

OVERVIEW

In the current economic environment of globalization, trade plays an increasingly important role in shaping economic and social performance and prospects of countries around the world, especially those of developing countries. This new series, *Developing Countries in International Trade* (DCIT), aims to analyse key trade and development issues facing developing countries on an annual basis. To organize the analytical work, an attempt has been made to develop a conceptual framework to account for the complex interaction of factors affecting trade and development. This interaction is expressed in terms of the Trade and Development Index (TDI), which is the subject matter of Chapter 1. Two special issues are taken up in this report. An in-depth empirical treatment of the determinants of export performance is provided in Chapter 2. In Chapter 3, the issue of adjustment to trade reforms is analysed.

The Heads of State and Government at the 2005 World Summit reaffirmed their commitment to ensure that trade plays its full part in promoting economic growth, employment and development for all. How can implementation of this commitment be monitored? The elaboration of the TDI tries to respond to this question by developing a conceptual and quantitative framework to systematically monitor the trade and development performance of developing countries with a view to facilitating national and international policies and strategies that would ensure that trade serves as a key instrument of development.

The Trade and Development Index

In constructing the TDI, a point of departure is to recognize that to act as an engine of development, trade must lead to steady improvements in human conditions by expanding the range of peoples' choices. The latter depends much on the interplay among factors determining both trade outcomes and human development outcomes. The trade and development performance of a country is not a mere sum of these two outcomes. Instead, it is a composite concept, reflecting the state in which a country finds itself as a result of interactions among underlying factors determining them. By accounting for these interactions, the TDI tries to provide a quantitative indication of trade and development performance of countries.

The TDI identifies three sets of such determinants, referred to as *dimensions*—namely, structural and institutional factors; trade policies and processes; and, finally, level of development. Each dimension is composed of a number of *components*, which are derived from a set of *indicators*.

In addition to the construction of the TDI for developing countries, similar indices are prepared for two other groups of countries: the TDI for the OECD group is taken as the long-term trade and development benchmark for developing countries, while that for the newly acceded EU10 group of countries as the medium- to longer-term benchmark for developing countries, against which progress in trade and development performance will be assessed.

The selection of appropriate indicators and methodology was central to the construction of the TDI. An extensive review of literature was undertaken to help choose the most relevant indicators. A similar review was conducted in respect of available methodologies, including those employed by a number of UN system organizations. Eventually, it was decided to follow the pathways laid by the Nagar-

Basu methodology to construct the TDI as a weighted sum of a normalized version of these identified indicators, where respective weights are the outcome of multivariate statistical analysis of principal components. The main reason for employing principal components analysis is that it makes it possible to define a synthetic measure that is able to account for interactions and interdependence between the selected set of components making up the TDI. Other attractive features of this methodology are that it permits calculation of statistical weights of the various components of the TDI for the sample that thereby identify what drives the results, and that it allows comparison of results over time.

Main results of the TDI

The results indicate that the top 20 are all developed countries, except Singapore (rank 15). Denmark leads the pack, followed by the United States and the United Kingdom. The TDI scores of Sweden, Norway, Japan, Switzerland and Germany are particularly close. The countries of southern Europe members of the EU are at the bottom of the top 25. Only three developing countries are in the top 30. Besides Singapore, they include the Republic of Korea (rank 25) and Malaysia (rank 28). This partly indicates that only a handful of developing countries have been able to come close to the trade and development performance of developed countries.

At the other extreme all the bottom 20, excepting Pakistan and Papua New Guinea, are either least developed countries (LDCs) or African countries, or both. The entire bottom 10 are African countries, with 9 being LDCs; indeed, only two African countries, South Africa (rank 41) and Mauritius (rank 47) are among the top 50 scorers. This indicates the severity of the trade and development problematique of LDCs and African countries. A word about the two largest developing countries in population terms, *viz.*, China and India. Years of economic and trade growth notwithstanding, China (rank 51) is not among the top 50 performers. India, on the other hand, ranks 90th among all countries in the sample.

Within the developing countries group, the top 10 ranking countries include mostly newly industrializing economies of East and South-East Asia, and some Latin American and Caribbean countries. After Singapore, the Republic of Korea and Malaysia, Uruguay ranks fourth among all developing countries, and scores highest among the Latin America and Caribbean countries. The pattern changes as one goes down the list. With regard to the middle-20 developing countries, the results show that 10 countries are from the Latin American and Caribbean region; eight are from Africa; and one each from the East and Central Asian regions. Finally, the 10 lowest scorers comprise only African countries, of which nine are LDCs.

The inter-country differences among developing countries with respect to the TDI scores also indicate certain regional patterns. The East Asia and Pacific (EAP) countries group lead the entire developing country sample, followed by countries of the Latin American and Caribbean (LAC) group and Middle East and North African (MENA) countries. Gaps between these three regions' average scores are not very far apart. However, the scores of South Asian (SOA) and sub-Saharan African (SSA) countries show significantly lower TDI scores compared with the other three groups. Indeed, the two regions have comparable scores, and lag quite substantially behind other regions.

An overall analysis of the TDI components reveals that the EAP countries' lead is due to relatively high average scores for physical infrastructures and financial environment, and to some extent market access indicators. As to SOA and SSA countries, they are lagging behind for most components. This is particularly true for the social development component, the financial environment component and the physical infrastructure component. SSA countries score particularly low on

physical infrastructure. SOA countries score low in terms of their trade openness. EAP countries' disaggregated scores reveal a relatively high level of uniformity of performance across different components.

Results of benchmarking

In order to obtain benchmarking results, countries are aggregated into three groups: developing countries, newly acceding EU 10 countries (i.e. new EU members since May 2004) and developed countries (i.e. EU 15 plus other OECD countries). Two sub-groups are identified, namely the top 10 developing country performers, and LDCs. As indicated above, the score of the developed countries group is the highest, followed by the EU 10 countries, whose performance stands between the performance of developing and of developed countries. The top 10 developing country performers have come significantly closer to developed countries in some areas, such as environment, economic structure, openness to trade and social development. As a group, they have nearly caught up with EU 10 in respect of physical infrastructure, environment, economic structure, openness to trade, market access, economic development and social development. In other areas, their differences are not very pronounced; this indicates that there is a strong possibility of their catching up with EU 10 in the medium term. However, there is a substantial gap between the two groups with regard to human capital, physical infrastructure, institutional quality, market access and economic development. There are huge differences in performance between developed countries and other developing countries. The catching up challenge is especially formidable for LDCs.

What drive results?

The analysis also indicates that the contribution to the TDI of the openness to trade component is the largest and explains almost 15 per cent of the TDI score. Contributions of other components vary between 3.9 per cent and 13 per cent. The contribution of the social development component is the second most important, followed by the contribution of the economic structure component, the environmental sustainability component and the gender development component. The lowest contribution came from economic development component, represented by per capita GDP in PPP terms.

A disaggregated analysis of relative contributions of the components indicates that the importance of the openness to trade component tends to be higher for countries with lower TDI scores, and vice versa. While its contribution to the TDI is around 17 per cent for developing countries as a group, it falls to less than 12 per cent for the EU 10 countries and less than 10 per cent for developed countries. In other words, trade liberalization played a much larger role in the case of developing countries as a whole, and especially LDCs, in explaining the TDI score than in the case of developed countries. The contribution of the access to markets component is similar for all country groups, although it plays a much less pronounced role relative to the openness to trade component in the case of developing countries than in the case of developed countries.

The contribution of environmental sustainability, economic structure and social development components is closer to one another across countries. However, there are significant differences among country groups with regard to the respective contribution of economic development, human capital, physical infrastructure, financial environment and institutional quality. In general, their contribution tends to decline as one moves down the list of countries in declining order of TDI scores.

TDI and variability among components

The TDI scores also point to an interesting pattern as regards the relative contribution of different components to the TDI scores among the country groups. The highest TDI scoring countries tend to score uniformly high in different components. In other words, these countries display a low variability, defined by the coefficient of variation among contributions of individual components. The variability increases as one moves down the list in decreasing order of TDI scores. The greatest variability is found among the bottom 10 scores. It is observed quite clearly that the higher TDI scoring countries exhibit lower variability in the contribution of individual components, while lower scoring countries have higher variability. Taking the sample of countries as a whole, the correlation coefficient between the TDI and coefficients of variation indicates a very high degree of reverse association between them, so that the following general rule holds:

The higher the TDI score, the lower the variability in the contribution of its components, and vice versa.

An implication of this finding is that while changes in the value of TDI scores over time could be regarded as a *quantitative* indication of trends in the trade and development performance of countries, those in respect of the variability could be seen as *qualitative* changes. Thus, trade and development policies and strategies should simultaneously aim at improving TDI scores and reducing the variability in the contribution of different components. As the case of low scoring countries indicates, a disproportionate emphasis on a limited number of objectives such as trade liberalization without concomitant focus on factors that make liberalization work can yield only marginal results. By demonstrating significant inter-country differences in the coefficient of variation, the findings point to the importance of country-specific approaches to trade, development and poverty reduction strategies.

The above analysis also has implications for development partnership. For example, a comparison between the disaggregated results of the EU 10, on the one hand, and developing countries, especially middle- and low-ranking ones, on the other, indicates what works: a simultaneous thrust on a broad-based development agenda to be pursued with a well-defined time frame under strict institutional discipline, and facilitated by adequate financial and technical support and market access. Indeed, the European integration process, as well as the experience of more successful developing countries could provide important insights into the formulation of development cooperation paradigms aiming at fast-improving TDI performance. The above rule points to the need for greater coherence between trade policy and rule making, on the one hand, and development strategies, as well as development solidarity and partnership, on the other. It should also help elaborate priorities for "Aid for Trade". Future work on TDI will include in-depth focus on these issues.

Determinants of export performance

The subject matter of Chapters 2 and 3, namely determinants of export performance and adjustments arising from trade agreements, has implications for the trade and development performance of developing countries. Chapter 1 illustrates

the need to adopt a pluri-dimensional policy approach in order to make trade a proper instrument for development. In that context, export performance cannot only mean the good fortune to be producing goods in great demand. Rather, it is likely to be the outcome of the combination of various elements framing the production environment and export products' access to international markets.

Determinants of export performance can be split into internal and external components. External factors are related to market access conditions and other factors affecting demand for imports. Apart from trade barriers and competition factors, foreign market access is also determined by transportation costs, including geography and physical infrastructures. Internal factors refer to supply-side conditions. Supply capacity is also affected by the location-related elements, which may, for example, affect access to raw materials and other resources. It also depends upon factor costs: labour and capital. Besides resource endowment, factor costs are essentially the outcome of economic policy and the institutional environment. Access to technology, which is likely to affect the productivity of the external sector, may also be an important determinant.

In order to examine these issues, an econometric model of bilateral trade flows is constructed using gravity techniques. This model is tested using data series representing foreign market access and supply capacity for a sample of 84 countries. It is observed that in the aggregate, all regions have benefited in different degrees from the greater integration in the world economy in the period 1985-2003. African countries appear to have faced severe supply capacity constraints over the last two decades, while their access to foreign markets has remained largely unchanged. East Asian and Pacific countries' export performance has been driven by improvements in both supply capacity and foreign market access. South Asian countries' export growth can mainly be explained by increased supply capacity.

Further investigation was undertaken to consider possible non-linearities in the relationship between export performance, supply capacity factors and foreign market access. It was found that limitations on foreign market access are a major contributor to poor export performance. However, good performers in the second half of the 1990s also faced higher external constraints but were able to overcome them. In general a rise in exports would tend to increase factors of production prices, which in turn contains export expansion. As to supply capacity elements, internal transport infrastructures are found to have a significant and positive impact in lifting performance, as does a good macroeconomic environment. The contribution of foreign direct investment to capital formation is used in order to include a technology-related element, possibly linked to the structure of the external sector. The finding is that FDI is significant and has a positive impact on export performance at all levels.

The general policy implication is that foreign market access and supply capacity have to be considered equally important in the development process of the external sector. Acting simultaneously on both supply capacity and foreign market access drives the performance and structural deepening of the external sector. Important elements of supply capacity at the early stage of development of the external sector are transport infrastructure and macroeconomic stability. FDI is a significant determinant at all levels of export performance.

Adjustment to trade reforms

In Chapter 1, trade liberalization, represented by the openness to trade indicator of the TDI, was found to be the most significant driver of trade and development performance, especially in the case of developing countries. That gains from trade liberalization come about in the long run is widely accepted, at least in the

absence of externalities, but there are often short- to medium-term adjustment implications. These adjustments, by producing winners and losers, ultimately affect the level of well-being of people through altering their access to goods, services and opportunities. Particularly at risk are those that are least able to cope with the changes induced by trade reforms, including the poor, women, the elderly, and unskilled and low-skilled workers. Unfortunately, most developing countries do not have well-developed social safety nets—unemployment benefits, retraining programmes, portable pensions, and the like—to address these problems. From this perspective, liberalization can have some serious short- to medium-term implications for development in developing countries, and the latter may need adjustment assistance going beyond implementation support to see them through this process.

To gauge the possible developmental implications of trade reforms, the final Chapter of this report looks at the experience of a number of developing countries that have undergone important trade reforms as well as the possible magnitude of further adjustments under the current WTO negotiations, drawing upon a number of country studies, and CGE modelling of various proposals in the Doha negotiations, supplemented by a review of number of other studies on the adjustment process. This study on adjustments to trade reforms is useful also in the further development of the TDI, especially by helping to design shocks in trade and trade-related processes and simulate resulting changes in trade and development performance.

Preliminary analysis from country case studies and reviews of other experiences suggest that it would be desirable to anticipate adjustments in a number of ways: encouraging domestic and foreign investment, including through legislation and institutions that are business-friendly; developing capital markets to provide access to finance, especially by SMEs; providing social safety nets; introducing labour retraining and extending other skills-oriented education programmes; providing physical infrastructure, especially in the transport sector; trade facilitation; debureaucratization; helping developing countries meet SPS/TBT barriers in major markets; and encouraging cluster group formation.

The IFIs, with their considerable technical expertise in a wide range of projects, can play an important role in helping developing countries to implement or extend programmes in many of the ways outlined, and have already indicated their willingness to help, for example the IMFs' trade assessment mechanism (TAM). However, there is also a key role for the donor community, particularly where the affected countries are already heavily indebted. The WTO process can also help by providing for meaningful liberalization by developed countries in areas where the developing countries have comparative advantage, ahead of the liberalization by the latter group of countries, so that jobs start to be created ahead of job losses in sectors that are likely to suffer from increased competition as their own barriers are lowered. The WTO could also usefully address systemic and rules-related issues in order to provide some policy space to allow the use of trade and trade-related policies for development purposes. This was partly envisaged in the original GATT, but it seems that such options, including the use of support policies in the presence of externalities, are increasingly being called into question.



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