officers in foreign embassies—in overcoming informational asymmetries. This is particularly important for overcoming impediments to gaining information for the private sector in the search for third markets.
- Of similar importance are likely to be *investment promotion agencies, standards bodies, customs* and *agencies to support innovation and clustering, export processing zones,* and *duty refund schemes.*

In tackling government and market failures, trade ministries are typically weak and their policy purview limited to border barriers. Large domains of policy that affect competitiveness are the responsibility of other ministries—for example, investment policies, services, and transport, to name a few. It is

important that these initiatives are brought together within a strategy for competitiveness rather than as a series of ad hoc interventions. In isolation these agencies tend to focus on narrow objectives, some of which may even be inconsistent with a broader competitiveness strategy. Incorporating competitiveness broadly into the national development strategies may require more effective mechanisms to review and coordinate policies. One option is to create an interministerial council on competitiveness with the mandate of undertaking analysis of the existing policy framework and for reviewing policies before they are put in place.

In addition to the incentive framework and costs of doing business, competitiveness diagnostics can highlight whether binding constraints to export performance reside in low discovery, low geographic diversification, low product quality and and/or low services exports. Each may have slightly different policy remedies. For example, if the problem is discovery, an examination of the innovation framework may be warranted, and the *World Development Report* on the knowledge economy (World Bank, 1998) offers a rich inventory of policies to review. If the problem is lack of reach to third markets, an examination of the effectiveness of export promotion may be warranted (see Lederman et al., 2007). Failure to improve quality and/or introduce differentiated products requires consultation with the poorly performing industry to identify policy and economic constraints and areas for support (if any). Moreover, lack of detailed trade data and historically grown professional associations and institutions that often separate producers along sectoral lines should not lead to the exclusion of services from consideration for support as potentially promising activities for trade expansion.

Diversifying exports is a complex process—and obstacles are specific to countries. Hence, a "one size fits all" approach to export diversification is clearly inappropriate. Nevertheless, these constraints are likely to be best identified and addressed within the context of a comprehensive strategy towards trade and global competitiveness. Given the range of opportunities for diversification from new goods, higher qualities of existing products, exploiting new markets for goods currently exported and from services, the government is likely to be most effective in removing economy-wide constraints and providing an enabling environment for the private sector rather than in supporting particular activities or firms. Although governments in low-income countries have the responsibility of putting in place an appropriate set of incentives, of improving infrastructure and the regulation of backbone services, and of counteracting market and government failures than hinder exporters, there is an important role for development partners to support such trade and competitiveness strategies by providing necessary technical and financial assistance through aid for trade.

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