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TRADE AND DEVELOPMENT INDEX

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TRADE AND DEVELOPMENT INDEX 2006

Part I

1. INTRODUCTION

The Trade and Development Index (TDI) was introduced in *Developing Countries in International Trade 2005: Trade and Development Index* (DCIT-TDI 2005). It is a useful policy assessment and policymaking tool for developing countries as it provides a framework for enhancing the enabling environment for economic and social development, and promoting a mutually beneficial interplay between trade and development in the context of globalization. Analysis through the TDI framework brings country-specific constraints to the forefront by simultaneously identifying structural, institutional, financial, trade and development policies that allow developing countries to maximize benefits and minimize costs from trade liberalization and globalization. The analysis helps address the challenges and opportunities of trade-driven globalization. (See UNCTAD XII theme and sub-themes.)[1]

The TDI provides both a quantitative indication and an analytical framework to identify how well trade and development are integrated in an individual country, based not only on its trade and development performance, but also on key factors affecting this joint performance. The TDI also offers an innovative tool for comparative studies among countries and regions of their trade and development performance. Therefore, TDI national scores are a composite quantitative indication describing the degree of integration between trade and development performance. Since the introduction of the TDI as a work in progress in DCIT-TDI 2005, there has been considerable feedback from member States, other international organizations and the academic community.[2] In the light of the comments received, attempts have been made to refine the conceptual framework and the TDI through the addition of further factors, as well as expanded country coverage.

TDI 2005 was designed to measure the key forces underlying the complex process of trade and development. Although the role of structures, institutions and policies as preconditions to improving trade performance and achieving a higher level of development was highlighted, no *a priori* judgment as to their relative importance was made in computing the TDI. The TDI is intended to serve as an innovative diagnostic tool to capture the overall interactions and interdependence among various factors in the trade and development process. As a result of new research by the UNCTAD secretariat and in response to comments on TDI 2005, it is used to distinguish between input-based measures (such as human capital, physical infrastructure, macroeconomic stability, openness to trade and access to foreign market) on the one hand, and outcome-based measures (such as trade performance and economic and social well-being) on the other in TDI 2006.

The aim of this more refined approach is to understand more clearly how the input measures (conditioning factors) interact with outcome measures (performance indicators). It is important to stress that there is no straightforward way to identify this interaction. Analysis of the TDI is intended to identify patterns at the levels of countries and country groupings. It is hoped that this will indicate missing links between conditioning factors and performance indicators. Two indices, the Input Measure Index (InputMI) and the Outcome Measure Index (OutcomeMI), are first measured separately and then aggregated to construct the overall TDI.

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[1] UNCTAD XII will be held in Ghana in 2008. The theme of the conference, which was adopted at the forty-first executive session of the Trade and Development Board in April 2007, is "Addressing the opportunities and challenges of globalization for development". The four sub-themes are: "(a) Enhancing coherence at all levels for sustainable economic development and poverty reduction in global policymaking, including the contribution of regional approaches; (b) Key trade and development issues and the new realities in the geography of the world economy; (c) Enhancing the enabling environment at all levels to strengthen productive capacity, trade and investment: mobilizing resources and harnessing knowledge for development; (d) Strengthening UNCTAD: enhancing its development role, impact and institutional effectiveness."

[2] See UNCTAD (2006a) chairperson's summary of the high-level event to discuss "Climbing the trade and development ladder: Trade and Development Index". See also, for example, Benefits to trade require broad reform, UNCTAD's new Trade and Development Index. *Oxford Analytica*, 14 November 2005.

As in the 2005 publication, the TDI incorporates three dimensions: (a) structural and institutional context (SIC); (b) trade policies and processes (TPP); and (c) trade and development performance (TDP). The last is a renamed and expanded replacement of level of development (LD) dimension of DCIT-TDI 2005 that explicitly includes trade performance indicators. In DCIT-TDI 2007, the first two dimensions (SIC and TPP) fall within the InputMI, and third (TDP) falls within the OutcomeMI.

The TDI 2006 also includes three additional components, namely domestic finance resources, international finance resources and macroeconomic stability. For the TDP dimension, we have introduced a new component, trade performance, which includes the share of merchandise exports as percentage of the world total, a share of service exports as a percentage of the world total, a merchandise export concentration index, and a trade-to-gross domestic product (GDP) ratio. In TDI 2005, the merchandise export concentration index was part of the effective market access component of trade policies and processes dimension. Furthermore, we have modified the economic development component by including the Sen Welfare Index (1976),[3] which incorporates the income/consumption distribution aspect in the estimation of GDP. Moreover, in TDI 2006, we put together economic development, social development and gender development in a new component called economic and social well-being.

The following new indicators are also included in TDI 2006: (a) gross domestic savings (domestic finance component); (b) total external debt service and short-term debt (international financial resources component); (c) regulatory quality and control of corruption (institutional quality component, which replaces the bureaucratic quality index and corruption index of TDI 2005 in DCIT-TDI 2005); (d) the inflation and current account balance (macroeconomic stability component); and (e) female-to-male income share and female labour force participation in total labour force (which replaces the gender development index of TDI 2005). The gross enrolment ratio has been dropped from social development, which now includes only the adult literacy ratio as an education indicator.

TDI 2006 covers 123 countries, an increase from 110 in DCIT-TDI 2005. Eighty-two of these countries are developing countries, including 26 least developed countries (LDCs).[4] Also included are 10 countries from South-Eastern Europe and the Commonwealth of Independent States. Scores are also computed for a number of country groups, namely: (a) developing countries; (b) developed countries, including "European Union (EU15)" countries (Member States of the EU before 2004) and six Organization for Economic Cooperation and Development (OECD) member countries; and (c) nine of the 10 new EU member States that acceded in 2004 (EU10).[5] (See appendix 1 for the complete list of countries and country groups.)

The statistical method used to compute TDI 2006 remains unchanged. The major difference in the actual estimation is that the InputMI and OutcomeMI are separately calculated, and TDI 2006 is arrived at as an average of the two (see appendix 2 for details). TDI 2005 scores and rankings in DCIT-TDI 2005 are not comparable with TDI 2005 and TDI rankings in the current publication due to changes in composing indicators, computational approach and country coverage.

[3] Sen (1976) proposed a measure of welfare-based national income that incorporates efficiency and equity as well as a conventional measure of national income. The measure is defined as $W=\mu(1-G)$, where μ is the mean income of the society, and G is the Gini coefficient of the income distribution.

[4] According to United Nations classification.

[5] The nine countries that are in the sample include the Czech Republic, Estonia, Hungary, Lithuania, Latvia, Malta, Poland, Slovakia and Slovenia. Cyprus was not included due to lack of data. In January 2007, Bulgaria and Romania became members of the EU but are included in the grouping of South-Eastern Europe and the Commonwealth of Independent States rather than the EU10 country grouping.

Yet the objective remains the same: by systematically capturing the linkages between its determinants, the TDI indicates how effectively trade is integrated into the development process across different countries and regions. Thus, the TDI framework aims to contribute to national and international policies designed to keep trade focused on its development multiplier function. As noted in DCIT-TDI 2005, the TDI analytical framework also focuses on issues at the crossroads of trade and development, in particular the ultimate goal of people's well-being. Conventional mainstream technical analyses of trade performance often overlook the crucial relation between trade and development.

The realization of the United Nations Millennium Development Goals, including Goal 8 – Develop a global partnership for development – has added to the urgency of examining trade and development linkages. It is therefore necessary to shed light on how best such strategies can be designed to enhance not only trade but also its contribution to development. Furthermore, trade policies have far-reaching implications for the range of choices that people have through their access to goods, services and opportunities. Thus, the quality of policies need to be judged against their contribution to human development. Finally, in recent years, a number of developing countries have made significant gains in both trade and development, while many others, especially LDCs, have been less successful. It is therefore necessary to keep the spotlight on the constraints faced by countries that have performed poorly, while emphasizing the ways in which trade has served development in more successful countries. The TDI as a policymaking tool is designed to provide an understanding of the relative importance and interaction of various factors of trade and development in a coherent conceptual framework.

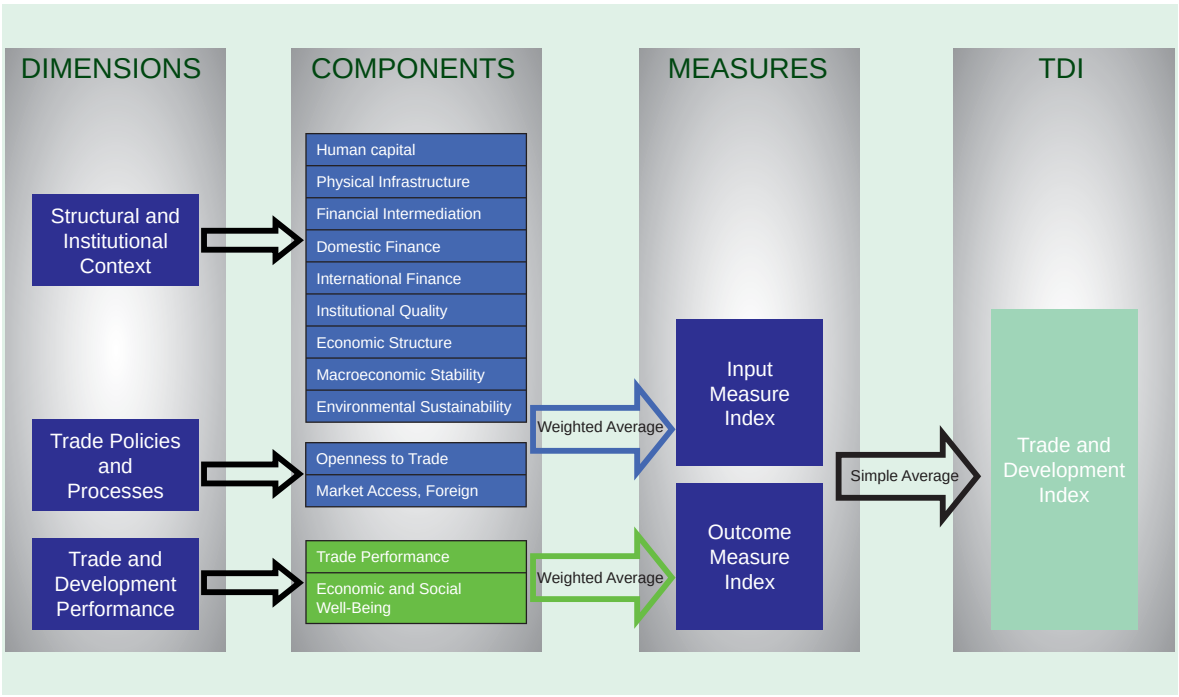
2. TDI AND BENCHMARKS: CONCEPTS, METHODOLOGY AND COMPUTATION

2.1 *The conceptual approach to TDI 2006*

As noted earlier, TDI 2006 is intended to measure, to the extent possible, the positive interaction between inputs and outcomes: countries with better availability of inputs have a better chance of meeting the preconditions for reaping maximum benefits through beneficial trade integration with the rest of the world. TDI 2006 is based on two broad sets of measures: InputMI and OutputMI. Two broad sets of determinants are included in InputMI: they are referred to as *dimensions* and include structural and institutional context, and trade policies and processes. Under the trade and development performance dimension, OutputMI groups a set of performance-related indicators. The relationships among these dimensions, which themselves are composed of a number of *components*, are complex, mutually interacting and multi-directional, so that each of the components is both a cause of change in others and an outcome of their influences. Each of these components is in turn composed of a set of indicators.

Figure 1 presents the conceptual framework of the TDI. The three basic dimensions of DCIT-TDI 2007 are composed of 13 components, which in turn are composed of 34 indicators (see appendix 3 for a full list of indicators). In constructing the TDI, the indicators are aggregated to form the respective components. The methodology used in Nagar-Basu (2002) was selected to compute a composite index based on principal component analysis. By using this methodology, the structural and institutional context and trade policies and processes are aggregated by taking the weighted sum of 11 components to form the InputMI that reflects both dimensions. Similarly, the OutputMI is computed by taking the weighted sum of two components under trade and development performance dimension.

Figure 1. Conceptual framework of TDI



The TDI is then obtained by taking the simple average of two aggregated indices, InputMI and OutcomeMI. The choice of indicators and methodology assumes special significance in this regard.

The TDI framework can also be used as a benchmarking tool for the countries under study. By benchmarking, we mean that a country or group of countries may be compared to another country group or set of groups that have shown much improved performance in trade and development. Thus, in addition to the TDI for developing countries, indices have also been prepared for two other groups of countries: developed countries (including OECD and EU15 countries) and EU10 countries.

Current levels of trade and development integration of most developing countries are far below those of developed countries and reflected in the measured gaps between these two groups. Similarly, EU10 countries have achieved a considerably higher level of trade and development during the past decade. Thus, in this analysis, developing countries' performance has been benchmarked against the TDI scores of developed countries, and EU10 countries have been benchmarked against those of developing countries. The OECD countries' TDI scores serve as the long-term trade and development benchmarks for developing countries. The EU10 countries are at an intermediate stage between developed and developing countries and are in the process of integrating into a highly developed grouping. Their TDI thus serves as the medium-term benchmark for developing countries. The characteristics of transition economies are crucial in comparing their performance on TDI with the benchmarked countries.

2.2 Selection of indicators

In choosing the indicators for TDI's three dimensions, special attention was paid to data coverage in terms of both the number of countries and time periods. Cross-country significance and widespread acceptability were also taken into account. Lack of availability of data has restricted coverage of countries in our analysis.

A literature survey and a preliminary quantitative analysis were conducted to select possible candidates for inclusion in the TDI framework. Since it was possible that a number of indicators eligible for inclusion in the components were highly correlated, a bivariate analysis was carried out to reduce redundancy. Indicators were constructed on three-year averages between 2000 and 2002 for TDI 2005, and between 2003 and 2005 for TDI 2006. This helps to capture possible lags in the interaction among the various dimensions and their components as well as possible cyclical variations. These multi-year averages may be only partially successful for this purpose. Some of the components of the structural and institutional context dimension may take longer for their effects to be properly felt. The discussion that follows on dimensions and indicators also indicates any changes in TDI 2006 (see appendix 3 for a summary list of indicators, definition and sources).

2.2.1 Components of the structural and institutional context dimension

Human capital: As in TDI 2005, the following two indicators were chosen to reflect the importance of a proactive government role in providing public goods: public health expenditure and public education expenditure.[6] It has long been argued that higher levels of health and education expenditure are necessary conditions for the improvement of human capital, computed as combined expenditure on health and education to GDP.[7]

[6] See Bloom et al (2001), and Krueger and Lindahl (2001).

[7] As data coverage for expenditure of these set of indicators tends to be relatively poor, included information may not perfectly correspond for all countries' situations.

Physical infrastructure: As in TDI 2005, three indicators are chosen to represent transportation and information and communication technology (ICT): (a) total percentage of roads that are paved; (b) airfreight in millions of tons per kilometre; and (c) telephone mainlines per 1,000 population.[8] Both the quantity and quality of physical infrastructure are of vital importance for the productive capacity of an economy and for facilitating trade and enhancing its development impact. Efficient transportation facilities encourage growth prospects and contribute to a country's export performance by providing faster and cheaper access to national and international markets.[9] It is well known that many developing countries cannot achieve their full potential for trade expansion because of inadequate physical infrastructure.[10] ICT can foster innovation and contribute to the improvement of factor productivity. Efficient ICT infrastructure also helps to reduce transaction costs and can bring important gains in employment in developing countries, especially if made available to small and medium-sized enterprises.[11]

Financial intermediation: The ratio of domestic credit to the private sector to GDP was selected to capture the capacity of financial institutions. Not only is credit required in order to finance working capital and investment in fixed capital required for both trade and development; it can also smooth consumption. Credit shortages can have negative effects both on economic activities and social and human development.[12] Empirical work shows that countries with better-developed financial intermediaries experience faster declines in measures of both poverty and income inequality.[13] This indicator, however, does not capture financial activities in the informal sector, which may be an important source of finance. Informal financial activities could also be the consequence of credit shortages, which would be reflected in low values of the indicator selected. Moreover, this indicator should ideally be subject to a ceiling.[14] However, choice of an appropriate ceiling was not practicable for the large sample of countries included in TDI 2006.

Domestic finance resources: Gross domestic savings as a percentage of GDP was chosen as a new indicator for TDI 2006**.** The availability of resources to finance investment affects both trade performance and development. Higher savings accompany the channelling of domestic financial resources into investment opportunities.

International finance resources: External debt service as a percentage of Gross National Income (GNI) and short-term debt as a percentage of total external debt were selected as new indicators under this heading. Policymakers have long cautioned that the burden of external debt is an obstacle to productive investment and trade expansion. Moreover, high external debt provides a negative signal to international capital markets.

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8 Indicators such as the expenditure on transport infrastructure or docks, containers, harbours and other parts of the shipping infrastructure could be more appropriate but were not used because of inadequate data availability and country coverage. ICT expenditure was not used for the same reason. An indicator reflecting the percentage of Internet users would be highly correlated with telephone mainlines. Furthermore, the physical infrastructure component could not incorporate availability of mobile phone coverage and railway routes due to lack of comparable data.

9 See Limão and Venables (2001), Nagar and Basu (2004a), Fan and Zhang (2004).

10 World Bank (1994), *World Development Report* and Krugman (1998).

11 See UNCTAD (2004a) for more information on ICT measurement.

12 The role of domestic financial resources for development was given a key role in achieving economic growth and poverty reduction at the Monterrey Consensus of the International Conference on Financing for Development (United Nations, 2002).

13 See Levine (1997) and Beck, Demirgu and Levine (2004) for empirical evidence.

14 Growth of lending above a certain ceiling – which may be higher than that of GDP at current prices but not that much higher – is generally considered to be a harbinger of serious problems such as asset bubbles in the financial sectors of emerging-market economies. However, a good alternative is not easily at hand. Ideally, the indicator or indicators here should reflect the availability not only of credit to firms and individuals but also of other basic financial services such as good facilities for the storage of their assets and for payments and transfers. One possibility would be the ratio of the value added of the financial sector to GDP, but this solution faces the difficulty that the data for such value added are sometimes poor or non-existent.

A high share of short-term in total external debt is treated as a negative signal by lenders and investors.

Institutional quality: World Bank indicators of regulatory quality and control of corruption are chosen to represent institutional quality as new indicators in TDI 2006 as against the International Country Risk Guide indicators of institutional quality used in DCIT-TDI 2005.[15] According to the World Bank Governance Matters database, the regulatory quality indicator represents "the ability of the Government to formulate and implement sound policies and regulations that permit and promote private sector development". The control of corruption indicator represents "the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as 'capture' of the State by elites and private interests".[16] Policymakers and international institutions, including the United Nations (UNCTAD 2006b; United Nations 2006), have recently given increasing emphasis to the importance of the good governance agenda worldwide. Good governance depends on good institutions, which in turn are key to better trade and development outcomes. A burgeoning literature has shown that trade in general – in particular trade liberalization episodes – is positively related to economic growth and to social and economic development only within a good institutional environment.[17]

Economic structure: As in TDI 2005, the indicator chosen is value added in agriculture as a percentage of GDP. The economic structure of a country reflects its level of economic development. This relationship is clearly established in the Rostow-Kuznets theory of stages of growth, although it does not appear in neoclassical growth and endogenous growth models. All developed countries appear to be characterized by low shares of agriculture in GDP relative to that of manufactures and services, while most developing countries have increasing shares in export of diversified commodities, mostly from primary commodities to manufacturing products. However, the agriculture sector still contributes the most in GDP. The relationship between trade and development is likely to be conditional upon the structure of the economy. In turn, trade and trade liberalization can also be expected to affect the economic structure.

Macroeconomic stability: The new indicators chosen for this component in TDI 2006 are the rate of inflation of consumer prices and the share of the current account balance in GDP. These are generally related to a favourable macroeconomic environment and the avoidance of disruptive shifts in fiscal and monetary policies that are generally considered conducive to long-term productive investment.

Environmental sustainability: As in TDI 2005, the following three indicators have been selected: (a) access to an improved water source as indicated by the percentage of the population with reasonable access to water; (b) access to improved sanitation facilities as indicated by the percentage of the population with adequate access to excreta disposal facilities; and (c) the GDP (in purchasing power parity terms) per unit of energy use.[18]

There is now growing consensus that trade expansion and growth and development prospects should be undertaken within the framework of an environmental strategy. The access to water and sanitation, along with availability of energy services, are key

[15] DCIT-TDI 2005 included two International Country Risk Guide indicators to represent institutional quality: bureaucratic quality and corruption. These indicators are not as broad as the World Bank indicators on governance database. The World Bank indicators have actually included both these International Country Risk Guide indicators, along with a number of other variables from different sources, in computation of governance matters database, which has six different dimensions of governance.

[16] See Kaufmann et al. (2007), and World Bank (various years).

[17] See also Sachs (2003), Rodrik et al. (2004) and Basu (2007a).

[18] The "Energy Poverty Issues" were taken up for discussion by the G8 summit held in St Petersburg, Russian Federation on 16 July 2006. For more information see: http:/eng.g8russia/docs/11.htm. The lack of access of energy services may hinder achieving Millennium Development Goals in many of the developing countries.

components of environmental sustainability. Recent empirical studies have shown that energy and environmental degradation can pose a risk to development.[19] The degradation of the environment may lead to the deterioration of health conditions and thus affect social and human development. Lack of access to affordable and reliable energy affects social well-being on the one hand and economic, and trade competitiveness on the other. Universal access to public services such as drinking water and energy is thus critical for human development.[20]

2.2.2 Components of the trade policies and processes dimension

Openness to trade: As in TDI 2005, tariff barriers and non-tariff barriers (NTBs) are taken into account, and the three same indicators selected to reflect tariff barriers in DCIT-TDI 2005 are used once again, namely: (a) the applied trade-weighted average tariff; (b) the share of tariff lines with national peaks; and (c) the share of lines with international peaks. Applied trade-weighted average tariffs account for the preferences granted to trade partners. The shares of tariff lines with national and international peaks can be seen as indicators of industrial policy, in the sense that they show, although imperfectly, the extent to which Governments intervene in international trade policymaking to protect specific activity sectors.

The indicator for NTBs, also unchanged from DCIT-TDI 2005, is the share of lines with specific tariffs drawn from a more comprehensive tariff database. This is an imperfect indicator of non-tariff barriers, but is the only available and quantitative data that can be tracked on specific NTBs. A specific tariff rate, as opposed to an ad valorem rate, has a built-in effect of restricting less costly imports by applying, de facto, higher ad valorem rates to them.[21]

NTBs are increasingly becoming a critical and perhaps more important determinant of market entry and access as they are becoming more frequent and stringent than traditional tariffs. At present, NTBs are difficult to identify, collect, classify and provide quantitative measure across countries. UNCTAD – in collaboration with various international organizations such as the Food and Agriculture Organization of the United Nations (FAO), International Monetary Fund (IMF), International Trade Centre (ITC), Organization for Economic Cooperation and Development (OECD), the United Nations Industrial Development Organization (UNIDO), the World Bank (WB) and the World Trade Organization (WTO) – has launched a new project on non-tariff measures or barriers.[22] This project would be able to bring NTBs-related activities to the forefront

[19] See United Nations Environment Programme, Annual Report, various years.

[20] See United Nations Development Programme (UNDP) (2003). Water (e.g. emissions of organic water pollutants) and air (e.g. emissions of the sulfur dioxide or nitrogen dioxide) pollution indicators might be more appropriate to reflect the degradation of environment and its possible impact on health conditions but could not be used owing to lack of data.

[21] In September 2005, UNCTAD hosted an expert meeting on non-tariff barriers, where issues concerning collection, classification and quantification of NTBs were discussed. As a result, it was agreed that UNCTAD would reinforce its efforts to improve the quality and data coverage of its NTBs database and establish a methodology for its quantification (Report of the Expert Meeting on Methodologies, Classifications, Quantification and Development Impacts of Non-Tariff Barriers. http://www.unctad.org/en/docs/c1em27d3_en.pdf.

[22] Dr. Supachai Panitchpakdi, Secretary-General of UNCTAD, has set up a Group of Eminent Persons on NTBs (GNTBs), which aims to contribute to the understanding of new barriers to international trade and thereby enhance the participation of developing countries in international trade. The members of the group are: Ms. Anne O. Kruger, First Deputy Managing Director, IMF; Mr. Rufus H. Yerxa, Deputy Director-General, WTO; Mr. L. Alan Winters, Director, Development Research Group, World Bank; Prof. Alan Deardorf, Professor of Economics, University of Michigan; Mr. Amit Mitra, Secretary-General of India's Federation of Chambers of Commerce and Industry; Dr. Marcelo de Paiva Abreu, Senior Expert in Integration and Trade, Inter-American Development Bank; H.E. Mr. Alan Kyerematen, Minister of Trade and Industry, Ghana. (Positions cited indicate those at the time that the GNTBs were set up.) A multi-agency support team (MAST) was established to provide technical advice to the group. This is composed of international

of international trade policy discussions, to capture more fully the "openness quotient" of both exporting countries and their receiving members. [23]

With regard to tariffs, a specific as opposed to an ad valorem tariff rate has the built-in effect of restricting less costly imports by applying de facto higher ad valorem rates to them.[24] These tariff rates are intended to reflect different dimensions and imperatives of trade and industrial policies. Protection may also be motivated by the desire to promote productive capacity and the need to promote other positive externalities. In this context, the UNCTAD *Least Developed Countries Report 2006* argues that the "development of domestic productive capacities and concomitant expansion of productive employment opportunities is the key to sustained economic growth and poverty reduction in the… LDCs". However, the appropriate weight for such considerations generally depends on the characteristics and capacity to absorb for countries at different levels of development.

Access to foreign markets: As in TDI 2005, this consists of the same indicators for the receiving country as those specified under openness to trade above. For obvious reasons, access to foreign markets is an important determinant of export performance.[25] However, low tariff barriers in destination markets may not be a fully adequate guide to the openness of the markets of receiving countries. The indicators are an attempt to provide as full a measure as possible of access to foreign markets, especially in relation to NTBs.

2.2.3 Components of trade and development performance

To reflect the trade and development performance under OutcomeMI as explained above, the present analysis includes two components, namely trade performance and economic and social well-being.

Trade performance: This component is composed of four indicators: (a) the share of the country's merchandise exports in the total world merchandise exports; (b) the share of the country's service exports in the total world service exports; (c) the market concentration index for the country's merchandise exports; and (d) the country's ratio of total trade (exports plus imports) to GDP.

Economic and social well-being: This component includes five indicators: (a) the Sen Welfare Index, which takes account of income distribution as well GDP per capita (in United States dollars); (b) the adult literacy rate; (c) life expectancy at birth; (d) the female-to-male income ratio; and (5) the female labour force participation to represent gender development.[26]

experts from the above-mentioned institutions. This team met three times: once in Washington, D.C. in October 2006; in Rome in April 2007; and in Vienna in September 2007.

[23] See Fugazza and Robert-Nicoud (2006) and Fugazza and Vanzetti (2007) for a further discussion on trade liberalization and the potential for trade growth.

[24] See Bora et al. (2002), Kee et al. (2005), and Fugazza and Maur (2006).

[25] See Redding and Venables (2003) for a theoretical discussion and Fugazza (2004) for empirical evidence.

[26] See Anand and Sen (1993, 1995) and UNDP's *Human Development Report* (various issues) for a detailed description of indicators of gender equality and inequality.

3. TDI 2006 RESULTS

3.1 TDI 2006 scores and global rankings

TDI 2006 provides scores and rankings for 123 countries. Table 1 shows individual country scores and rankings for TDI 2006, InputMI 2006 and OutcomeMI 2006. Appendix 4 compares scores for refined TDI 2005 (i.e. the new version of the index incorporating the new indicators and the expanded sample of countries) with TDI 2006.

The United States holds the top position in TDI 2006, followed by Germany, Denmark and the United Kingdom. Developed economies hold the top positions, with the exception of Singapore, which holds fifth place. The following pairs of countries have equal TDI scores and ranks: Japan and Sweden, France and Norway, and Canada and Switzerland. Southern European countries are at the bottom of the top 30. Five developing countries are in the top 30 performers. Besides Singapore, these include the Republic of Korea (No. 21), China (No. 25), Malaysia (No. 27) and Thailand (No. 29).

At the other extreme, all the bottom 20 countries are either LDCs (14 countries) or sub-Saharan African countries or both, except for the Syrian Arab Republic (No. 105) and Yemen (No. 117) in the Middle East and North African region. More specifically, nine of the bottom 10 are sub-Saharan African countries, seven of which are LDCs. Indeed, only two African countries – South Africa (No. 47) and Mauritius (No. 50) – are among the top 50. This indicates the severity of problems confronting LDCs and sub-Saharan African countries in integrating trade and development.

China and India have become important players in the world economy following two decades of impressive growth in their respective economies and trade levels. China now holds 25th place in the TDI ranking.[27] India, on the other hand, started its economic reforms in the early 1990s and has a long way to go to catch up with China in TDI. Its relatively lower rank of 86 reflects both the problems which it must still confront and its still unrealized potential. An in-depth analysis of TDI components reveals the associated problems and potential that countries face.

3.2 TDI scores and rankings: regional patterns

TDI 2006, InputMI2006 and OutcomeMI2006 are grouped according to eight regional groupings to account for the inter-country differences as follows: East Asia and the Pacific (13 countries), Europe and Central Asia (19 countries), Latin America and the Caribbean (20 countries), Middle East and North Africa (18 countries), North America (two countries), South Asia (4 countries), sub-Saharan Africa (33 countries) and Western Europe (14 countries).[28]

Figure 2 shows the TDI2006, InputMI2006 and OutcomeMI2006 scores and rankings for the eight country groups. Among developing country groupings, East Asia and Pacific countries are leading, followed by Middle East and North Africa countries, and Latin America and Caribbean countries. The scores of sub-Saharan African and South Asian countries are comparable and lag substantially behind other regions. Western Europe and North America, not surprisingly, lead the pack by a substantial margin.

[27] China's improved rank of 27 in the refined version of TDI 2005 compared with the rank of 51 recorded in DCIT-TDI 2005 reflects the changes in the system of indicators since the earlier version.

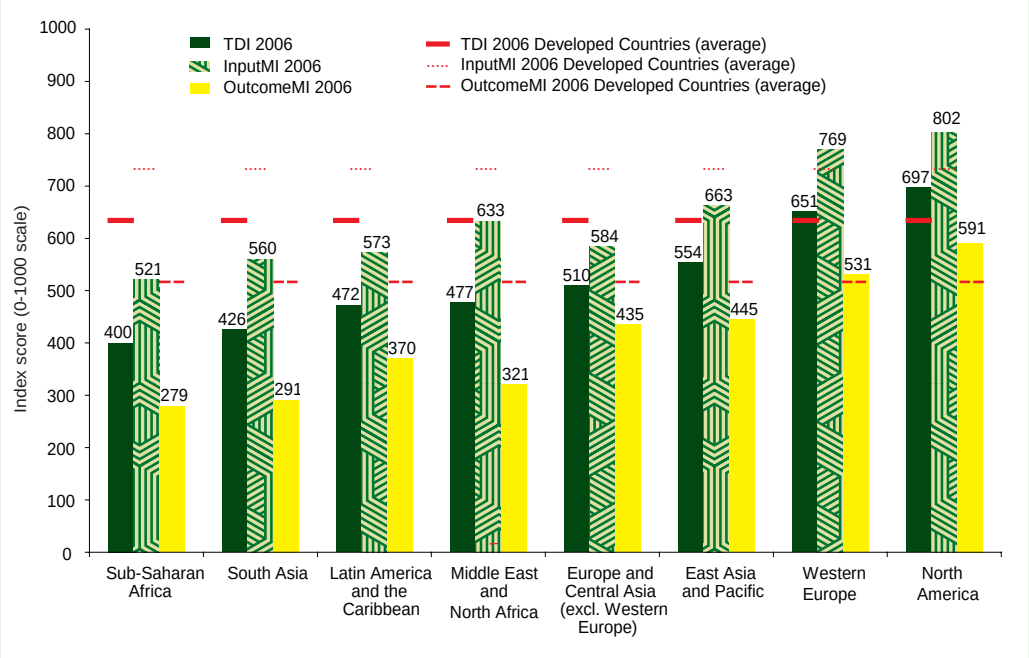
[28] The country and regional classifications used in this publication are based on the World Bank's country classification system (World Bank, 2005).

Table 1. Trade and Development Index 2006: global rankings

TDI rank 2006	Country	TDI score 2006	InputMI rank 2006	OutcomeMI rank 2006	TDI rank 2006	Country	TDI score 2006	InputMI rank 2006	OutcomeMI rank 2006	TDI rank 2006	Country	TDI score 2006	InputMI rank 2006	OutcomeMI rank 2006
1	United States	743	1	1	42	Latvia	517	59	33	83	Algeria	436	49	98
2	Germany	696	4	2	43	Bahrain	511	24	89	83	United Rep. of Tanzania	436	92	78
3	Denmark	691	2	6	44	Costa Rica	503	42	53	85	Botswana	434	39	115
4	United Kingdom	682	5	4	44	Viet Nam	503	70	38	86	India	433	60	94
5	Singapore	675	3	11	46	Albania	495	55	47	86	Lebanon	433	110	62
6	Japan	668	10	5	47	Mexico	493	51	50	89	Lesotho	432	89	85
6	Sweden	668	12	3	47	South Africa	493	35	84	89	Papua New Guinea	432	104	72
8	France	664	10	6	49	Bolivia	491	46	60	89	Venezuela, Bolivarian Rep.	432	96	80
8	Norway	664	7	8	50	Azerbaijan	490	57	49	91	Senegal	429	69	93
10	Canada	650	14	10	50	Mauritius	490	40	68	92	Rwanda	425	98	83
10	Switzerland	650	9	12	52	Colombia	488	61	48	93	Guatemala	423	86	90
12	Belgium	642	21	9	54	Argentina	486	78	43	93	Iran, Islamic Republic of	423	63	99
12	Iceland	642	8	15	54	Brazil	486	72	45	95	Morocco	420	65	101
14	Finland	636	16	13	54	Romania	486	93	37	96	Ghana	412	115	75
15	Ireland	630	6	22	56	Armenia	485	80	42	97	Egypt	407	61	112
16	Australia	628	16	15	57	Belarus	484	101	34	97	Malawi	407	110	88
17	Austria	627	19	14	58	Russian Federation	483	86	41	99	Mozambique	404	106	92
18	New Zealand	623	13	18	58	Uruguay	483	81	44	100	Togo	401	97	96
19	Spain	619	15	19	60	Jordan	478	42	80	101	Mali	398	67	117
20	Israel	610	18	23	60	Sri Lanka	478	48	70	102	Bangladesh	397	98	101
21	Italy	599	26	17	62	Georgia	475	73	51	103	Pakistan	395	86	109
21	Republic of Korea	599	20	27	63	Peru	474	54	66	103	Zimbabwe	395	123	82
23	Portugal	593	22	29	63	Philippines	474	71	54	105	Syrian Arab Republic	392	113	95
24	Slovenia	583	29	20	65	Moldova	473	103	40	105	Chad	392	83	113
25	China	577	30	20	66	Indonesia	468	73	56	107	Côte d'Ivoire	387	76	119
26	Czech Republic	560	34	28	67	Guyana	465	77	57	107	Mauritania	387	110	101
27	Malaysia	556	25	46	68	Honduras	464	58	74	109	Burkina Faso	386	91	116
28	Greece	555	33	34	68	El Salvador	464	67	63	110	Benin	384	94	114
29	Malta	551	23	55	70	Ecuador	461	82	57	111	Burundi	382	119	91
29	Thailand	551	36	36	71	Saudi Arabia	459	31	111	112	Central African Republic	381	108	108
31	Hungary	539	44	25	72	Tunisia	455	52	86	112	Zambia	381	114	103
32	Poland	537	41	31	73	Oman	453	38	107	114	Ethiopia	379	106	110
33	Estonia	536	47	24	73	Turkey	453	75	73	115	Cameroon	373	117	97
34	Slovakia	527	50	29	75	Cambodia	452	90	61	116	Guinea	372	116	105
35	Lithuania	526	53	25	76	Jamaica	449	84	71	117	Yemen, Rep.	370	67	123
37	Chile	522	32	59	76	Madagascar	449	88	68	118	Angola	364	121	104
37	Panama	522	37	51	78	Uganda	446	78	80	118	Congo, Democratic Rep.	364	120	105
37	Ukraine	522	45	39	79	Dominican Republic	443	95	66	120	Niger	362	112	118
39	United Arab Emirates	521	28	76	79	Nicaragua	443	64	87	121	Nigeria	350	105	121
39	Kuwait	521	27	77	81	Kenya	441	100	63	122	Guinea-Bissau	339	121	120
41	Bulgaria	520	55	32	82	Paraguay	440	101	66	123	Sudan	326	118	122

Note: TDI scores have been rounded to the nearest whole number but the ranking corresponds to values including decimals. The higher score indicates improvement in TDI, InputMI and OutcomeMI.

Figure 2. Regional pattern in TDI 2006, InputMI 2006 and OutcomeMI 2006 scores



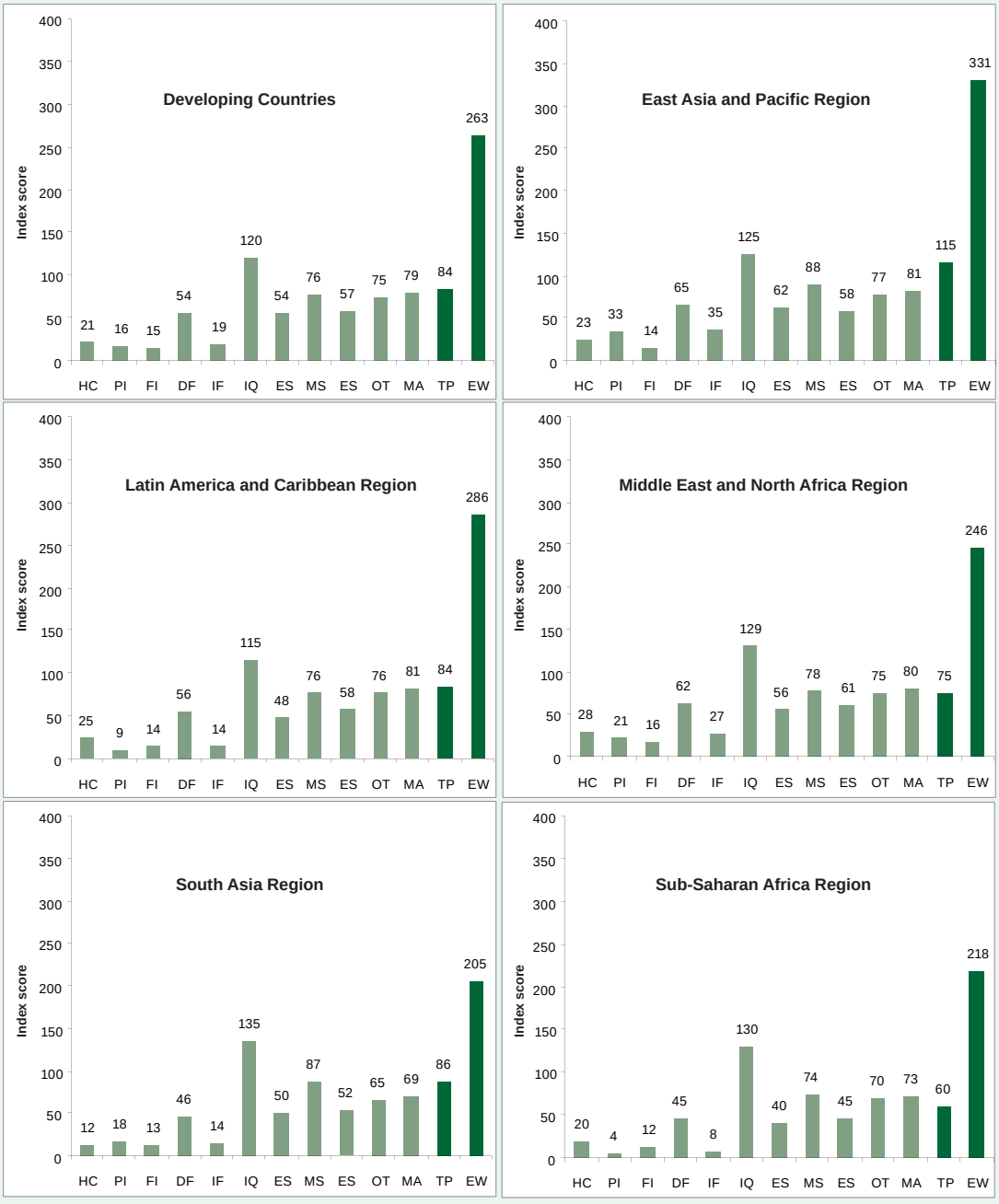
Note: See appendix 1 for regional groupings.

An overall analysis of the TDI components reveals that the relatively high score of East Asia and Pacific countries reflects high average scores for components of both InputMI (especially in human capital, physical infrastructure, financial intermediation, domestic finance, institutional quality and macroeconomic stability) and of OutcomeMI (especially trade performance). Sub-Saharan African and South Asian countries lag behind other developing countries on almost all components, a rare exception being trade performance for South Asia (figure 3).

Latin American countries have a relatively lower indicator for physical infrastructure, but have other InputMI and OutcomeMI components that do not diverge especially sharply from those for all developing countries. For Middle Eastern and North African countries, the scores for the human capital and economic structure components are relatively high, while the scores for macroeconomic stability, openness to trade and foreign market access are similar to the scores those for all developing countries.

Another look at the regional patterns among the five regional groupings reveal some interesting features: (a) Middle Eastern and North African countries have performed better than other regions in human capital, followed by Latin America and the Caribbean, East Asia and the Pacific, sub-Saharan Africa and South Asia; (b) East Asia and the Pacific outperforms other regions in several components, including physical infrastructure, domestic finance component, international finance, economic structure, macroeconomic stability, openness to trade, market access, trade performance and economic and social well-being; (c) the Middle East and North Africa scores highest in financial intermediation; (d) South Asia leads in institutional quality, followed by sub-Saharan Africa; and (e) Latin America and the Caribbean scores second in financial intermediation, environmental sustainability, openness to trade, and economic and social well-being. However, final

Figure 3. Regional pattern in TDI 2006 components



InputMI:

HC	=	Human capital	MS	=	Macroeconomic stability
PI	=	Physical infrastructure	ES	=	Environmental sustainability
FI	=	Financial intermediation	OT	=	Openness to trade
DF	=	Domestic finance	MA	=	Access to foreign market
IF	=	International finance	**OutcomeMI:**		
IQ	=	Institutional quality	TP	=	Trade performance
ET	=	Economic structure	EW	=	Economic and social well-being

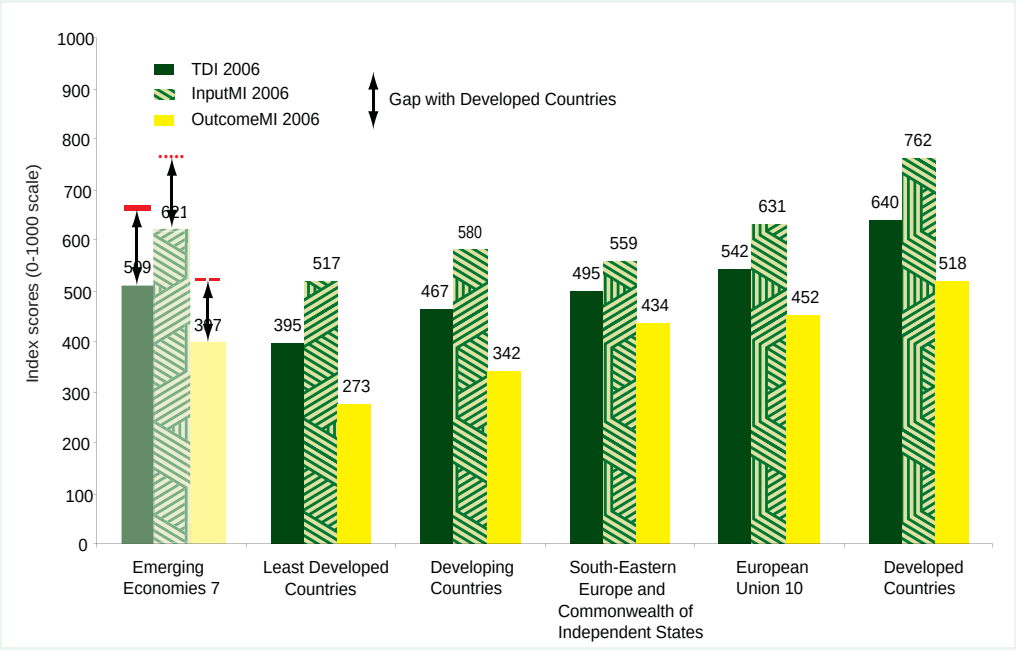
Note: See appendix 1 for regional groupings.

results vary depending on the weights of components that make up the TDI (see figure A1). Among InputMI components, international finance gets the most weight, followed by financial intermediation, and then institutional quality, macroeconomic sustainability, physical infrastructure, domestic finance, openness to trade, foreign market access, human capital, economic structure and environmental sustainability. In OutcomeMI components, economic and social well-being gets about 1.6 times higher weight (see appendix 5 for disaggregated scores on dimensions, components and input and outcome measures).

3.3 *Major emerging economies: TDI scores and rankings*

An UNCTAD (2007a) study shows that developing countries' participation in world trade has dramatically increased in the last two decades. Several developing countries and countries with economies in transition have become major players in international economic relations, and have achieved sustainable economic growth over the past several years. Seven major emerging economies (E7) have been selected for special study here: Brazil, China, India, Republic of Korea, Mexico, the Russian Federation and South Africa.[29] In 2004, the E7 countries constituted about 45 per cent of the world's population, contributed about 26.50 per cent of world's exports of goods and services, and their combined GDP growth has been higher than the world average during the past decade.

Figure 4. TDI scores in E7 and other regions

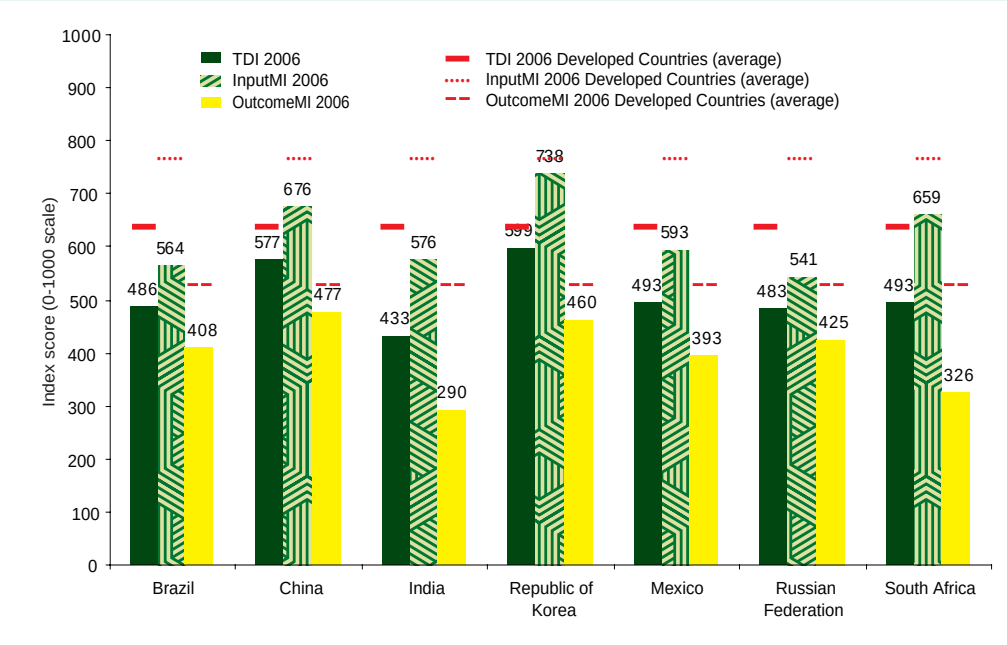


Note: See appendix 1 for regional groupings.

[29] A further discussion on this can be found in the Report of the Secretary-General of UNCTAD to UNCTAD XII (UNCTAD, 2007a), available at: http://www.unctad.org/en/docs//td413_en.pdf. See also UNCTAD (2007b) and Basu (2007b).

In comparing E7 countries to developed countries, the EU10, South-Eastern Europe and the Commonwealth of Independent States, developing countries as a whole and LDCs, some interesting facts are revealed about the convergence of these countries. Figure 4 presents the TDI 2006, InputMI2006 and OutcomeMI2006 scores for six country groups. On average, E7 countries have better TDI 2006 scores than other developing countries. Moreover, their score has already surpassed that of South-Eastern Europe and the Commonwealth of Independent States, and the gap between their score and that of EU10 countries is not large. A similar pattern can be obtained from the InputMI scores, though not for the OutputMI scores. This suggests that, even when E7 countries have done well on input measures, further sustained improvement of socio-economic policies is still required.

Figure 5. TDI scores in emerging economies

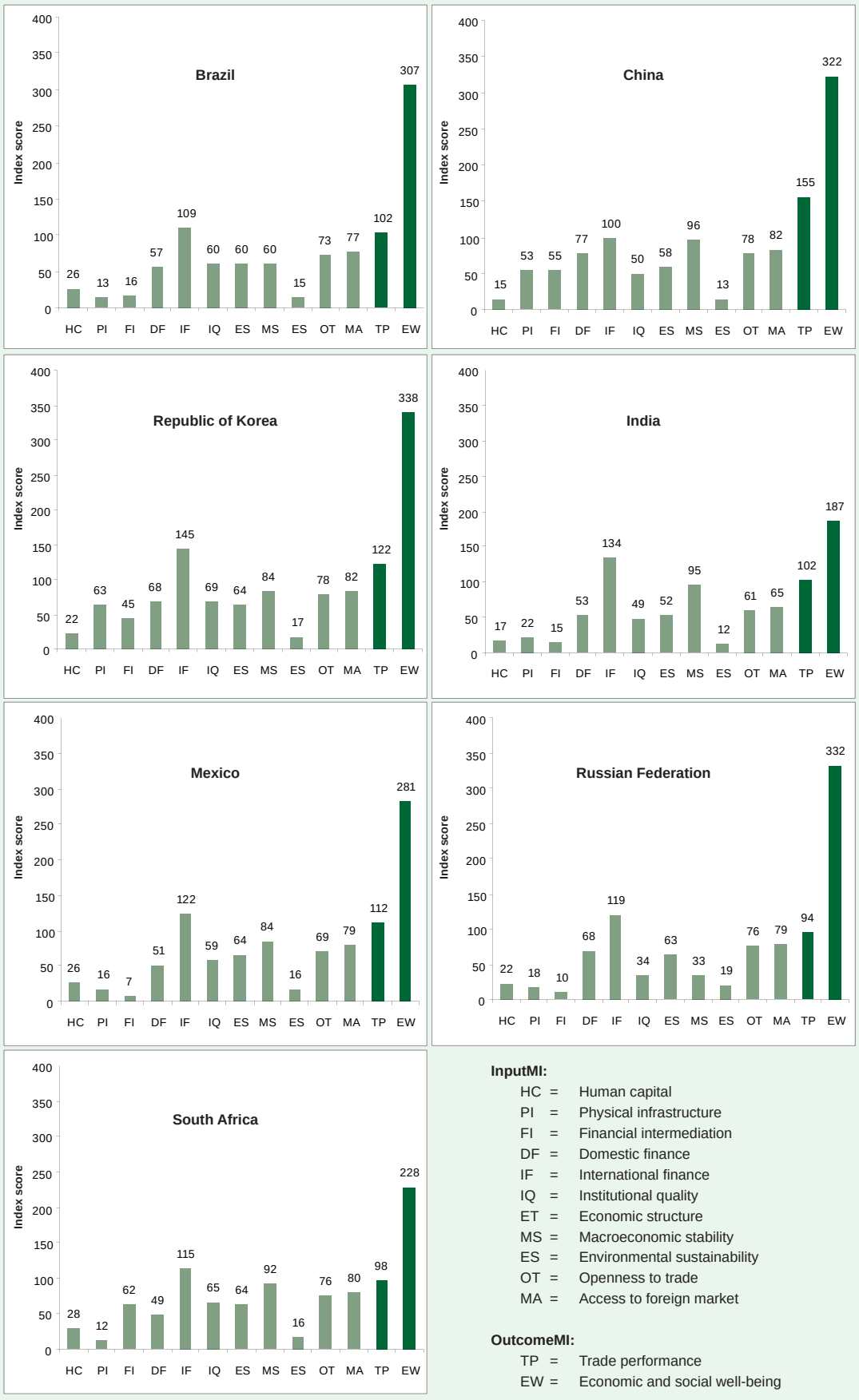


Within the E7 group, there are significant variations (figure 5). An overall analysis of the TDI, InputMI and OutcomeMI places the Republic of Korea at the top of the list, followed by China, Mexico, South Africa, Brazil, the Russian Federation and India. The Republic of Korea leads due to high average scores for InputMI. China lags behind the Republic of Korea in TDI and InputMI, but has the highest score for OutcomeMI. India's scores still lag behind those of the rest of the E7 countries for TDI and OutcomeMI, though for InputMI its score is above those of Brazil and the Russian Federation. The gaps between InputMI and OutputMI are especially large for Mexico and South Africa.

A comparative analysis can also be carried out for the components of TDI 2006 for the E7 countries (figure 6). For human capital, South Africa scores highest, followed by Brazil, Mexico, the Republic of Korea, the Russian Federation, India and China.

For physical infrastructure, the Republic of Korea, China and India score relatively high, while South Africa lags behind. For financial intermediation, South Africa leads, while Mexico scores lowest. China obtained the highest score and South Africa the lowest score on the domestic finance measure. Interestingly, for international finance, the score

Figure 6. Emerging economies pattern in TDI 2006 components



InputMI:

- HC = Human capital
- PI = Physical infrastructure
- FI = Financial intermediation
- DF = Domestic finance
- IF = International finance
- IQ = Institutional quality
- ET = Economic structure
- MS = Macroeconomic stability
- ES = Environmental sustainability
- OT = Openness to trade
- MA = Access to foreign market

OutcomeMI:

- TP = Trade performance
- EW = Economic and social well-being

of India, which has tightly controlled inward capital movements, is bettered only by that of the Republic of Korea. For institutional quality, the Republic of Korea scores highly, while the scores of China, India and the Russian Federation lag; a similar pattern can be seen for economic structure, reflecting the continuing importance for the latter countries' agricultural sectors. China and India outperformed other E7 countries for macroeconomic stability, but for environmental sustainability, their scores are the lowest. The scores for openness to trade point to the extent to which the Republic of Korea and China have opened up their economies, while that for India and its score for market access are consistent with the still-cautious openness of its economy. Among the OutcomeMI, China has the highest score for trade performance components, and the Russian Federation the lowest. The Republic of Korea has the top score for economic and social well-being, and India the lowest.

Although there are some variations among different components in E7 countries, the above results indicate that they have an overall balance in most of the areas of InputMI and OutcomeMI components, which have provided strong impetus for their growing importance in the world economy. Similar types of analysis of different regions and groups of countries show that, in general, countries with balanced performance among different components tend to obtain better results in InputMI and OutcomeMI.

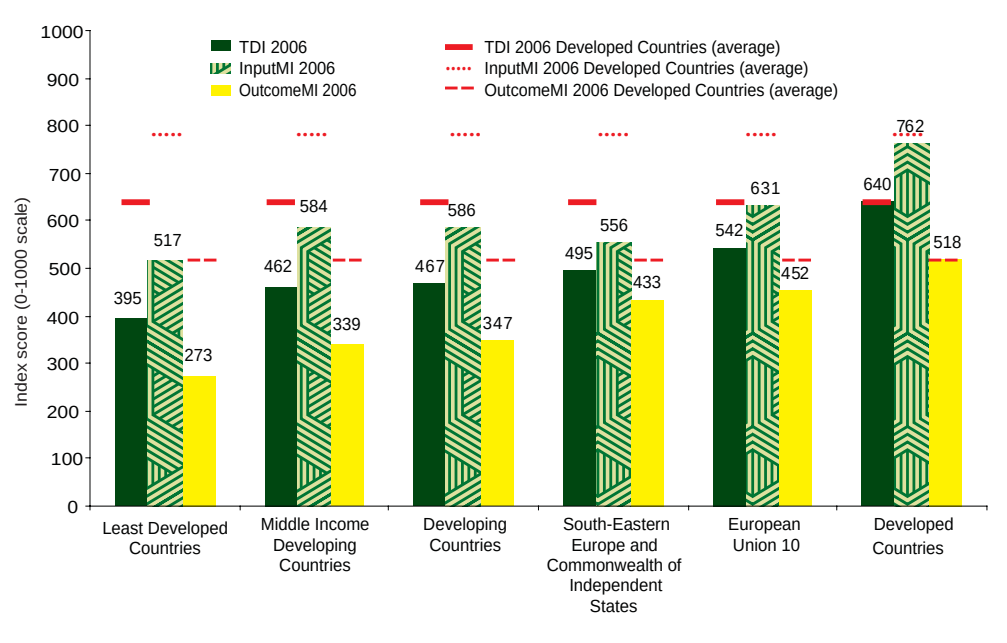
3.4 Benchmarking: TDI, InputMI and OutcomeMI scores

One of the objectives of the TDI exercise is to identify gaps among country groups that point to policy options to overcome bottlenecks to trade and development. To enable benchmarking, countries are aggregated into three groups: (a) developing countries (according to the United Nations definition); (b) South-Eastern Europe and Commonwealth of Independent States; and (c) developed countries (EU10, EU15 plus other OECD countries). Within the first group, two sub-groups are identified middle-income developing countries (MIDs) and LDCs.

The global overview of the TDI 2006 in figure 7 shows that there is still a considerable gap between developing countries (with average TDI 2006 of 467) and developed countries (with average TDI 2006 of 640). A similar pattern can be observed for InputMI 2006 and OutcomeMI 2006 scores. Furthermore, EU10 and South-Eastern Europe and Commonwealth of Independent States countries have better scores than developing countries for TDI 2006. In the case of South-Eastern Europe and Commonwealth of Independent States countries, the difference reflects the scores for OutcomeMI 2006, since InputMI 2006 is higher for developing countries.

However, there is still a large gap between the OutcomeMI 2006 of EU10 and developed countries, on the one hand, and that of developing countries, on the other. The scores of MID countries for TDI, InputMI and OutcomeMI are close to those of developing countries as a whole. Finally, TDI 2006, InputMI 2006 and OutcomeMI 2006 of LDCs are all substantially below those for the other country groupings in figure 7.

Figure 7. Benchmarking TDI



Note: See appendix 1 for regional groupings.

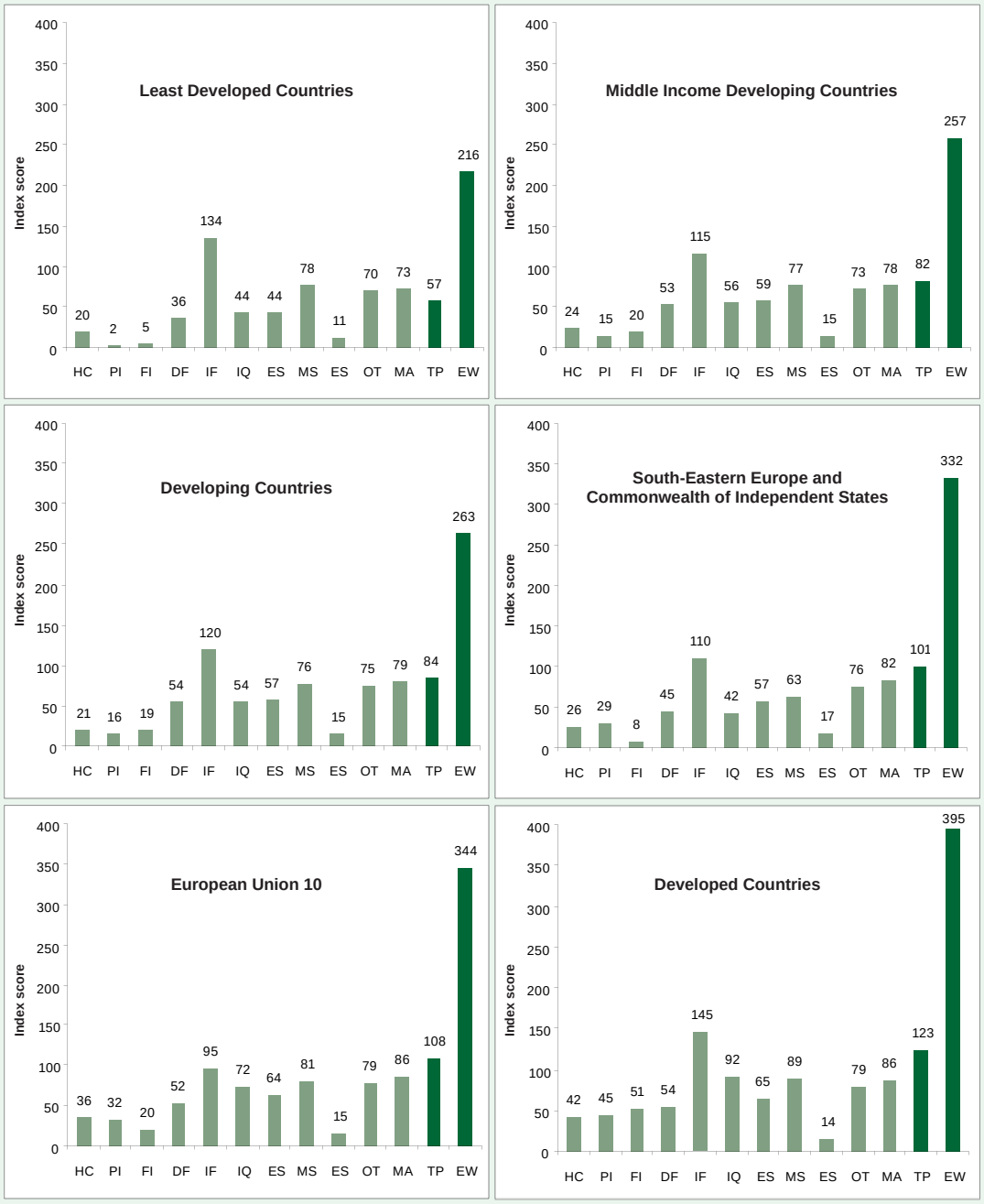
The average scores for these groups and sub-groups are displayed in figure 8. Disaggregated scores for InputMI and OutcomeMI components (figure 8) show that developing countries have achieved scores not far from those of developed countries in a number of areas, such as domestic finance, economic structure, macroeconomic stability, environmental sustainability and openness to trade. However, there is still a substantial gap between the two groups in most other areas, especially human capital, physical infrastructure, financial intermediation, institutional quality, trade performance and economic and social well-being.

Figure 8 also indicates that the scores of developing countries surpass or are close to those of EU10 countries for domestic finance, international finance, environmental sustainability, financial intermediation, economic structure, macroeconomic stability, openness to trade and market access. Nevertheless, there are still significant gaps between the two groups for human capital, physical infrastructure, institutional quality, trade performance and economic and social well-being.

The disaggregated analysis also shows that the different groups of countries are relatively closer to one another in respect of openness to trade, ranging from the LDCs' score of 70 to that of developed and EU10 countries of 79. In other words, most economies are now relatively comparable with respect to openness. Yet the differences in other components indicate the limits to what openness alone can achieve in the absence of other key determinants of trade development evolution. This is especially evident in the large gaps between the scores of the different groups of developing countries and those of South-Eastern Europe and the Commonwealth of Independent States, EU10 and developed countries for trade performance and economic and social well-being.

The scores for access to foreign markets of developed countries and EU10 (86) are above those of the developing country group (79). This could be due in part to tariff escalation, existence of tariff peaks and specific tariffs in developed countries' tariff schedules applied to developing countries. However, the lowest scores for developing countries are due to some extent to the persistence of relatively high tariff barriers applied

Figure 8. Benchmarking TDI components across country groups



InputMI:

HC	=	Human capital	MS	=	Macroeconomic stability
PI	=	Physical infrastructure	ES	=	Environmental sustainability
FI	=	Financial intermediation	OT	=	Openness to trade
DF	=	Domestic finance	MA	=	Access to foreign market
IF	=	International finance	**OutcomeMI:**		
IQ	=	Institutional quality	TP	=	Trade performance
ET	=	Economic structure	EW	=	Economic and social well-being

Note: See appendix 1 for regional groupings.

to products of export interest to other developing countries, which are in the process of being reduced in South-South regional trade agreements and Global System of Trade Preferences negotiations.[30]

Developed countries' scores for OutcomeMI 2007 indicate important gaps between developed countries and the rest of world. The score of developed countries for economic and social well-being (395) exceeds that of EU10 countries by 51 points and that of developing countries by 132 points. The gap persists for the trade performance component, where the scores for EU10 and developed countries, 108 and 123, are both well above that of developing countries (84).

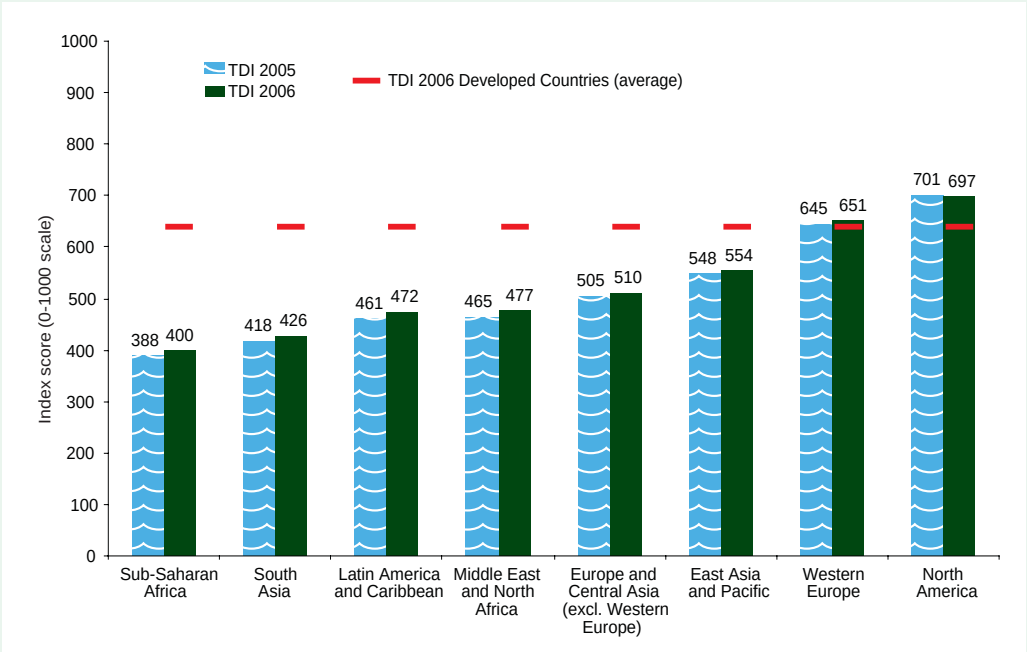
The discussion of benchmarking concept also brings into question the issue of tariff and non-tariff barriers for those developing countries in exporting commodities. The developed countries discriminate against developing countries' products through tariff escalation and other forms to protect the interests of their domestic industry.

3.5 *Climbing the TDI ladder: a comparison of results in 2005[31] and 2006*

The path through time of TDI, InputMI and OutcomeMI can show the extent of improvements and help to identify their causes. Here too, the scores of developed countries serve as useful benchmarks. As noted before, TDI 2005 and TDI 2006 were constructed on three-year averages between 2000-2002 and 2003-2005 respectively.

Figure 9 shows that TDI scores have improved in all the regions, with the exception of a marginal decline for North America. TDI scores have risen the most (12 points each) in sub-Saharan Africa and the Middle East and North Africa. Nevertheless, this improvement still leaves a huge gap between sub-Saharan Africa and North America.

Figure 9. TDI scores in 2005 and 2006



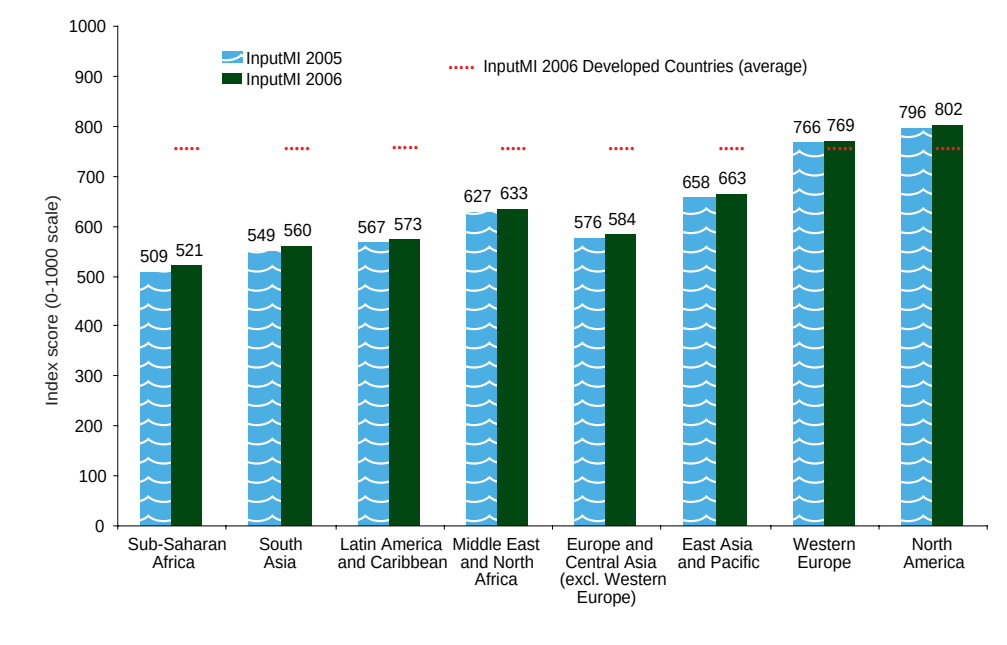
Note: See appendix 1 for regional groupings.

[30] See Cernat et al. (2003) and Cordoba et al. (2004) for quantitative evidence.

[31] TDI 2005 scores and rankings in DCIT-TDI 2005 are not comparable with TDI 2005 and TDI rankings in the current publication due to changes in composing indicators, computational approach and country coverage.

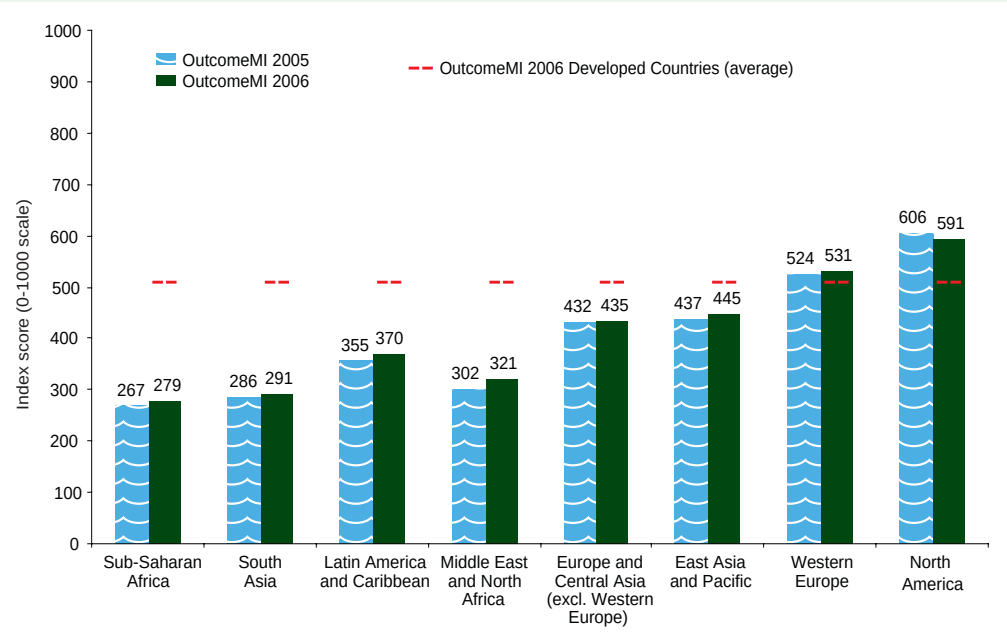
The improvement in TDI scores has been accompanied by improvements in InputMI for all regions and improvements in OutcomeMI for all regions, with the exception of a slight decline for North America (figures 10 and 11).

Figure 10. InputMI score in 2005 and 2006



Note: See appendix 1 for regional groupings.

Figure 11. OutcomeMI score in 2005 and 2006

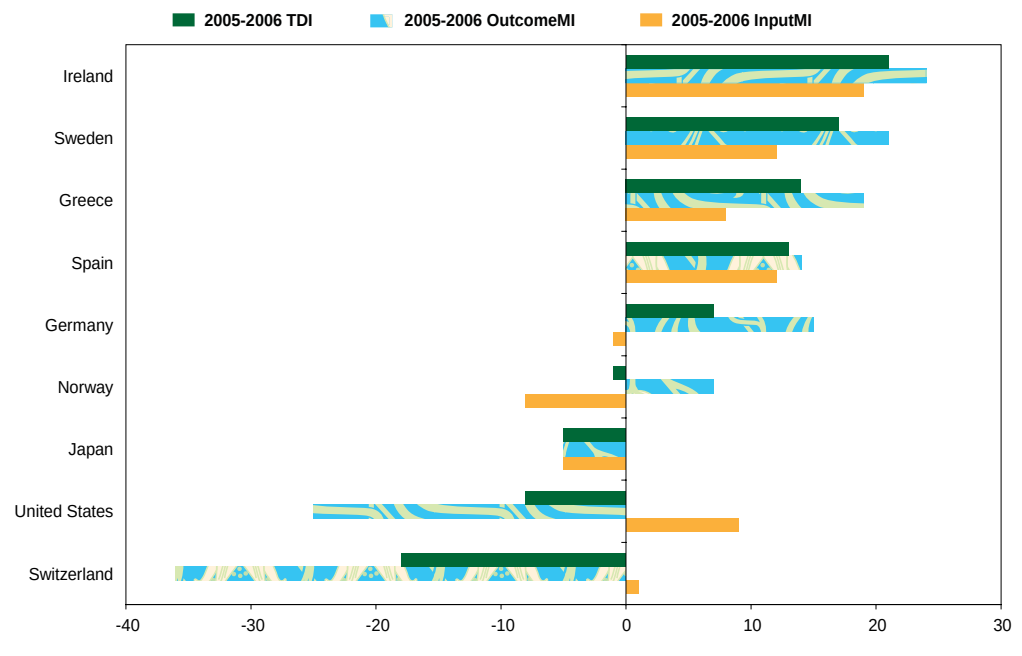


Note: See appendix 1 for regional groupings.

The reductions in the range between the lowest scores (sub-Saharan Africa) and the highest (North America) suggest that there has been at least some climbing up the ladder of trade and development during the early years of the new millennium. A country-level analysis of TDI scores over the two years fleshes out this picture further.

Among developed countries (OECD and EU15), Switzerland has shown the largest fall in TDI score from TDI 2005 scores, followed by the United States, Japan and Norway (Figure 12). This decline in TDI can be attributed to lower scores for OutcomeMI in these countries, except in Norway. Japan has experienced a decline both in input and outcome measures, while Switzerland and the United States have shown a rise in InputMI.

Figure 12. Climbing the TDI ladder: pattern in developed countries



Note: 2005–2006: change in indices scores from 2005.

All the EU15 countries have registered an overall improvement over the years, with Ireland leading the pack, followed by Sweden, Greece, Spain and Germany. More interestingly, all five of these EU15 countries scored higher both in InputMI and OutcomeMI score, except Germany, whose InputMI score slightly declined.

The five developing countries with the largest falls in TDI between 2005 and 2006 are Botswana, Jamaica, Uruguay, Cameroon and the Syrian Arab Republic (figure 13). In all five of these countries, InputMI has declined significantly, with the largest decline in the Syrian Arab Republic. In Uruguay, Cameroon and the Syrian Arab Republic, these declines were partly offset by increases in OutcomeMI.

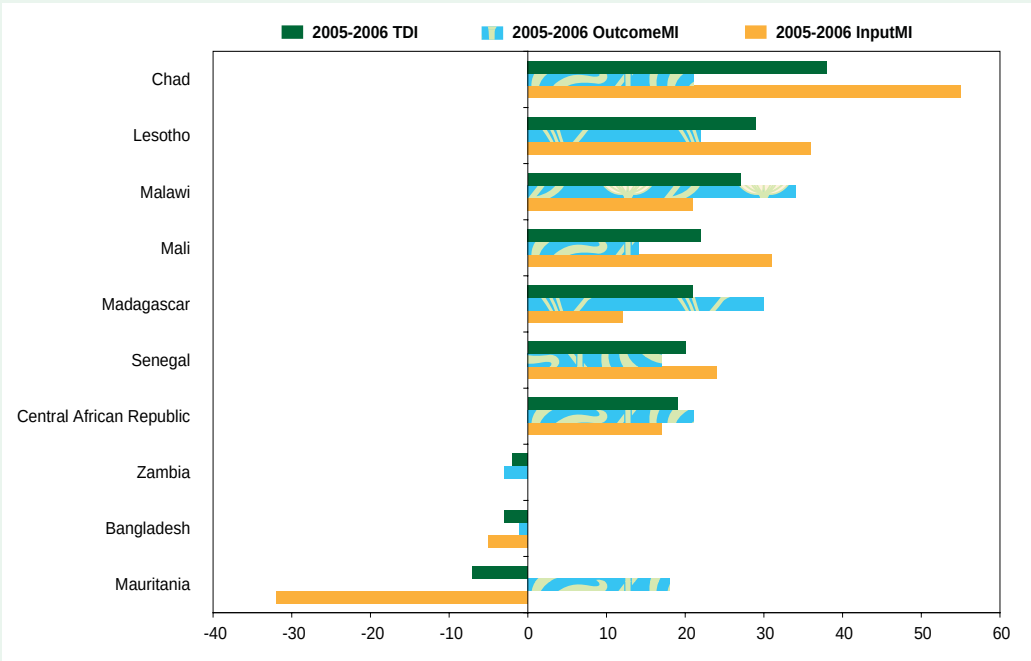
The four developing countries with the largest improvements in TDI scores are Ecuador, the Islamic Republic of Iran, Oman and Honduras. Their climbing up the TDI ladder can again be attributed to improvements in both InputMI and OutcomeMI. Of course, as noted, the Islamic Republic of Iran and Oman are key players in international trade of energy exports, and could contribute to the performance of these countries.

Figure 13. Climbing the TDI ladder: pattern in developing countries

Note: 2005–2006: change in indices scores from 2005.

Although the 26 LDCs in the report occupy most of the places at the bottom of the TDI rankings, there were some success stories (figure 14).

Figure 14. Climbing the TDI ladder: pattern in LDCs

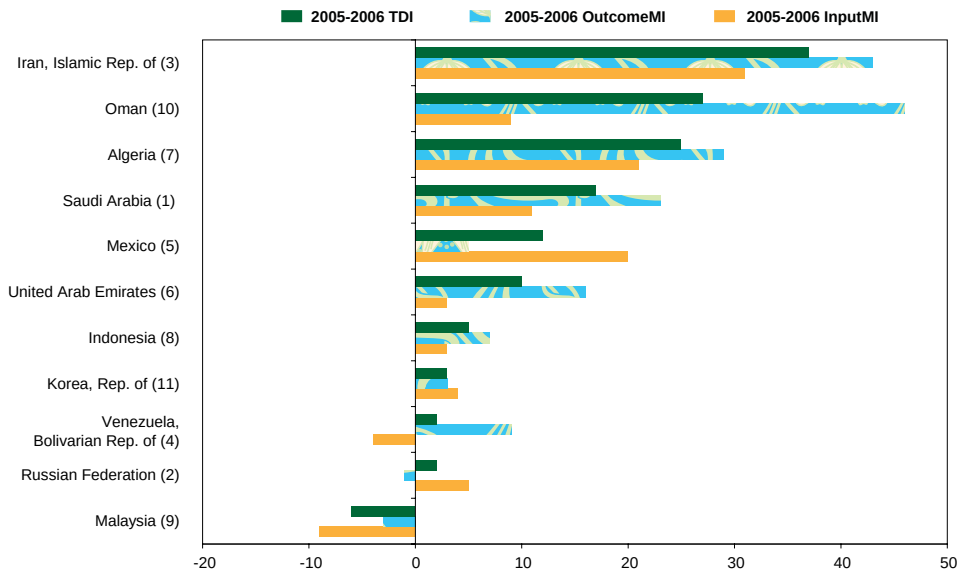


Note: 2005–2006: change in indices scores from 2005.

Only three LDCs – Mauritania, Bangladesh, and Zambia – have experienced a fall in TDI scores, due mainly to lower InputMI scores in 2006. The remaining LDCs in the 2006 sample registered higher scores. The top climbers among LDCs are (in ascending order): Chad, Lesotho, Malawi, Mali, Madagascar, Senegal and the Central African Republic. All seven countries have shown improvement in both InputMI and OutputMI, pointing to the benefits of a balanced approach in policies towards trade and development. In classifying criteria for LDCs, UNCTAD includes the economic vulnerability index (EVI), based on indicators of: (a) the instability of agricultural production; (b) the instability of exports of goods and services; (c) the economic importance of non-traditional activities (share of manufacturing and modern services in GDP); (d) merchandise export concentration; and (e) the handicap of economic smallness (as measured through the population in logarithmic form). It can therefore be readily seen that some of the concepts of EVI are already included in the TDI framework. Therefore, a comprehensive LDCs story should be analysed not just through EVI and other criteria; the climbing up in TDI framework may be used for the LDCs' graduation debate.[32]

Another group of developing and transition economies whose TDI is of special interest are exporters of energy.[33] Among these countries, all except Malaysia have TDI scores higher for 2006 than for 2005 (figure 15).

Figure 15. Climbing the TDI ladder: pattern in energy exporting developing and transition economies



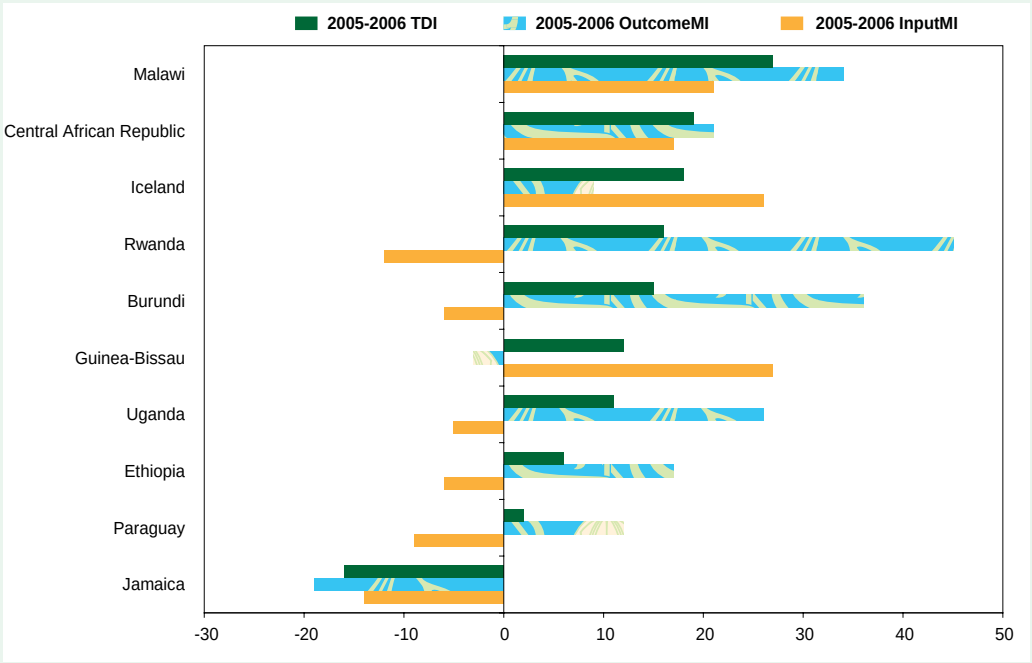
Note: 2005–2006: change in indices scores from 2005. The numbers in parentheses following the country indicate the ranking in terms of value of energy products.

[32] For further information see http://r0.unctad.org/ldcs/LDCs/index.html.

[33] The 11 countries are included only if their value of energy exports (The Standard International Trade Classification Revision 3), Chapter 3 for Mineral fuel/lubricants which includes coal, petroleum, gas, and electric current) is $10 billion or more on an average for the period 2003–2005. There are 24 countries in the list, including (in descending order of value of energy exports) Saudi Arabia, the Russian Federation, Canada, Norway, the Islamic Republic of Iran, the Bolivarian Republic of Venezuela, the United Kingdom, the Netherlands, Mexico, the United Arab Emirates, Singapore, the United States, Australia, Algeria, Belgium, Indonesia, Qatar, Germany, Malaysia, China, Kazakhstan, France, Oman and the Republic of Korea.

Seven countries with improved TDI scores had larger increases in OutcomeMI than in InputMI; the exceptions were Mexico, the Republic of Korea and the Russian Federation.

Figure 16. Climbing the TDI ladder: pattern in commodity-dependent countries



Note: 2005–2006: change in indices scores from 2005.

The Bolivarian Republic of Venezuela registered a decline in InputMI and the Russian Federation a small drop in OutcomeMI. The decline in the TDI for Malaysia, which nonetheless enjoys the highest rank among developing countries, is due to falls in both InputMI and OutcomeMI. It should be noted that three E7 countries are included among the energy exporters.

The TDI is also computed for commodity-dependent economies of the world.[34] Here again, among the top 10 commodity-dependent countries, with the exception of Jamaica, TDI scores are higher for 2006 than for 2005 (figure 16).

All seven emerging economies (E7) have shown a rise in TDI scores between 2005 and 2006 (figure 17). Improvements are also evident in both their InputMI and OutcomeMI, except for Russian Federation and South Africa. Among E7 countries, China has achieved the highest increase in its TDI, followed by India, but the increases are also substantial for the other members of this group, except for the Russian Federation and the Republic of Korea.

There are 10 countries in South-Eastern Europe and the Commonwealth of Independent States groupings, including the Russian Federation, but not discussed below as was included in E7 countries. These countries are also classified as the countries with economies in transition. Seven countries in this group have achieved positive improvements in TDI scores as compared to 2005. Romania has the highest increase, followed by Azerbaijan and Albania, among others (see Figure 18). However, Armenia and Georgia

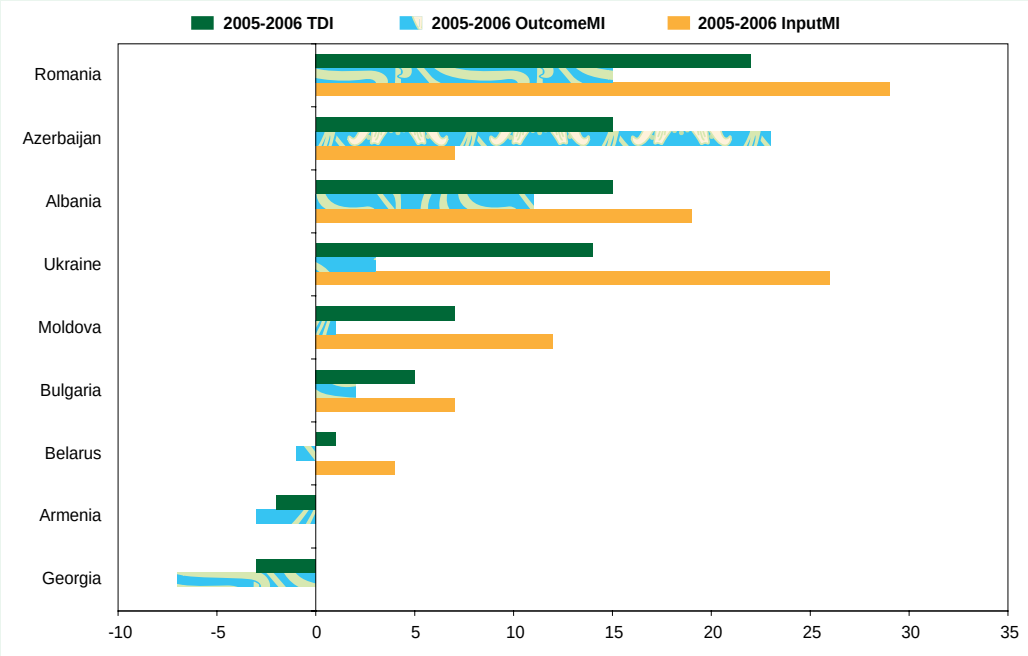
[34] Commodity dependence is defined as the share of top 3 exports of countries during the period of 1998-2000. For further information, see UNCTAD 2004b.

Figure 17. Climbing the TDI ladder: pattern in E7 countries

Note: 2005–2006: change in indices scores from 2005.

have registered a decline in TDI score compared to TDI 2005. Romania and Ukraine have shown the highest improvements in InputMI scores, while Azerbaijan and Romania climb up in OutcomeMI score. Belarus showed a decline in InputMI, while OutcomeMI scores improved since 2005.

Figure 18. Climbing the TDI ladder: pattern in countries with economies in transition



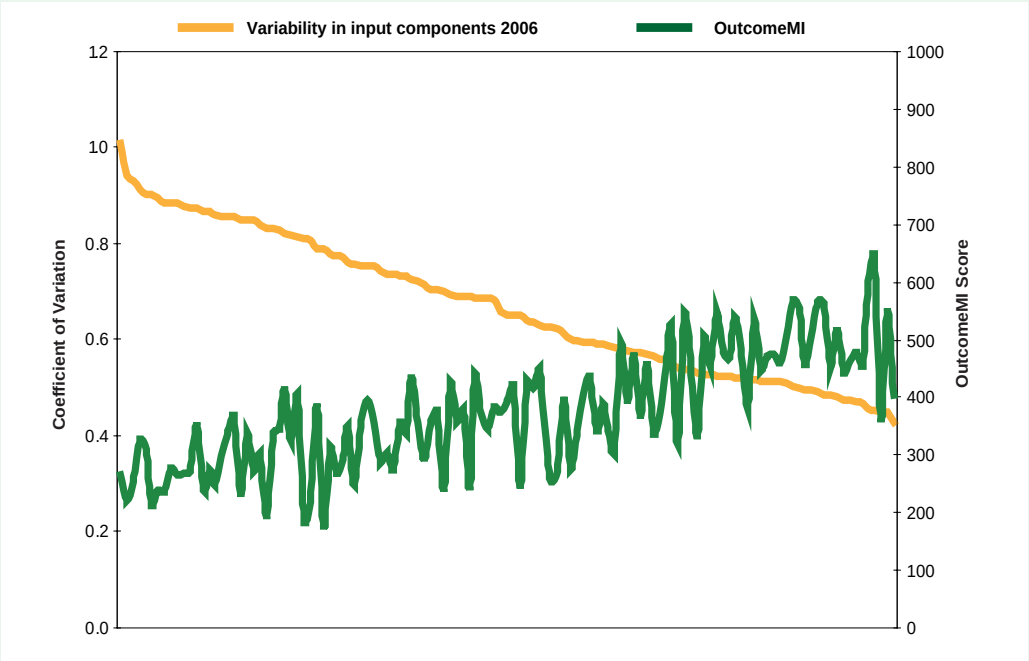
Note: 2005–2006: change in indices scores from 2005.
The Russian Federation is not included, as it has already been discussed in E7 country groupings.

Therefore, the above analysis of TDI in two periods helps us to identify the improvements of national scores, as well as InputMI and OutcomeMI. In this way, TDI provides an in-depth look at the national level strength and weakness of structural, institutional and policy aspects of countries, and their impact on trade and development.

3.6 TDI components and variability

A key result of the TDI 2006 analysis is that the countries with the best OutcomeMI also tend to score uniformly highly at the level of individual components in InputMI. Countries with the best scores in OutcomeMI display a low variability of scores among the 11 components of InputMI. In other words, the observed tendency is that the variability in the components of InputMI decreases with higher OutcomeMI scores. The highest variability is found among countries with the bottom ten OutcomeMI. This relationship is shown in figure 19. Therefore, the better-performing countries indicate consistency of input and outcome performances across all indicators.

Figure 19. OutcomeMI scores and input component variability in 2006



Note: See appendix 5.

A policy implication of this relationship is that disproportionate emphasis on a limited number of objectives such as trade liberalization is likely to yield only marginal results. At a national level, countries need to follow an effective and coherent framework that allows designing successful strategies for trade and development. Moreover, a country could emphasize simultaneously the different individual input components of TDI with the aim of reducing variation among them. In other words, for trade and development success, countries need to address multiple development goals within a coherent overall national trade and development strategy.

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Appendix 1. List of countries in the TDI 2006 sample

TDI rank 2006	Country	Country code	Region	Group
1	United States	USA	North America	Developed Countries
2	Germany	DEU	Western Europe	European Union Countries (EU15)
3	Denmark	DNK	Western Europe	European Union Countries (EU15)
4	United Kingdom	GBR	Western Europe	European Union Countries (EU15)
5	Singapore	SGP	East Asia and Pacific	Developing Countries
6	Japan	JPN	East Asia and Pacific	Developed Countries
6	Sweden	SWE	Western Europe	European Union Countries (EU15)
8	France	FRA	Western Europe	European Union Countries (EU15)
8	Norway	NOR	Western Europe	European Union Countries (EU15)
10	Canada	CAN	North America	Developed Countries
10	Switzerland	CHE	Western Europe	Developed Countries
12	Belgium	BEL	Western Europe	European Union Countries (EU15)
12	Iceland	ISL	Western Europe	European Union Countries (EU15)
14	Finland	FIN	Western Europe	European Union Countries (EU15)
15	Ireland	IRL	Western Europe	European Union Countries (EU15)
16	Australia	AUS	East Asia and Pacific	Developed Countries
17	Austria	AUT	Western Europe	European Union Countries (EU15)
18	New Zealand	NZL	East Asia and Pacific	Developed Countries
19	Spain	ESP	Western Europe	European Union Countries (EU15)
20	Israel	ISR	Middle East and North Africa	Developed Countries
21	Italy	ITA	Western Europe	European Union Countries (EU15)
21	Republic of Korea	KOR	East Asia and Pacific	Seven Emerging Economies (E7)
23	Portugal	PRT	Western Europe	European Union Countries (EU15)
24	Slovenia	SVN	Europe and Central Asia	European Union Countries (EU10)
25	China	CHN	East Asia and Pacific	Seven Emerging Economies (E7)
26	Czech Republic	CZE	Europe and Central Asia	European Union Countries (EU10)
27	Malaysia	MYS	East Asia and Pacific	Developing Countries
28	Greece	GRC	Western Europe	European Union Countries (EU15)
29	Thailand	THA	East Asia and Pacific	Developing Countries
29	Malta	MLT	Middle East and North Africa	European Union Countries (EU10)
31	Hungary	HUN	Europe and Central Asia	European Union Countries (EU10)

.../...

Appendix 1. List of countries in the TDI 2006 sample (continued)

TDI rank 2006	Country	Country code	Region	Group
32	Poland	POL	Europe and Central Asia	European Union Countries (EU10)
33	Estonia	EST	Europe and Central Asia	European Union Countries (EU10)
34	Slovakia	SVK	Europe and Central Asia	European Union Countries (EU10)
35	Lithuania	LTU	Europe and Central Asia	European Union Countries (EU10)
37	Chile	CHL	Latin America and Caribbean	Developing Countries
37	Panama	PAN	Latin America and Caribbean	Developing Countries
37	Ukraine	UKR	Europe and Central Asia	South-Eastern Europe and Commonwealth of Independent States
39	Kuwait	KWT	Middle East and North Africa	Developing Countries
39	United Arab Emirates	ARE	Middle East and North Africa	Developing Countries
41	Bulgaria	BGR	Europe and Central Asia	South-Eastern Europe and Commonwealth of Independent States*
42	Latvia	LVA	Europe and Central Asia	European Union Countries (EU10)
43	Bahrain	BHR	Middle East and North Africa	Developing Countries
44	Costa Rica	CRI	Latin America and Caribbean	Developing Countries
44	Viet Nam	VNM	East Asia and Pacific	Developing Countries
46	Albania	ALB	Europe and Central Asia	South-Eastern Europe and Commonwealth of Independent States
47	Mexico	MEX	Latin America and Caribbean	Seven Emerging Economies (E7)
47	South Africa	ZAF	Sub-Saharan Africa	Seven Emerging Economies (E7)
49	Bolivia	BOL	Latin America and Caribbean	Developing Countries
50	Mauritius	MUS	Sub-Saharan Africa	Developing Countries
50	Azerbaijan	AZE	Europe and Central Asia	South-Eastern Europe and Commonwealth of Independent States
52	Colombia	COL	Latin America and Caribbean	Developing Countries
54	Argentina	ARG	Latin America and Caribbean	Developing Countries
54	Brazil	BRA	Latin America and Caribbean	Seven Emerging Economies (E7)
54	Romania	ROM	Europe and Central Asia	South-Eastern Europe and Commonwealth of Independent States*
56	Armenia	ARM	Europe and Central Asia	South-Eastern Europe and Commonwealth of Independent States
57	Belarus	BLR	Europe and Central Asia	South-Eastern Europe and Commonwealth of Independent States
58	Uruguay	URY	Latin America and Caribbean	Developing Countries
58	Russian Federation	RUS	Europe and Central Asia	Seven Emerging Economies (E7)
60	Jordan	JOR	Middle East and North Africa	Developing Countries

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Appendix 1. List of countries in the TDI 2006 sample (continued)

TDI rank 2006	Country	Country code	Region	Group
60	Sri Lanka	LKA	South Asia	Developing Countries
62	Georgia	GEO	Europe and Central Asia	South-Eastern Europe and Commonwealth of Independent States
63	Peru	PER	Latin America and Caribbean	Developing Countries
63	Philippines	PHL	East Asia and Pacific	Developing Countries
65	Moldova	MDA	Europe and Central Asia	South-Eastern Europe and Commonwealth of Independent States
66	Indonesia	IDN	East Asia and Pacific	Developing Countries
67	Guyana	GUY	Latin America and Caribbean	Developing Countries
68	El Salvador	SLV	Latin America and Caribbean	Developing Countries
68	Honduras	HND	Latin America and Caribbean	Developing Countries
70	Ecuador	ECU	Latin America and Caribbean	Developing Countries
71	Saudi Arabia	SAU	Middle East and North Africa	Developing Countries
72	Tunisia	TUN	Middle East and North Africa	Developing Countries
73	Oman	OMN	Middle East and North Africa	Developing Countries
73	Turkey	TUR	Europe and Central Asia	Developing Countries
75	Cambodia	KHM	East Asia and Pacific	Least Developed Countries
76	Jamaica	JAM	Latin America and Caribbean	Developing Countries
76	Madagascar	MDG	Sub-Saharan Africa	Least Developed Countries
78	Uganda	UGA	Sub-Saharan Africa	Least Developed Countries
79	Dominican Republic	DOM	Latin America and Caribbean	Developing Countries
79	Nicaragua	NIC	Latin America and Caribbean	Developing Countries
81	Kenya	KEN	Sub-Saharan Africa	Developing Countries
82	Paraguay	PRY	Latin America and Caribbean	Developing Countries
83	Algeria	DZA	Middle East and North Africa	Developing Countries
83	United Republic of Tanzania	TZA	Sub-Saharan Africa	Least Developed Countries
85	Botswana	BWA	Sub-Saharan Africa	Developing Countries
86	Lebanon	LBN	Middle East and North Africa	Developing Countries
86	India	IND	South Asia	Seven Emerging Economies (E7)
89	Lesotho	LSO	Sub-Saharan Africa	Developing Countries
89	Bolivarian Republic of Venezuela	VEN	Latin America and Caribbean	Developing Countries
89	Papua New Guinea	PNG	East Asia and Pacific	Least Developed Countries
91	Senegal	SEN	Sub-Saharan Africa	Least Developed Countries
92	Rwanda	RWA	Sub-Saharan Africa	Least Developed Countries
93	Guatemala	GTM	Latin America and Caribbean	Developing Countries
93	Islamic Republic of Iran	IRN	Middle East and North Africa	Developing Countries
95	Morocco	MAR	Middle East and North Africa	Developing Countries
96	Chad	GHA	Sub-Saharan Africa	Developing Countries
97	Egypt	EGY	Middle East and North Africa	Developing Countries
97	Malawi	MWI	Sub-Saharan Africa	Least Developed Countries
99	Mozambique	MOZ	Sub-Saharan Africa	Least Developed Countries
100	Togo	TGO	Sub-Saharan Africa	Least Developed Countries
101	Mali	MLI	Sub-Saharan Africa	Least Developed Countries

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Appendix 1. List of countries in the TDI 2006 sample (concluded)

TDI rank 2006	Country	Country code	Region	Group
102	Bangladesh	BGD	South Asia	Least Developed Countries
103	Pakistan	PAK	South Asia	Developing Countries
103	Zimbabwe	ZWE	Sub-Saharan Africa	Developing Countries
105	Syrian Arab Republic	SYR	Middle East and North Africa	Developing Countries
105	Chad	TCD	Sub-Saharan Africa	Least Developed Countries
107	Côte d'Ivoire	CIV	Sub-Saharan Africa	Developing Countries
107	Mauritania	MRT	Sub-Saharan Africa	Least Developed Countries
109	Burkina Faso	BFA	Sub-Saharan Africa	Least Developed Countries
110	Benin	BEN	Sub-Saharan Africa	Least Developed Countries
111	Burundi	BDI	Sub-Saharan Africa	Least Developed Countries
112	Central African Republic	CAF	Sub-Saharan Africa	Least Developed Countries
112	Zambia	ZMB	Sub-Saharan Africa	Least Developed Countries
114	Ethiopia	ETH	Sub-Saharan Africa	Least Developed Countries
115	Cameroon	CMR	Sub-Saharan Africa	Developing Countries
116	Guinea	GIN	Sub-Saharan Africa	Least Developed Countries
117	Yemen	YEM	Middle East and North Africa	Least Developed Countries
118	Angola	AGO	Sub-Saharan Africa	Developing Countries
118	Democratic Republic of the Congo	ZAR	Sub-Saharan Africa	Least Developed Countries
120	Niger	NER	Sub-Saharan Africa	Least Developed Countries
121	Nigeria	NGA	Sub-Saharan Africa	Developing Countries
122	Guinea-Bissau	GNB	Sub-Saharan Africa	Least Developed Countries
123	Sudan	SDN	Sub-Saharan Africa	Least Developed Countries

Note: Regions are based on World Bank classification, and groups (Developing Countries, South-Eastern Europe and Commonwealth of Independent States, Least Developed Countries) follow United Nations classification.
- European Union Member States before 2004 are referred to as EU15.
- European Union Member States that acceded in 2004 are referred to as EU10.
- Seven Emerging Economies are referred to as E7.

* EU member since January 2007.

Appendix 2. Computational approach

A. Rationale

As discussed in DCIT-TDI 2005, a computational approach that could account for interactions among the constituent components of TDI was adopted. For this purpose, the methodology used in Nagar-Basu (2002) was selected to compute a composite index based on principal component analysis.[35] The TDI is the sum of two indices, which are in turn weighted sums of components, whose respective weights are estimated by the multivariate statistical technique of principal components analysis (PCA). Components are estimated through a PCA of normalized versions of the variables or indicators assumed to determine them.

The rationale for use of the PCA technique is that interactions and interdependence between the set of indicators selected as determinants of TDI can be taken into account. These indicators are chosen based on thorough theoretical and empirical scrutiny designed to capture the different processes underlying the TDI. Use of PCA also permits identification of the drivers of TDI.[36]

The method of principal components was originated by Karl Pearson and Harold Hotelling to represent the correlation structure of a set of variables, and was pioneered by Richard Stone as a technique for measuring relationships among interdependent economic variables. The first step of the method is to assume that the index which is the object of the exercise, in this case TDI, is a conceptual/latent variable linearly dependent on a set of observable indicators or regressors, X_j, plus a disturbance term capturing error, e. Thus:

$$Index = \alpha + \beta_1 X_1 + ... + \beta_K X_K + e \qquad (1)$$

where $X_1, X_2, ... X_K$ is a set of indicators that are assumed to determine index.

The problem with estimating the coefficients of these equations through conventional regression analysis is that the β_j may not be properly defined or may be unstable as estimates of the influence of the X_j on *Index* owing to interdependence in the form of significant mutual correlations. The principal components, P_j , are estimated as a new set of variables through linear transformations of the X_j, derived in such a way as to get around this problem. The P_j so generated are orthogonal and thus uncorrelated. The linear transformation is also chosen in such a way that, subject to a constraint on the coefficients determining the relationship to the X_j, P_1 accounts for the *maximum* variance in the X_j. P_2 is derived similarly, i.e. in such a way as to account for the maximum remaining variance of the X_j subject to the condition that it is also orthogonal to and thus uncorrelated with P_1, And so on for the remaining P_j.

B. Normalization, reference values and estimation

An important element in the adopted methodology is the use of absolute reference values in the normalization procedure for components. This procedure uses maximum and minimum values of each indicator as reference values. Changes across periods in such indicators would otherwise make comparison of TDI scores somewhat hazardous. As one objective of TDI is to monitor the evolution the TDI and components of each country in the sample, the reference values were fixed. Some were fixed using reasonable values. For instance, in the case where shares are considered reasonable values, the minimum value is taken to be zero and the maximum 100 per cent. In some cases, shares go beyond 100 per cent, as, for example, in the case of the share of trade in GDP for small open economies. In that case and in any other case where extreme values could not be given any reasonable value, reference values were set proportionally to values observed in the first period. A proportionality coefficient equal to 1.5 was

[35] See also Basu (2003) for further discussion.

[36] An alternative computational approach might have been factor analysis. However, this is less flexible for analysing the roles of the different variables determining relations between trade and development. This is because of its dependence on the positing of dependent and independent variables and the importance attributed to interlinkages in the choice of determinants rather than to prior conceptual considerations and empirical analysis.

adopted. Sensitivity analysis shows that TDI results obtained with different proportionality coefficients are strongly correlated, so that the choice of a specific coefficient has a negligible influence on estimates.

The P_j themselves are normalized by subtracting the minimum value of the particular value from its actual value and dividing it by the range, which is the difference between the maximum and minimum value of the selected indicators. So, for component *i* for a country *j*:

$$Cij=(\text{actual value}_{ij} - \text{minimum value}_{ik})/(\text{maximum value}_{ik} - \text{minimum value}_{ik}) \quad (2)$$

where *j* and *k* are indices referring to countries *j* and *k*.

When necessary, the raw data have been transformed in such a way that normalized values equal to unity correspond to the best situation in the sample.

The variances of the P_j are equal to the variances of the X_k for which they are estimated to account, with the result that the P_j partition the total variance of the X_k. These variances can be shown to be equal to the eigenvalues of the correlation matrix of the original regressors. If these eigenvalues are denoted λ_k, the weights in the expression for *TDI* are the shares of the variances of the P_j in the total variance of $X_1, X_2 ... X_K$. Thus:

$$\text{Index}_i = (\lambda_1 P_{1+} \lambda_2 P_2 .....+ \lambda_K P_k)/(\lambda_1 + \lambda_2 + ...\lambda_K), \text{ where } i \text{ refers to country } i \quad (3).$$

From the point of view of analysis of the drivers of TDI, the technique of PCA has the advantage that the process generating the principal components can be reversed. Thus, the linear transformation in the form of the matrix consisting of the coefficients of the P_j with respect to the X_k can be inverted to generate the values of the original indicators or regressors corresponding to the values of the principal components. It thus becomes possible to conduct an analysis of the influence of these indicators or regressors on the TDI.

C. *Comparability of samples and estimates*

The weights are attributed to the two indices of TDI components, InputMI and OutcomeMI, based on the statistical procedure used to estimate them. Since the weights are obtained from cross-section data, they may vary from year to year for the same sample of countries or from sample to sample for the same period. Increased country coverage is by definition an improvement. Marginal increases are unlikely to create any major problem for comparability. However, substantial increases would necessitate a recomputation of weights and of the whole index series. Country coverage has increased dramatically since the first version of TDI 2005 in DCIT-TDI 2005, from 110 countries to 123 countries. It is unlikely, considering current data availability, that the sample size could be further increased in the immediate future by a similar proportion, though the figure of 150 countries may be attainable over a longer period.

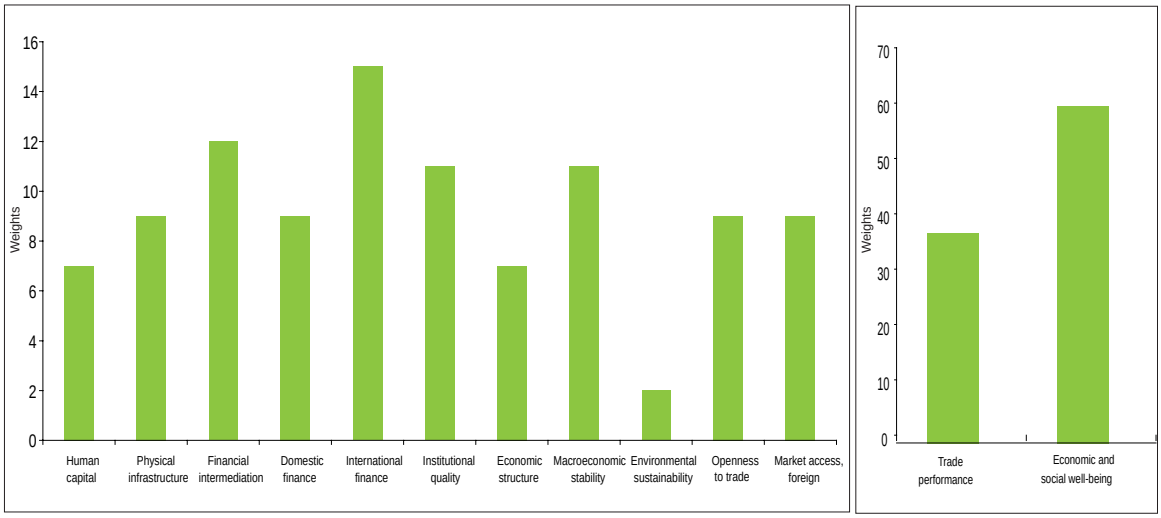
The most important source of incomparability is the systemic statistical properties of TDI components that affect the weighting. To avoid such incomparability, weights obtained in the first period – i.e. for InputMI 2005 and OutputMI 2005 – are assumed to be the reference weights and are applied to all successive periods. Adoption of such a restrictive assumption is motivated by the possibility of comparing TDI scores across years. Thus, TDI 2006 is computed using weights computed for TDI 2005. We also computed TDI 2006 using 2006 weights. We observe that the two results for TDI 2006 are strongly correlated, the coefficient of correlation being 0.987, which implies stability in statistical properties of the set of components. Nevertheless, in order to check the statistical coherence of weights, similar sensitivity analysis will be repeated for every future exercise.

The average weight is 9 per cent. The largest weight is obtained for the international finance component and is slightly more than 15 per cent. The smallest weight, obtained for environmental sustainability, is slightly more than 2 per cent. Weights reflect the systemic statistical properties of TDI components, higher weights being observed for components that are the most related to other components.[37]

[37] See Nagar and Basu (2004b) for discussion of the statistical properties of a composite index as estimate of a single latent variable.

Fixing reference values in the normalization of components (described earlier) and the components' weights allows full comparability of TDI scores for the same sample of countries across periods. As weights are normalized to obtain unity when summing them up, the maximum absolute InputMI, OutputMI and TDI score is 1,000, and the minimum score is zero. Maximum values could also be interpreted as weights. Indeed, as the unweighted component maximum value is 1,000, the weighted maximum value is simply equal to the weights attributed to each component times its unweighted maximum value. The weights of each of the InputMI and OutputMI components are the following:

Figure A1. Weights for InputMI and OutcomeMI



The major advantage of comparability is that it makes it possible to disentangle the relative from the absolute increases or decreases in scores for a specific country or group of countries. Changes in TDI scores across periods indicate the absolute evolution in performance, and changes in TDI rank across periods indicate relative evolution. The same type of analysis can be applied to InputMI and OutputMI scores. It is then straightforward to identify the components that are driving changes in the index for each country or group of countries. A higher value of the TDI reflects an improvement in the relationship between structural, institutional and trade policies with trade and development performance; lower value indicates a deterioration of the relationship and thus in ranking. Moreover, an increase (decrease) in TDI score through time indicates an improvement (decline) in trade and development performances compared with the base year of 2005.

Appendix 3. Components and indicators: definition and sources

Dimension	Component	Indicators	Definition and sources
Structural and Institutional Context (SIC)	*Human capital*	• Health expenditure (% of GDP)	**Health expenditure per capita (% of GDP):** Total health expenditure is the sum of public and private health expenditure. It covers the provision of health services (preventive and curative), family planning activities, nutrition activities and emergency aid designated for health, but does not include provision of water and sanitation. The World Bank, The World Development Indicators (2006).
		• Education expenditure (% of GDP)	**Education expenditure, public (% of GDP):** Expenditure includes both capital expenditures (spending on construction, renovation, major repairs and heavy equipment or vehicles) and current expenditures (spending on goods and services that are consumed within the current year and would need to be renewed the following year). It covers such expenditures as staff salaries and benefits, contracted or purchased services, books and teaching materials, welfare services, furniture and equipment, minor repairs, fuel, insurance, rents, telecommunications and travel. The World Bank, The World Development Indicators (2006).
	Physical infrastructure	• Paved roads (% of total roads)	**Roads, paved (% of total roads)**: Paved roads are those surfaced with crushed stone (macadam) and hydrocarbon binder or bituminized agents, with concrete or with cobblestones, as a percentage of all the country's roads, measured in length. The World Bank, The World Development Indicators (2006).
		• Air transport freight (million tons per km)	**Air transport, freight (million tons per km):** Air freight is the sum of the metric tons of freight, express and diplomatic bags carried on each flight stage (the operation of an aircraft from takeoff to its next landing) multiplied by the stage distance, by air carriers registered in the country. The World Bank, The World Development Indicators (2006).
		• Telephone mainlines (per 1,000 population)	**Telephone mainlines (per 1,000 people)**: Telephone lines connecting customer's equipment to the public switched telephone network. Data are presented per 1,000 people for the entire country. The World Bank, The World Development Indicators (2006).
	Financial intermediation	• Domestic credit to private sector (% of GDP)	**Domestic credit to private sector (% of GDP)**: Domestic credit to the private sector refers to financial resources provided to the private sector in such forms as loans, purchases of non-equity securities, and trade credits and other accounts receivable that establish a claim for repayment. For some countries, these claims cannot be separated from credit to public enterprises. The World Bank, The World Development Indicators (2006).

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Appendix 3. Components and indicators: definition and sources (continued)

Dimension	Component	Indicators	Definition and sources
	Domestic finance	• Gross domestic savings (% of GDP)	**Gross domestic savings (% of GDP)**: Gross domestic savings are calculated as GDP less final consumption expenditure (total consumption). The World Bank, The World Development Indicators (2006).
	International finance	• Total external debt service (% of GNI)	**Total external debt service (% of GNI)**: Total debt service is the sum of principal repayments and interest actually paid in foreign currency, goods or services on long-term debt, interest paid on short-term debt, and repayments (repurchases and charges) to the IMF. The World Bank, The World Development Indicators (2006).
		• Short-term debt (% of total external debt)	**Short-term debt (% of total external debt)**: Short-term debt includes all debt having an original maturity of one year or less and interest in arrears on long-term debt. The World Bank, The World Development Indicators (2006).
	Institutional quality	• Regulatory quality	**Regulatory quality (-2.5 to 2.5 scale, with higher score for better outcomes)**: Regulatory quality reflects government policies affecting business environment, including measures of the presence of market-unfriendly policies such as price controls or financial repression, as well as perceptions of the burdens imposed by excessive regulation in areas such as foreign trade and business development. The World Bank, The Governance Matters Index 2006.
		• Control of corruption	**Control of corruption (-2.5 to 2.5 scale, with higher score for better outcomes)**: Control of corruption is an aggregate measure of the extent of corruption, conventionally defined as the exercise of public power for private gain. This indicator, like the preceding rule of law indicator, is based on perceptions of corruption recorded in polls and surveys. The World Bank, The Governance Matters Index 2006.
	Economic structure	• Agricultural value added (% of GDP)	**Agricultural value added (% of GDP):** Agriculture corresponds to International Standard Industrial Classification divisions 1to 5 and includes forestry, hunting and fishing, as well as cultivation of crops and livestock production. Value added is the net output of a sector after adding up all outputs and subtracting intermediate inputs. It is calculated without making deductions for depreciation of fabricated assets or depletion and degradation of natural resources. The origin of value added is determined by the International Standard Industrial Classification, revision 3. The World Bank, The World Development Indicators (2006).

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Appendix 3. Components and indicators: definition and sources (continued)

Dimension	Component	Indicators	Definition and sources
	Macroeconomic stability	• Consumer price index (annual %)	**Consumer price index (annual %):** Inflation as measured by the consumer price index reflects the annual percentage change in the cost to the average consumer of acquiring a fixed basket of goods and services that may be fixed or changed at specified intervals, such as yearly. The Laspeyres formula is generally used. The World Bank, The World Development Indicators (2006).
		• Current account balance (% of GDP)	**Current account balance (% of GDP):** This is the sum of net exports of goods and services, net income (due to compensation of employees and investment), and net current transfers. The World Bank, The World Development Indicators (2006).
	Environmental sustainability	• Access to improved water (% of total population with reasonable access to water)	**Water source (% of population with access):** Access to an improved water source refers to the percentage of the population with reasonable access to an adequate amount of water from an improved source, such as a household connection, public standpipe, borehole, protected well or spring, and rainwater collection. Unimproved sources include vendors, tanker trucks, and unprotected wells and springs. Reasonable access is defined as the availability of at least 20 litres per person per day from a source within one kilometre of the dwelling. The World Bank, The World Development Indicators (2006).
		• Access to improved sanitation (% of total population with adequate access to excreta disposal facilities)	**Sanitation facilities (% of population with access):** This refers to the percentage of the population with at least adequate excreta disposal facilities (private or shared, but not public) that can effectively prevent human, animal and insect contact with excreta. Improved facilities range from simple but protected pit latrines to flush toilets with a sewerage connection. To be effective, facilities must be correctly constructed and properly maintained. The World Bank, The World Development Indicators (2006).
		• GDP in PPP- terms per unit of energy use	**Energy use:** GDP per unit of energy use is the PPP GDP per kilogram of the oil equivalent of energy use. PPP GDP is gross domestic product converted to 1995 constant international dollars using purchasing power parity rates. An international dollar has the same purchasing power over GDP as a dollar has in the United States. The World Bank, The World Development Indicators (2006).
Trade policies and processes (TPP)	*Openness to trade*	• Applied trade-weighted average tariff (%)	**Weighted mean tariff:** Average of effectively applied rates weighted by the total imports from trading partner countries. UNCTAD, Trade Analyses and Information System (TRAINS) database.

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Appendix 3. Components and indicators: definition and sources (continued)

Dimension	Component	Indicators	Definition and sources
		• Share of lines with national peaks (%)	**Share of lines with international peaks**: Share of lines in the tariff schedule with tariff rates that exceed 15 per cent. UNCTAD, TRAINS database.
		• Share of lines with international peaks(%)	**Share of lines with national peaks**: Share of lines in the tariff schedule with tariff rates that exceed three times the average tariff. UNCTAD, TRAINS database.
		• Share of lines with specific tariffs (%)	**Share of lines with specific rates**: Share of lines in the tariff schedule that are set on a per unit basis or that combine ad valorem and per unit rates. UNCTAD, TRAINS database.
	Access to foreign market	• Trade-weighted average tariff applied on exports in partner countries(%)	**Weighted mean tariff:** Average of effectively applied rates by trading partners weighted by the total imports of trading partner countries. UNCTAD, TRAINS database.
		• Share of lines with national peaks applied on exports in partner countries(%)	**Share of lines with international peaks**: Share of lines in the tariff schedule of trading partners with tariff rates that exceed 15 per cent. UNCTAD, TRAINS database.
		• Share of lines with international peaks applied on exports in partner countries(%)	**Share of lines with national peaks**: Share of lines in the tariff schedule of trading partners with tariff rates that exceed three times the average tariff. UNCTAD, TRAINS database.
		• Share of lines with specific tariffs applied on exports in partner countries (%)	**Share of lines with specific rates**: Share of lines in the tariff schedule of trading partners that are set on a per unit basis or that combine ad valorem and per unit rates. UNCTAD, TRAINS database.
Trade and development performance (TDP)			
	Trade Performance	• Merchandise exports (% of world merchandise exports)	**Merchandise exports (% of world):** Total merchandise exports as a share of total world merchandise exports. UNCTAD Handbook of Statistics.
		• Services exports (% of world services exports)	**Service exports (% of world):** Total service exports as a share of total world service exports. UNCTAD Handbook of Statistics.
		• Market concentration index for merchandise exports	**Merchandise export concentration index (0 to 1 scale):** For the degree of market concentration, index value of 1 implies maximum concentration. UNCTAD Handbook of Statistics.
		• Total trade (exports and imports) (% of GDP)	**Trade (% of GDP):** Trade is the sum of exports and imports of goods and services measured as a share of gross domestic product. The World Bank, The World Development Indicators (2006).

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Appendix 3. Components and indicators: definition and sources (concluded)

Dimension	Component	Indicators	Definition and sources
	Economic and social well-being	• Sen Welfare Index (GDP per capita (1-Gini index))	**Sen Welfare Index:** This index is defined as GDP per capita multiplied by (1-Gini index). The GDP per capita figure is based on **a** constant $2,000. The Gini index takes a value of 0 to represent perfect equality, and a value of 100 to represent perfect inequality. The index is measured either based on income or expenditure depending on different countries' methods of data collection. The World Bank, The World Development Indicators (2006) for GDP per capita data, and UNDP, Human Development Report for Gini index.
		• Adult literacy rate (%)	**Adult literacy rate (%):** The percentage of people aged 15 and above who can, with understanding, both read and write a short, simple statement related to their everyday life. The World Bank, The World Development Indicators (2006) and UNDP, Human Development Report.
		• Life expectancy (years)	**Life expectancy at birth (years):** The number of years a newborn infant would live if prevailing patterns of age-specific mortality rates at the time of birth were to stay the same throughout the child's life. The World Development Indicators (2006) and UNDP, Human Development Report.
		• Female-to-male income ratio (%)	**Female to male income share (%)**: This indicator is computed by taking the ratio of female-to-male estimated earned income (PPP). UNDP, Human Development Report.
		• Female labour force (% of total labour force)	**Female Labor force (% of total labor force):** Female labour force as a percentage of the total shows the extent to which women are active in the labour force. Labour force comprises all people who meet the International Labour Organization's definition of the economically active population. The World Bank, The World Development Indicators (2006).

Appendix 4. Trade and Development Index: global rankings

TDI rank 2006	Country	TDI score 2006	TDI score 2005	TDI rank 2005
1	United States	743	751	1
2	Germany	696	689	2
3	Denmark	691	687	3
4	United Kingdom	682	678	4
5	Singapore	675	665	7
6	Japan	668	673	5
6	Sweden	668	651	10
8	France	664	663	9
8	Norway	664	665	7
10	Canada	650	650	11
10	Switzerland	650	668	6
12	Belgium	642	638	12
12	Iceland	642	624	15
14	Finland	636	633	13
15	Ireland	630	609	18
16	Australia	628	624	15
17	Austria	627	627	14
18	New Zealand	623	622	17
19	Spain	619	606	19
20	Israel	610	595	21
21	Italy	599	595	21
21	Republic of Korea	599	596	20
23	Portugal	593	589	23
24	Slovenia	583	574	24
25	China	577	550	27
26	Czech Republic	560	562	25
27	Malaysia	556	562	25
28	Greece	555	541	29
29	Malta	551	550	27
29	Thailand	551	537	31
31	Hungary	539	527	34
32	Poland	537	532	33
33	Estonia	536	539	30
34	Slovakia	527	522	36
35	Lithuania	526	537	31
37	Chile	522	515	38
37	Panama	522	523	35
37	Ukraine	522	508	41
39	United Arab Emirates	521	511	40
39	Kuwait	521	501	43
41	Bulgaria	520	515	38
42	Latvia	517	515	38
43	Bahrain	511	504	42
44	Costa Rica	503	493	45
44	Viet Nam	503	496	44
46	Albania	495	480	52
47	Mexico	493	481	50
47	South Africa	493	481	50
49	Bolivia	491	466	62
50	Azerbaijan	490	475	56
50	Mauritius	490	473	58

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Appendix 4. Trade and Development Index: global rankings (continued)

TDI rank 2006	Country	TDI score 2006	TDI score 2005	TDI rank 2005
52	Colombia	488	478	53
54	Argentina	486	471	59
54	Brazil	486	469	60
54	Romania	486	464	65
56	Armenia	485	487	47
57	Belarus	484	483	48
58	Russian Federation	483	481	50
58	Uruguay	483	493	45
60	Jordan	478	469	60
60	Sri Lanka	478	477	55
62	Georgia	475	478	53
63	Peru	474	455	69
63	Philippines	474	475	56
65	Moldova	473	466	62
66	Indonesia	468	463	66
67	Guyana	465	457	67
68	Honduras	464	438	75
68	El Salvador	464	456	68
70	Ecuador	461	424	85
71	Saudi Arabia	459	442	73
72	Tunisia	455	436	78
73	Oman	453	426	84
73	Turkey	453	445	72
75	Cambodia	452	438	75
76	Jamaica	449	465	64
76	Madagascar	449	428	83
78	Uganda	446	435	79
79	Dominican Republic	443	433	81
79	Nicaragua	443	434	80
81	Kenya	441	449	71
82	Paraguay	440	438	75
83	Algeria	436	411	90
83	United Republic of Tanzania	436	421	86
85	Botswana	434	451	70
86	India	433	413	88
86	Lebanon	433	437	77
89	Lesotho	432	403	95
89	Papua New Guinea	432	418	87
89	Bolivarian Republic of Venezuela	432	430	82
91	Senegal	429	409	92
92	Rwanda	425	409	92
93	Guatemala	423	409	92
93	Islamic Republic of Iran	423	386	102
95	Morocco	420	406	94
96	Ghana	412	412	89
97	Egypt	407	399	98
97	Malawi	407	380	107
99	Mozambique	404	392	100
100	Togo	401	387	101
101	Mali	398	376	110
102	Bangladesh	397	400	96

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Appendix 4. Trade and Development Index: global rankings (concluded)

TDI rank 2006	Country	TDI score 2006	TDI score 2005	TDI rank 2005
103	Pakistan	395	381	106
103	Zimbabwe	395	380	107
105	Syrian Arab Republic	392	400	96
105	Chad	392	354	118
107	Côte d'Ivoire	387	371	112
107	Mauritania	387	394	99
109	Burkina Faso	386	386	102
110	Benin	384	377	109
111	Burundi	382	367	113
112	Central African Republic	381	362	115
112	Zambia	381	383	104
114	Ethiopia	379	373	111
115	Cameroon	373	382	105
116	Guinea	372	365	114
117	Yemen	370	362	115
118	Angola	364	356	117
118	Democratic Republic of the Congo	364	324	122
120	Niger	362	349	119
121	Nigeria	350	334	120
122	Guinea-Bissau	339	327	121
123	Sudan	326	319	123

Note: TDI 2005 scores and rankings in DCIT-TDI 2005 are not comparable with TDI 2005 and TDI 2005 rank in DCIT-TDI 2007 of this appendix due to changes in composing indicators, computational approach and country coverage.

Appendix 5. TDI, dimensions, components and input and outcome measures

TDI rank 2006	Country	TDI score 2006	Structural and institutional context								
			Human capital	Physical infrastructure	Financial intermediation	Domestic finance	International finance	Institutional quality	Economic structure	Macroeconomic stability	Environmental sustainability
1	United States	743	42	74	108	44	145	94	66	85	18
2	Germany	696	46	74	51	54	145	94	66	88	16
3	Denmark	691	53	51	70	59	145	101	65	100	15
4	United Kingdom	682	40	65	68	44	145	100	66	95	9
5	Singapore	675	17	65	49	86	145	108	66	86	14
6	Japan	668	34	64	45	59	145	81	66	94	17
6	Sweden	668	52	34	47	56	145	102	65	82	18
8	Norway	664	53	46	22	67	145	94	66	101	15
8	France	664	46	64	40	52	145	84	65	98	11
10	Canada	650	42	38	37	57	145	99	65	91	19
10	Switzerland	650	42	40	71	61	145	100	66	85	16
12	Iceland	642	53	31	70	47	145	100	60	90	19
12	Belgium	642	42	40	33	56	145	87	66	90	13
14	Finland	636	40	34	30	58	145	107	64	88	19
15	Ireland	630	34	46	57	77	145	94	65	95	6
16	Australia	628	38	34	45	54	145	97	64	89	18
17	Austria	627	36	46	47	59	145	97	65	68	17
18	New Zealand	623	44	36	53	55	145	101	60	91	13
19	Spain	619	34	46	53	58	145	90	64	94	9
20	Israel	610	47	48	41	42	145	80	65	93	17
21	Republic of Korea	599	22	63	45	68	145	69	64	84	17
21	Italy	599	38	29	39	52	145	77	65	83	7
23	Portugal	593	42	21	67	47	145	87	64	83	9
24	Slovenia	583	43	43	20	59	145	76	65	62	12
25	China	577	15	53	55	77	100	50	58	96	13
26	Czech Republic	560	38	41	15	59	91	71	65	101	14
27	Malaysia	556	30	36	60	80	104	65	60	97	17
28	Greece	555	30	23	34	48	145	77	62	68	9
29	Thailand	551	20	38	45	66	102	59	60	101	17
29	Malta	551	42	43	49	45	145	71	64	87	15
31	Hungary	539	38	25	20	53	79	77	64	76	17
32	Poland	537	33	31	13	48	98	69	64	84	13
33	Estonia	536	32	18	17	57	79	81	64	77	15
34	Slovakia	527	32	33	14	57	72	66	64	75	19
35	Lithuania	526	36	16	10	47	80	69	62	90	14
37	Chile	522	23	16	28	62	102	90	64	99	17
37	Panama	522	31	6	41	54	118	61	61	100	14
37	Ukraine	522	29	37	11	59	121	35	58	75	20
39	United Arab Emirates	521	14	48	23	74	145	76	65	62	20
39	Kuwait	521	35	11	34	68	145	69	66	84	18

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Appendix 5. TDI, dimensions, components and input and outcome measures (continued)

TDI rank 2006	Country	TDI score 2006	Structural and institutional context								
			Human capital	Physical infrastructure	Financial intermediation	Domestic finance	International finance	Institutional quality	Economic structure	Macroeconomic stability	Environmental sustainability
41	Bulgaria	520	26	39	14	43	106	59	59	71	19
42	Latvia	517	29	39	18	47	63	65	64	79	12
43	Bahrain	511	21	33	27	76	145	75	66	84	18
44	Costa Rica	503	36	16	14	50	107	77	61	70	15
44	Viet Nam	503	19	4	24	62	133	41	52	82	12
46	Albania	495	19	14	4	29	140	46	50	102	16
47	Mexico	493	26	16	7	51	122	59	64	84	16
47	South Africa	493	28	12	62	49	115	65	64	92	16
49	Bolivia	491	35	4	20	45	130	51	56	87	13
50	Azerbaijan	490	13	18	3	64	133	36	58	77	15
50	Mauritius	490	22	39	26	57	78	70	62	92	21
52	Colombia	488	39	13	10	48	110	51	59	79	14
54	Argentina	486	30	12	5	59	106	48	59	77	9
54	Brazil	486	26	13	16	57	109	60	60	60	15
54	Romania	486	24	21	4	47	117	51	57	47	12
56	Armenia	485	14	9	3	34	137	47	51	78	16
57	Belarus	484	35	40	6	55	71	27	59	51	19
58	Uruguay	483	18	14	17	46	107	74	59	44	15
58	Russian Federation	483	22	18	10	68	119	34	63	33	19
60	Jordan	478	31	34	32	21	117	62	65	93	18
60	Sri Lanka	478	12	26	14	47	133	58	54	86	14
62	Georgia	475	11	16	4	41	133	38	54	84	16
63	Peru	474	17	7	9	52	128	59	60	89	11
63	Philippines	474	15	5	16	47	106	53	58	83	14
65	Moldova	473	29	32	9	17	98	39	52	61	17
66	Indonesia	468	8	20	10	59	109	38	56	81	14
67	Guyana	465	32	6	21	42	120	49	46	78	16
68	Honduras	464	30	5	18	42	125	48	58	73	15
68	El Salvador	464	22	6	18	26	113	59	60	86	13
70	Ecuador	461	11	9	9	57	108	40	62	81	15
71	Saudi Arabia	459	18	17	25	82	145	60	64	89	17
72	Tunisia	455	31	24	29	53	117	65	58	80	14
73	Oman	453	23	6	16	68	102	75	65	108	17
73	Turkey	453	31	21	8	51	100	55	58	54	16
75	Cambodia	452	14	5	4	46	139	44	44	91	10
76	Jamaica	449	26	9	8	43	103	57	63	70	18
76	Madagascar	449	16	0	4	39	141	50	47	80	8
78	Uganda	446	24	7	3	36	140	47	45	80	10
79	Dominican Republic	443	14	10	15	53	119	54	59	36	13
79	Nicaragua	443	23	5	11	27	128	48	54	92	14
81	Kenya	441	27	4	11	43	127	40	48	60	13

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Appendix 5. TDI, dimensions, components and input and outcome measures (continued)

TDI rank 2006	Country	TDI score 2006	Structural and institutional context								
			Human capital	Physical infrastructure	Financial intermediation	Domestic finance	International finance	Institutional quality	Economic structure	Macroeconomic stability	Environmental sustainability
82	Paraguay	440	23	2	7	43	114	36	48	81	15
83	Algeria	436	24	4	5	84	128	41	60	93	16
83	United Republic of Tanzania	436	18	3	4	38	132	43	37	98	15
85	Botswana	434	19	13	8	75	140	76	65	73	14
86	India	433	17	22	15	53	134	49	52	95	12
86	Lebanon	433	19	10	35	28	80	50	62	42	19
89	Papua New Guinea	432	22	1	5	51	112	41	47	73	9
89	Bolivarian Republic of Venezuela	432	15	6	4	70	113	41	64	48	16
89	Lesotho	432	45	7	3	10	136	54	55	78	12
91	Senegal	429	20	9	9	38	135	51	55	92	13
92	Rwanda	425	14	0	5	28	142	47	39	86	12
93	Guatemala	423	16	8	9	34	113	51	52	76	14
93	Islamic Republic of Iran	423	26	27	16	78	119	36	59	59	17
95	Morocco	420	25	18	25	51	122	60	56	83	11
96	Ghana	412	11	6	6	39	126	51	42	44	14
97	Egypt	407	16	7	26	46	128	50	56	80	16
97	Malawi	407	30	0	4	13	138	47	40	73	12
99	Mozambique	404	21	0	1	41	136	47	52	55	10
100	Togo	401	16	1	7	33	135	43	39	100	11
101	Mali	398	20	0	9	43	141	52	42	108	10
102	Bangladesh	397	11	4	13	50	140	40	52	88	10
103	Pakistan	395	8	20	12	49	133	38	51	78	15
103	Zimbabwe	395	25	7	14	34	127	25	55	18	16
105	Syrian Arab Republic	392	18	10	5	57	118	41	51	39	16
105	Chad	392	19	0	2	66	141	41	36	98	4
107	Côte d'Ivoire	387	17	1	6	52	131	44	51	97	13
107	Mauritania	387	23	1	12	5	131	52	54	73	10
109	Burkina Faso	386	19	0	6	32	143	52	46	90	7
110	Benin	384	17	0	6	37	142	51	43	85	12
111	Burundi	382	18	3	11	26	120	31	33	69	15
112	Central African Republic	381	13	1	3	44	136	35	29	103	14
112	Zambia	381	19	7	3	50	117	45	52	37	13
114	Ethiopia	379	31	4	11	29	143	45	37	61	8
115	Cameroon	373	16	2	4	48	131	40	37	49	12
116	Guinea	372	9	3	2	37	131	45	50	52	11
117	Yemen	370	38	2	3	40	138	42	57	71	12
118	Democratic Rep. of Congo	364	17	3	1	33	138	15	26	77	11
118	Angola	364	17	3	2	56	107	23	61	18	11
120	Niger	362	16	0	3	34	143	40	40	81	6
121	Nigeria	350	9	0	7	72	127	33	52	56	13
122	Guinea-Bissau	339	19	1	1	27	115	39	25	89	10
123	Sudan	326	14	2	3	46	111	33	39	71	12

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Appendix 5. TDI, dimensions, components and input and outcome measures (continued)

TDI rank 2006	Country	Trade policies and processes		Trade and development performance		InputMI	Rank of InputMI	OutcomeMI	Rank of OutcomeMI
		Openness to trade	Market access, foreign	Trade performance	Economic and social well-being				
1	United States	80	85	224	419	843	1	643	1
2	Germany	79	86	195	397	799	4	592	2
3	Denmark	79	86	117	440	825	2	556	6
4	United Kingdom	79	86	159	407	797	5	566	4
5	Singapore	87	90	180	356	814	3	536	11
6	Japan	81	85	146	419	771	10	564	5
6	Sweden	79	86	117	452	767	12	568	3
8	Norway	82	88	79	469	780	7	548	8
8	France	79	86	151	405	771	10	556	6
10	Canada	80	86	131	408	760	14	539	10
10	Switzerland	69	82	112	411	777	9	523	12
12	Iceland	80	83	74	430	779	8	504	15
12	Belgium	79	86	152	394	737	21	546	9
14	Finland	79	86	96	425	751	16	521	13
15	Ireland	79	86	122	354	784	6	476	22
16	Australia	81	84	98	406	751	16	504	15
17	Austria	79	86	126	381	746	19	507	14
18	New Zealand	80	84	94	390	763	13	483	18
19	Spain	79	86	125	354	759	15	478	19
20	Israel	82	89	85	385	749	18	471	23
21	Republic of Korea	78	82	122	338	738	20	460	27
21	Italy	79	86	142	354	700	26	497	17
23	Portugal	79	86	105	351	730	22	456	29
24	Slovenia	75	88	110	367	689	29	477	20
25	China	78	82	155	322	676	30	477	20
26	Czech Republic	81	85	121	337	661	34	458	28
27	Malaysia	75	80	133	271	707	25	404	46
28	Greece	79	86	103	344	662	33	447	34
29	Thailand	72	77	124	321	657	36	445	36
29	Malta	79	83	82	298	722	23	380	55
31	Hungary	79	86	114	348	615	44	462	25
32	Poland	79	85	111	343	619	41	454	31
33	Estonia	79	85	118	352	603	47	469	24
34	Slovakia	79	86	115	341	597	50	456	29
35	Lithuania	79	86	103	359	590	53	462	25
37	Chile	83	88	82	291	671	32	373	59
37	Panama	81	85	83	307	653	37	390	51
37	Ukraine	80	86	109	324	610	45	434	39
39	United Arab Emirates	83	87	112	231	698	28	343	76
39	Kuwait	83	87	55	287	699	27	342	77

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Appendix 5. TDI, dimensions, components and input and outcome measures (continued)

TDI rank 2006	Country	Trade policies and processes		Trade and development performance		InputMI	Rank of InputMI	OutcomeMI	Rank of OutcomeMI
		Openness to trade	Market access, foreign	Trade performance	Economic and social well-being				
41	Bulgaria	73	77	112	341	586	55	453	32
42	Latvia	79	86	99	354	581	59	452	33
43	Bahrain	83	87	58	248	715	24	306	89
44	Costa Rica	83	87	90	299	617	42	389	53
44	Viet Nam	67	72	104	335	566	70	439	38
46	Albania	82	85	84	320	586	55	403	47
47	Mexico	69	79	112	281	593	51	393	50
47	South Africa	76	80	98	228	659	35	326	84
49	Bolivia	81	87	80	292	609	46	372	60
50	Azerbaijan	82	85	54	341	585	57	394	49
50	Mauritius	76	78	91	267	623	40	357	68
52	Colombia	74	79	84	318	574	61	402	48
54	Argentina	71	77	91	327	553	78	418	43
54	Brazil	73	77	102	307	564	72	408	45
54	Romania	66	83	103	338	531	93	441	37
56	Armenia	79	83	77	342	551	80	419	42
57	Belarus	77	81	106	340	521	101	447	34
58	Uruguay	74	81	85	332	548	81	417	44
58	Russian Federation	76	79	94	332	541	86	425	41
60	Jordan	70	75	106	232	617	42	338	80
60	Sri Lanka	77	80	89	267	600	48	356	70
62	Georgia	79	82	90	299	559	73	390	51
63	Peru	77	82	78	280	589	54	358	66
63	Philippines	82	87	78	305	565	71	383	54
65	Moldova	79	84	96	331	518	103	427	40
66	Indonesia	80	84	104	274	559	73	377	56
67	Guyana	71	73	105	270	555	77	374	57
68	Honduras	82	86	91	255	582	58	346	74
68	El Salvador	79	85	98	261	569	67	359	63
70	Ecuador	75	79	66	308	547	82	374	57
71	Saudi Arabia	79	80	49	193	675	31	242	111
72	Tunisia	57	65	98	219	592	52	318	86
73	Oman	83	88	51	204	651	38	255	107
73	Turkey	78	87	107	240	558	75	348	73
75	Cambodia	69	73	66	299	538	90	365	61
76	Jamaica	72	74	54	301	542	84	355	71
76	Madagascar	75	78	76	281	540	88	357	68
78	Uganda	78	83	76	262	553	78	338	80
79	Dominican Republic	75	78	96	262	527	95	358	66
79	Nicaragua	82	87	88	225	572	64	313	87
81	Kenya	72	76	81	278	522	100	359	63

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Appendix 5. TDI, dimensions, components and input and outcome measures (concluded)

TDI rank 2006	Country	Trade policies and processes		Trade and development performance		InputMI	Rank of InputMI	OutcomeMI	Rank of OutcomeMI
		Openness to trade	Market access, foreign	Trade performance	Economic and social well-being				
82	Paraguay	73	80	69	288	521	101	358	66
83	Algeria	70	74	51	223	598	49	274	98
83	United Republic of Tanzania	72	76	70	269	533	92	339	78
85	Botswana	72	76	29	208	630	39	237	115
86	India	61	65	102	187	576	60	290	94
86	Lebanon	79	81	115	248	503	110	363	62
89	Papua New Guinea	75	77	86	265	513	104	351	72
89	Bolivarian Republic of Venezuela	72	77	31	308	526	96	338	80
89	Lesotho	68	72	93	231	539	89	324	85
91	Senegal	72	72	87	204	567	69	291	93
92	Rwanda	71	78	63	264	523	98	327	83
93	Guatemala	82	86	90	214	541	86	304	90
93	Islamic Republic of Iran	64	70	30	242	573	63	273	99
95	Morocco	56	62	95	175	570	65	270	101
96	Ghana	70	72	77	267	480	115	344	75
97	Egypt	72	76	77	163	574	61	240	112
97	Malawi	71	74	60	251	503	110	311	88
99	Mozambique	72	75	56	241	510	106	297	92
100	Togo	70	70	82	195	525	97	277	96
101	Mali	71	73	36	191	569	67	227	117
102	Bangladesh	56	60	72	198	523	98	270	101
103	Pakistan	67	70	80	169	541	86	248	109
103	Zimbabwe	65	67	94	243	453	123	337	82
105	Syrian Arab Republic	67	74	49	238	495	113	288	95
105	Chad	67	71	49	190	545	83	239	113
107	Côte d'Ivoire	71	73	74	143	556	76	217	119
107	Mauritania	71	72	64	207	503	110	270	101
109	Burkina Faso	70	71	43	192	537	91	235	116
110	Benin	69	69	58	180	530	94	238	114
111	Burundi	64	73	37	263	464	119	300	91
112	Central African Republic	64	66	49	205	508	108	254	108
112	Zambia	73	77	55	213	493	114	269	103
114	Ethiopia	69	72	66	181	510	106	247	110
115	Cameroon	64	67	61	214	471	117	275	97
116	Guinea	69	68	50	215	478	116	265	105
117	Yemen	80	85	26	144	569	67	170	123
118	Dem. Rep. of Congo	70	72	50	215	462	120	265	105
118	Angola	80	83	31	235	461	121	267	104
120	Niger	69	70	49	173	502	112	222	118
121	Nigeria	69	73	23	165	511	105	188	121
122	Guinea-Bissau	68	68	37	179	461	121	216	120
123	Sudan	65	70	27	158	466	118	185	122