

Revised Draft with Updated Data

Attaining the MDGs *How Successful are the LDCs?*

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Attaining the MDGs *How Successful are the LDCs?*

1. INTRODUCTION

As the terminal year (2015) of the Millennium Development Goals (MDGs) draws near, the state of actual delivery regarding these development targets has become a matter of renewed and intense debate. The national governments as well as the international development community are preoccupied in generating the 'final push' towards accelerated implementations of the MDGs.¹ At the same time, an explicit understanding seems to have emerged that the MDGs are going to continue beyond 2015 in one form or other. This particular aspect has created enhanced demand on the lessons to be learnt for the future from the MDG implementation experience. In this connection, the state of attainment of MDGs in the least developed countries (LDCs)² – one of the most disadvantaged and vulnerable group of countries – remains a matter of special developmental concern.

United Nations Economic and Social Council's report of the Secretary-General flagged that "although the least developed countries have made some progress in social and human development, many of the goals and targets of the Millennium Development Goals are yet to be achieved" (United Nations Economic and Social Council 2013, p. 25). The Report of the Secretary-General on 26 July 2013 before the United Nations General Assembly stated, "Together, we need to focus on those Goals that are most off-track and on countries that face particular development challenges, including the least developed countries, landlocked developing countries, small island developing States and countries affected by or recovering from conflicts or disasters. (UN 2013a, p. 9)".

A scrutiny of the implementation status of the MDGs in the LDCs is supposed to provide important insights regarding articulation of the successor goals and targets of the MDGs. This is all the more important as the succeeding international development framework is supposed to be 'universal' in nature and to contain the Sustainable Development Goals (SDGs). Thus, it is pertinent to understand, based on experience, how the development challenges of the countries with special needs including the LDCs will be accommodated within a framework for all.

It should be noted that there is hardly any exclusive study available regarding MDG deliveries in the LDCs. At best, LDCs' progress in terms of MDGs is reported as a part of global reviews. In

¹Towards this end, United Nations Development Programme (UNDP) introduced the MDG Acceleration Framework (MAF) which provides a systematic way for countries to develop their own action plan based on existing plans and processes to pursue their MDG priorities. Between 2010-2012, UNDP supported 37 member countries to develop MAF action plans (see http://www.undp.org/content/undp/en/home/mdgoverview/mdg_goals/acceleration_framework/)

²The concept of LDCs emerged in the late 1960s. In 1971, category of the LDC was formed through the UN resolution 2768 (XXVI). LDCs are recognised to be the countries with a state of structural atrophy characterised by low-income, poor human development, and high economic vulnerability. At present 49 UN member states are categorised as LDCs. In the light of recommendations by the Committee for Development Policy (CDP), the list of LDCs is reviewed every three years by the United Nations Economic and Social Council (UNECOSOC). The latest review was undertaken in 2012. For further details see: <http://www.unohrlls.org/>

that sense, the present study is the first attempt to take a detailed and analytical look at MDG progress in the LDCs.³

However, assessing progress by the LDCs regarding attainment of the MDGs is fraught with methodological challenges. To evolve the methodology of the current exercise, the paper has briefly reviewed different approaches and methods that have been deployed in tracking movements towards achieving the MDGs in the developing countries in general. Availability of relevant data has been a major concern in undertaking the exercise. A total number of 14 MDG indicators (out of 49) concerning the LDCs has been analysed in the paper. The MDG-related data set maintained by the UN is quite wanting in this regard.⁴ Due to comparability problems, one could not in most cases use the national reports on MDGs. One of the key issues of investigation has been whether launching of MDGs did accelerate the process of attainment of the concerned indicators. The results have been reported under the regional groups of the LDCs, i.e. Asian, African and the Island States as well as by specific indicators.

After the present introduction, the paper discusses in Section 2 the economic performance of the LDCs since the launch of the MDGs (2000). Section 3 presents a review of the literature to bring out the various methodological approaches used by experts to track progress towards attainment of the MDGs. The core contribution of the paper is in Section 4, which describes the methodological approach followed in the present exercise as well as reports the summary of the results obtained through this exercise. Based on foregoing analysis, the concluding section seeks to tease out certain issues concerning the LDCs, which need to be kept in perspectives while designing the post-2015 international development framework.

2. LDCs' ECONOMIC PERFORMANCE SINCE 2000

While the MDG framework was largely influenced by the human development paradigm, it is important to understand a couple of basic economic trends having important implications for achieving the MDGs. In this section we recall the economic performance of the LDCs after the launch of the MDGs in 2000.

GDP Growth

During the decade 2001-2010, LDCs as a group has been relatively successful in accelerating the gross domestic product (GDP) growth rate recording an average of 7.0 per cent growth (Table 1). Average GDP growth rate for the LDC group started to decelerate after attaining the peak figure of 8.7 per cent in 2007, i.e. as the global financial and economic crisis was setting in. Although most of the LDCs could avoid falling into recession, most of them experienced erosion of economic growth in the post-crisis period. Thus, in 2011, the average growth rate of the group was yet to recover its pre-crisis benchmark. According to UNCTADSTAT data, the

³Among one of the early attempts was from United Nations Department of Economic and Social Affairs (UNDESA) when it published a report titled *Progress towards the Millennium Development Goals, 1990-2003*; (see http://www.un.org/special-rep/ohrlls/lcd/MDGs/Goal_1-final.pdf); later another report titled *Measuring Progress in Least Developed Countries: A Statistical Profile* was prepared in 2006 jointly by the United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States (UNOHRLLS) and World Bank (see <http://www.unohrlls.org/UserFiles/File/Publications/progress%20in%20LDCs.pdf>) which covered LDCs' progress beyond MND indicators.

⁴See <http://mdgs.un.org/unsd/mdg/data.aspx>

economic growth rate in the LDCs was only 3.8 per cent in 2011 and may increase to 4.8 per cent GDP growth in 2012 – still much lower than early 2000s.

Table 1: GDP Growth (%)

Group	Average			2007	2008	2009	2010	2011	2012
	2001-2010	2004-2008	2011-2012						
LDCs	7.0	8.0	4.3	8.7	7.1	5.2	6.1	3.8	4.8
LDCs: Africa and Haiti ⁵	7.1	8.5	4.1	9.7	7.5	4.8	6.0	3.7	4.5
LDCs: Asia ⁶	6.6	6.8	4.5	7.3	6.1	6.4	6.7	3.7	5.3
LDCs: Islands ⁷	13.1	20.6	7.8	1.3	8.4	-4.3	0.4	8.1	7.5
LDCs: Islands ⁸ (excluding Timor-Leste)	2.9	4.3	4.3	4.4	3.2	-0.1	3.2	4.8	3.9

Source: Authors' calculation based on the UNCTADSTAT data.

Per Capita GNI Growth

The performance of LDCs in terms of per capita income growth was also commendable during 2001-2010 period, particularly in comparison to the negative record of the earlier decade's (1991-2000). Per capita income – gross national income (GNI) in nominal USD terms – grew in 2001-2010, on an average, by 10.4 per cent per year (Table 2).⁹ African LDCs and Island LDCs managed to reap the benefits of the boom period in global economy more than the Asian LDCs. Similar to the GDP growth scenario, 2004-2008 period was outstanding in terms of per capita income growth. However, in 2009 per capita income of LDCs as a group could grow by only 0.2 per cent. In 2009, per capita income of African LDCs declined by (-) 4.3 per cent, while per capita income of Island LDCs experienced sharp decline (-) 15.0 per cent.¹⁰ The Asian LDCs showed better resilience in 2009 where per capita income of the group increased by 9.1 per cent. In 2011, LDCs as a group registered 10.4 per cent growth of per capita GNI which was similar to the average growth of the previous decade (2001-2010).

Table 2: Per Capita Income (GNI, in Nominal USD Terms) Growth (%)

Group	Average			2007	2008	2009	2010	2011
	1991-2000	2001-2010	2004-2008					
LDCs	-0.6	10.4	15.7	20.1	18.1	0.2	8.6	10.4
LDCs: Africa and Haiti	-2.6	11.0	18.2	21.9	18.7	-4.3	4.5	10.5
LDCs: Asia	2.7	9.7	11.8	16.7	16.4	9.1	15.3	10.3
LDCs: Islands	-0.1	10.5	22.4	25.7	33.6	-15.0	14.5	17.3
LDCs: Islands (excluding Timor-Leste)	-0.1	6.3	8.9	11.6	7.1	-5.1	9.5	15.9

Source: Authors' calculation based on the UNCTADSTAT data.

⁵African LDCs include the following countries: Angola, Benin, Burkina Faso, Burundi, Central African Republic, Chad, Democratic Republic of the Congo, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gambia, Guinea, Guinea-Bissau, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Niger, Rwanda, Senegal, Sierra Leone, Somalia, Sudan, Togo, Uganda, United Republic of Tanzania and Zambia. For the analysis in this paper Haiti is included in the African LDCs group.

⁶Asian LDCs include the following countries: Afghanistan, Bangladesh, Bhutan, Cambodia, Lao People's Democratic Republic, Myanmar, Nepal and Yemen.

⁷Island LDCs include: Comoros, Kiribati, Samoa, Sao Tome and Principe, Solomon Islands, Timor-Leste, Tuvalu and Vanuatu.

⁸Performance of Island LDCs as a group was highly influenced by Timor-Leste since its emergence in 2003. The country's share in total GDP of all Island LDCs is about 60 per cent. Hence, for a better understanding, the performance of Island LDCs excluding Timor-Leste has also been reported here.

⁹It is important to recognise that these figures are in nominal terms and it was a time of high commodity prices. Hence, in real terms the increase in well-being was obviously much lower.

¹⁰Excluding Timor-Leste, the decline was about 5.1 per cent.

The performance of LDCs in terms of GDP growth and per capita GNI growth during the decade of 2000s and thereafter indicate a number of important dynamics. *First*, the improved performance by the LDCs was not evenly distributed among the members of the group. *Second*, this improved performance in LDCs to a large extent was driven by the mining sector in African LDCs and was underpinned by the global commodity prices (see later). *Third*, such structural weakness in the economic performance was exposed in face of global financial and economic crisis as the LDCs are yet to recapture its pre-global financial and economic crisis benchmark. *Fourth*, the increase in per capita GNI was largely due to robust flow of remittance notwithstanding the global crisis (see later).

Composition of the Economies

The economic composition in LDCs are mostly biased towards agriculture sector both in terms of value addition and employment. It needs to be, however, recognised that the LDCs have made some progress towards reducing their dependence on agriculture. Regrettably, in many LDCs, particularly in African LDCs, this was associated with higher contribution from the extractive industries, i.e. the mining sector. Between 2001 and 2008, the share of mining sector in GDP for LDCs as a group increased by more than 10 percentage points (Table 3). Consequently, this change in the GDP composition was not manifested in their employment structure. The countries continued to rely heavily on low productive sectors, particularly agriculture, for generating employment.

Table 3: Share of Mining Sector in GDP (%)

Group	Average		2001	2008	2009	2010	2011
	1991-2000	2001-2010					
LDCs	6.8	14.0	9.1	19.8	13.9	14.3	16.3
LDCs: Africa and Haiti	9.0	18.1	11.6	24.9	18.3	19.3	22.1
LDCs: Asia	3.7	6.6	5.9	7.9	5.2	4.9	5.2
LDCs: Islands	2.1	31.6	2.5	54.7	44.0	47.9	51.2

Source: Authors' calculation based on the UNCTADSTAT data.

Share of manufacturing sector in LDCs has stagnated at around 10.0 per cent over the last two decades (1991-2000 and 2001-2010). At regional level, GDP share attributable to this sector in the Asian LDCs as a group, is higher than that of their African counterparts. In fact, African and Island LDCs have undergone creeping deindustrialisation as the share of manufacturing in their economies declined since 1990s.

Savings

Lower level of gross domestic and national savings is a common feature of most of the LDCs. Average national savings rate of the LDCs as a group was 22.1 per cent during 2000-2010 (Table 4). It increased to 24.2 per cent of GDP in the 2006-2008 period, and further to 24.46 per cent of GDP in 2009-2010.

Prior to the global economic crisis period (2006-2008), it was marginally higher (13.3 per cent) which declined to 12.4 per cent of GDP in 2009-2010. Data for 2011 show that, the ratio increased to 13.1 per cent which was largely influenced by African LDCs. The performance of African LDCs was clearly influenced by the presence of natural resource rent in several

countries. Indeed, the volatility of domestic savings in face of global financial crisis was also originated from performance of the oil-exporting African LDCs.

The volatility found in the domestic savings was not manifested in the national savings trends of LDCs as a group, thanks to the resilient performance of remittance inflow to the Asian LDCs. African LDCs continued to experience the shock from the crisis. Indeed, the national savings in African LDCs are lower than domestic savings indicating negative net current transfers.

Table 4: Gross National Savings Trend in the LDCs (% of GDP)

Year	LDCs ¹	LDCs: Africa ² (n=23)	LDCs: Asia ³ (n=5)	LDCs: Islands ⁴ (n=2)
2000-2010 (Average)	22.14	16.91	27.71	N/A
2006-2008 (Average)	24.19	20.89	28.89	N/A
2009-2010 (Average)	24.46	16.50	29.61	N/A
2011	25.22	20.42	32.96	N/A

Source: World Development Indicator, World Bank, 2013.

Note:

1. LDCs include 33 African LDCs (including Haiti), 8 Asian LDCs and 8 Island LDCs.
2. African LDCs include: Angola, Benin, Burkina Faso, Burundi, Djibouti, Ethiopia, Gambia, Guinea, Lesotho, Liberia, Madagascar, Malawi, Mali, Mozambique, Rwanda, Senegal, Sierra Leone, Sudan, Togo, Uganda, United Republic of Tanzania and Zambia. For the analysis in this paper Haiti is included in African LDCs group (n=23).
3. Asian LDCs include: Bangladesh, Cambodia, Lao People's Democratic Republic, Nepal and Yemen (n=5).
4. Island LDCs include: Solomon Islands, Vanuatu (n=2).

Investment

The LDCs as a group of countries possess the common characteristic of low capital endowment. Investment is a binding constraint for their economic growth. Current levels of investment in infrastructure in LDCs are particularly low. The average gross capital formation as percentage of GDP increased to 21.4 per cent during 2001-2010 which was 18.0 per cent in the preceding decade (1991-2000). Table 5 suggests that in 2010 the indicator recorded an increase to 23.3 per cent of GDP of the LDCs, only to fall to 22.0 per cent in 2011. This fall was experienced by all regional groups of LDCs.¹¹

Table 5: Share of Gross Capital Formation in GDP (%)

Group	Average		2001	2008	2009	2010	2011
	1991-2000	2001-2010					
LDCs	18.0	21.4	19.9	22.1	22.5	23.3	22.0
LDCs: Africa and Haiti	18.0	20.8	19.0	21.7	22.2	23.3	22.6
LDCs: Asia	17.8	22.7	21.1	23.3	23.1	23.4	21.3
LDCs: Islands	22.8	14.5	18.0	10.8	17.4	18.8	15.4

Source: Authors' calculation based on the UNCTADSTAT data.

Foreign direct investment (FDI) inflow in LDCs is traditionally concentrated in export-oriented primary production sectors. This characteristic is particularly observed in African LDCs. Moreover, FDI inflow is concentrated in a few destinations. During the 2000s FDI inflow was mainly targeted in extractive industries with oil-exporting LDCs in Africa accounting for more

¹¹In other developing countries gross capital formation as percentage of GDP was about 32.0 per cent in 2010.

than 60 per cent of the total. In absolute terms, LDCs as a group faced a sharp decline in FDI inflow since the global financial crisis in 2008. In 2011, LDCs' share of global FDI reverted to the level of 2001, i.e. 0.9 per cent which was 2.1 per cent in 2008.

Export

Paralleling the GDP and per capita GDP growth trend, the export growth performance of the LDC group was most spectacular during the period 2004-2008 recording 29.7 per cent (annual average) expansion. When the advanced economies faced economic crisis towards the end of 2008, the global demand for commodities fell sharply precipitating a decline in commodity prices. Export earnings of LDCs as a group, as Table 6 indicates, declined sharply in 2009 – by (-) 24.0 per cent. The export earnings of oil-exporting countries experienced major slump. As a result, exports from African LDCs fell by (-) 28.8 per cent in 2009, while the comparable figure for Asian LDCs was (-) 7.2 per cent. It may be also noted from the figure presented in Table 6 that the exports of the LDCs did rebound in the subsequent years (i.e. 2010 and 2011) recapturing the pre-crisis benchmark. Surprisingly, export expansion of the LDCs did not seem to sustain in 2012 and experienced once again a sharp decline.

Table 6: Export Growth (%)

Group	Average		2009	2010	2011	2012
	2001-2010	2004-2008				
LDCs	17.7	29.7	-24.0	27.2	25.0	0.6
LDCs: Africa and Haiti	20.8	35.1	-28.8	26.7	25.4	0.9
LDCs: Asia	12.3	17.9	-7.2	28.8	23.5	-0.2
LDCs: Islands	9.2	11.0	-20.4	25.8	54.5	11.0

Source: Authors' calculation based on the UNCTADSTAT data.

It is well recognised that the export earnings record of many LDCs is greatly influenced by the movement of the commodity prices. As Table 7 reveals, in terms of volume index, export performance of LDCs remains much less spectacular. Indeed, the export volume index of the LDCs had been negative in 2011 and modestly positive in 2012. Further, if one considers together the movement of the export value growth and export volume growth during 2011 and 2012, it is observed that the movement of these two indicators had been in the opposite direction. Obviously, growth of export revenue in the face of fall in export volume is basically explained by the changes in commodity prices in the global market.

Table 7: Export Volume Index Growth (%)

Group	Average		2009	2010	2011	2012
	2001-2010	2004-2008				
LDCs	6.9	8.8	-3.3	5.6	-1.3	4.3
LDCs: Africa and Haiti	8.0	10.1	-3.0	1.3	-3.8	8.6
LDCs: Asia	6.4	6.9	0.6	18.7	5.8	-1.6
LDCs: Islands	3.3	2.4	-11.5	11.3	38.8	13.6

Source: Authors' calculation based on the UNCTADSTAT data.

The narrow export basket has been a typical feature of the export structure of the LDCs. One of the major structural flaws of LDCs' export performance is its overdependence on primary commodities. Dependency of the LDCs on primary commodities increased over manufacture

exports due to rise in global prices of primary commodities and the increased international demand for these commodities.

Inflation

On an average, annually LDCs experienced 7.6 per cent during 2001-2010 (Table 8).¹² The rate of price level increase was particularly higher during the years of food and oil price shocks (2007-2008). Soaring food prices during this period caused serious concerns around the world, particularly for the low-income groups, who spend a significant proportion of their income on food consumption. Indeed, other than Myanmar, all other 48 LDCs are net food importers. Global economic crisis in 2009 was associated with lower inflation in LDCs. During 2011-2012 inflation rate went back to higher trajectory with lower economic growth.

Table 8: Inflation in the LDCs (% of GDP)

Group	2001-2010	2006	2007	2008	2009	2010	2011	2012
LDCs	7.6	7.7	8.0	13.1	5.2	5.9	8.8	8.8
LDCs: Africa	7.2	7.4	6.5	12.6	5.9	5.5	9.4	9.0
LDCs: Asia	9.3	8.3	11.6	16.2	1.8	8.4	8.7	8.6
LDCs: Islands	7.2	8.1	9.9	11.6	6.5	4.6	6.6	8.1

Source: World Development Indicator, World Bank, 2013.

Official Development Assistance (ODA)

International attention towards MDGs has led to grow an interest in ODA noticeably over the last decade. More importantly, ODA allocation since the Millennium Declaration has become more MDG-sensitive; although, total aid flows fell short of promised levels (Hailu and Tsukada 2012). In 2011, members of the Development Assistance Committee (DAC) of the Organisation for Economic Co-operation and Development (OECD) provided USD 133.5 billion of net ODA representing 0.31 per cent of their combined GNI. This was a (-) 2.7 per cent drop in real terms compared to 2010. UN (n.d.) made a detail situation analysis and indicated that among the 23 donor countries, 17 reduced their ODA between 2010 and 2011. Donors continued to reaffirm their aid commitments in the form of providing more than 0.2 per cent of their GNI aid to LDCs in multiple global platforms, but areas of significant new progress towards attainment of the MDG 8 could not be found (UN 2012). Shiferaw (2010) found that aid to LDCs did not increase at a favourable rate compared with non-LDCs. According to his estimate, the non-LDCs fared better than LDCs in terms of ODA allocation. Curiously, large allocations of ODA are still directed to middle-income countries with lower levels of poverty. The preferences of donors are creating overlapping and 'aid darlings' and 'aid orphans' are emerging among the LDCs. Unequal distribution of ODA is an emerging area of concern particularly at a time when ODA has become scarcer (Bhattacharya and Khan 2013). OECD (2012) identified nine LDCs as under-aided. These under-aided countries are with better institutional capacity but lagging behind in meeting MDGs, which would require higher allocation of resources. Among the 13 targets of Paris Declaration, only target concerning coordinated technical cooperation was met at the global level (UN 2012).

¹²The estimates are simple averages. While estimating average inflation rates, Angola and Democratic Republic of Congo were excluded considering them as outliers. These two countries, which were involved in civil wars for a long period, experienced substantial hyper inflations for consecutive years.

The foregoing brief and selective analysis of the economic performance prompts us to make to basic conclusions. *First*, notwithstanding the relatively higher economic growth, improved per capita income, export expansion and enhanced national savings experienced by the LDCs since 2000, the economies of this group of countries did not undergo any significant movement towards structural transformation of their economies leading to discernible expansion of their production capacities. Indeed gross capital formation in the LDCs has been stagnating in the recent past. *Second*, while the LDCs did not go into recession following the global economic and financial crisis, these countries got deeply affected by the fallouts of the crisis. The countries are yet to recover from this aftermath. Moreover, commodity price movements as well as international food price hike also further exposed structural vulnerabilities of these countries. These two structural aspects created the not-so-encouraging backdrop for implementation of the MDGs in the LDCs.

3. TRACKING PROGRESS OF THE MDGs: A LITERATURE REVIEW

All measurement exercises in economics generate a multitude of methodological approaches. Thus, in literature concerning estimation of progress towards the MDGs, one may find a number of methods have been used in this regard. The present section recalls a selected set of studies which demonstrate the diversity of the methodological approaches deployed while measuring MDG progress.

The UN Millennium Development Goals Report provides a summary of the MDG progress drawing on official reports. The MDG 2013 Report refers to 21 targets and 60 official indicators to measure the progress towards the eight MDGs (UN 2013b). Using 1990 as the baseline, the report aggregated the country data at the regional and sub-regional levels to show the overall progress over time. It used the UN geographical divisions with some modifications to define regional and sub-regional level. The figures presented are weighted averages of country data where the population of reference have been used as the weights. Data for many of the indicators have been derived exclusively from information collected through surveys – in addition to the official statistics provided by governments to the international agencies – to fill the data gap.

Besides the official UN reports, several attempts have been made by engaged scholars towards analysing the country-level progress towards MDGs. Leo and Thuotte (2011) examined MDG indicators using comparison between countries performance with required achievement trajectories where the trajectory is based on linear annualised rates of improvement for each respective MDG indicators. If the country's actual rate of improvement during the available observation period is above the required trajectory, then it has received score of 1. Countries which have achieved at least 50 per cent of the required trajectory then it has been assigned with a score of 0.50.

The MDG Report Card, proposed by the ODI (2010), ranked the top performers on the basis of the absolute progress of the countries that have achieved the biggest positive change on the indicators ignoring their initial conditions. The report also used both absolute and relative measures to examine the progress at a national level. To analyse the progress across wealth quintile for under-five mortality, the paper conceived the methodology developed by the Vandemoortele and Delamonica (2010). The study weighted the performance of poorer wealth

quintiles more heavily than that in wealthier quintiles. The decision whether the progress experienced by the poorest quintiles is taken if the country performs better in equity adjusted indicator and vice versa. Countries were ranked and divided into three categories – lowest third (green), middle third (yellow) and highest third (red). In measuring the progress across gender categories and rural-urban locations, the analysis used simple female-male and rural-urban ratios and ranks countries based on the distance to parity (one). In line with the guidelines provided by the United Nations Educational, Scientific and Cultural Organization (UNESCO), the paper used female-male ratio between 0.97 and 1.03 is considered to represent gender equality, a ratio between 0.97 and 0.94 or 1.03 and 1.06 is considered a middle range, and a ratio below 0.94 and above 1.06 represents a high disparity.

Go and Quijada (2011) distinguished countries that are on target and countries that are off target or lagging. To examine a country's progress, the authors further differentiate lagging countries that are close to becoming on target from those that are far from becoming on track. The performance of any country is measured by the deviation of its latest data from trajectory required to fulfil MDG goal. Using linear annualised rate of improvement calculation, Go and Quijada (2011) classified countries on target/off target. Mean gaps have been used as a convenient cut-off point, dividing the lagging countries into two sub-groups: (i) off target and above average; and (ii) off target and below average.

Muro *et al.* (2010) proposed the Mazziotta-Pareto Index (MPI) of development and poverty which introduces penalties for the countries or geographical areas with 'unbalanced' values of the indicators starting from linear aggregation considering the desirable properties that a composite index should have. Using the Human Development Index (HDI)¹³ and Human Poverty Index (HPI), Muro *et al.* (2010) compares results with MPI. The differences between the methods are found to be very insignificant. It is interesting to note that the MPI values were lower than the mean values (HDI method) because there is the penalty effect.

Besides looking at the MDG attainment issue, a number of studies tried to evaluate the progress made by the countries before and after the inception of MDG. Hailu and Tsukada (2011) evaluated whether a country is 'on track' or 'off track' based on measuring the rate of progress including the commitment of policymakers, rather than changes in the level of indicators. The authors recognised that the rate of progress in MDG indicators may not be linear across time, and attaining MDG targets may be harder when a country's baseline indicator is approached to its target value. In this context, Hailu and Tsukada (2011) adopted the 'Unbiased Rate of Progress Method (URPM)' to solve two measurement biases arising from non-linearity and effort appreciation.

Parr and Greenstein (2010) also presented a methodology which compares the rate of change in the periods before and after adoption of the MDGs. They have found data for three years for each country and each indicator: 1990, the earliest year; a middle year (2003) and the most recent year available. As the effect of the new policies (adoption of MDGs) has an implementation lag, they considered 2003 as the preferable middle year. Several data as well as indicators have been excluded for a large number of countries due to insufficiency. The analysis,

¹³Measures the average achievements in a country or region in three basic dimensions: (i) well-being; (ii) knowledge; and (iii) standard of living.

based upon the comparison of the two periods, showed whether there had been acceleration of improvement or not.

The seven methodologies discussed above are quite different from one another. It transpires that differences in the choice of assessment objective can significantly influence the estimation outcome. In some exercises, a country's performance progress towards attainment of MDGs is measured against the benchmark of 1990; in other studies the progress is measured in terms of country's achievement after the inception of MDG in 2000. Moreover, some studies measured progress in linear scale, whereas some scholars have used non-linear scales. In the present study, we have attempted to take on board most of these variations and have tried to estimate the LDCs' progress in terms of MDG attainment by following a 'synthetic approach'.

4. ASSESSING THE PROGRESS OF LDCs IN ATTAINING MDGs

In view of the existing methodologies, the present exercise has evolved a synthetic approach comprising the Linear Progress Method and URPM (Hailu and Tsukada 2011). Empirical results have been obtained by applying the evolved methodology on the LDCs covering 14 selected indicators of the MDGs.

4.1 Methodology of the Exercise

This paper attempts to estimate a country-level indicator-specified 'MDG Progress Index' (MPI). MPI is derived from following steps.

Step 1: The methodology compares a country's performance against 'required progress rate' for each of the observed MDG indicators. The required rate is calculated based on linear annualised rates of improvement for each respective MDG indicator.

Step 2: By calculating a country's actual rate of improvement (or deterioration) during the available observation period, whether a country's projected value is above or below the target of MDG indicator would be determined.

For Positive Indicators

Positive indicators are those where progress means an increase in the indicator value (e.g. net enrolment ratio in primary education):

- If projected value of the MDG Indicator is more than or equal to the Indicator Target value, the indicator would be considered 'On Track';
- If projected value of the MDG Indicator is less than the Indicator Target value, but more than the baseline value, the indicator would be tagged as 'Slow Progress';
- If projected value of the MDG Indicator is less than or equal to the baseline value, the indicator would be labeled as 'Off Track'.

For Negative Indicators

Negative indicators are those where progress is achieved through a decrease in the indicator value (e.g. tuberculosis case per 100,000 people):

- If projected value of the MDG Indicator is less than or equal to the Indicator Target value, the indicator would be considered 'On Track';
- If projected value of the MDG Indicator is more than the Indicator Target value, but less than the baseline value, the indicator would be tagged as 'Slow Progress';
- If projected value of the MDG Indicator is more than or equal to the baseline value, the indicator would be labeled as 'Off track'.

Finally, LDCs' indicator-wise percentage of progress status such as 'On Track', 'Slow Progress' and 'Off Track' is measured to obtain the MPI. The MPI is derived by providing '(+) 1' for a country attaining MDG target whereas '(-) 1' is penalised when a country is off track, i.e. deteriorated from its benchmark of 1990. A country has a '0' score when it has made some progress, but insufficient to attain a target. The ranking of the country is prepared by dividing the total score with number of indicators for which data were available. Hence, MPI value of a country can be in the range of (-) 1 to (+) 1.

MPI seeks to gauge progress in implementing the MDGs, but this approach is inadequate due to a number of framework issues. This approach is incomplete since implementation of the MDGs involves political commitment. The more appropriate question is whether more is being done to live up to that commitment, resulting in faster progress. This calls for a comparison of progress of MDG indicators before and after the MDG adoption. For example, if the countries have made true efforts to achieve the MDGs, there would be accelerated progress relative to the previous decade. Thus, we apply the URPM exclusively for LDCs in this paper to access the true effort made towards realising the MDG commitment in this group of countries¹⁴.

Calculations, based on the URPM, were done in the following way.

Step 1: The average annual progress on an indicator in a time period has been measured by the rate of progress calculated from the unit-free indicators in two points in time, as in the following equation:

$$P(x_1, x_2, U, L) = \frac{f(x_2, U, L) - f(x_1, U, L)}{t_2 - t_1}$$

¹⁴ URPM is applied in this paper by following the methodology proposed by Hailu and Tsukada (2011).

where,

$$f(x, U, L) = \frac{\ln(U-L) - \ln(U-x)}{\ln(U-L)}$$

Step 2: The rates of progress, P for the periods before and after the adoption of the MDGs yields:

$$P_{90s} = \frac{f(x_m, U, L) - f(x_s, U, L)}{t_m - t_s}$$

$$P_{MDGs} = \frac{f(x_f, U, L) - f(x_m, U, L)}{t_f - t_m}$$

Here,

x = value of the MDG indicator;

U = upper possible value of the MDG indicator;

L = lower possible value of the MDG indicator;

t = time period.

s = starting year;

m = mid-point year (to represent the adoption of MDG); and

f = most up-to-date year.

During the analysis we have chosen the earliest year since 1990 as the starting period and the earliest year after 2000 as the mid-point year and the most recent for the most up-to-date year.

Step 3: The rate of progress after the adoption of the MDGs has been compared with the rate of progress during the earlier decade, and allow for a 5 per cent margin for statistical error. This 5 per cent margin is chosen arbitrarily, and can be set higher for more conservative results. Thus, a country is considered as having 'accelerated' the rate of progress on a determined indicator after the MDGs if its rate of progress for that indicator is

$$(3.a) \quad P_{MDGs} \geq 1.05 P_{90s} = P_{90s} (1 + 0.05)$$

Its progress is considered as having 'slowed down' if

$$(3.b) \quad P_{MDGs} \leq 0.95 P_{90s} \text{ or } P_{MDGs} < 0$$

Finally, the country is considered as having 'maintained' the rate of progress if

$$(3.b) \quad 0.95 P_{90s} < 0.95 P_{MDGs} < 1.05 P_{90s}$$

Ranking of the LDCs are prepared based on a country's performance in terms of its performance in terms being 'accelerated' among the 13 MDG indicators under the study¹⁵.

Although UN agencies are collaborating with partners to produce adequate and consistent estimates for all MDGs indicators, sufficient and reliable data for all of the indicators for all countries were not available. For example, availability of data for indicator 1.1 (proportion of population with purchasing power parity (PPP) below USD 1 per day) was very limited. For the present study, we have tried to compile data from country reports of individual countries to track MDG progress hazarding comparability issues. Due to lack of data availability, we have concentrated on analysing 14 among the 49 MDG indicators.¹⁶ These 14 indicators are chosen in a way so that they represent the seven broad aspects of the MDG performance. The state of data availability also partly defined the choice of the indicators. Progress on Goal 8 was not discussed since most of the indicators are concerned with the performance of the advanced industrialised countries.

4.2 Results of the Exercise

Progress of LDCs as a Group

The LDCs as a group is unlikely to meet any of the 14 targets examined under the study (Table 9). For three indicators, namely employment-to-population ratio (1.5), HIV prevalence among population aged 15-24 years (6.1), and land area covered by forest (7.1), the group is off track, meaning the situation in these cases has deteriorated since 1990. Incidentally, in the cases of HIV prevalence and afforestation determination is observed across the three regional groups, whereas it is the off track situation regarding employment to population ratio in the Asian LDCs which has pulled down the group average. On a welcome note, for most of the other targets (11 out of 14), LDCs as a group has made positive movement.

¹⁵ This analysis could not consider MDG indicator 3.1 i.e. 3.1: Ratios of Girls to Boys in Primary Education since it does not obtain an upper value.

¹⁶A summary of data availability is provided in Annex 1.

Table 9: Summary of Progress regarding Selected MDG Indicators in the LDCs (by Region Group)¹⁷

MDG Targets No.	Indicators	African LDCs	Asian LDCs	Island LDCs	LDCs
1.1	Proportion of population above USD 1.25 (PPP) per day	Slow Progress	On track	Slow Progress	Slow Progress
1.5	Employment-to-population ratio	Slow Progress	Off track	Slow Progress	Off track
1.9	Proportion of population above minimum level of dietary energy consumption	Slow Progress	Slow Progress	Off track	Slow Progress
2.1	Net enrolment ratio in primary education	Slow Progress	Slow Progress	Slow Progress	Slow Progress
2.3	Literacy rates of 15-24 years old, both sexes, percentage	Slow Progress	Slow Progress	Slow Progress	Slow Progress
3.1	Ratio of girls to boys in primary, secondary and tertiary education	Slow Progress	Slow Progress	Slow Progress	Slow Progress
4.1	Under-five survival rate	Slow Progress	On track	On track	Slow Progress
4.2	Infant survival rate	Slow Progress	Slow Progress	Slow Progress	Slow Progress
4.3	Proportion of one-year old children immunised against measles	Slow Progress	Slow Progress	Off track	Slow Progress
5.1	Maternal survival ratio (per 100,000 live births)	Slow Progress	Slow Progress	Slow Progress	Slow Progress
6.1	HIV prevalence among population aged 15-24 years	Off track	Off track	Off track	Off track
7.1	Proportion of land area covered by forest	Off track	Off track	Off track	Off track
7.8	Proportion of population not using an improved drinking water source	Slow Progress	Slow Progress	On track	Slow Progress
7.9	Proportion of population using an improved sanitation facility	Slow Progress	Slow Progress	Slow Progress	Slow Progress

Source: Authors' calculation based on UN data on MDGs.

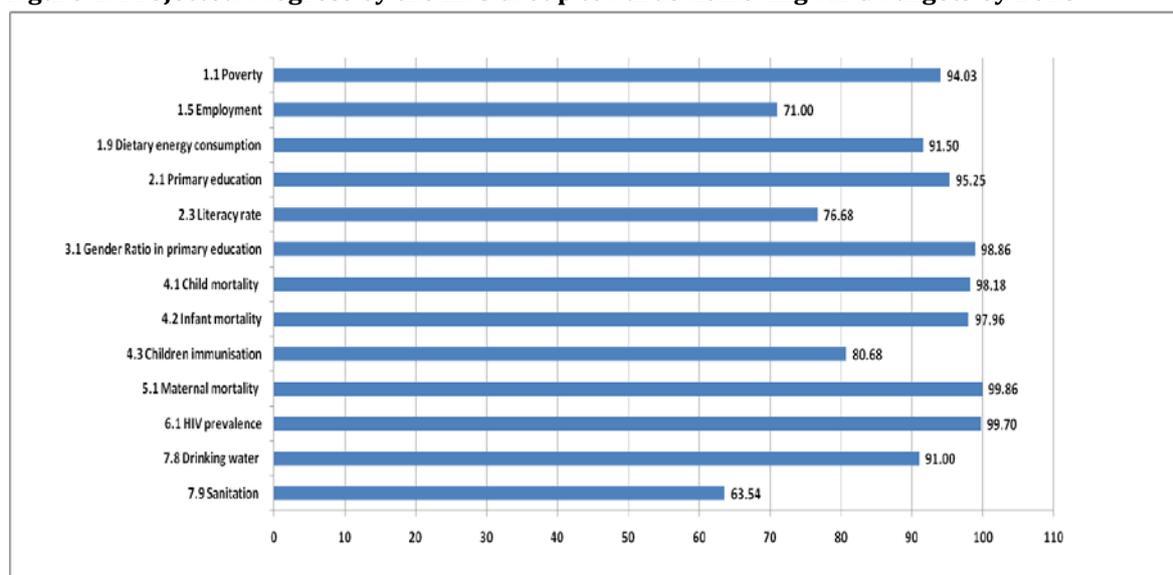
The projection based on linear progress suggests that among 13 indicators¹⁸, in six areas the achievements could be more than 95 per cent against the target (Figure 1). These areas are: maternal survival ratio; HIV prevalence among population aged 15-24 years¹⁹; survival of children under-five years; survival of infants; net enrolment ratio in primary education and gender parity in primary education. This implies that with an enhanced effort, LDCs may achieve these targets by 2015. In contrast, in the area of ensuring improved sanitation facility, the progress of the group is very subdued due to slower progress in African LDCs and Island LDCs.

¹⁷Detailed country progress is presented in Annex 2.

¹⁸Indicator relating to afforestation has been dropped from the projection as there is no corresponding empirical target.

¹⁹It needs to be noted that, the target with regard to HIV prevalence was halting it to 1990 level. Although it is close 1990 level, the higher prevalence means that LDC as group is off track considering this indicator.

Figure 1: Projected Progress by the LDC Group towards Achieving MDG Targets by 2015

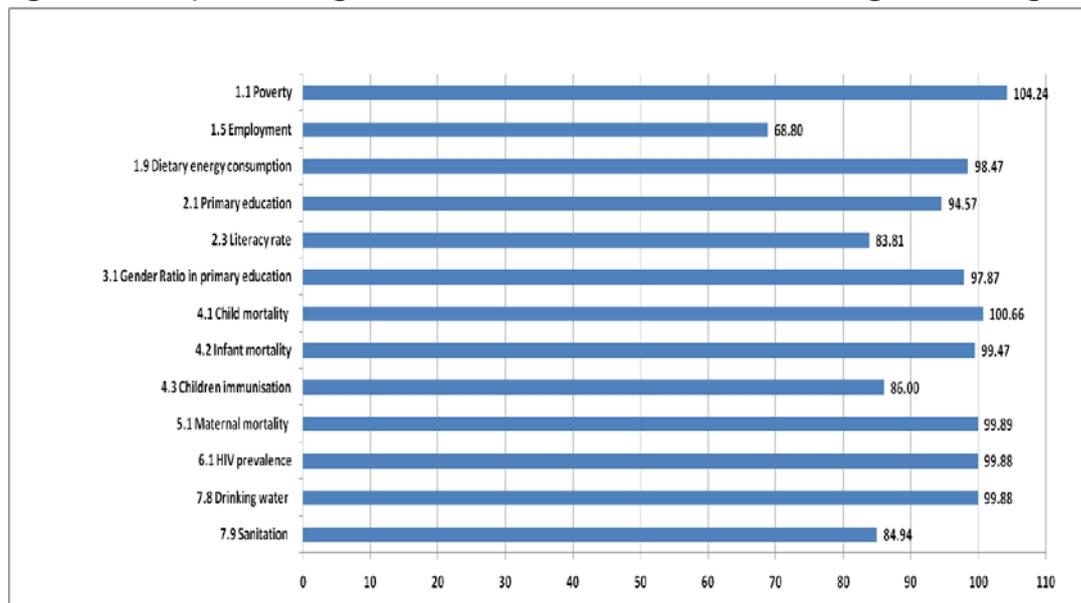


Source: Authors' projection based on MDG data.

Progress in the Asian LDCs

At the regional level, Asian LDCs as a group performed better than their two other counterparts, i.e. African and Island LDCs. For at least two indicators, i.e. proportion of population above USD 1.25 (PPP) per day and survival of children under-five years age, Asian LDCs as a group is likely to meet the targets. For six other indicators the progress could be very close to the target, i.e. more than 95 per cent against the target (Figure 2). These are: maternal survival ratio; proportion of population using an improved drinking water source HIV prevalence among population aged 15-24 years; survival of infants; reducing maternal mortality rate, ; gender parity in primary education and meeting minimum dietary energy consumption. . Attaining these targets by the Asian LDCs may not be out of reach. As mentioned earlier the Asian LDCs are off track in two particular areas viz. employment to population ratio; and proportion of land area covered by forest.

Figure 2: Projected Progress in Asian LDCs towards Achieving MDG Targets by 2015

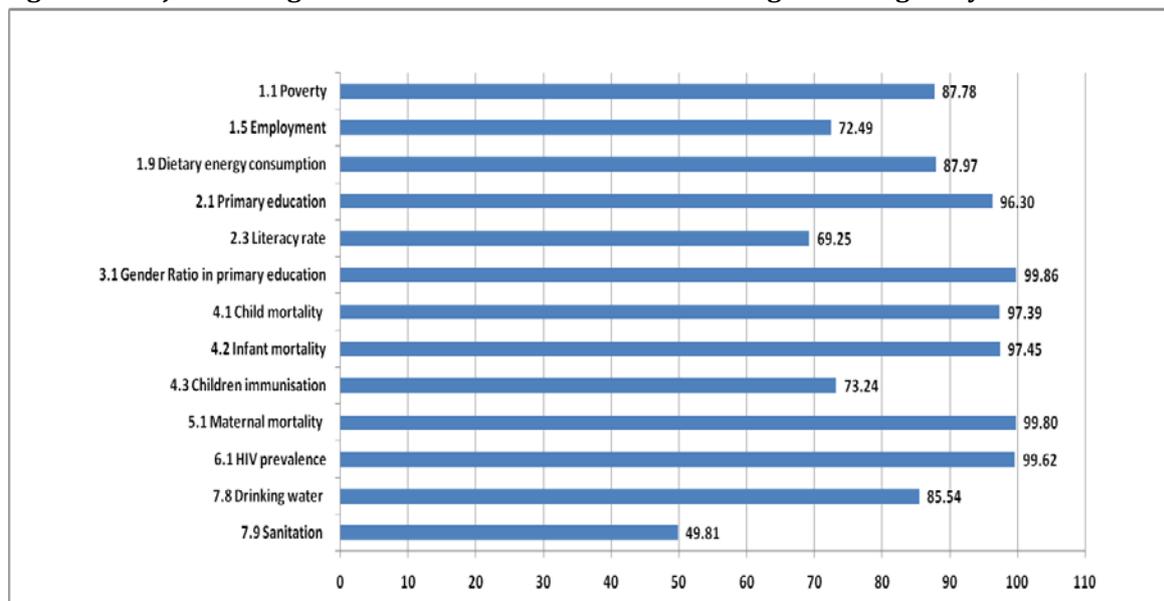


Source: Author's projection based on MDG data.

Progress in the African LDCs

The African LDCs as a group is likely to miss all the targets among the 14 indicators studied in this paper. The group is, however, very close to attaining six targets, i.e. maternal survival ratio; HIV prevalence among population aged 15-24 years; infant survival rate; net enrolment ratio in primary education; gender parity in primary education and survival of children under-five years age (Figure 3).

Figure 3: Projected Progress in African LDCs towards Achieving MDG Targets by 2015

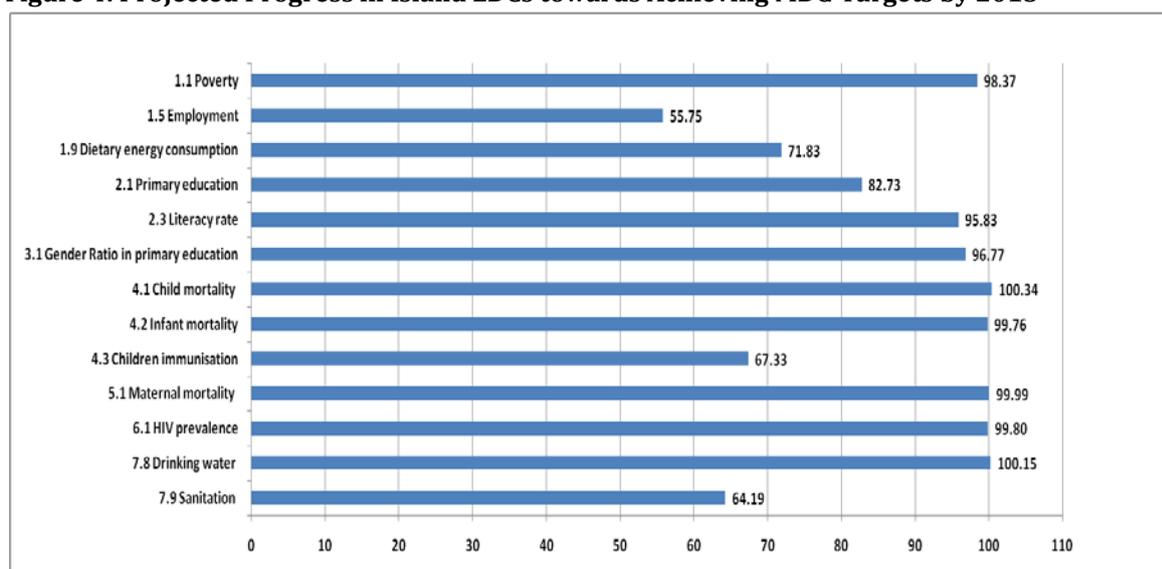


Source: Authors' projection based on MDG data.

Progress in the Island LDCs

Island LDCs are likely to meet only two targets. These are: proportion of population using an improved drinking water source; and survival of children under-five years age. In five other indicators, the progress is closer to the target. These are: maternal survival ratio; HIV prevalence among population aged 15-24 years; infant survival rate; proportion of population above USD 1.25 (PPP) per day; literacy rates of 15-24 years old and gender parity in primary education (Figure 4). The group is off track in case of proportion of population below minimum level of dietary energy consumption. Curiously, the Island LDCs are very close to meeting the target for proportion of population above USD 1.25 (PPP) per day, but lagged behind in terms of proportion of population below minimum level of dietary energy consumption.

Figure 4: Projected Progress in Island LDCs towards Achieving MDG Targets by 2015



Source: Authors' projection based on MDG data.

Country Rankings based on MDG Progress Index (MPI)²⁰

Estimates of the MPI, reveals that Rwanda is on the top position in the country ranking²¹. Indeed, Rwanda is likely to meet eight out of the 14 targets under review, while the country has made progress towards five other areas. However, in one area, i.e. employment-to-population ratio, the country is off track implying the situations have deteriorated since 1990. Following Rwanda, two Asian LDCs - Bangladesh²² and Cambodia are jointly on the second position in MPI ranking (Table 10). Both of these countries are likely to attain eight out of the reviewed 14 targets while in other four areas, they progressing but target is not within reach. Bangladesh is off track in case of two indicators that are employment to population ratio and

²⁰South Sudan is deliberately left out of the rankings (based on both MPI and URPM), since it is a new country. However, its progress for 6 MDG indicators (among the 14) is presented in Annex 2.

²¹ Detailed country ranking based on MPI is presented in Annex 3.

²²Bangladesh is likely to meet targets relating to 1.9: Proportion of population below minimum level of dietary energy consumption; 2.1: Net enrolment ratio in primary education; 3.1: Ratios of girls to boys in primary education; 4.1: Under-five mortality rate; 4.2: Infant mortality rate; 4.3: Proportion of one-year old children immunised against measles; 5.1: Maternal mortality ratio; and 6.1: HIV prevalence among population aged 15-24 years. The four other areas where Bangladesh has made substantial progress are - 1.1: Proportion of population below poverty line; 2.3: Literacy rate of 15-24 year olds, women and men; 7.8: Proportion of population using an improved drinking water source; and 7.9: Proportion of population using an improved sanitation facility.

proportion of land area covered by forest. Similarly, Cambodia is off track in the areas concerning HIV prevalence and forestation. Among other Asian LDCs, Bhutan has secured the fourth position in the ranking, while Lao people’s Democratic Republic and Nepal jointly is in the fifth position.

Table 10: Country Performance based on MDG Progress Index (MPI)

MPI (Best Performing Countries)			MPI (Low Performing Countries)		
LDCs	Index Score	Rank	LDCs	Index Score	Rank
Rwanda	0.5000	1	Somalia	-0.5556	48
Bangladesh & Cambodia	0.4286	2	Equatorial Guinea	-0.4167	47
Bhutan	0.3846	4	Sudan	-0.3333	46
Lao People’s Democratic Republic & Nepal	0.2857	5	Lesotho & Chad	-0.2857	45

Source: Authors’ calculation.

On the bottom of the list, all five countries belong to the African group. Out of 9 indicators for which data are available in case of Somalia, five show that the country is off track, i.e. under-five mortality rate; infant mortality rate; maternal mortality ratio; HIV prevalence among population aged 15-24 years; and proportion of land area covered by forest, while in the other four areas – i.e. employment-to-population ratio; proportion of one-year old children immunised against measles; proportion of population using an improved drinking water source; proportion of population using an improved sanitation facility – the country has made progress, but is unlikely to meet the targets. Equatorial Guinea is in the second position from the bottom, despite having per capita GDP of a middle income country (USD 10,013). The country is also likely to be graduated soon from the LDC status. However, the country is off track in six areas, while may attain only one MDG target concerning maternal mortality ratio. Data for Chad is available for 13 indicators, out of which the country may achieve only one MDG target – reducing maternal mortality ratio. Sudan is also off track in three areas and made some progress in other six. One can point out that both Somalia and Chad are countries in conflict. Moreover, Chad is also a landlocked country. Lesotho on the other hand, despite being on track in having population below poverty line, is off track in six areas, namely, employment to population ratio, literacy rate of 15-24 year-olds; ratios of girls to boys in primary education; maternal mortality ratio; HIV prevalence among population aged 15-24 years;; and proportion of population using an improved drinking water source.

At the country level, 46 out of 49 LDCs will achieve at least one target among the 14 indicators under the study. The four countries which are unlikely to meet any of the targets are Mozambique, Sierra Leone, Somalia and South Sudan . However, this does not mean that these countries did not make any progress towards the 14 indicators. Mozambique has made progress in 12 out of 14 indicators while Sierra Leone has made progress in 10 out of 13 indicators. As mentioned above, Somalia’s progress is not very impressive.

Progress Across Indicators

If the indicators are ranked according the methodology used in estimating the MPI, it is found that the top three indicators are: proportion of population using an improved drinking water source; under-five mortality rate; ratios of girls to boys in primary education; (Table 11).

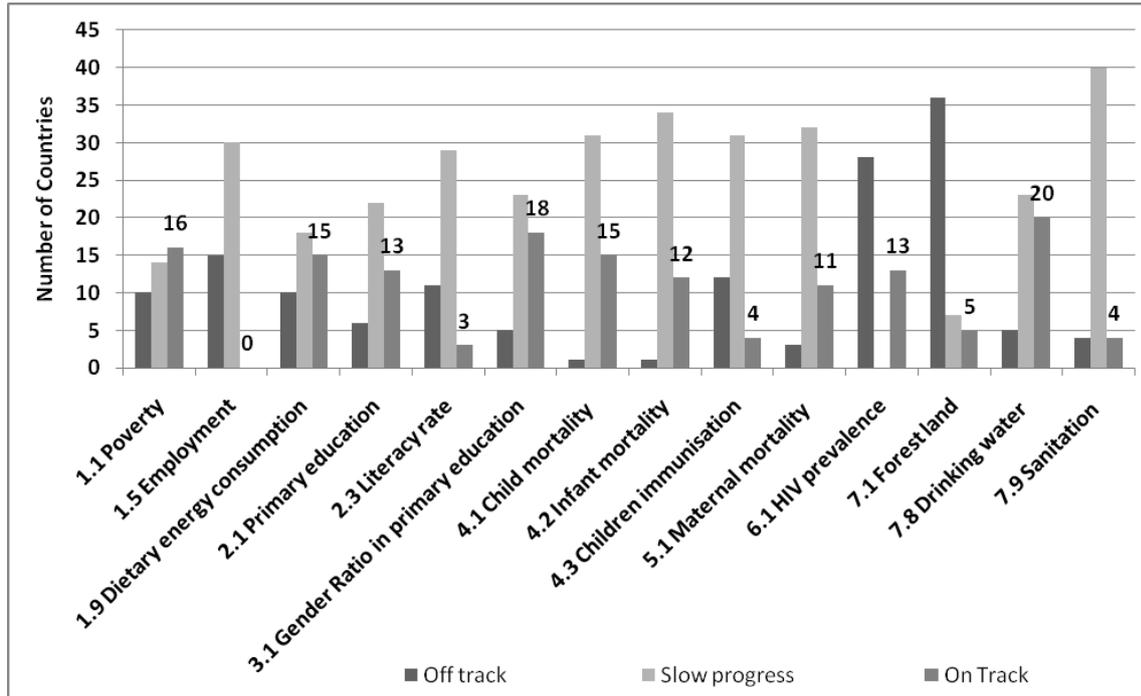
Table 11: MDG Indicator Ranking based on MDG Progress Index (MPI)

	Indicator	Normalized Score
7.8	Proportion of population not using an improved drinking water source	0.3125
4.1	Under-five Survival rate	0.2979
3.1	Ratio of girls to boys in primary, secondary and tertiary education	0.2826
4.2	Infant Survival Rate	0.2340
5.1	Maternal survival ratio (per 100000 live births)	0.1739
2.1	Net enrolment ratio in primary education	0.1707
1.1	Proportion of population above \$1.25 (PPP) per day	0.1500
1.9	Proportion of population above minimum level of dietary energy consumption	0.1163
7.9	Proportion of population using an improved sanitation facility	0.0000
4.3	Proportion of 1 year-old children immunised against measles	-0.1702
2.3	Literacy rates of 15-24 years old, both sexes, percentage	-0.1860
1.5	Employment-to-population ratio	-0.3333
6.1	HIV prevalence among population aged 15-24 years	-0.3659
7.1	Proportion of land area covered by forest	-0.6458

Source: Authors' calculation.

If the number of successful countries in terms of attainment of a target is considered, then proportion of population using an improved drinking water source tops the list (Figure 5). In the area of ratio of proportion of population using an improved drinking water source 20 (42 per cent) out of 48 LDCs are likely to attain the targets, where 16 LDCs (40 per cent) out of 40 are on track to attain the target of proportion of population below poverty line. However since, 10 LDCs (25 per cent) are off track, the indicator remains in the middle in the ranking order.

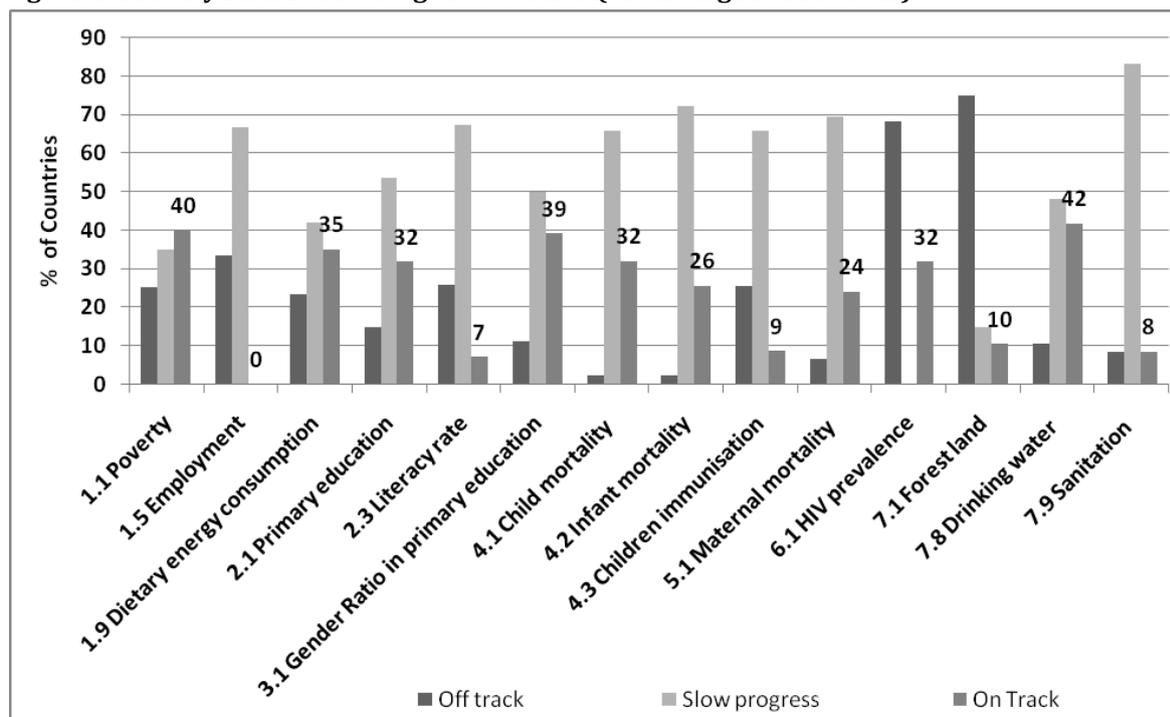
Figure 5: Indicators by Country Status (Number of Countries)



Source: Authors' calculation.

It may be recalled that data on all LDCs for all indicators are not available. Based on available data, it seems 42 per cent LDCs will achieve the targets concerning drinking water, whereas poverty and gender parity in primary education come second and third respectively (Figure 6). No surprise that targets with regard to employment to population ratio, HIV prevalence and forest area remained at the top in terms of being off track.

Figure 6: Country Status according to Indicators (Percentage of Countries)



Source: Authors' calculation.

Acceleration towards MDG Attainment

The progress towards attaining MDG targets does not necessarily imply that these countries have accelerated such progress since the launching of the MDGs in 2000. To identify the countries which have made accelerated progress after 2000, implying due to MDG adoption, the earlier mentioned URPM method as has been applied on the data set. Most notable acceleration (where more than half of the countries accelerated) can be observed in five indicators HIV prevalence, maternal mortality, proportion of people below poverty line, land area covered by forest and use of safe drinking water (Table 12). These findings do not always correspond with the earlier findings regarding progress towards attainment of MDG targets. This has largely to do with the benchmark situation (1990) and its development till 2000.

Table 12: Improvement in the Rate of Progress by Indicator²³

Improvement in the rate of progress by Indicator							
Goal	Indicator	Accelerated Progress		Maintained Progress		Slowdown Progress	
		Countries	(%)	Countries	(%)	Countries	(%)
1	1.1	10	52.63	0	0.00	9	47.37
	1.5	11	28.21	0	0.00	28	71.79
	1.9	15	36.59	0	0.00	26	63.41
2	2.1	16	44.44	0	0.00	20	55.56
	2.3	9	45.00	3	15.00	8	40.00
4	4.1	3	6.52	0	0.00	43	93.48
	4.2	16	35.56	20	44.44	9	20.00
	4.3	18	39.13	0	0.00	28	60.87
5	5.1	23	53.49	4	9.30	16	37.21
6	6.1	26	74.29	1	2.86	8	22.86
7	7.1	21	51.22	9	21.95	11	26.83
	7.8	28	60.87	4	8.70	14	30.43
	7.9	22	46.81	3	6.38	22	46.81

Source: Authors' calculation.

At the country level, regarding acceleration of progress towards attainment of MDGs, one finds that African LDC Niger tops the list followed by, Sierra Leone, Angola, Ethiopia and Nepal (Table 13). One may recall that Sierra Leone is one of the three countries which are unlikely to meet any of the MDG targets. On the other hand, among the weakest performance, is at the bottom, followed by Lesotho, Samoa, Solomon Islands and Kiribati. This implies that many of the LDCs may reach their MDG targets because of the fact that those countries made a head start supported by their achievements in the 1990s, i.e. before the MDGs were adopted.

Table 13: Country Performance based on URPM Index²⁴

URPM Index (Best Performing Countries)			URPM Index (Low Performing Countries)		
LDCs	Index Score	Rank	LDCs	Index Score	Rank
Niger	0.75	1	Lesotho	9.09	48
Sierra Leone	0.73	2	Samoa	10.00	47
Angola	0.70	3	Solomon Islands	12.50	46
Ethiopia	0.69	4	Kiribati	14.29	45
Nepal	0.67	5	Liberia	18.18	44

Source: Authors' calculation.

Combining the Results from MPI and URPM

If we combine the rankings of MPI and URPM, about one-third of LDCs (16) fall in the category where these countries ranked higher both in terms of MPI (i.e. made notable progress towards achieving MDG targets) and URPM (accelerated their progress towards achieving MDGs after 2000).²⁵ The following scatter diagram suggests that only three countries have managed to

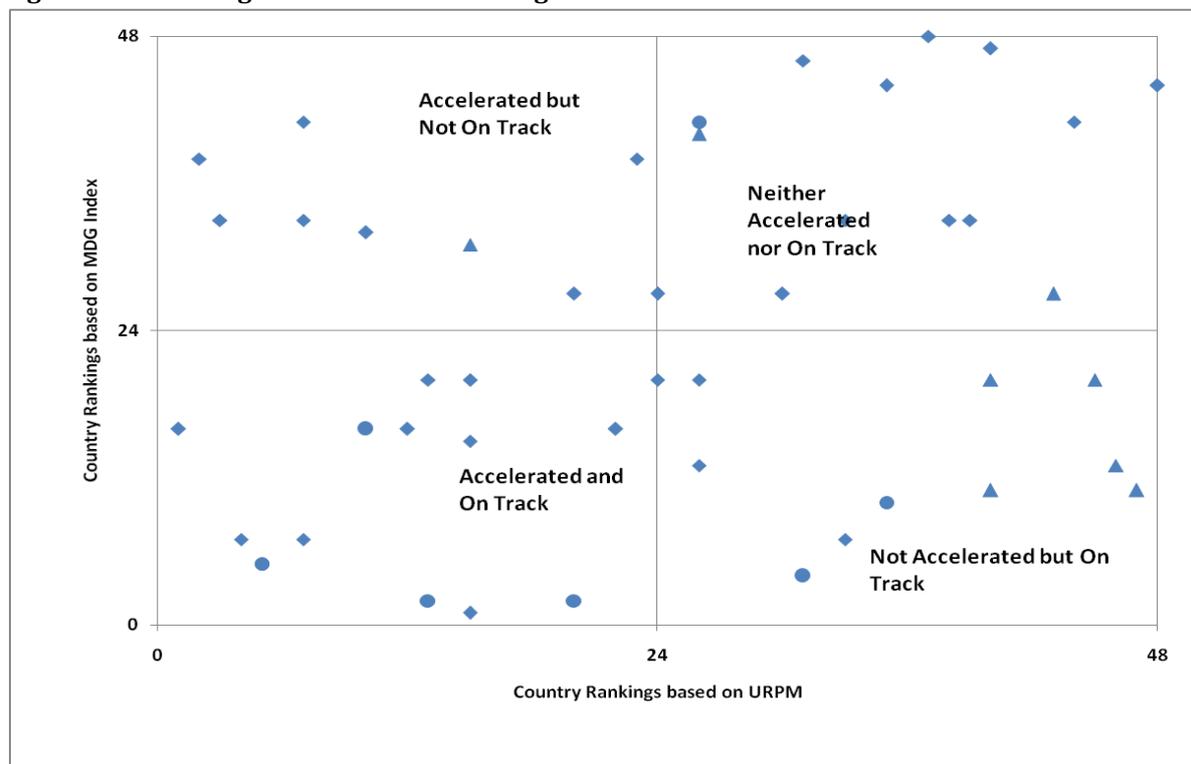
²³A detailed country-wise progress for all indicators is presented in Annex 4.

²⁴A detailed country ranking is presented in Annex 5. As was the case for MPI ranking, South Sudan is left out of the ranking prepared based on URPM index.

²⁵South Sudan is deliberately left out of this analysis since it is a new country.

attain positions at the top 25 per cent in both rankings (Figure 7). Nepal ranks fifth both in the MPI and in URPM rankings. Similarly Mali ranks seventh both in MPI ranking, and URPM ranking. Ethiopia ranks seventh position in MPI while the country ranks fourth in URPM ranking.

Figure 7: Combining MPI and URPM Rankings of LDCs



Source: Authors' calculation.

Note: Here Diamond, Circle and Triangle shapes represents African, Asian and Island LDCs respectively.

On the other hand, only eight out of 48 LDCs lagged behind in terms of making impact in both rankings. Half of the LDCs are found to be in a better position – either in terms of MPI or URPM ranking. Rwanda lies in the area along with 'countries accelerated and on track'. Similarly, Bangladesh and Cambodia which are jointly in the second position in MPI ranking lie in the area where 'countries accelerated and on track'. Likewise, Cambodia is on the 'countries accelerated and on track' zone. On the other hand, all the three countries i.e. Somalia, Equatorial Guinea and Sudan are lying at the bottom of MPI ranking also failed to accelerate their performance in the post-2000 period.

Table 14: Countries Grouped by Performance in the MPI and URPM Rankings

Countries Accelerated but Not On Track(9)	Countries Neither Accelerated Nor On Track(13)
Sierra Leone, Angola, United Republic of Tanzania, Madagascar, Democratic Republic of the Congo, Sao Tome and Principe, Zambia, Djibouti, Central African Republic.	Tuvalu, Yemen, Burkina Faso, Sudan, Togo, Chad, Somalia, Eritrea, Mozambique, Equatorial Guinea, Comoros, Liberia, Lesotho.
Countries Accelerated and On Track(16)	Countries Not Accelerated but On Track(10)
Niger, Ethiopia, Lao People's Democratic Republic, Nepal, Mali, Afghanistan, Benin, Cambodia, Guinea, Rwanda, Uganda, Guinea-Bissau, Mauritania, Bangladesh, Malawi, Senegal.	Burundi, Haiti, Bhutan, Gambia, Myanmar, Vanuatu, Timor-Leste, Kiribati, Solomon Islands, Samoa.

Source: Prepared by the authors.

5. CONCLUDING OBSERVATIONS: LESSONS FOR POST-MDGs

The present paper has attempted to take an in-depth look to ascertain how successful the LDCs had been so far in achieving the MDGs. The paper has also sought to project the degree of success that the LDCs may achieve in realising the MDGs by 2015. The exercise was undertaken by deploying a 'synthetic approach' which takes note of various methodologies used so far in measuring MDG progress by country and by indicator.

Two of the broad conclusions of the present study regarding the economic performance of the LDCs during the decade of MDGs are the following. *First*, the apparent impressive economic performance of the LDCs in the 2000s, did not lead to significant development of their productive capacities, thus depriving them from transformative changes of their economies. *Second*, the vulnerabilities of the LDCs got accentuated by the vagaries of the international market, particularly due to global economic and financial crisis and volatility of the food and commodity prices. LDCs are yet to recapture the heights attained in the early 2000.

Regarding meeting the MDG targets in the LDCs, the following conclusions may be highlighted. *First*, LDCs as a group may not achieve any of the 14 targets studied under this paper. *Second*, although LDCs as a group may not attain any of the targets, they have generally made some progress in most indicators. *Third*, progress towards achieving MDGs by 2015 remained uneven across countries and across indicators. *Fourth*, with a final push some of countries may attain more targets by 2015. Thanks to their head starts, i.e. before MDGs were adopted in 2000, a number of countries may attain a greater portion targets. *Fifth*, the countries which have managed to accelerate their progress in certain indicators may perform better compared to the countries which neither had a head start nor managed to accelerate their progress.

In view of the above findings, one may highlight a number of issues having implications for the ongoing discourse on post-2015 international development framework.

Productive Capacity and Gainful Employment

One of the critical fault lines of the MDGs relates to lack of indicator concerning productive capacity development and gainful employment generation. Indeed, our analysis reveals that the delivery on the indicator in the form of employment-to-population ratio remains off track in the LDCs. Moreover, sustainability of the relative progress attained in social sectors including education and health has to be underwritten by steady flow of income backed by creation of new and decent jobs. Thus, post-2015 international development framework has to put due emphasis on goals and targets concerning employment and income.

Quality of Outcome

While it is true that many LDCs have made significant progress in attaining human development related indicators of the MDGs. However, many of these targets concerns inputs, rather than access and outcome. For example, higher enrolment rate in schools does not guarantee quality education for the students. Accordingly, outcome-related indicators have to be given due importance in the post-MDGs framework.

Countries with Special Needs

It is now becoming increasingly obvious that the post-2015 international development framework will be 'universal' in nature. It is also to be seen how, in an uneven world, a universal framework will accommodate the specific concerns and interests of the countries with special needs including the LDCs. One wonders to what extent specific targets for the LDCs with concomitant promise of global support will find place in the post-2015 framework.

Multidimensional Inequality

The issue of inequality has figured quite prominently in the recent debates on post-MDGs. It is widely acknowledged that progress of a country on the MDG trajectory may not be coupled with reduction of inequalities, deprivations and discriminations. Moreover, are we talking about inequality of opportunities or inequalities of outcome? Thus, part of the problem of articulating an inequality-related indicator concerns capturing the multidimensionality of the concept. Further, as we embark upon a universal international development framework, should we not also think about intra-country inequalities along with inter-country inequalities?

Resources for Post-MDGs

The discussions on resource requirement for a set of ambitious post-MDG targets have brought clarity on two aspects. *First*, development finance in the future has to be beyond ODA and should include domestic resource mobilisation, remittances, FDI, innovative finance and South-South cooperation. *Second*, this is not to say concessional finance flow is not important. Global commitments made regarding disbursement of official development assistance will have to be met. One may only recall that the flow of ODA to the LDCs has fallen in real term in 2012.

Reforming Global Rules

A truly international development framework cannot but concern itself with the global governance and rules that inhibiting realisation of the core priorities of the post-MDGs. Access to productive technologies or access to life-saving drugs is often impeded by the prevailing global regime of intellectual property rights. Concurrently, stalled WTO Doha negotiations are holding back fuller market access for the LDCs. The recent global economic crisis has once again alerted us to the need for having better international financial architecture. As illicit outflow of financial resources from the LDCs grows, one expects an early launch of a modern international taxation regime which will do away with tax havens. The question is to what extent the post-2015 will be able to take these issues on board to create a more just world. Efficiency gains from the reforms of the global rules may provide an additional support towards underwriting post-MDGs.

Implementation Challenges

Our analysis of the experience of MDG implementation in the LDCs and the ongoing discussion on post-2015 framework have brought to the fore the challenges of delivery of the global goals and targets in the national and regional context. It is not only about the need to have better coordination and coherence among the international actors, it is also about capacity of the national institutions to implement the agreed priorities, principles and targets. It is also about

mainstreaming in right pace and sequencing the global goals and targets in national plans and programmes. It is also about integrating the non-state actors, particularly the private sector in the implementation process. All these issues have greater significance in case of the LDCs, where 'performance deficit' is often predicated by their 'capacity shortfall'. We would also need a 'data revolution' to be able to monitor progress at disaggregate level in real time.

As we move towards 2015, one will have to pay due attention to the actual state of delivery of MDGs in the LDCs and address the above mentioned issues, among others, to realise the international political commitment regarding "*Leave No One Behind*"²⁶, where success will be defined by the level of achievement of the lowest denominator.

²⁶See UN (2013b) p. 29.

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Annex 1: Countries Observed with Available Data

Annex Table 1A: Countries Observed with Available Data for MPI

Goal	Indicator	Number of Countries Observed
Goal 1	1.1: Proportion of population below poverty line	40
	1.5: Employment-to-population ratio	45
	1.9: Proportion of population below minimum level of dietary energy consumption	43
Goal 2	2.1: Net enrolment ratio in primary education	41
	2.3: Literacy rate of 15-24 year olds, women and men	43
Goal 3	3.1: Ratios of girls to boys in primary education	46
Goal 4	4.1: Under-five mortality rate	47
	4.2: Infant mortality rate	47
	4.3: Proportion of one-year old children immunised against measles	47
Goal 5	5.1: Maternal mortality ratio	46
Goal 6	6.1: HIV prevalence among population aged 15-24 years	41
Goal 7	7.1: Proportion of land area covered by forest	48
	7.8: Proportion of population using an improved drinking water source	48
	7.9: Proportion of population using an improved sanitation facility	48

Source: Authors' calculation.

Annex Table 1B: Countries Observed with Sufficient Data for URPM

Goal	Indicator	Number of Countries Observed
Goal 1	1.1: Proportion of population below poverty line	19
	1.5: Employment-to-population ratio	39
	1.9: Proportion of population below minimum level of dietary energy consumption	41
Goal 2	2.1: Net enrolment ratio in primary education	36
	2.3: Literacy rate of 15-24 year olds, women and men	20
Goal 4	4.1: Under-five mortality rate	45
	4.2: Infant mortality rate	45
	4.3: Proportion of one- year old children immunised against measles	46
Goal 5	5.1: Maternal mortality ratio	43
Goal 6	6.1: HIV prevalence among population aged 15-24 years	35
Goal 7	7.1: Proportion of land area covered by forest	41
	7.8: Proportion of population using an improved drinking water source	46
	7.9: Proportion of population using an improved sanitation facility	47

Source: Authors' calculation.

Annex 2: Performance of LDCs by Different MDG Indicators

Annex Table 2A(i): Performance of African LDCs by Different MDG Indicators

Country	1.1: Proportion of Population below Poverty Line	1.5: Employment- to- Population Ratio	1.9: Proportion of Population below Minimum Level of Dietary Energy Consumption	2.1: Net Enrolment Ratio in Primary Education	2.3: Literacy Rate of 15- 24 Year Olds, Women and Men	3.1: Ratios of Girls to Boys in Primary Education	4.1: Under- Five Mortality Rate
Angola	SLP	OFT	ONT	SLP	SLP	OFT	SLP
Benin	OFT	SLP	ONT	ONT	SLP	SLP	SLP
Burkina Faso	ONT	OFT	OFT	SLP	SLP	SLP	SLP
Burundi	SLP	OFT	OFT	ONT	ONT	ONT	N/A
Central African Republic	SLP	SLP	SLP	SLP	SLP	SLP	SLP
Chad	OFT	OFT	ONT	ONT	SLP	SLP	SLP
Democratic Republic of the Congo	SLP	SLP	N/A	N/A	OFT	SLP	SLP
Djibouti	OFT	N/A	ONT	SLP	N/A	SLP	SLP
Equatorial Guinea	N/A	OFT	N/A	OFT	SLP	SLP	SLP
Eritrea	OFT	SLP	SLP	SLP	SLP	OFT	SLP
Ethiopia	ONT	SLP	SLP	ONT	SLP	SLP	ONT
Gambia	ONT	SLP	SLP	SLP	SLP	ONT	SLP
Guinea	ONT	SLP	SLP	SLP	SLP	SLP	SLP
Guinea-Bissau	OFT	SLP	ONT	SLP	SLP	ONT	SLP
Haiti	N/A	SLP	SLP	N/A	OFT	ONT	SLP
Lesotho	ONT	OFT	SLP	SLP	OFT	OFT	SLP
Liberia	OFT	SLP	SLP	SLP	OFT	SLP	ONT
Madagascar	OFT	SLP	OFT	SLP	OFT	SLP	ONT
Malawi	SLP	SLP	ONT	OFT	OFT	ONT	ONT
Mali	ONT	SLP	ONT	SLP	SLP	SLP	SLP
Mauritania	ONT	SLP	SLP	SLP	SLP	ONT	SLP
Mozambique	SLP	SLP	SLP	SLP	SLP	SLP	SLP
Niger	ONT	SLP	ONT	SLP	SLP	SLP	ONT
Rwanda	SLP	OFT	ONT	ONT	SLP	ONT	ONT
Senegal	ONT	SLP	SLP	SLP	SLP	ONT	SLP
Sierra Leone	SLP	SLP	SLP	N/A	SLP	SLP	SLP
Somalia	N/A	SLP	N/A	N/A	N/A	N/A	OFT
Sudan	N/A	SLP	SLP	N/A	N/A	N/A	SLP
Togo	SLP	SLP	ONT	ONT	SLP	SLP	SLP
Uganda	ONT	OFT	OFT	N/A	SLP	ONT	SLP
United Republic of Tanzania	SLP	SLP	OFT	ONT	OFT	ONT	ONT
Zambia	OFT	SLP	OFT	ONT	OFT	ONT	ONT

Source: Authors' calculation.

Annex Table 2A(ii): Performance of African LDCs by Different MDG Indicators

Country	4.2: Infant Mortality Rate	4.3: Proportion of One-Year Old Children Immunised against Measles	5.1: Maternal Mortality Ratio	6.1: HIV Prevalence among Population Aged 15-24 Years	7.1: Proportion of Land Area Covered by Forest	7.8: Proportion of Population Using an Improved Drinking Water Source	7.9: Proportion of Population Using an Improved Sanitation Facility
Angola	SLP	SLP	SLP	OFT	OFT	SLP	ONT
Benin	SLP	OFT	SLP	ONT	OFT	ONT	SLP
Burkina Faso	SLP	OFT	SLP	ONT	OFT	ONT	SLP
Burundi	N/A	SLP	SLP	ONT	OFT	SLP	SLP
Central African Republic	SLP	OFT	SLP	ONT	OFT	SLP	SLP
Chad	SLP	OFT	OFT	OFT	OFT	SLP	SLP
Congo DR	SLP	SLP	SLP	ONT	OFT	SLP	SLP
Djibouti	SLP	OFT	SLP	OFT	SLP	ONT	OFT
Equatorial Guinea	SLP	OFT	ONT	OFT	OFT	OFT	SLP
Eritrea	SLP	ONT	ONT	OFT	OFT	SLP	SLP
Ethiopia	ONT	SLP	ONT	OFT	OFT	SLP	SLP
Gambia	SLP	SLP	SLP	OFT	ONT	ONT	SLP
Guinea	SLP	SLP	SLP	OFT	OFT	ONT	SLP
Guinea-Bissau	SLP	SLP	SLP	OFT	OFT	ONT	SLP
Haiti	SLP	SLP	SLP	ONT	OFT	SLP	SLP
Lesotho	SLP	SLP	OFT	OFT	ONT	OFT	SLP
Liberia	ONT	OFT	SLP	OFT	OFT	SLP	SLP
Madagascar	ONT	SLP	SLP	OFT	OFT	SLP	SLP
Malawi	ONT	SLP	SLP	OFT	OFT	ONT	SLP
Mali	SLP	SLP	SLP	ONT	OFT	ONT	SLP
Mauritania	SLP	SLP	SLP	OFT	OFT	SLP	SLP
Mozambique	SLP	SLP	SLP	OFT	OFT	SLP	SLP
Niger	SLP	SLP	SLP	OFT	OFT	SLP	SLP
Rwanda	ONT	SLP	SLP	ONT	ONT	SLP	ONT
Senegal	SLP	SLP	SLP	OFT	OFT	SLP	SLP
Sierra Leone	SLP	N/A	SLP	OFT	OFT	SLP	SLP
Somalia	OFT	SLP	OFT	OFT	OFT	SLP	SLP
South Sudan	SLP	SLP	SLP	N/A	OFT	OFT	OFT
Sudan	SLP	OFT	SLP	OFT	OFT	SLP	OFT
Togo	SLP	SLP	SLP	ONT	OFT	ONT	SLP
Uganda	SLP	SLP	SLP	OFT	OFT	OFT	SLP
United Republic of Tanzania	SLP	OFT	SLP	ONT	OFT	SLP	SLP
Zambia	SLP	SLP	SLP	OFT	OFT	SLP	ONT

Source: Authors' calculation.

Annex Table 2B(i): Performance of Asian LDCs by Different MDG Indicators

Country	1.1: Proportion of Population below Poverty Line	1.5: Employment-to-Population Ratio	1.9: Proportion of Population below Minimum Level of Dietary Energy Consumption	2.1: Net Enrolment Ratio in Primary Education	2.3: Literacy Rate of 15-24 Year Olds, Women and Men	3.1: Ratios of Girls to Boys in Primary Education	4.1: Under-Five Mortality Rate
Afghanistan	SLP	OFT	OFT	SLP	SLP	SLP	SLP
Bangladesh	SLP	OFT	ONT	ONT	SLP	ONT	ONT
Bhutan	ONT	SLP	OFT	SLP	N/A	ONT	ONT
Cambodia	ONT	SLP	ONT	ONT	SLP	SLP	ONT
Lao PDR	ONT	OFT	SLP	ONT	SLP	SLP	ONT
Myanmar	N/A	SLP	N/A	N/A	SLP	ONT	SLP
Nepal	ONT	OFT	SLP	ONT	SLP	ONT	ONT
Yemen	OFT	SLP	OFT	SLP	SLP	SLP	SLP

Source: Authors' calculation.

Annex Table 2B(ii): Performance of Asian LDCs by Different MDG Indicators

Country	4.2: Infant Mortality Rate	4.3: Proportion of One-Year Old Children Immunised against Measles	5.1: Maternal Mortality Ratio	6.1: HIV Prevalence among Population Aged 15-24 Years	7.1: Proportion of Land Area Covered by Forest	7.8: Proportion of Population Using an Improved Drinking Water Source	7.9: Proportion of Population Using an Improved Sanitation Facility
Afghanistan	SLP	SLP	ONT	ONT	SLP	ONT	SLP
Bangladesh	ONT	ONT	ONT	ONT	OFT	SLP	SLP
Bhutan	ONT	SLP	ONT	OFT	ONT	ONT	SLP
Cambodia	ONT	ONT	ONT	OFT	OFT	ONT	SLP
Lao PDR	ONT	SLP	ONT	OFT	OFT	ONT	ONT
Myanmar	SLP	ONT	SLP	OFT	OFT	ONT	ONT
Nepal	ONT	SLP	ONT	OFT	OFT	ONT	SLP
Yemen	SLP	SLP	ONT	OFT	SLP	OFT	SLP

Source: Authors' calculation.

Annex Table 2C(i): Performance of Island LDCs by Different MDG Indicators

Country	1.1: Proportion of Population below Poverty Line	1.5: Employment-to-Population Ratio	1.9: Proportion of Population below Minimum Level of Dietary Energy Consumption	2.1: Net Enrolment Ratio in Primary Education	2.3: Literacy Rate of 15-24 Year Olds, Women and Men	3.1: Ratios of Girls to Boys in Primary Education	4.1: Under-Five Mortality Rate
Comoros	SLP	SLP	OFT	SLP	SLP	SLP	SLP
Kiribati	N/A	N/A	SLP	OFT	N/A	ONT	SLP
Samoa	ONT	SLP	ONT	SLP	OFT	ONT	SLP
Sao Tome and Principe	N/A	OFT	ONT	SLP	OFT	SLP	SLP
Solomon Islands	N/A	OFT	ONT	ONT	SLP	ONT	SLP
Timor-Leste	OFT	OFT	SLP	OFT	ONT	SLP	ONT
Tuvalu	SLP	N/A	N/A	OFT	OFT	OFT	SLP
Vanuatu	ONT	SLP	SLP	OFT	ONT	OFT	ONT

Source: Authors' calculation.

Annex Table 2C(ii): Performance of Island LDCs by Different MDG Indicators

Country	4.2: Infant Mortality Rate	4.3: Proportion of One Year Old Children Immunised against Measles	5.1: Maternal Mortality Ratio	6.1: HIV Prevalence among Population Aged 15-24 Years	7.1: Proportion of Land Area Covered by Forest	7.8: Proportion of Population Using an Improved Drinking Water Source	7.9: Proportion of Population Using an Improved Sanitation Facility
Comoros	SLP	OFT	SLP	ONT	OFT	ONT	SLP
Kiribati	SLP	SLP	N/A	N/A	SLP	SLP	SLP
Samoa	SLP	OFT	SLP	N/A	ONT	ONT	OFT
Sao Tome and Principe	SLP	SLP	SLP	OFT	SLP	ONT	SLP
Solomon Islands	SLP	SLP	SLP	N/A	OFT	SLP	SLP
Timor-Leste	ONT	SLP	ONT	N/A	OFT	SLP	SLP
Tuvalu	SLP	SLP	N/A	N/A	SLP	ONT	SLP
Vanuatu	ONT	OFT	SLP	N/A	SLP	ONT	SLP

Source: Authors' calculation.

Notes for Annex 2:

ONT for any country represents that the respective country is ON TRACK in achieving a specific target indicator.

OFT for any country represents that the respective country is OFF TRACK in achieving a specific target indicator.

SLP for any country represents that the respective country is in SLOW PROGRESS in achieving a specific target indicator.

N/A represents that the country data for the specific indicator is not available.

Annex 3: LDC-wise MPI Ranking

Group	Country	Index Score	Rank
African LDCs	Rwanda	0.5000	1
Asian LDCs	Bangladesh	0.4286	2
Asian LDCs	Cambodia	0.4286	2
Asian LDCs	Bhutan	0.3846	4
Asian LDCs	Lao People's Democratic Republic	0.2857	5
Asian LDCs	Nepal	0.2857	5
African LDCs	Ethiopia	0.2143	7
African LDCs	Gambia	0.2143	7
African LDCs	Mali	0.2143	7
Asian LDCs	Myanmar	0.1818	10
Island LDCs	Samoa	0.1538	11
Island LDCs	Vanuatu	0.1538	11
African LDCs	Burundi	0.0833	13
Island LDCs	Solomon Islands	0.0833	13
African LDCs	Uganda	0.0769	15
Asian LDCs	Afghanistan	0.0714	16
African LDCs	Benin	0.0714	16
African LDCs	Malawi	0.0714	16
African LDCs	Niger	0.0714	16
African LDCs	Guinea	0.0000	20
African LDCs	Guinea-Bissau	0.0000	20
African LDCs	Haiti	0.0000	20
Island LDCs	Kiribati	0.0000	20
African LDCs	Mauritania	0.0000	20
African LDCs	Senegal	0.0000	20
Island LDCs	Timor-Leste	0.0000	20
African LDCs	Burkina Faso	-0.0714	27
African LDCs	Central African Republic	-0.0714	27
Island LDCs	Comoros	-0.0714	27
African LDCs	Zambia	-0.0714	27
Island LDCs	Sao Tome and Principe	-0.0769	31
African LDCs	Democratic Republic of the Congo	-0.0833	32
African LDCs	Angola	-0.1429	33
African LDCs	Eritrea	-0.1429	33
African LDCs	Mozambique	-0.1429	33
African LDCs	Togo	-0.1429	33
African LDCs	United Republic of Tanzania	-0.1429	33
African LDCs	Djibouti	-0.1667	38
African LDCs	Sierra Leone	-0.1667	38
Island LDCs	Tuvalu	-0.2000	40
African LDCs	Liberia	-0.2143	41
African LDCs	Madagascar	-0.2143	41
Asian LDCs	Yemen	-0.2143	41
African LDCs	Chad	-0.2857	44
African LDCs	Lesotho	-0.2857	44
African LDCs	Sudan	-0.3333	46
African LDCs	Equatorial Guinea	-0.4167	47
African LDCs	Somalia	-0.5556	48

Source: Authors' calculation

Annex 4: LDC-wise MDG Performance Estimated by URPM

Annex Table 4A(i): African LDC-wise MDG Performance Estimated by URPM

Country	1.1: Proportion of Population below Poverty Line	1.5: Employment-to-Population Ratio	1.9: Proportion of Population below Minimum Level of Dietary Energy Consumption	2.1: Net Enrolment Ratio in Primary Education	2.3: Literacy Rate of 15-24 Year Olds, Women and Men	4.1: Under-Five Mortality Rate	4.2: Infant Mortality Rate
Angola	N/A	Slow Down	Accelerated	N/A	N/A	Slow Down	Maintained
Benin	N/A	N/A	Accelerated	Accelerated	Accelerated	Slow Down	Maintained
Burkina Faso	Slow Down	Slow Down	Slow Down	Accelerated	Accelerated	Slow Down	Maintained
Burundi	N/A	Slow Down	Slow Down	Slow Down	Slow Down	N/A	N/A
Central African Republic	Slow Down	Accelerated	Accelerated	Slow Down	N/A	Accelerated	Accelerated
Chad	N/A	Slow Down	Slow Down	Slow Down	Slow Down	Slow Down	Slow Down
Congo DR	N/A	Slow Down	N/A	Slow Down	N/A	N/A	N/A
Djibouti	N/A	N/A	Accelerated	Slow Down	N/A	Slow Down	Maintained
Equatorial Guinea	N/A	Slow Down	N/A	Accelerated	N/A	Slow Down	Maintained
Eritrea	N/A	Slow Down	Slow Down	Slow Down	N/A	Slow Down	Maintained
Ethiopia	Accelerated	Slow Down	Accelerated	Accelerated	Accelerated	Slow Down	Maintained
Gambia	N/A	Slow Down	Slow Down	Slow Down	N/A	Slow Down	Accelerated
Guinea	Slow Down	Slow Down	Slow Down	Accelerated	Accelerated	Slow Down	Slow Down
Guinea-Bissau	N/A	Accelerated	Accelerated	N/A	N/A	Slow Down	Maintained
Haiti	N/A	Slow Down	Slow Down	N/A	N/A	Slow Down	Accelerated
Lesotho	N/A	Slow Down	Slow Down	Slow Down	N/A	Accelerated	Maintained
Liberia	N/A	N/A	Slow Down	Slow Down	Maintained	Slow Down	Slow Down
Madagascar	Accelerated	Slow Down	Slow Down	Slow Down	N/A	Slow Down	Maintained
Malawi	Slow Down	Accelerated	Slow Down	Slow Down	N/A	Slow Down	Maintained
Mali	Slow Down	N/A	Accelerated	Accelerated	Slow Down	Slow Down	Accelerated
Mauritania	Slow Down	Accelerated	Slow Down	Slow Down	N/A	Slow Down	Slow Down
Mozambique	Accelerated	Slow Down	Slow Down	Accelerated	Slow Down	Slow Down	Slow Down
Niger	Accelerated	Slow Down	Accelerated	Accelerated	N/A	Slow Down	Accelerated
Rwanda	N/A	Slow Down	Accelerated	Accelerated	Slow Down	Accelerated	Accelerated
Senegal	Slow Down	Accelerated	Slow Down	Accelerated	N/A	Slow Down	Slow Down
Sierra Leone	Slow Down	Slow Down	Accelerated	Accelerated	N/A	Slow Down	Accelerated
Somalia	N/A	Slow Down	N/A	N/A	N/A	N/A	N/A
South Sudan	N/A	Accelerated	Slow Down	N/A	N/A	Slow Down	Accelerated
Sudan	N/A	Slow Down	Accelerated	Slow Down	N/A	Slow Down	Maintained
Togo	Accelerated	Accelerated	Slow Down	N/A	Slow Down	Slow Down	Slow Down
Uganda	Slow Down	Slow Down	Slow Down	Accelerated	N/A	Slow Down	Accelerated
United Republic of Tanzania	Accelerated	Slow Down	Slow Down	Slow Down	Accelerated	Slow Down	Accelerated
Zambia	N/A	Slow Down	Accelerated	N/A	N/A	Slow Down	Maintained

Source: Authors' calculation.

Annex Table 4A(ii): African LDC-wise MDG Performance Estimated by URPM

Country	4.3: Proportion of One-Year Old Children Immunised against Measles	5.1: Maternal Mortality Ratio	6.1: HIV Prevalence among Population Aged 15-24 Years	7.1: Proportion of Land Area Covered by Forest	7.8: Proportion of Population Using an Improved Drinking Water Source	7.9: Proportion of Population Using an Improved Sanitation Facility
Angola	Accelerated	Accelerated	Accelerated	Accelerated	Accelerated	Accelerated
Benin	Slow Down	Accelerated	Slow Down	Slow Down	Accelerated	Accelerated
Burkina Faso	Slow Down	Slow Down	Slow Down	Accelerated	Accelerated	Accelerated
Burundi	Accelerated	Accelerated	Accelerated	Slow Down	Slow Down	Accelerated
Central African Republic	Slow Down	Slow Down	Slow Down	Accelerated	Maintained	Maintained
Chad	Slow Down	Slow Down	Accelerated	Accelerated	Accelerated	Accelerated
Congo DR	Slow Down	Accelerated	N/A	Accelerated	Accelerated	Accelerated
Djibouti	Slow Down	N/A	Accelerated	N/A	Accelerated	N/A
Equatorial Guinea	Slow Down	Slow Down	Accelerated	Maintained	N/A	Slow Down
Eritrea	Accelerated	Slow Down	Accelerated	Accelerated	Slow Down	Slow Down
Ethiopia	Slow Down	Accelerated	Accelerated	Accelerated	Accelerated	Accelerated
Gambia	Slow Down	Accelerated	Accelerated	Accelerated	Slow Down	Slow Down
Guinea	Accelerated	Accelerated	Accelerated	Accelerated	Accelerated	Slow Down
Guinea-Bissau	Slow Down	Accelerated	Accelerated	Maintained	Accelerated	Slow Down
Haiti	Slow Down	Slow Down	Slow Down	Accelerated	Accelerated	Accelerated
Lesotho	Slow Down	Slow Down	Slow Down	Slow Down	Maintained	Slow Down
Liberia	Slow Down	Slow Down	Accelerated	Accelerated	Slow Down	Slow Down
Madagascar	Accelerated	Accelerated	Accelerated	Accelerated	Accelerated	Accelerated
Malawi	N/A	Accelerated	Accelerated	Maintained	Accelerated	Accelerated
Mali	Slow Down	Slow Down	Accelerated	Accelerated	Accelerated	Accelerated
Mauritania	Slow Down	Accelerated	Accelerated	Accelerated	Accelerated	Accelerated
Mozambique	Slow Down	Accelerated	Slow Down	Maintained	Slow Down	Slow Down
Niger	Accelerated	Accelerated	Accelerated	Slow Down	Accelerated	Accelerated
Rwanda	Slow Down	Accelerated	Slow Down	Accelerated	Slow Down	Maintained
Senegal	Slow Down	Maintained	Accelerated	Maintained	Accelerated	Accelerated
Sierra Leone	Accelerated	N/A	Accelerated	Accelerated	Accelerated	Accelerated
Somalia	Slow Down	Slow Down	Accelerated	Accelerated	Slow Down	Slow Down
South Sudan	Accelerated	N/A	N/A	Slow Down	Slow Down	Slow Down
Sudan	Slow Down	Accelerated	Accelerated	Maintained	Maintained	Accelerated
Togo	Accelerated	Accelerated	Slow Down	Maintained	Accelerated	Accelerated
Uganda	Accelerated	Accelerated	Accelerated	Maintained	Accelerated	Accelerated
United Republic of Tanzania	Slow Down	Slow Down	Accelerated	Accelerated	Accelerated	Slow Down
Zambia	Accelerated	Accelerated	Accelerated	Accelerated	Accelerated	Accelerated

Source: Authors' calculation.

Annex Table 4B(i): Asian LDC-wise MDG Performance Estimated by URPM

Country	1.1: Proportion of Population below Poverty Line	1.5: Employment- to- Population Ratio	1.9: Proportion of Population below Minimum Level of Dietary Energy Consumption	2.1: Net Enrolment Ratio in Primary Education	2.3: Literacy Rate of 15- 24 Year Olds, Women and Men	4.1: Under- Five Mortality Rate	4.2: Infant Mortality Rate
Afghanistan	N/A	Slow Down	N/A	N/A	N/A	Slow Down	Accelerated
Bangladesh	Accelerated	Slow Down	Slow Down	Accelerated	Accelerated	Slow Down	Slow Down
Bhutan	N/A	Accelerated	N/A	N/A	N/A	Slow Down	Accelerated
Cambodia	Accelerated	Slow Down	Accelerated	Slow Down	Slow Down	Slow Down	Maintained
Lao PDR	Accelerated	Accelerated	Accelerated	Accelerated	Accelerated	Slow Down	Accelerated
Myanmar	N/A	Slow Down	N/A	N/A	N/A	Slow Down	Maintained
Nepal	Accelerated	Slow Down	Accelerated	N/A	Accelerated	Slow Down	Accelerated
Yemen	N/A	Accelerated	Slow Down	Accelerated	Accelerated	Slow Down	Maintained

Source: Authors' calculation.

Annex Table 4B(ii): Asian LDC-wise MDG Performance Estimated by URPM

Country	4.3: Proportion of One-Year Old Children Immunised against Measles	5.1: Maternal Mortality Ratio	6.1: HIV Prevalence among Population Aged 15-24 Years	7.1: Proportion of Land Area Covered by Forest	7.8: Proportion of Population Using an Improved Drinking Water Source	7.9: Proportion of Population Using an Improved Sanitation Facility
Afghanistan	Accelerated	Accelerated	N/A	N/A	Accelerated	Slow Down
Bangladesh	Accelerated	Slow down	Maintained	Accelerated	Maintained	Accelerated
Bhutan	Slow Down	Maintained	N/A	Accelerated	Slow Down	Slow Down
Cambodia	Accelerated	Accelerated	Accelerated	Slow Down	Accelerated	Accelerated
Lao PDR	Accelerated	Maintained	N/A	Maintained	Slow Down	Accelerated
Myanmar	Accelerated	Slow Down	Accelerated	Slow Down	Accelerated	Slow Down
Nepal	Accelerated	Maintained	Accelerated	Slow Down	Accelerated	Accelerated
Yemen	Slow Down	Accelerated	N/A	N/A	Slow Down	Maintained

Source: Authors' calculation.

Annex Table 4C(i): Island LDC-wise MDG Performance Estimated by URPM

Country	1.1: Proportion of Population below Poverty Line	1.5: Employment-to-Population Ratio	1.9: Proportion of Population below Minimum Level of Dietary Energy Consumption	2.1: Net Enrolment Ratio in Primary Education	2.3: Literacy Rate of 15-24 Year Olds, Women and Men	4.1: Under-Five Mortality Rate	4.2: Infant Mortality Rate
Comoros	N/A	Accelerated	Slow Down	Slow Down	N/A	Slow Down	Maintained
Kiribati	N/A	N/A	Slow Down	Slow Down	N/A	Slow Down	Maintained
Samoa	N/A	N/A	Slow Down	Slow Down	Maintained	Slow Down	Maintained
Sao Tome and Principe	N/A	N/A	Accelerated	Slow Down	Slow Down	Slow Down	Maintained
Solomon Islands	N/A	Slow Down	Slow Down	N/A	N/A	Slow Down	Slow Down
Timor-Leste	N/A	Slow Down	Slow Down	Accelerated	N/A	Slow Down	Maintained
Tuvalu	N/A	N/A	N/A	N/A	N/A	Slow Down	Accelerated
Vanuatu	N/A	N/A	Slow Down	Slow Down	Maintained	Slow Down	Accelerated

Source: Authors' calculation.

Annex Table 4C(ii): Island LDC-wise MDG Performance Estimated by URPM

Country	4.3: Proportion of One-Year Old Children Immunised against Measles	5.1: Maternal Mortality Ratio	6.1: HIV Prevalence among Population Aged 15-24 Years	7.1: Proportion of Land Area Covered by Forest	7.8: Proportion of Population Using an Improved Drinking Water Source	7.9: Proportion of Population Using an Improved Sanitation Facility
Comoros	Slow Down	Slow Down	N/A	Accelerated	Slow Down	Slow Down
Kiribati	Accelerated	N/A	N/A	N/A	Slow Down	Slow Down
Samoa	Slow Down	Slow Down	N/A	Slow Down	Accelerated	Slow Down
Sao Tome and Principe	Accelerated	Accelerated	Accelerated	N/A	Accelerated	Slow Down
Solomon Islands	Slow Down	Accelerated	N/A	Slow Down	N/A	Slow Down
Timor-Leste	N/A	Accelerated	N/A	Slow Down	Slow Down	Slow Down
Tuvalu	Slow Down	N/A	N/A	N/A	Accelerated	Slow Down
Vanuatu	Slow Down	Slow Down	N/A	N/A	Accelerated	Slow Down

Source: Authors' calculation.

Annex 5: Improvement in the Rate of Progress by LDC

Rank	Country	LDCs Group	Slow Down		Maintained		Accelerated		Indicators by Country
			Indicators	(%)	Indicators	(%)	Indicators	(%)	
1	Niger	African LDCs	3	25.00	0	0.00	9	75.00	12
2	Sierra Leone	African LDCs	3	27.27	0	0.00	8	72.73	11
3	Angola	African LDCs	2	20.00	1	10.00	7	70.00	10
4	Ethiopia	African LDCs	3	23.08	1	7.69	9	69.23	13
5	Lao People's Democratic Republic	Asian LDCs	2	16.67	2	16.67	8	66.67	12
5	Nepal	Asian LDCs	3	25.00	1	8.33	8	66.67	12
7	Madagascar	African LDCs	4	33.33	1	8.33	7	58.33	12
7	Mali	African LDCs	5	41.67	0	0.00	7	58.33	12
7	United Republic of Tanzania	African LDCs	4	33.33	1	8.33	7	58.33	12
10	Democratic Republic of the Congo	African LDCs	3	42.86	0	0.00	4	57.14	7
10	Afghanistan	Asian LDCs	3	42.86	0	0.00	4	57.14	7
12	Benin	African LDCs	4	36.36	1	9.09	6	54.55	11
13	Guinea	African LDCs	6	46.15	0	0.00	7	53.85	13
13	Cambodia	Asian LDCs	5	38.46	1	7.69	7	53.85	13
15	Guinea-Bissau	African LDCs	3	30.00	2	20.00	5	50.00	10
15	Mauritania	African LDCs	6	50.00	0	0.00	6	50.00	12
15	Rwanda	African LDCs	5	41.67	1	8.33	6	50.00	12
15	Uganda	African LDCs	5	41.67	1	8.33	6	50.00	12
15	Sao Tome and Principe	Island LDCs	4	40.00	1	10.00	5	50.00	10
20	Zambia	African LDCs	7	53.85	0	0.00	6	46.15	13
20	Bangladesh	Asian LDCs	5	38.46	2	15.38	6	46.15	13
22	Malawi	African LDCs	4	36.36	2	18.18	5	45.45	11
23	Djibouti	African LDCs	3	42.86	1	14.29	3	42.86	7
24	Central African Republic	African LDCs	5	41.67	2	16.67	5	41.67	12
24	Senegal	African LDCs	5	41.67	2	16.67	5	41.67	12
26	Burundi	African LDCs	6	60.00	0	0.00	4	40.00	10
26	Haiti	African LDCs	6	60.00	0	0.00	4	40.00	10
26	Yemen	Asian LDCs	4	40.00	2	20.00	4	40.00	10
26	Tuvalu	Island LDCs	3	60.00	0	0.00	2	40.00	5
30	Burkina Faso	African LDCs	7	53.85	1	7.69	5	38.46	13
31	Sudan	African LDCs	5	62.50	0	0.00	3	37.50	8
31	Bhutan	Asian LDCs	4	50.00	1	12.50	3	37.50	8
33	Gambia	African LDCs	7	63.64	0	0.00	4	36.36	11
33	Togo	African LDCs	4	36.36	3	27.27	4	36.36	11
35	Chad	African LDCs	8	66.67	0	0.00	4	33.33	12
35	Myanmar	Asian LDCs	5	55.56	1	11.11	3	33.33	9
37	Somalia	African LDCs	5	71.43	0	0.00	2	28.57	7
38	Eritrea	African LDCs	7	63.64	1	9.09	3	27.27	11
39	Mozambique	African LDCs	9	69.23	1	7.69	3	23.08	13
40	Equatorial Guinea	African LDCs	5	55.56	2	22.22	2	22.22	9
40	Timor-Leste	Island LDCs	6	66.67	1	11.11	2	22.22	9
40	Vanuatu	Island LDCs	6	66.67	1	11.11	2	22.22	9
43	Comoros	Island LDCs	7	70.00	1	10.00	2	20.00	10
44	Liberia	African LDCs	8	72.73	1	9.09	2	18.18	11
45	Kiribati	Island LDCs	5	71.43	1	14.29	1	14.29	7
46	Solomon Islands	Island LDCs	7	87.50	0	0.00	1	12.50	8
47	Samoa	Island LDCs	7	70.00	2	20.00	1	10.00	10
48	Lesotho	African LDCs	8	72.73	2	18.18	1	9.09	11

Source: Authors' calculation.