Chapter 2

The Istanbul Programme of Action for LDCs: A Monitoring and Benchmarking Exercise

Yurendra Basnett, Jodie Keane and Dirk Willem te Velde[1]

2.1 Introduction

The United Nations (UN) Least Developed Country (LDC) Conference in 2011 adopted the Istanbul Programme of Action (IPoA) to be implemented by LDCs and development partners (which include traditional donors and emerging developing countries) to improve the economic and social conditions in the world's poorest countries. The programme foresees favourable measures for LDCs in international trade, development financing and technical assistance, building up productive capacity, etc. However, the goals and targets as specified in the IPoA are, in most cases, not concretely defined. This chapter seeks to redress this shortcoming and suggests an approach towards monitoring progress vis-à-vis quantifiable targets that correspond to the objectives sought by IPoA.

There is a large amount of literature on constructing indices, including the World Economic Forum competitiveness index, the UN economic vulnerability index and others. We do not review it here but we have done so elsewhere. Annex 2.1 includes a summary of 30 indices reviewed by Cantore et al. (2011).[2] The crucial aspect we emphasise here is that there appear to be no indices that specifically measure structural transformation for individual LDCs linked to IPoA objectives. This chapter provides a preliminary IPoA index, which can be improved over time.

The structure of this chapter is as follows. In Section 2.2 we provide a brief overview of IPoA and its objectives, which ultimately translate into the need to achieve structural transformation in LDCs. We then, in Section 2.3, proceed to review in some detail potential indicators that could be used to monitor progress vis-à-vis the objectives of IPoA. Here we discuss some of the challenges involved with respect to monitoring progress across the priority areas as defined by IPoA. Despite these challenges, Section 2.4 uses some of the indicators we have matched to the objectives of IPoA to create an index which serves two main purposes: first, it benchmarks LDCs in terms of their current position; and second, it provides a reference point from which progress can be monitored in the future. We acknowledge major caveats in this process. Section 2.5 concludes the chapter.

2.2 Overview of the IPoA objectives

The IPoA marks a major change in relation to the global set of goals and objectives towards LDCs. The previous programme of action (the Brussels Programme of Action agreed in 2001 – the BPoA) emphasised social goals and prioritised spending on social

areas; this followed the UN conference that agreed the Millennium Development Goals (MDGs), which focused on areas such as primary education, health and poverty. Over the past decade, however, a view has emerged that the MDGs helped raise the profile of development but skewed development attention towards the short-term alleviation of poverty, at the expense of thinking about the long-term determinants of growth and development. The IPoA seeks to redress this imbalance and instead focuses on issues such as structural transformation, diversification, productive capacities – precisely those areas demanded by LDCs and their constituents.

The IPoA is already proving to be lasting beyond the UN LDC IV 2011 conference. For example, paragraph 34 of the Rio + 20 text of June 2012 reads:

> …we reaffirm that the [IPoA] outlines the priorities of [LDCs] for sustainable development and defines a framework for renewed and strengthened global partnership to implement them. We commit to assist the least developed countries with the implementation of the [IPoA] as well as in their efforts to achieve sustainable development.

The IPoA calls for a renewed and strengthened partnership for development (Jones 2011). It does this in several ways. It includes the following five high-level *objectives* (paragraph 28) achieving economic growth of 7 per cent per annum, building human capacities, reducing vulnerability, enhancing finances and enhancing good governance. There are also eight *principles* (paragraph 29): ownership, integrated thinking, partnerships, results, peace, equity, voice, and state and market. It also identifies priority areas for action by LDCs and development partners.

Notwithstanding the ambition of IPoA, in order to ensure that it avoids some of the pitfalls of BPoA[3] there is a need to better link objectives to specific outcomes, so that monitoring of progress against targets can be improved. Quantitative targets, which are sometimes explicitly but mostly implicitly referred to, need to be identified, so that the progress of the LDCs can be monitored, which is related both to the actions of LDCs themselves, but also to those of development partners. This means formulating specific numerical targets for objectives where this is possible. In relation to some of the principles and partnerships specified for IPoA it may be more difficult to formulate measures and targets for all of these, although possible for some. In this chapter, we begin to identify indicators which could be used to monitor the progress of LDCs linked to the objectives of IPoA and its priority areas.

2.3 Indicators for benchmarking and monitoring IPoA

Where possible, we propose quantifiable and concrete indicators for monitoring progress on IPoA in relation to each of the eight identified priority areas for action, which are:

A. Productive capacity;

B. Agriculture, food security and rural development;

C. Trade;

D. Commodities;

E. Human and social development;

F. Multiple crises and other emerging challenges;

G. Mobilising financial resources for development and capacity building; and

H. Good governance at all levels.

For most priority areas the IPoA contains a set of 'goals and targets', followed by 'joint actions', 'actions by LDCs' and 'actions by development partners'. Each of these aspects could be linked to quantifiable indicators, as we have discussed at some length in our background paper (Basnett et al. 2013). For ease, and also brevity, here we identify indicators for monitoring progress of targets within each of the aforementioned priority areas, or pillars of IPoA, regardless of whom the action is required by (the background paper has separate tables for monitoring actions). We match indicators that could be used to monitor progress of IPoA to specific objectives and focus on those that already exist within international databases and could therefore be relatively easily used. The purpose of this is to begin to identify a select number of indicators that could be used to monitor the progress of LDCs across the stated objectives of all eight pillars.

2.3.1 Productive capacity

The IPoA has a number of goals related to the development of productive capacity within LDCs, some of which are fairly specific such as the achievement of economic diversification. Table 2.1 presents possible indicators that could be used to monitor progress against targets, and also introduces some discussion around their use.

2.3.2 Agriculture, food security and rural development

Table 2.2 suggests a number of indicators that can be used to monitor objectives in the priority area of agriculture, food security and rural development. As can be seen, illustrative indicators are readily available in a number of international databases. However, we have found that there are severe data limitations with regard to the available information in LDCs – an issue which we return to later.

2.3.3 Trade

According to IPoA, the joint actions required on trade by both development partners and LDCs include:

- Realising the timely implementation of duty-free and quota-free (DFQF) market access, on a lasting basis, for all LDCs, consistent with the Hong Kong Ministerial Declaration adopted by the World Trade Organization (WTO) in 2005;
- Reaffirming the provision of special and differential treatment for LDCs in the WTO agreements; and
- Facilitating and accelerating negotiations with acceding LDCs based on the accession guidelines adopted by the WTO General Council in December 2002.

Table 2.1 Targets and indicators for productive capacity

Targets for productive capacity (Area A)	Indicator	Comments
(a) Increase significantly the value addition in natural resource-based industries, paying special attention to employment generation	• Industry, value added (constant 2000 USD) • Industry, value added (annual % growth) • GDP per person employed (constant 1990 PPP $) • Employment in industry (% of total employment)	• Defining natural resource-based industry may be a point of ambiguity • Industry is classified as comprising 'divisions 2–5 (ISIC revision 2) or tabulation categories C–F (ISIC revision 3) and includes mining and quarrying (including oil production), manufacturing, construction, and public utilities (electricity, gas, and water)' (World Bank) – hence this could be representative of resource-based industry • GDP per person employed could be a measure of labour productivity but this is not GDP per person employed in industry (natural resource-based or otherwise)
(b) Diversify local productive and export capability with a focus on dynamic value-added sectors in agriculture, manufacturing and services	• Agriculture, value added (constant 2000 USD) • Agriculture, value added (% of GDP) • Manufacturing, value added (constant 2000 USD) • Manufacturing, value added (% of GDP) • Services, etc., value added (constant 2000 USD) • Services, etc., value added (% of GDP) • Agricultural raw materials exports (% of merchandise exports) • Manufactures exports (% of merchandise exports) • Food exports (% of merchandise exports) • Fuel exports (% of merchandise exports)	• Can consider using the World Bank's Economic Diversification and Growth in Developing Countries Toolkit, or an index built along the same lines

(continued)

Table 2.1 Targets and indicators for productive capacity (continued)

Targets for productive capacity (Area A)	Indicator	Comments
	• Ores and metals exports (% of merchandise exports) • High-technology exports (% of manufactured exports) • Merchandise exports (current USD) • Gross capital formation (% of GDP) • GDP per capita PPP (constant 2005 international $)	
(c) Significantly increase access to telecommunication services and strive to provide 100 per cent access to the internet by 2020	• Internet users (per 100 people) • Fixed broadband internet subscribers (per 100 people) • Mobile cellular subscriptions • Mobile cellular subscriptions (per 100 people) • Telephone lines • Telephone lines (per 100 people) • Investment in telecoms with private participation (current USD)	
(d) Strive to increase total primary energy supply per capita to the same level as other developing countries	• Energy production (kg of oil equivalent)	• Need a comparative measure (average of other developing countries' TPES?)
(e) Significantly increase the share of electricity generation through renewable energy sources by 2020	• Electricity production (kWh) • Electricity production from renewable sources (kWh) • Electricity production from renewable sources, excluding hydroelectric (kWh) • Electricity production from renewable sources, excluding hydroelectric (% of total)	
(f) Enhance capacities in energy production, trade and distribution with the aim of ensuring access to energy for all by 2030	• Energy production (kg of oil equivalent) • Energy use (kg of oil equivalent per capita) • Investment in energy with private participation (current USD) • Energy imports, net (% of energy use) • Alternative and nuclear energy (% of total energy use)	• Capacity of energy production may differ from actual production • These indicators do not capture distribution of energy (access for all not represented by a per capita measure)

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Table 2.1 Targets and indicators for productive capacity (continued)

Targets for productive capacity (Area A)	Indicator	Comments
(g) Ensure that the LDCs have significant increase in combined rail and paved road mileage and sea and air networks by 2020	• Fossil fuel energy consumption (% of total) • Electric power consumption (kWh per capita) • Cereal yield (kg per hectare) • Rail lines (total route-km) • Roads, paved (% of total roads) • Roads, total network (km) • Air transport, registered carrier departures worldwide • Air transport, freight (million tonne-km) • Air transport, passengers carried • Liner shipping connectivity index (maximum value in 2004 = 100) • Container port traffic (TEU: 20 foot equivalent units) • Investment in transport with private participation (current USD)	

Notes:
ISIC International Standard Industrial Classification
TEU twenty-foot equivalent units
TPES Total Primary Energy Supply

At present there are limited quantitative indicators for these objectives, some of which are statements and not actually measurable. Table 2.3 summarises those trade indicators which it is possible to monitor. It is more difficult to measure 'effort'.

2.3.4 Commodities

The actions required by LDCs under the commodities part of the objectives of IPoA in this section include establishing and strengthening, as appropriate, national commodity management strategies so as to maximise the benefits derived from their resource base; and adopting and strengthening, as appropriate, sector and commodity-specific policies, measures and strategies to enhance productivity and vertical diversification, ensuring value addition and increasing value retention. Only in-depth country-specific analysis can assess progress as to whether these objectives are being met.

Most of the indicators we have proposed in relation to commodities (see Table 2.4) are related to the capacity of countries to manage their natural resources effectively in terms of the financial resources made available to them by development partners, which includes dealing with external shocks.

Table 2.2 Targets and indicators for agriculture, food security and rural development

Targets for agriculture, food security and rural development (Area B)	Indicator	Comments
(a) Make substantial progress towards eradicating hunger by 2020	• Prevalence of undernourishment (% of population) • Depth of hunger (kilocalories per person per day) • Low-birthweight babies (% of births) • Malnutrition prevalence, weight for age (% of children under five years) • Malnutrition prevalence, height for age (% of children under five years) • Prevalence of wasting (% of children under five years)	
(b) Substantially increase investment in rural infrastructure	• Improved water source, rural (% of rural population with access) • Improved sanitation facilities, rural (% of rural population with access) • Logistics performance index: quality of trade and transport-related infrastructure (1 = low to 5 = high) • Investment in energy with private participation (current USD) • Investment in telecoms with private participation (current USD) • Investment in transport with private participation (current USD) • Investment in water and sanitation with private participation (current USD) • Foreign direct investment, net (BoP, current USD)	• Unless explicitly mentioned, data not specific to rural sector
(c) Ensure access to safe food and emergency food assistance in all LDCs	• Food production index (2004–06 = 100) • Food imports (% of merchandise imports)	• No indicator on emergency food assistance • No indicator for 'access'

Note: BoP balance of payment

2.3.5 Human and social development

Table 2.5 suggests a number of indicators that can be used to monitor progress on actions against targets in the area of human and social development. This priority area is clearly a substantive one within the overall spirit of IPoA and includes a number of sub-pillars such as education and training; population and primary health; youth development; shelter; water and sanitation; gender equality; and social protection.

Table 2.3 Targets and indicators for trade

Targets for trade (Area C)	Indicator	Comments
(a) Significantly increase the share of LDCs' trade in global trade with the aim of doubling the share of LDCs' exports in global exports by 2020, including by broadening their export base	• Exports of goods and services (BoP, current USD) • Imports of goods and services (BoP, current USD) • Imports of goods and services (constant 2000 USD) • Net trade in goods and services (BoP, current USD) • Trade (% of GDP)	• Look at Area A target b for suggested indicators to measure economic diversification (broadening export base)
(b) Make substantial efforts for an early and successful conclusion of the Doha Round of trade negotiations with an ambitious, comprehensive, balanced and development-oriented outcome	• No indicators available	

Table 2.4 Targets and indicators for commodities

Targets for commodities (Area D)	Indicator
(a) Broaden LDCs' economic base in order to reduce commodity dependence	• Agriculture, value added (constant 2000 USD) • Agriculture, value added (% of GDP) • Manufacturing, value added (constant 2000 USD) • Manufacturing, value added (% of GDP) • Services, etc., value added (constant 2000 USD) • Services, etc., value added (% of GDP) • Agricultural raw materials exports (% of merchandise exports) • Manufactures exports (% of merchandise exports) • Food exports (% of merchandise exports) • Fuel exports (% of merchandise exports) • Ores and metals exports (% of merchandise exports) • High-technology exports (% of manufactured exports) • Merchandise exports (current USD) • Imports of goods and services (% of GDP) • Product diversification (number of HS6 subheads exported) • Market diversification (number of export markets)

Table 2.5 Targets and indicators for human and social development

Targets for human and social development (Area E)			Indicator	Comments
Education and training	(a)	Ensure universal access to free primary education in LDCs and also increase access to secondary, tertiary and vocational education and skill development training	• Primary education, pupils • School, primary (% gross) • Persistence to grade 5, total (% of cohort) • Persistence to last grade of primary, total (% of cohort) • Adjusted net rate, primary (% of primary school age children) • Secondary school starting age (years) • Secondary education, duration (years) • Secondary education, pupils • Secondary education, vocational pupils • School, secondary (% gross) • School, secondary (% net) • Progression to secondary school (%) • School, tertiary (% gross) • Children out of school, primary	
	(b)	Increase the quality of education and training that is offered at all levels and increase literacy and numeracy rates of adults and children	• Pupil–teacher ratio, primary • School, primary, private (% of total primary) • Trained teachers in primary education (% of total teachers) • Primary education, teachers • Repeaters, primary, total (% of total) • Pupil–teacher ratio, secondary • School, secondary, private (% of total secondary) • Repeaters, secondary, total (% of total) • Secondary education, teachers • Expenditure per student, primary (% of GDP per capita) • Expenditure per student, secondary (% of GDP per capita)	• No data to assess numeracy • Arguably the assessment of quality of education would need a more comprehensive indicator than literacy: we have therefore included measures such as expenditure on education, pupil–teacher ratio, etc.

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Table 2.5 Targets and indicators for human and social development (continued)

Targets for human and social development (Area E)	Indicator	Comments
	• Expenditure per student, tertiary (% of GDP per capita) • Public spending on education, total (% of government expenditure) • Public spending on education, total (% of GDP) • Literacy rate, youth total (% of people aged 15–24) • Literacy rate, adult total (% of people aged 15 and above)	
(c) Eliminate gender disparities in education and training and ensure equal quality of education between males and females	• Primary education, pupils (% female) • Persistence to grade 5, female (% of cohort) • Persistence to grade 5, male (% of cohort) • Persistence to last grade of primary, female (% of cohort) • Persistence to last grade of primary, male (% of cohort) • Repeaters, primary, female (% of females) • Repeaters, primary, male (% of males) • Adjusted net enrolment rate, primary, female (% of primary school-age children) • Adjusted net enrolment rate, primary, male (% of primary school-age children) • Children out of school, primary, female • Children out of school, primary, male • Secondary education, general pupils (% female) • Secondary education, vocational pupils (% female) • School enrolment, secondary, female (% gross) • School enrolment, secondary, male (% gross) • School enrolment, secondary, female (% net) • School enrolment, secondary, male (% net) • Progression to secondary school, female (%) • Progression to secondary school, male (%)	

Table 2.5 Targets and indicators for human and social development (continued)

Targets for human and social development (Area E)		Indicator	Comments
		• Repeaters, secondary, female (% of female enrolment) • Repeaters, secondary, male (% of male enrolment) • School enrolment, tertiary, female (% gross) • School enrolment, tertiary, male (% gross) • Literacy rate, youth, female (% of females aged 15–24) • Ratio of young literate females to males (% aged 15–24) • Literacy rate, youth, male (% of males aged 15–24) • Literacy rate, adult, female (% of females aged 15 and above) • Literacy rate, adult, male (% of males aged 15 and above) • Ratio of female to male primary enrolment (%) • Ratio of females to males in primary and secondary education (%) • Ratio of female to male secondary enrolment (%) • Ratio of female to male tertiary enrolment (%)	
Population and primary health	(a) Achieve targets under MDG 4 and 5 by 2015 and, building on these, further significantly reduce the infant, under-five and maternal mortality rates and child under-nutrition by 2020	• Mortality rate, female child (per 1,000 female children aged one) • Mortality rate, male child (per 1,000 male children aged one) • Mortality rate, under five years (per 1,000 live births) • Mortality rate, infant (per 1,000 live births) • Mortality rate, neonatal (per 1,000 live births) • Immunisation, measles (% of children aged 12–23 months) • Maternal mortality ratio (national estimate, per 100,000 live births) • Prevalence of undernourishment (% of population)	• MDG target 4.3 indicator is proportion of one-year-old children immunised against measles – these data, however, are from 12 to 23 months of age

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Table 2.5 Targets and indicators for human and social development (continued)

Targets for human and social development (Area E)	Indicator	Comments
(b) Provide universal access to reproductive health by 2015, including integrating family planning, sexual health and healthcare services in national strategies and programmes	• Births attended by skilled health staff (% of total) • Contraceptive prevalence (% of women aged 15–49) • Condom use, population aged 15–24, female (% of females aged 15–24) • Condom use, population aged 15–24, male (% of males aged 15–24) • Pregnant women receiving prenatal care (%) • Adolescent fertility rate (births per 1,000 women aged 15–19) • Unmet need for contraception (% of married women aged 15–49) • Health expenditure, public (% of government expenditure) • Health expenditure, public (% of GDP) • Nurses and midwives (per 1,000 people)	• No data on unmet need for family planning, or for antenatal care • Aggregate public health expenditure not specific to sexual health/family planning programmes
(c) Achieve targets under MDG 6 by 2015 and, building on this, further reverse the spread of HIV/AIDS and the incidence of malaria and other major diseases	• Women's share of population aged 15+ living with HIV (%) • Prevalence of HIV, total (% of population aged 15–49) • Children (aged 0–14) living with HIV • Prevalence of HIV, female (% aged 15–24) • Prevalence of HIV, male (% aged 15–24) • Antiretroviral therapy coverage (% of people with advanced HIV infection) • Notified cases of malaria (per 100,000 people) • Children with fever receiving antimalarial drugs (% of children under age five with fever) • Tuberculosis treatment success rate (% of registered cases) • Tuberculosis case detection rate (%, all forms) • Incidence of tuberculosis (per 100,000 people)	• No data on the death rates associated with malaria • No data on the proportion of children under five years sleeping under insecticide-treated bed nets

Table 2.5 Targets and indicators for human and social development (continued)

Targets for human and social development (Area E)		Indicator	Comments
		• Hospital beds (per 1,000 people) • Community health workers (per 1,000 people) • Physicians (per 1,000 people)	
Youth development	(a) Strive to ensure the full and effective participation of youth in the life of society and in decision-making processes	• Teenage mothers (% of women aged 15–19 who have had children or are currently pregnant) • Adolescent fertility rate (births per 1,000 women aged 15–19)	• Measuring participation in society and decision-making may be done through data on voting/political participation in a democracy but there are no data on this
	(b) Build the educational and skills capacity of youth and achieve full and productive employment and decent work	• Ratio of young literate females to males (% aged 15–24) • Literacy rate, youth total (% of people aged 15–24) • Unemployment, youth total (% of total labour force aged 15–24) • Labour force participation rate for ages 15–24, total (%) • CPIA building human resources rating (1 = low to 6 = high)	• More data on skills training may be desirable. CPIA human resource rating not specific to youth • Employment data may include jobs that do not conform to 'decent jobs' classification
	(c) Enhance youth participation in the economy through improving access to vocational education, volunteering and employment	• Secondary education, vocational pupils • Secondary education, vocational pupils (% female)	• No data on volunteering • Refer to labour force participation (aged 15–24) for employment

(continued)

Table 2.5 Targets and indicators for human and social development (continued)

Targets for human and social development (Area E)			Indicator	Comments
Shelter	(a)	Increase access to affordable housing, land and housing-related infrastructure and basic services while achieving a significant improvement in the lives of slum dwellers and rural poor		• No data on housing or slums
Water and sanitation	(a)	Halve by 2015 the proportion of people without sustainable access to safe drinking water and basic sanitation and strive to provide sustainable access to safe drinking water and basic sanitation to all by 2020	• Improved water source, rural (% of rural population with access) • Improved sanitation facilities, rural (% of rural population with access) • Improved water source, urban (% of urban population with access) • Improved sanitation facilities, urban (% of urban population with access)	
Gender equality and empowerment of women	(a)	Achieve equal access of women and girls to education, basic services, healthcare, economic opportunities and decision-making at all levels	• CPIA gender equality rating (1 = low to 6 = high) • Firms with female participation in ownership (% of firms) • Ratio of young literate females to males (% aged 15–24) • Literacy rate, adult female (% of females aged 15+) • Ratio of female to male primary enrolment (%) • Ratio of female to male secondary enrolment (%) • Ratio of female to male tertiary enrolment (%) • Female legislators, senior officials and managers (% of total)	

Table 2.5 Targets and indicators for human and social development (continued)

Targets for human and social development (Area E)	Indicator	Comments
	• Employees, agriculture, female (% of female employment) • Employers, female (% of employment) • Contributing family workers, female (% of females employed) • Wage and salaried workers, female (% of females employed) • Labour force participation rate, female (% of female population aged 15–64) • Part-time employment, female (% of total part time employment) • Ratio of female to male labour participation rate (%) • Mortality rate, adult, female (per 1,000 female adults) • Life expectancy at birth, female (years) • Female-headed households (% of households with a female head) • Population, female (% of total) • Fertility rate, total (births per woman)	
(b) Take steps to realise the right of everyone to the enjoyment of the highest attainable standard of physical and mental health, including sexual and reproductive health	• Health expenditure, public (% of total health expenditure) • Health expenditure, public (% of government expenditure) • Health expenditure, public (% of GDP) • Health expenditure, total (% of GDP)	

(continued)

Table 2.5 Targets and indicators for human and social development (continued)

Targets for human and social development (Area E)		Indicator	Comments
	(c) Accelerate efforts to promote women's rights and gender equality, including women with disabilities		• No relevant indicator for this in dataset
Social protection	(a) Enhance social protection systems to improve the resilience of all, including poor and disadvantaged groups	• CPIA social protection rating (1 = low to 6 = high) • Social contributions (% of revenue) • Poverty gap at USD2 a day (PPP) (%) • Poverty gap at USD1.25 a day (PPP) (%)	• Poverty gap index measures intensity of poverty. It estimates the depth of poverty by considering how far below, on average, the poor are from the poverty line.

Note: CPIA Country Policy and Institutional Assessment

2.3.6 Multiple crises and other emerging challenges

Table 2.6 summarises indicators that could be used to monitor the ability of LDCs to manage multiple crises and other emerging challenges.

2.3.7 Mobilising financial resources for development and capacity building

The priority area of mobilising financial resources for development and capacity building includes a number of sub-pillars including those related to official development assistance; external debt; foreign direct investment; remittances; and domestic resource mobilisation. We have assigned quantitative indicators to each of these in Table 2.7.

2.3.8 Governance

Many of the governance objectives in the IPoA are difficult to measure. The actions proposed for development partners include supporting LDCs in their efforts to improve their governance systems and structures. Measuring the extent to which these objectives may or may not have been met can be related to assistance provided by donors through aid, which has already been reviewed, but also to aid effectiveness and the ability of public institutions to manage flows. Table 2.8 below presents a range of indicators that could potentially be used for monitoring the targets.

Table 2.6 Targets and indicators for multiple crises and other emerging challenges

Targets for multiple crises and other emerging challenges (Area F)	Indicator
(a) Build the resilience of LDCs to withstand economic shocks and to mitigate their adverse effects	• CPIA financial sector rating (1 = low to 6 = high) • CPIA macroeconomic management rating (1 = low to 6 = high) • CPIA quality of public administration rating (1 = low to 6 = high) • CPIA fiscal policy rating (1 = low to 6 = high) • UN EVI index for LDCs; and/or Commonwealth Secretariat criterion
(b) Strengthen LDCs' ability to withstand and overcome the adverse effects of climate change, enhance sustainable growth and protect biodiversity	• CPIA policy and institutions for environmental sustainability rating (1 = low to 6 = high)
(c) Build the resilience of LDCs to withstand natural hazards in order to reduce the risk of disasters	

Notes: CPIA Country Policy and Institutional Assessment
EVI Economic Vulnerability Index

Table 2.7 Targets and indicators for mobilising financial resources for development and capacity building

Targets for mobilising financial resources for development and capacity building (Area G)		Indicator
Domestic resource mobilisation	(a) Enhance the mobilisation of domestic resources, including by raising domestic savings, increasing tax revenue and strengthening institutional capacity	• Gross domestic savings (% of GDP) • Gross savings (% of GDP) • Gross fixed capital formation (constant 2000 USD) • Gross capital formation (annual % growth) • Tax revenue (current LCU) • Tax revenue (% of GDP) • CPIA efficiency of revenue mobilisation rating (1 = low to 6 = high) • CPIA property rights and rule-based governance rating (1 = low to 6 = high) • Adjusted savings: gross savings (% of GNI) • Adjusted savings: net national savings (current USD)
	(b) Reduce corruption and increase transparency at all levels	• CPIA transparency, accountability and corruption in the public sector rating (1 = low to 6 = high)
Official development assistance	(a) Ensure the fulfilment of all ODA commitments to LDCs	• Net ODA received (% of GNI) • Net ODA received per capita (current USD)
	(b) Ensure the alignment of aid with LDCs' national priorities and increase the alignment of aid with their national systems and procedures	• Net official development assistance and official aid received (constant 2010 USD)
External debt	(a) Achieve sustainable debt levels in all LDCs, bearing in mind their special development needs	• External debt stocks (% of GNI) • Interest payments on external debt (% of GNI) • CPIA debt policy rating (1 = low to 6 = high) • Central government debt, total (% of GDP) • Present value of external debt (% of GNI)

(continued)

Table 2.7 Targets and indicators for mobilising financial resources for development and capacity building (continued)

Targets for mobilising financial resources for development and capacity building (Area G)		Indicator
	(b) Remain vigilant in monitoring the debt situation of LDCs and continue to take effective measures within the existing frameworks	• Disbursements on external debt, long-term + IMF (DIS, current USD) • Average maturity on new external debt commitments (years) • Total change in external debt stocks (current USD) • Short-term debt (% of total external debt) • Multilateral debt (% of total external debt)
	(c) Provide specific debt relief measures for LDCs that are not HIPC countries on a case-by-case basis	• Concessional debt (% of total external debt) • Debt forgiveness or reduction (current USD) • Debt forgiveness grants (current USD) • Average grace period on new external debt commitments (years) • Debt buyback (current USD)
Foreign direct investment	(a) Attract and retain increased foreign direct investment in LDCs, especially with the aim of diversifying their production base and enhancing productive capacity	• Foreign direct investment, net inflows (BoP, current USD) • Foreign direct investment, net inflows (% of GDP)
	(b) Enhance initiatives to support investment in LDCs	• CPIA business regulatory environment rating (1 = low to 6 = high) • CPIA trade rating (1 = low to 6 = high)
Remittances	(a) Reduce the transaction cost of remittance flows and foster the development impact of remittances	• Workers' remittances, receipts (BoP, current USD)

Notes: CPIA Country Policy and Institutional Assessment
DIS disbursements
GNI gross national income
HIPC Heavily Indebted Poor Countries
IMF International Monetary Fund
LCU local currency unit
ODA official development assistance

Table 2.8 Targets and indicators for governance

Targets for good governance at all levels (Area H)	Indicator
(a) Strengthen good governance, the rule of law, human rights, gender equality and empowerment of women, and democratic participation, including by enhancing the role of parliaments	• CPIA property rights and rule-based governance rating (1 = low to 6 = high) • CPIA policies for social inclusion/equity cluster average (1 = low to 6 = high) • CPIA gender equality rating (1 = low to 6 = high)
(b) Strengthen and effectively implement measures to prevent corruption and to increase transparency of budgets and expenditure	• CPIA transparency, accountability and corruption in the public sector rating (1 = low to 6 = high)
(c) Enhance the institutional capacity of LDCs to ensure good governance	• CPIA property rights and rule-based governance rating (1 = low to 6 = high)
(d) Ensure that resources to LDCs are provided and used in a predictable, transparent and timely manner	• CPIA equity of public resource use rating (1 = low to 6 = high) • CPIA policy and institutions for environmental sustainability rating (1 = low to 6 = high)
(e) Provide continued support for strengthened and effective voice and participation of LDCs in relevant international forums	• No indicators available
(f) Build durable peace and ensure stability, security and sustainable and inclusive development in LDCs	• CPIA policies for social inclusion/equity cluster average (1 = low to 6 = high)

2.3.9 Choosing indicators to monitor progress on IPoA

Clearly there is a wide range of potential indicators that could be used to monitor progress made by LDCs in relation to the stated objectives of IPoA. Several of the indicators that we have identified have also been suggested by the United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and the Small Island Developing States (UN-OHRLLS); see Basnett et al. (2013) for a table on this. These targets are all related to the achievement of structural transformation, to which all of the indicators included within the eight priority areas for action should contribute. Hence, establishing a database on these indicators should also help to deepen our understanding related to the achievement of structural transformation in LDCs.

Having suggested possible indicators, beyond those already explicitly stated within IPoA, it may be useful to assign numerical targets for achievement by the LDCs by 2020. There are four broad ways in which targets can be defined for achievement by 2020 in order to be consistent with the stated IPoA objectives:

- Targets taken directly from the text, for example a growth target of 7 per cent.
- Targets implicit in the text, for example that sustainable energy for all requires 100 per cent access to energy.

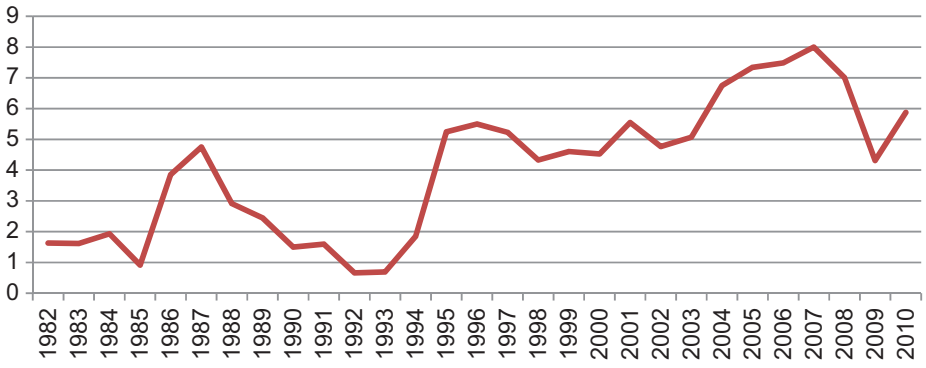
- Targets that can be derived from the text, for example when a reference group is mentioned such as other developing countries or middle-income countries (MICs).
- Targets that are self-constructed, using a reference group or past averages.

In other cases, however, it is not possible to specify a target. For example, what should a resilience target for LDCs be? It would also be useful to benchmark the performance of LDCs relative to each other and prior to the implementation of IPoA in order to then use this information as a basis for the assignment of targets to be met for achievement by 2020. We have constructed spreadsheets for the 49 LDCs to monitor how well each country is scoring on each of the indicators we have identified so far (and from 1960 to 2010); this information is discussed at length in the background paper from which this chapter is adapted. We emphasise the major data limitations that exist for most LDCs.

Whilst there are challenges in assigning country-specific numerical targets for achievement, IPoA does include explicit targets for achievement for the *group* of LDCs in relation to:

- Graduation – 'Halving' the number of LDCs to 24 during the next decade; LDCs are classified by the Economic and Social Council of the United Nations.
- Growth – Growth in LDCs of 7 per cent per annum; currently growth for LDCs is below the IPoA target. However, prior to the global financial crisis it had been exceeded for a specific period (see Figure 2.1).
- Exports – Doubling the share of LDC exports in global exports by 2020, which we estimate to be from 0.9 per cent in 2010 to 1.8 per cent in 2020 (or similar to doubling of share over 2000–10 from 0.45 to 0.9 per cent; one can also use 2005–08 as the base year). As can be seen from Figure 2.2, the share of LDCs in world exports is considerably below the IPoA target at present.

Figure 2.1 GDP growth in LDCs, 1982–2010 (%)



Source: World Development Indicators.

2.4 Creating a country-level IPoA index for structural transformation

There is a range of challenges in constructing composite indices, which we discuss in this section. Here we attempt to benchmark the performance of LDCs in relation to the indicators we have identified so far for IPoA. We show that it is possible to construct a composite index, so that the performance of LDCs against MICs can be compared and benchmarked in a methodologically simple and transparent way. However, the analysis is constrained by severe data limitations for LDCs, to which we have already alluded. We construct a composite index for IPoA and rank LDCs accordingly across the pillars of productive capacity, trade and agriculture. We exclude other pillars from the analysis because of the limited data available across LDCs as well as other conceptual issues regarding the interpretation of scores.[4]

2.4.1 Pros and cons of composite indices

There are a number of pros and cons in constructing composite indices (OECD 2008):

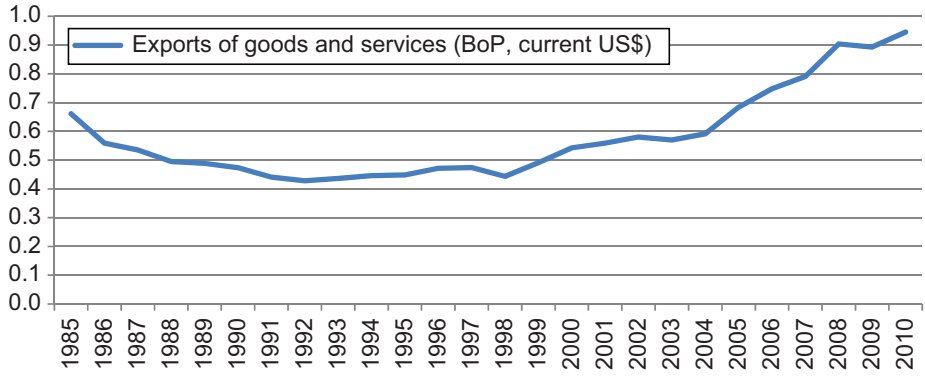
Pros of composite indices

- Can summarise complex, multidimensional realities with a view to supporting decision makers and are easier to interpret than a range of separate indicators.
- Help to reduce the visible size of a set of indicators without dropping the underlying information.
- It can be easier to compare performance across indicators, and countries' indices can help to place the issue of country performance and progress on the policy agenda.

Cons of composite indices

- May disguise serious failings in some dimensions and increase the difficulty of identifying proper remedial action if the construction process is not transparent.

Figure 2.2 Share of LDCs in world exports, 1985–2010 (%)



Source: WDI

- May lead to inappropriate policies if dimensions of performance that are difficult to measure are ignored, or invite simplistic policy conclusions.
- The choice of indicators and weights is often based on value judgements or data limitations.

Cantore et al. (2011) examine the landscape of existing indices. They argue that aims and objectives of indices vary considerably in terms of the issues being captured, the audience and the intended use and impact; the country coverage varies from one country to over 200; the components or broad issues being measured by the index vary depending on the overall focus and aim of the index; the construction/technical aspects vary; and the data vary in terms of data sources and use of quantitative, qualitative or perceptional data. None of the composite indices surveyed provides an adequate description of a country's ability for structural transformation.

2.4.2 Selecting indicators

The purpose of constructing this index is to provide both a benchmark and a reference through which to measure structural transformation in LDCs. It is significant that structural transformation is measured, as opposed to traditional measures of growth, because it is a more comprehensive process that represents a country's ability to eradicate poverty by transitioning from a low productivity to a high productivity economy. In their paper 'Globalization, structural change and productivity growth', McMillan and Rodrik (2011) emphasise the need for structural change that enhances growth by channelling labour and other resources into modern economic activities in developing countries. Structural transformation is defined in the context of four steps (Timmer et al. 2012) that include (i) a declining share of agriculture in gross domestic product (GDP) and employment; (ii) a rapid process of urbanisation; (iii) the rise of an industrial and service economy; and (iv) a transition from high to low rates of births and deaths. When these four steps occur, resources are reallocated, productivity rises and incomes expand, allowing positive growth to ensue. However, McMillan and Rodrik (2011) also point out that this sort of structural shift must occur in a timely manner for a country to achieve successful structural transformation.

This chapter has selected a number of indicators based on how we expect variables to contribute to structural transformation, consistent with the literature. In particular, we expect an LDC to structurally transform itself when it (compared with a benchmark):

- becomes more productive in agriculture by achieving a higher cereal yield;
- increases the share of manufacturing in value addition;
- increases GDP per capita;
- increases gross capital transformation;
- increases the share of ICT in services exports;
- improves its product diversification;
- increases the number of export markets it trades with;

- improves health services by decreasing the infant mortality rate;
- has better telecommunications infrastructure; and
- has a more developed financial market.

It is important to construct an index that looks at the growth in appropriate indicators over a period of time. In our index we have chosen 11 indicators that pertain to the process of structural transformation, and examine them during the period from 2005 to 2008. We examine progress of selected IPoA indicators over the period 2005–08 to benchmark individual LDCs against the MIC average. Table 2.9 presents LDC averages across IPoA pillars such as productive capacity; trade; and agriculture, education, health and water. This average figure – calculated across all identified indicators for which it is possible to do so – provides one means through which to benchmark the performance of LDCs relative to each other and provide a baseline from which the monitoring of progress linked to interventions motivated by IPoA (by LDCs and development

Table 2.9 Average for LDCs and MICs (2005–08)

Indicator name	LDC average (2005–08)	MIC average (2005–08)	Ratio LDC/MIC	IPoA pillar
Mobile cellular subscriptions (per 100 people)	12.7	38.4	0.33	Productive capacity
Cereal yield (kg per hectare)	1,760.3	3,222.8	0.55	Productive capacity
Manufacturing, value added (% GDP)	11.7	22.2	0.53	Productive capacity
GDP per capita PPP (constant 2005 international $)	1,125.2	4,793.3	0.23	Productive capacity
Gross capital formation (% GDP)	22.9	30.2	0.76	Productive capacity
Manufactures exports (% of merchandise exports)		66.3		Trade
Service exports (BoP, current USD) as % of exports goods and services	13.0	15.2	0.86	Trade
Product diversification (number of HS6 subheads exported)		4,287.75		Trade
Market diversification (number of export markets)		218.5		Trade
Infant mortality rate (per 1,000 live births)	0.01	0.02	0.58	Other
Domestic credit to private sector (% GDP)	17.2	59.2	0.29	Other

Note: Data for LDC and MIC average are taken from WDI and averaged over 2005–08

partners) can begin. We can also compare this with an MIC average. For product and market diversification, an MIC benchmark was not provided with the data, so the values for a representative MIC (Malaysia) were used to create an LDC/MIC ratio.

In the following sections, we discuss these indicators and begin to construct an LDC-specific index. We include only those indicators for which there are most data available across LDCs and that make conceptual sense. When a country did not have data for these indicators it was excluded. When data for only one year were available, we extra- and intrapolated data using the simple averages for that particular indicator(s) and country.[5]

We assign equal weights to each indicator as no prior analysis has been undertaken to establish statistical relationships between the indicators (e.g. through principal components or factor analysis). This provides a relatively straightforward way of assessing the performance of each LDC relative to each other, but it is also possible to calculate country performance relative to a group average (in this case, the MIC average), or other numerical targets.

2.4.3 Productive capacity

For this pillar we include the following five indicators: mobile cellular subscriptions (per 100 people), cereal yield (kg per hectare), manufacturing value added (% of GDP), GDP per capita PPP (constant 2005 international $) and gross capital formation (% of GDP). We score the value of each indicator in each year as a ratio of the MIC average in that year (some LDCs which are low-income countries (LICs) or MICs can score higher than the MIC average for some indicators). We then aggregate these five indicators into one IPoA productive capacity index. A higher score for each of the indicators included would indicate an improvement in productive capacity compared with the MIC average. As the data are time varying we can also examine relative improvements in productive capacity in each LDC. Figure 2.3 provides data for those LDCs for which there are data.

2.4.4 Trade

For this pillar we include the following four indicators: manufactures exports (% of merchandise exports), service exports (BoP, current USD), product diversification (number of HS6 subheads exported) and market diversification (number of export markets). We score the value of each indicator in each year as a ratio of the MIC average in that year. We then aggregate these four indicators into one IPoA trade index. A higher score for each of the indicators included would indicate an improvement in trade performance compared with the MIC average. As the data are time varying we can also examine relative improvements in the trade index in each LDC. Figure 2.4 provides data for those LDCs for which there are data.

2.4.5 Other

For this pillar we include the following two indicators: infant mortality rate (per 1,000 live births) and domestic credit to private sector (% of GDP). We score the

Figure 2.3 Productive capacity index

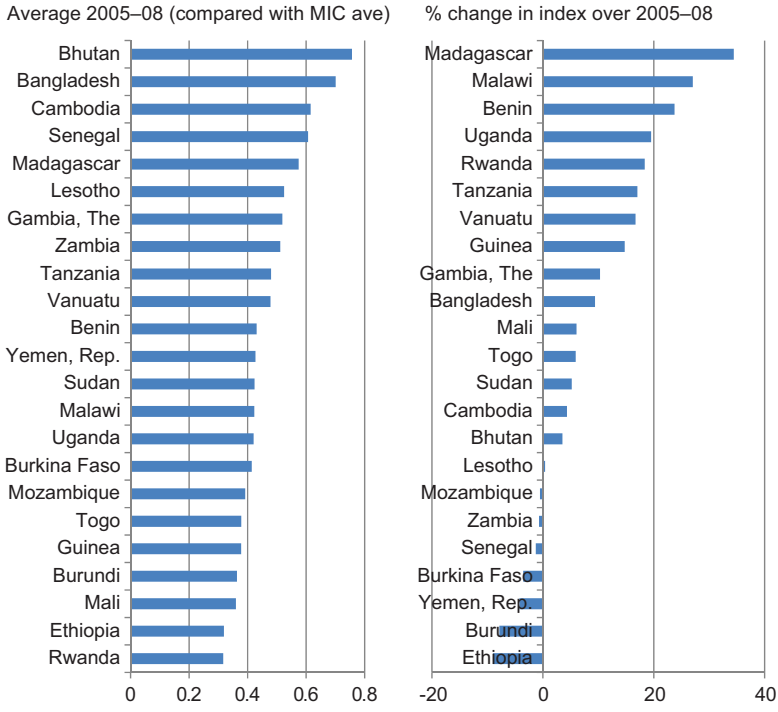
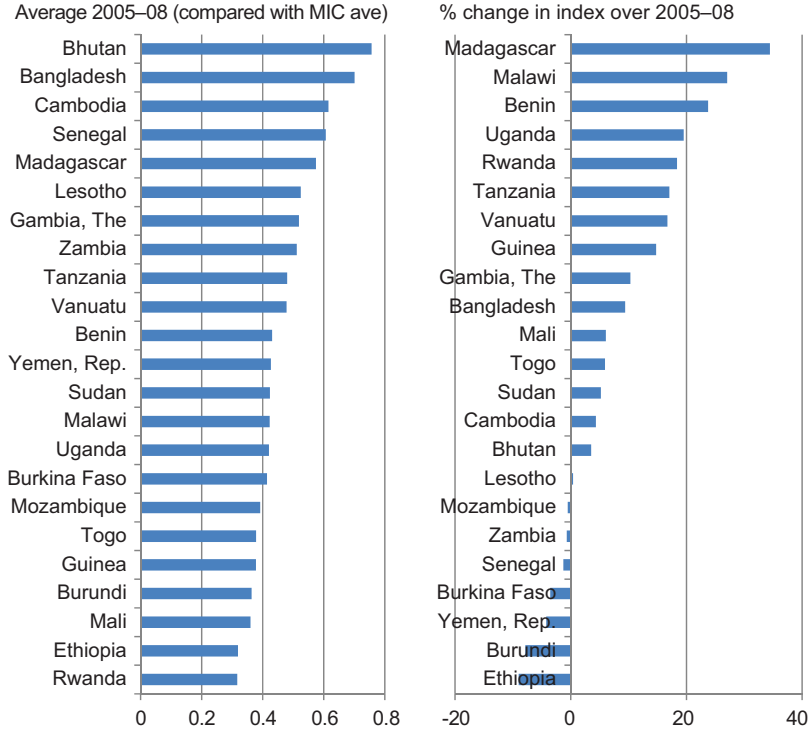


Figure 2.4 Trade index



value of each indicator in each year as a ratio of the MIC average in that year. We then aggregate these two indicators into one IPoA other index. A higher score for each of the indicators included would indicate an improvement in performance compared with the MIC average. As the data are time varying we can also examine relative improvements in the trade index in each LDC. Figure 2.5 provides data for those LDCs for which there are data.

2.4.6 IPoA index for structural transformation

We can now aggregate the three sub-indices (productive capacity, trade, other) into one aggregate IPoA index for structural transformation. There are missing data for several LDCs in the underlying sub-indices and as a result there are only data for 23 LDCs. The use of fewer indicators would allow us to include more LDCs. Figure 2.6 shows that Vanuatu scores highest, followed by Madagascar, Cambodia and Bangladesh. These countries are close to the MIC average. Guinea and Zambia scored lowest of the 23 LDCs. The greatest improvements over 2005–08 have been made by Burundi, Madagascar and Rwanda. Bhutan's index worsened (Figure 2.7).

Figure 2.5 Other index

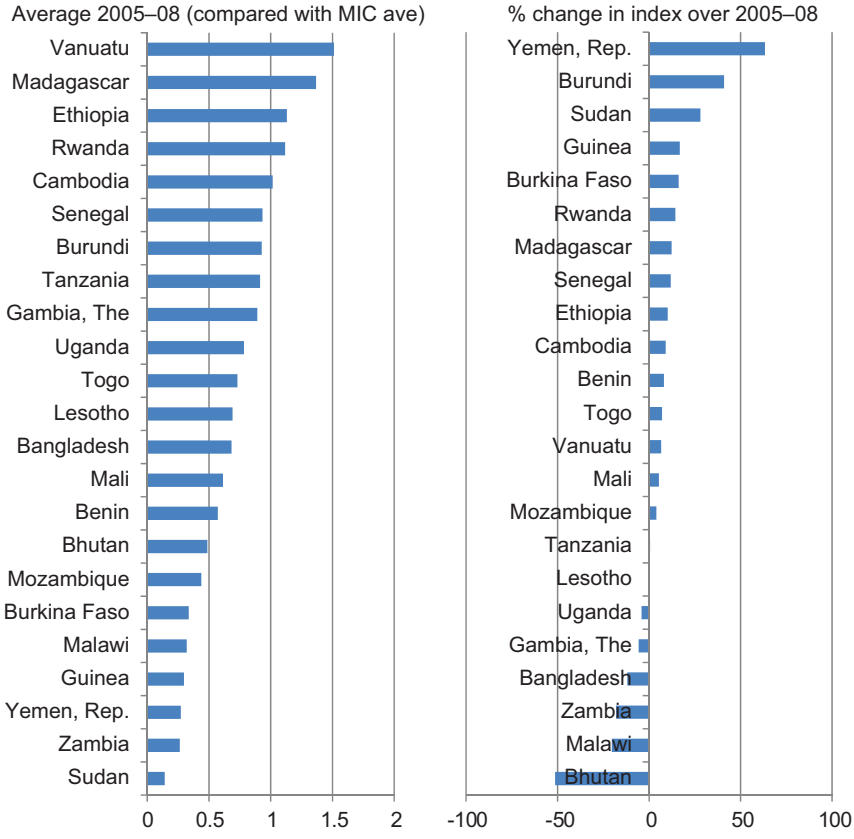
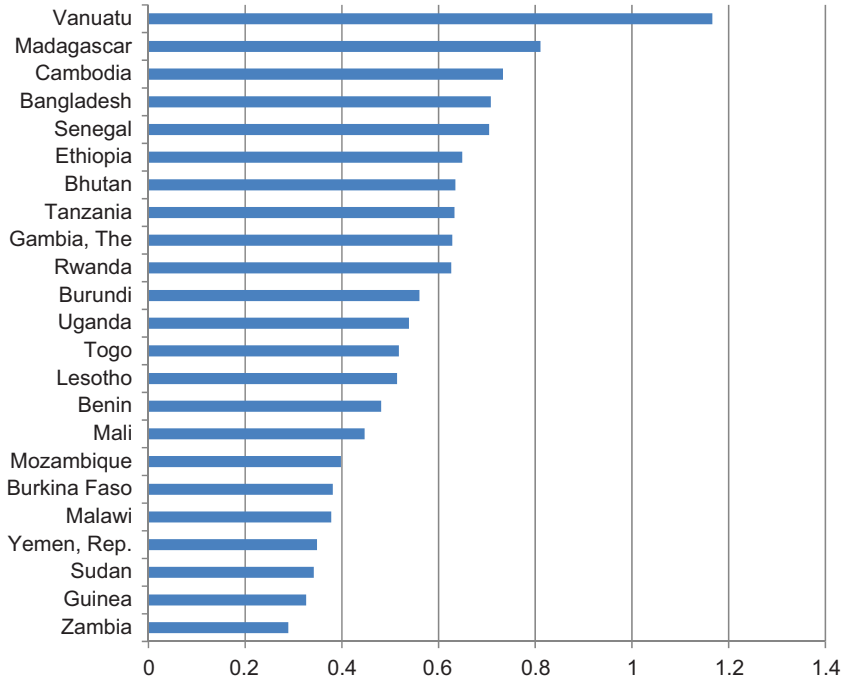


Figure 2.6 IPoA index for structural transformation, LDCs compared with MIC average (2005–08), aggregated on basis of 11 indicators and three sub-indices



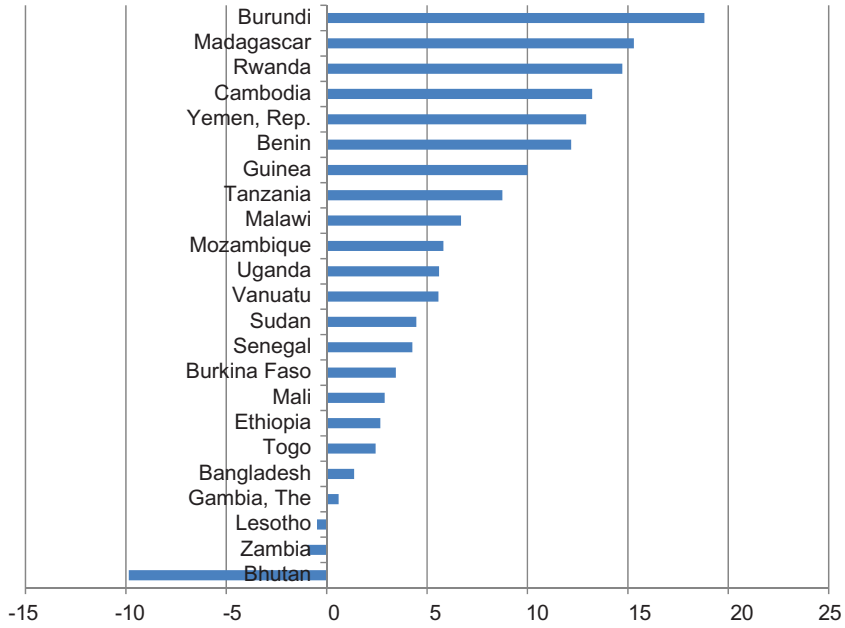
Source: Authors' calculations

This chart was calculated on the basis of the following indicators: mobile cellular subscriptions (per 100 people), cereal yield (kg per hectare), manufacturing value added (% of GDP), GDP per capita PPP (constant 2005 international $), gross capital formation (% of GDP), manufactures exports (% of merchandise exports), service exports (BoP, current USD), product diversification (number of HS6 subheads exported), market diversification (number of export markets), infant mortality rate (per 1,000 live births) and domestic credit to private sector (% of GDP).

When we examine the availability of the individual indicators, two indicators in particular constrain the number of LDCs in the IPoA index: product diversification (number of HS6 subheads exported) and market diversification (number of export markets). After we delete these indicators, we can construct the resulting IPoA index of structural transformation which now has 26 individual LDCs. Zambia, Guinea and Sudan bring up the rear, whilst Maldives, Vanuatu and Madagascar lead the index. Different countries progressed differently, with the choice of indicators affecting the rankings as well as the number of countries included.

Figure 2.8 was calculated on the basis of the following indicators: mobile cellular subscriptions (per 100 people), cereal yield (kg per hectare), manufacturing value added (% of GDP), GDP per capita PPP (constant 2005 international $), gross capital formation (% of GDP), manufactures exports (% of merchandise exports), service

Figure 2.7 IPoA index for structural transformation, LDCs compared with MIC average (% changes 2005–08)



Source: Authors' calculations

exports (BoP, current USD), infant mortality rate (per 1,000 live births) and domestic credit to private sector (% of GDP).

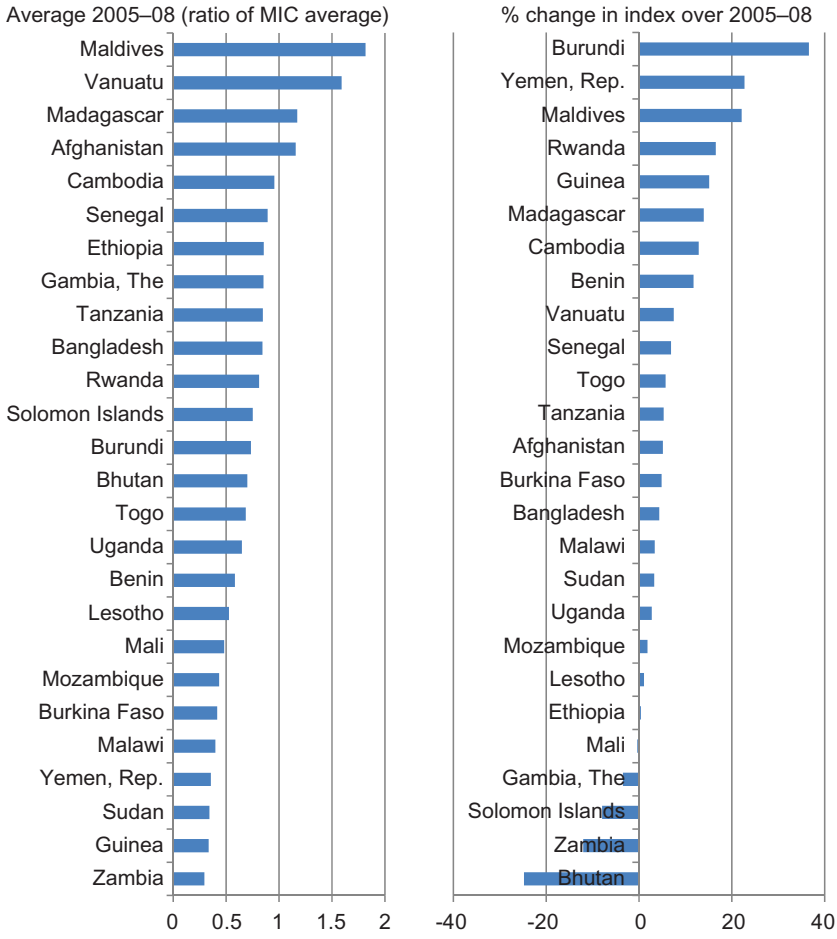
2.5 Conclusions

The IPoA clearly emphasises the need for LDCs (as a group) to reach a target growth rate of 7 per cent, the importance of economic diversification (without a target specified) and the need to double the share of LDC exports (which can be monitored easily, as suggested in this chapter). However, it also underlines a set of country-specific targets and further actions, which are required both by LDCs and by development partners. As part of the development of this chapter, we have constructed country-level databases that could be used to monitor indicators for LDCs across the IPoA pillars of priority areas for action.

A related background paper from which this chapter is adapted, and its associated spreadsheets (constructed for 49 LDCs), serves to benchmark the performance of the LDCs. There is a set of meaningful country- and development partner-level indicators for which some meaningful targets could be specified, and which could be used to monitor IPoA on a regular basis. Much of Section 2.3 in this chapter addresses the question of which indicators could be used to monitor IPoA targets and objectives.

Section 2.4 presents preliminary work to construct an IPoA index for structural transformation. It selects indicators for which there are some data available and

Figure 2.8 IPoA index for structural transformation, LDCs as ratio of MIC average (2005–08), aggregated on basis of nine indicators and three sub-indices



which are expected to contribute to structural transformation (which is underlying much of IPoA) – that is when an LDC becomes more productive in agriculture and achieves a higher cereal yield, increases its share of manufacturing (and services) in value addition and exports, increases its share of ICT in services exports, increases its product and market diversification, has better telecommunications infrastructure, improves its health system, has a more developed financial market and increases GDP per capita. We benchmarked LDC country performance to the average of MICs, and provided index values for LDCs for the years 2005–08. Selecting a limited set of 11 indicators yielded 23 LDCs with data for all indicators.

Further work will be needed to benchmark LDCs comprehensively on the basis of IPoA indicators. The discussion in this chapter provides for a simple and stable method to benchmark IPoA indicators and to construct a composite IPoA index for informing policies and monitoring progress. In future, better data availability could also lead to better monitoring.

Annex 2.1 Coverage of existing indices

Indicator	Economic capabilities	Governance/institutional capabilities	Social capabilities	Number of developing countries covered
Composite Vulnerability Index (UN)	—	—	—	*many*
Economic Resilience Index (UN)	*limited*	*some*	—	*some*
Composite Global Vulnerability Index (UN)	*limited*	—	—	*many*
Economic Vulnerability Index (UN)	—	—	—	*some*
Local Vulnerability Index	*limited*	*limited*	—	*limited*
Prevalent Vulnerability Index	*limited*	*limited*	*limited*	*limited*
Risk Management Index	*some*	*some*	*some*	*limited*
Environmental Sustainability Index	*limited*	*limited*	—	*many*
Environmental Performance Index	—	*limited*	*limited*	*many*
Environmental Vulnerability Index	*limited*	*limited*	—	*many*
Worldwide Governance Indicator	*many*	*many*	*limited*	*many*
Country Policy and Institutional Assessment (WB)	*some*	*some*	*limited*	*many*
Polity IV Project	—	*some*	—	*many*
Performance Logistics Index (WB)	*limited*	—	—	*many*
Human Development Index	—	—	—	*limited*
Global Competitiveness Index (WF)	*many*	*limited*	*limited*	*many*
Innovation Capability Index	*limited*	—	—	*some*
Technology Achievement Index	—	—	—	*some*
Competitive Industrial Performance Index	—	—	—	*some*
Ease of Doing Business (WB)	*some*	*some*	—	*many*
Capital Control Index	*limited*	—	—	*some*
Enabling Trade Index	*limited*	*limited*	—	*some*
Trade Performance Index	—	—	—	*many*
Trade Indicators	*limited*	*limited*	—	*many*
Environmental Vulnerability Index	—	*limited*	—	*limited*
Vulnerability-Resilience Indicator	—	—	—	*limited*
State-Business Relations Index	—	*limited*	—	*limited*

Notes: The classification 'many', 'some' and 'limited' associated with the economic, governance/institutional and social capabilities refers to the number of input factors related to change management capabilities that each indicator takes into account; the assessment is based on subjective criteria. The number of developing countries covered is classified as 'many' if it is greater than 100, 'some' if it is in the range of 50–100 and 'limited' if it is smaller than 50.

Source: For background info, see Cantore et al. (2011)

Notes

1 This chapter has been adapted from a larger piece of research undertaken for the Commonwealth Secretariat between May 2012 and August 2013 by Yurendra Basnett, Jodie Keane, Jane Kennan and Dirk Willem te Velde of the Overseas Development Institute (ODI), London, with the assistance of Mohammed Razzaque of the Commonwealth Secretariat and background research by Jane Kennan and Ritwika Sen of ODI. We are grateful for the constructive comments received by the LDC IV Monitoring Group, Expert Group Meeting hosted by the Centre for Policy Dialogue, Dhaka, 7–9 September 2012, and for expert comments by ICTSD, in addition to other comments received at further meetings in London and from internal and external referees.

2 See www.odi.org.uk/sites/odi.org.uk/files/odi-assets/publications-opinion-files/6441.pdf for an ODI review of 30 indices.

3 See background paper for further discussion.

4 The indicators used in this case are too limited to be developed further.

5 In the event that there was no data entry for the time period under study (2005–08), the country in question was not included in the study. If data were available for only one year, the given value was used for all the four years as a flat trend, which was judged to be the best approximation. When there were two or three entries, the MS Excel 'TREND' or 'FORECAST' function was used for purposes of extrapolation or interpolation (the former function is only relevant for extrapolation, whereas the latter can be used for both). These functions return predicted values of the dependent variable (*y*) for a specific *x* value (independent variable) by using the method of least squares to best fit a linear regression of *y* on *x*. Since the *x* values in question represent a time series, the results are identical whether the actual years or the series 1, 2, 3… are entered into the function. For example, for Guinea-Bissau the data for school enrolment, secondary (% gross) was available only for the years 2005 and 2006, that is 33.8009 and 36.01214 respectively. The FORECAST function syntax is FORECAST(*x*, known_*y*'s, known_*x*'s). Hence, on entering the relevant values in the given format the results 38.22338 and 40.43462 were obtained for the years 2007 and 2008.

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