

Discussion Papers

Prospects of Achieving Sustainable Development Goals

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Discussion Paper # 241



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Prospects of Achieving Sustainable Development Goals

Manmohan Agarwal*

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Abstract: This paper discusses how far developing country regions and major developing countries have been able to achieve the MDG goals and what this implies for their success in achieving the SDGs. South Asia and Sub-Saharan Africa did not reach their MDGs while the other regions have done so. However, performance in all regions improved after the acceptance of the MDG declaration in 2000. Past trends suggest that most regions would reach their SDG goals except Sub-Saharan Africa. As far as the major developing countries are concerned, they except for India have been by and large successful in meeting their MDG goals and this bodes well for achieving the SDGs. An important aspect to be noted is that growth in Asia is not very inclusive, so very high growth rates are required to improve the social conditions. Growth in the other regions has a much larger impact on social improvement.

Keywords:

JEL codes I30, I32, O10,O15

1. Introduction

The MDGs were first accepted at the start of the new millennium (2000).¹ At a meeting of the UN, 147 heads of states and 189 member-states committed to certain global targets to be achieved by 2015.² The goals had a conceptual clarity; they were all output goals: reducing poverty and malnutrition and achieving gender parity in school enrolment, reducing mortality rates. The MDGs were prescriptive; and countries were expected to achieve them by 2015. The declaration of MDGs was the result of a number of different forces – the failure of structural

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adjustment policies to generate growth, particularly their unfavourable effects on social conditions; the elaboration of new concepts of welfare; the work of UN conferences in providing concepts, targets and policies for achieving social objectives and bureaucratic interests at the national and international levels.

The debt crisis that started in 1982 and persisted throughout the 1980s³ resulted in the adoption of structural adjustment programmes (SAP) championed by the International Monetary Fund (IMF) and the World Bank (WB) to restore growth. But during the 1980s and 1990s, the economies of Latin America (LA) and Sub-Saharan Africa (SSA) stagnated as per capita income grew by only 0.7 per cent a year between 1982 and 2000 in LA, and declined by 0.8 per cent a year in SSA. The SAP policies were believed to have resulted in deterioration in public services, and there were calls for adjustment with a human face (Cornia, Jolly and Stewart, 1988).⁴ It was thought necessary to shift attention back from macro-stabilisation to policies to improve human conditions (Desai, 2007).

In the meantime, the UN had developed a framework for social goals. The UNDP had published the first Human Development Report in 1990 in which countries were ranked according to the level of social development (Hulme, 2009).⁵ The UN had also organised throughout the 1990s many international conferences to analyze different aspects of social achievement and these recommended policies to improve the situation in that particular area (Hulme, 2009).⁶ These recommendations were accepted after refinement in the Development Assistance Committee (DAC) of the Organisation for Economic Co-operation and Development (OECD) as the International Development Goals (IDGs).⁷ Later, they became the MDGs (Hulme and Fukuda-Parr, 2009).⁸ The compromises necessary for reaching agreement on the MDGs often disappointed groups, particularly NGOs, whose issues were either dropped or were not given enough prominence (Hulme and Fukuda-Parr, 2009).

Another strand was bureaucratic competition. Adoption of MDGs would reverse the decline in the importance of ministers and bureaucrats in the international development and cooperation ministries, which had happened earlier (Hulme, 2009). It would also enable the UN to retrieve the prominent role played by it earlier in debates about development.⁹ The achievement of the MDGs would require greater involvement of UN agencies, for example, those dealing with education, health, children's welfare, etc.

The different components of the MDG declaration and their indicators were the result of the analytical recognition that poverty was multi-dimensional and was not merely an issue of insufficient income (Hulme and Fukuda-Parr, 2009), and were based on negotiations about which of the recommendations of the various UN conferences should be included (Hulme and Fukuda-Parr, 2009, Sen, 1985 and 1989). It was necessary that the dimensions chosen as the indicators of the social condition were monitorable.¹⁰ They shared a common vision of material well-being, freedom and equity (Fukuda-Parr, 2004); and were also an instrument for mobilising support and resources (Fukuda-Parr, 2004, Desai, 2007).

The United Nations accepted the SDGs in 2015. These are the goals for 2030. They were the outcome of much wider consultations than the MDGs as developing countries were more involved for them to command greater acceptability. The MDGs had 8 goals and 63 indicators, and the SDGs are more ambitious with 17 goals with 169 indicators.

We first study the progress under the MDGs in different regions – East Asia Pacific (EAP), Latin America and Caribbean (LAC), Middle East and North Africa (MNA), South Asia (SAS) and Sub-Saharan Africa (SSA).¹¹ Then the performance of the MDGs in those developing countries, which are members of the G20 are analysed.

2. Progress on the MDGs in the Regions and Prospects for the SDGs

Poverty

A) Progress towards the MDGs

One MDG goal was to reduce poverty by half of the 1990 level. Substantial progress has occurred over the past two decades in poverty alleviation. The global poverty goal has been reached for an aggregate of all regions, as poverty was reduced to less than half the 1990 level (Table 1).

Table 1: Regional Poverty (2011 PPP) (% of population)

							CAGR	
	1990	2005	2010	2015	MDG	Difference	2005-10	2010-15
EAP	61.6	19.1	11.2	7	30.8	23.8	-10.13	-8.9
LAC	14.2	9.8	6	4	7.1	3.1	-9.35	-7.8
MNA	6.3	3	2.3	2	3.15	1.15	-5.18	-2.7
SAS	44.4	33.7	24.7	17	22.2	5.2	-6.02	-7.2
SSA	55.1	50.9	46.5	41	27.55	-13.45	-1.79	-2.5

Source: World Bank Data Bank.

Note : The right most two columns show the compound annual growth rate of regional poverty, in this case decline in poverty.

In 1990, almost half the population in developing countries was living on incomes below \$1.25 per person per day, the international poverty level fixed by the World Bank. This decreased to 14 per cent in 2015. The number of people living in extreme poverty was 1.9 billion in 1990 and decreased to 836 million in 2015 – a reduction of more than 50 per cent. The working middle-class population almost tripled since 1991; more people were able to break the shackles of poverty and lead more meaningful dignified lives.¹² Undoubtedly, the announcement of the MDGs added impetus to developing countries to work in a time-bound manner to reach the specific target.

However, this progress has not spread equally among the regions. Most regions could overshoot their target level (Table 1). EAP met its target by 2005, and reduced poverty at an average rate of 8 per cent annually. It has been the fastest among all the regions. This is mainly due to the very fast pace of poverty reduction in China. The only region that did not achieve the goal was SSA.

In 2015, 80 per cent of the global population living under extreme poverty resided in SSA and SAS; though SAS succeeded in reducing poverty by more than half, SSA failed. The average annual decline in the poverty rate in SSA was only 1.2 per cent so the poverty level in the region declined only by 25 per cent. More than 40 per cent of the population in SSA continued to live in extreme poverty in 2015.¹³ Because of the different rate of poverty reduction in SSA and EAP; the EAP countries, which had the highest poverty level at the starting in 1990 had lower poverty rate in 2015 than SAS and SSA. SSA countries, which had the second highest poverty level in 1990, had slipped behind further, and had the highest poverty rate by 2015. The failure of the SSA countries could be because of their poor performance in the agricultural sector, partly owing to declining terms of trade, resulting in negative increases in per capita income for much of the quarter century from 1983 to 2005. They would need special focus to meet the SDGs by 2030. MNA had the lowest poverty rate among all the regions.

B) Prospects for achieving the SDGs

We now discuss how successful the regions were in converting growth in per capita income into reductions in poverty. For this we calculated the elasticity of poverty reduction with respect to growth of per capita income. The elasticity is percentage reduction in poverty divided by the percentage increase in per capita income. Since poverty is supposed to go down when the income increases, the elasticity would be negative.

Table 2: Poverty Analysis

	Elasticity		Avg annual % change		Avg annual growth rate to reach SDG	
	2005-10	2010-15	by 2030	by 2025	by 2030	by 2025
EAP	-0.77	-1.01	-5.71	-8.57	5.65	8.47
LAC	-3.12	-6.46	-5.00	-7.50	0.77	1.16
MNA	-1.63	-5.23	-3.33	-5.00	0.64	0.96
SAS	-0.79	-1.11	-6.27	-9.41	5.65	8.48
SSA	-0.60	-1.57	-6.50	-9.76	4.15	6.23

Source: Author's calculation

Two points are important. First, Asian countries had low elasticities of poverty reduction during 2005-10; it was less than 1 for both EAP and SAS (Table 2). In the same period, SSA also had an elasticity less than 1. Only LAC and MNA showed an elastic response of poverty to growth. The very substantial reduction in poverty in EAP was largely because of its very high rate of growth. Second, the elasticity increased for all the regions during 2010-15. The maximum responsiveness to growth during 2010-15 was observed in LAC and MNA.

SDG 1 strives to achieve zero poverty for all by 2030. This would require considerable effort, both in terms of funds and proper implementation of inter-related strategies such as capacity-building, social protection system, decent employment opportunities and improving the resilience of the poor and vulnerable sections. Even though the goal is complete poverty eradication, a poverty target of 1 was set for the above analysis, and average annual percentage change required to achieve target was computed.¹⁴

The growth rates required for EAP, LAC and MNA to meet the goal are quite low, comparable or less than what the regions achieved in the past. EAP would definitely reach the goal by 2030 if it maintains the growth rate achieved in the past, even the lower growth rate achieved

during 2010-15 (Table 3). EAP can achieve the poverty target by 2025 if it reverted to the higher growth rates achieved in 2005-10. SAS would achieve the target by 2030 if it sustains the growth rate achieved in the past. MNA can reach the poverty target by 2030 if achieves growth rate experienced in 2005-10. At those growth rates, the region can eliminate poverty by 2025. Maintenance of growth rates achieved in the recent years would enable LAC to eliminate poverty by 2030. It is likely that such growth rates would even enable the region to eliminate poverty by 2025. But EAP and LAC may find it difficult to maintain the past pace of poverty alleviation as specially disadvantaged groups may need to be reached at low level of poverty. Extra efforts may be required to target the remaining poverty and to ensure that they do not slide back. Special programmes would also be required in India in SAS because of the heterogeneity of its population.

Problems for poverty eradication in MNA arise from political uncertainty and the presence of civil strife and war, which have created a large number of refugees, who have special needs.

Table 3: Growth of per capita GDP by Region

(% Annual Average)

	2005-10	2010-15
EAP	10.7	7.4
LAC	2.5	2.0
MNA	2.9	0.5
SAS	6.8	5.6
SSA	2.9	1.5

Source: World Bank Data Bank

The only hitch is in SSA. The region failed to fulfill their MDG poverty goal, and seem highly unlikely to fulfill their SDG goal as well. because “48.5 per cent of the population is living on less than \$1.25 per day, and 69.9 per cent on less than \$2.00 per day. With a little over

910 million people living in the region, this places around 637 million Africans below the poverty line.”¹⁵ The Democratic Republic of Congo is the poorest country in Africa with almost 88 per cent of the population living below the poverty line. To attain the SDGs, concerted efforts need to be adopted by local, national and international communities.

Per capita income in the region grew at an annual rate of 2.9 and 1.5 per cent, respectively, during 2005-10 and 2010-15. These rates are considerably lower than the 4 per cent required to eliminate poverty by 2030. So either the region needs a much more accelerated growth rate or the nature of its growth must change so that more benefits reach the poorer sections of the population. Achieving a per capita growth rate of 4 per cent would imply that GDP must grow at over 6 per cent a year which in turn would require an investment ratio of 25 to 30 per cent of GDP. This is considerably higher than what the region achieved in the past. The closest the region came to achieving such investment rates was 1974-82 (Agarwal, 2008). But even then its rate of growth of per capita income was very low because of a high incremental capital output ratio (ICOR). Even achieving a high investment rate may not be sufficient; the efficiency in the use of capital must increase.¹⁶ Special safety nets may need to be devised in addition to a change in the nature of the growth process for poverty eradication in SSA.

Malnutrition

The goal under the MDG was to halve between 1990 and 2015 the proportion of people who suffer from hunger. Globally, there were 795 million people who were malnourished in 2015; this translated to one in nine individuals living in hunger every day. Developing countries accounted for 780 million of the malnourished population. Data showed that globally, malnourished population reduced by almost half from 23.3 per cent (1990-92) to 12.9 per cent (2014-16).¹⁷

Table 4: Prevalence of undernourishment (% of population)

							Compound Annual Rate of Growth		
	2000	2005	2010	2015	MDG	Difference	2000-05	2005-10	2010-15
EAP	17.91	16.39	12.52	10.20	8.95	-1.25	-1.76	-5.25	-4.01
LAC	12.83	9.42	7.22	6.90	6.41	-0.49	-6.00	-5.16	-0.90
MNA	9.98	10.07	9.09	9.11	4.99	-4.13	0.18	-2.02	0.05
SAS	18.83	20.66	16.45	15.29	9.41	-5.88	1.87	-4.46	-1.45
SSA	26.98	22.69	19.75	20.15	13.49	-6.66	-3.40	-2.74	0.39

Source: World Bank Data Bank.

Data for the regional malnourishment rates for 1990 and 1995 is unavailable. “Rapid progress during 1990s was followed by a slower decline in hunger in the first five years of the new millennium, and then a rebound starting around 2008. The projections for the most recent period mark a new phase of slower progress.”¹⁸

The global environment has been particularly challenging in the last decades. The main challenges included volatile commodity prices, high unemployment rates, higher energy and food prices, and economic recessions (the East Asian Crisis of late 1990s and the Global Financial Crisis of 2008). Natural disasters and uncertain climate changes affected life, livelihood and global food security. Additionally, political factors like civil strife and instability aggravated the situation, leading to a significant humanitarian crisis.

In 2000, SSA had the highest rate of malnutrition. LAC and MNA had relatively low rates of malnutrition (Table 4). The malnutrition rates in SAS and EAP were rather similar. By 2015, the regions had almost met the goal of halving malnutrition; they were slightly off the target. The countries of SSA and SAS showed the highest prevalence of hunger and malnutrition. The MNA countries had the lowest incidence of hunger and malnutrition in 2000, but there was hardly any reduction in malnutrition;

its rates actually increased between 2000 and 2005 a feature shared with SAS.¹⁹ As a consequence, the MNA region had fallen behind EAP and LAC, and had higher rates of malnutrition than these two regions. MNA and SAS countries registered a slight increase in malnutrition level in early 2000s before the decline after 2005. Furthermore, MNA and SSA again showed a slight increase in malnutrition levels after 2010. This is a particularly alarming situation, especially for SSA, which had very high malnutrition rates to begin with. SAS accounted for almost 281 million undernourished people, facing the highest hunger burden. EAP and LAC emerged again as the best performing regions and reduced successfully their malnourishment rates. LAC countries show presently the lowest malnutrition rates. EAP has shown a particularly speedy decline even though the rate of decline slowed down in all the regions in 2010-15. This might be partly owing to the impact of the slowdown due to the GFC.

In African countries, the rate of progress has been hampered by rapid population growth, environmental uncertainties, political and economic imbalances. In West Asia, the pattern was particularly worrying. The prevalence of malnourishment could have risen due to war, civil unrest and the refugee crisis.

Table 5: Malnourishment Analysis

	Elasticity			Avg annual % change		Avg annual growth rate to SDG	
	2000-05	2005-10	2010-15	by 2030	by 2025	by 2030	by 2025
EAP	-0.20	-0.44	-0.50	-6.01	-9.02	12.06	18.09
LAC	-4.27	-1.87	-0.85	-5.70	-8.55	6.69	10.04
MNA	0.07	-0.68	0.11	-5.94	-8.90	-54.33	-81.50
SAS	0.40	-0.60	-0.25	-6.23	-9.35	24.89	37.33
SSA	-0.94	-0.90	0.26	-6.34	-9.50	-24.05	-36.08

Source: Author's calculation

LAC showed a very high elasticity with respect to growth in per capita income in 2000-05 (Table 5). However, this trend was reversed later. All the regions showed inelastic reductions in malnutrition to growth of per capita income in 2010-15. It is interesting to note that high elasticity of poverty reduction did not translate into high rates of reduction in malnutrition.²⁰ Obviously, reduction in malnutrition depends on factors other than income; much more than poverty reduction does. EAP and LAC showed a relatively greater response than the other regions.

The second goal in Agenda 2030 of the SDGs aims to end hunger, achieve food security, and improve nutrition, and promote sustainable agriculture. This translates to ensuring access to safe, nutritious and sufficient food throughout the year for all people, especially the poor and the vulnerable sections, including infants. Here, we focus on the hunger component. It aims to end all forms of malnutrition and achieve a set of internationally agreed upon targets on stunting and wasting among children by 2025, and address the nutritional needs of adolescent girls, pregnant and lactating mothers and older generations.²¹

For the purpose of this analysis, a target of reducing prevalence of malnutrition was set to 1. To achieve this by 2030 or 2025, the pace of the decline required has been calculated by estimating average rate of decline required per year till 2030 and 2025, respectively. Next, using the average annual rate of change required, given present elasticity levels, the rate of growth of per capita income per year till 2030 and 2025 has also been calculated.

The analysis shows that it would be very difficult for most of the regions to reach this target. They need very high levels of annual change as well as growth rate of per capita income. EAP and LAC are in the best position to reach the target. But even for EAP, the growth rates required to meet the target are much higher than those achieved in the past or are projected to achieve by the Bretton Woods institutions. For LAC the growth rates of per capita income would have to almost triple. It would

be particularly difficult for SSA and SAS countries, which account for almost two-third of the total population living in hunger, i.e. 63 per cent of the total undernourished persons globally.²² Consequently, achieving the target is going to be difficult, particularly when we look at the pace at which malnourishment has declined in the past few years. Growth rates of per capita income in SAS would have to be more than triple. MNA has low levels to begin with, but as it could not improve much in the last 15 years, reversing trajectory in the next 15 years may prove extremely hard.²³

It is extremely unlikely that growth rates needed to meet the goals for hunger eradication in the SDGs on the assumption of maintenance of the past relation between growth of per capita income and reduction in malnutrition would be achieved. Therefore, greater focus must be focused on other means of tackling malnutrition.

Mortality Rates

A) Progress towards the MDG goals

Goal 4 of the MDGs had envisioned lowering the Infant Mortality Rate (IMR) and under 5 Mortality Rate (U5MR) by two-third between 1990 and 2015. Goal 5 had envisioned a reduction of the Maternal Mortality Rate (MMR) by three-quarters. Significant progress was achieved in the last 25 years. Between 1990 and 2015, the world reduced IMR by 49 per cent, from 90 deaths per 1,000 live -births in 1990 to 46 in 2013.²⁴ Of the total number of births, more than 71 per cent of the births were assisted by skilled medical practitioners.²⁵ Another important achievement globally was increased vaccination of people. Global U5MR was reduced from 90 (in 1990) to 43 (in 2015) per 1000 – a reduction of more than half. This outcome has been commendable as despite a growing population deaths reduced from 12.7 million to 6 million during the period. Globally, MMR reduced by 45 per cent, the maximum decline occurring after 2000. But these achievements while substantial have fallen short of the goals.

Table 6: Mortality rate, infant (per 1,000 live-births)

									Compound Annual Rate of Growth		
	1990	1995	2000	2005	2010	2015	MDG	Difference	2000-05	2005-10	2010-15
EAP	45.60	40.50	33.60	25.30	19.10	14.90	15.20	0.30	-5.52	-5.47	-4.85
LAC	44.70	36.10	28.20	22.40	19.10	15.60	14.90	-0.70	-4.50	-3.14	-3.97
MNA	52.50	44.20	36.50	29.90	24.70	21.90	17.50	-4.40	-3.91	-3.75	-2.38
SAS	91.70	80.40	68.90	58.30	49.00	40.30	30.57	-9.73	-3.29	-3.42	-3.83
SSA	108.00	103.50	94.00	78.80	65.20	54.90	36.00	-18.90	-3.47	-3.72	-3.38

Source: World Bank Data Bank.

The above figures show that EAP performed the best, and it had achieved its goal (Table 6). With an average decline rate of 5 per cent, it showed the fastest decline in IMR. It was closely followed by LAC, which almost achieved its target with the second largest decline rate. However, the other three regions – MNA, SAS and SSA – lagged behind. During 2010-15, MNA had the slowest decline rate among all the regions; SSA had the highest MMR among all the regions and had an annual decline rate of around 3.5 per cent. Many of the deaths in SSA and SAS were owing to preventable infectious causes which could have been avoided using simple, high-impact and cost-effective interventions addressing the needs of women and child, especially just after child-birth.

Table 7: Mortality rate, under-5 (per 1,000 live-births)

									Compound Annual Rate of Growth		
	1990	1995	2000	2005	2010	2015	MDG	Difference	2000-05	2005-10	2010-15
EAP	59.80	52.40	42.50	31.20	23.20	18.00	19.93	1.93	-5.99	-5.75	-4.95
LAC	56.50	44.50	34.10	26.60	23.30	18.30	18.83	0.53	-4.85	-1.00	-6.27
MNA	68.80	56.60	45.80	36.60	29.70	26.30	22.93	-3.37	-4.39	-4.09	-2.40
SAS	129.40	111.60	93.70	77.20	62.90	50.30	43.13	-7.17	-3.80	-4.01	-4.37
SSA	180.70	173.00	155.00	126.60	100.60	81.40	60.23	-21.17	-3.97	-4.49	-4.15

Source: World Bank Data Bank

In 2015, about 16,000 children died globally every day before they could celebrate their fifth birthday from preventable causes, like pneumonia, diarrhea, malaria. EAP and LAC were the best performers in terms of reducing U5MR. They reduced their U5MR, and achieved the MDG target (Table 7). The rate of decline in EAP decreased since 2000-05 The decline rate was especially pronounced in LAC in 2010-15 after facing a sudden slowdown in the rate of decline of U5MR during 2005-10. MNA had the slowest decline rate in 2010-15 among all the regions. Even though SSA and SAS had very high U5MR to begin with, they showed an average of 4 per cent decline over the past 25 years. SAS had a total under-5 death of 1.8 million in 2015. In SSA, the total under 5 mortality was 3 million in 2015 – it carried almost half the burden of the under 5 deaths in the world. The total number of infant and under five population is expected to rise in SSA in the coming years. Thus, the number of under-five deaths may increase unless reduction of the under-five mortality rate is enough to outpace population growth.²⁶

In 2013 the under-five mortality rate in low-income countries was 76 deaths per 1,000 live-births – more than 12 times the average rate of 6 in high-income countries. (Levels & Trends in Child Mortality Report 2014 Estimates Developed by the UN Inter-agency Group of WHO, UNICEF, WB, UN.2014).

Table 8: Maternal mortality ratio (modeled estimate, per 100,000 live births)

									Compound Annual Rate of Growth		
	1990	1995	2000	2005	2010	2015	MDG	Difference	2000-05	2005-10	2010-15
EAP	168.00	137.00	120.00	100.00	79.00	63.00	42.00	-21.00	-3.58	-4.61	-4.43
LAC	142.00	124.00	104.00	92.00	84.00	70.00	35.50	-34.50	-2.42	-1.80	-3.58
MNA	181.00	152.00	125.00	110.00	99.00	90.00	45.25	-44.75	-2.52	-2.09	-1.89
SAS	558.00	476.00	388.00	296.00	228.00	182.00	139.50	-42.50	-5.27	-5.09	-4.41
SSA	987.00	928.00	846.00	717.00	625.00	547.00	246.75	-300.25	-3.25	-2.71	-2.63

Source: World Bank Data Bank.

In developing regions, only 56 per cent and 87 per cent of the total births in rural and urban areas were assisted by skilled health personnel, respectively, leading to relatively high levels of MMR. SSA had enormously high MMR in the 1990s. Even though this has nearly halved in 2015, a lot needs to be done. The regions showing the lowest MMR are EAP and LAC in 2015 (Table 8) . The highest decline was by EAP and SAS; the performance of SAS is commendable in this respect. Only 50 per cent of the pregnant women in developing countries received the prescribed minimum number of antenatal care visits of 4. MNA showed the slowest reduction in MMR among all the regions. SSA and SAS comprised 86 per cent of global maternal deaths; haemorrhage being the greatest cause of death (more than 27 per cent in developing regions). Other major causes included high blood pressure during pregnancy, infections, unsafe abortion, delivery complications, etc.

Overall, as women have gained access to family planning and skilled birth attendance with back-up emergency obstetric care, the global maternal mortality ratio had fallen from 380 maternal deaths per 100,000 live -births in 1990 to 210 deaths per 100,000 live-births in 2013; a 45 per cent decline (<http://www.unfpa.org/maternal-health>). This resulted in many countries halving their maternal death rates. At the country level, India (19 per cent or 56,000) and Nigeria (14 per cent or 40,000) accounted for roughly one-third of the maternal deaths in 2010. Furthermore, Afghanistan, Bangladesh, Democratic Republic of the Congo, Ethiopia, Indonesia, Pakistan, Sudan and the United Republic of Tanzania each accounted for 3 to 5 per cent of maternal deaths. Together these ten countries accounted for about 60 per cent of all maternal deaths.²⁷

B) Prospects for achieving the SDGs

SDG 3 addresses major health priorities and focuses on reproductive, maternal and child-health; ending communicable diseases; reducing non-communicable diseases and other health hazards; and would ensure universal access to safe, effective, quality and affordable medicines and

vaccines as well as health coverage. The mortality targets are: Neonatal Mortality Rate (NNMR) of 12, Under-5 Mortality Rate (U5MR) of 25 and a Maternal Mortality Ratio (MMR) of 70. In contrast to the MDGs which planned to reduce mortality rate based on a target linked to initial levels, SDG would bring uniformity in all the countries of the world with a benchmark threshold target. This means that countries and regions with higher mortality rates would require to make an extra effort.

Table 9: IMR Analysis

	Elasticity			Avg annual % change		Avg annual growth rate to SDG	
	2000-05	2005-10	2010-15	by 2030	by 2025	by 2030	by 2025
EAP	-0.57	-0.46	-0.59	-1.30	-1.95	2.19	3.28
LAC	-3.30	-1.18	-3.55	-1.54	-2.31	0.43	0.65
MNA	-1.47	-1.21	-4.55	-3.01	-4.52	0.66	0.99
SAS	-0.63	-0.47	-0.63	-4.68	-7.02	7.41	11.11
SSA	-0.96	-1.20	-2.09	-5.21	-7.81	2.49	3.73

Source: Author's calculation

EAP and SAS showed an inelastic response consistently from 2000-15 of IMR to growth of per capita income (Table 9). LAC, MNA and SSA showed an elastic response; the highest elasticities were shown by MNA. EAP, LAC and MNA are closest to reaching their target in the given order and thus would not only comfortably reach the target, but may overshoot it. Only SSA and SAS are lagging behind. In this scenario, SSA and SAS need to step-up their efforts, requiring an average decline rate of almost 5 per cent annually. This is achievable with the proper implementation of correct policies. LAC and MNA show the lowest increase in per capita income needed to reach the target given the elasticity of IMR reduction to increase in per capita income. They are followed closely by EAP, which is at par with what the SSA region needs, given its present elasticity level. However, SAS countries have a very inelastic response of U5MR to growth in per capita income. To reach the SDG target they would require an average per capita increase

in income of around 7.5 per cent. Achieving this would not be easy, and would require special efforts.

Table 10: Under-5 MR Analysis

	Elasticity			Avg annual % change		Avg annual growth rate to SDG	
	2000-05	2005-10	2010-15	by 2030	by 2025	by 2030	by 2025
EAP	-0.61	-0.48	-0.60	-5.92	-8.88	9.8	14.7
LAC	-3.53	-0.39	-5.35	-5.93	-8.91	1.1	1.66
MNA	-1.63	-1.32	-4.59	-0.32	-0.49	0.07	0.10
SAS	-0.72	-0.54	-0.71	-3.35	-5.02	4.70	7.05
SSA	-1.09	-1.43	-2.52	-4.61	-6.92	1.82	2.74

Source: Author's calculation

As far as U5MR are concerned, EAP and LAC have already achieved their SDG of 25. It is commendable that these regions have already overshoot their target. So different targets are taken for these two regions; the lowest U5MR achieved by any country in the world (2 per 1000 live births) has been achieved by Iceland, Luxembourg, etc. The average U5MR in the European Union is 4 per 1000 live-births or the average of high income countries, which is 5 per 1000 live-births.

LAC could achieve the standard set by the best countries, 2 per 1000 live -births, as the necessary GDP growth rate required to achieve the target with the estimated elasticity is lower than what the region has achieved in the past (Table 10). But the growth rates required in EAP region to reach the revised target are very high because of the low elasticity of response of U5MR to GDP growth rate. Even to reach the average mortality rate in high-income countries would require per capita income in the region to grow at almost 8 per cent a year, a rate that may be difficult to achieve. SAS also has a low elasticity and would require rapid growth to achieve the SDG target. But the required growth rate to reach the target by 2030 is less than 5 per cent, which the region had achieved in the past. MNA showed a highly elastic response of decline in U5MR to growth of per capita income. It could be the first region to reach

the target and would do so comfortably before 2025. If it successfully maintains the current pace, it will overshoot the target and lower the rates further. Though SSA also showed an elastic response it would have to catch-up more with an average annual decline rate of around 4 per cent. However, the corresponding increase in per capita income, given present elasticity, makes the target achievable.

EAP and LAC have to lower mortality almost by the same percentage every year to achieve the lowest rates prevailing in the world. However, as EAP showed inelastic response, it would require a very high growth of per capita income. Thus, LAC has a better chance of reaching the target sooner.

Table 11: MMR Analysis

	Elasticity			Avg annual % change		Avg annual growth rate to SDG	
	2000-05	2005-10	2010-15	by 2030	by 2025	by 2030	by 2025
EAP	-0.39	-0.39	-0.55	-6.35	-9.52	11.62	17.43
LAC	-1.85	-0.70	-3.23	-6.38	-9.57	1.98	2.97
MNA	-0.97	-0.70	-3.65	-1.48	-2.22	0.41	0.61
SAS	-0.97	-0.68	-0.72	-4.10	-6.15	5.71	8.57
SSA	-0.91	-0.89	-1.65	-5.81	-8.72	3.52	5.27

Source: Author's calculation

MNA, EAP and LAC have already achieved their MMR, SDG of 70. So, for these two regions, the target is taken as the lowest MMR in the world (3 per 100,000 live-births) achieved by Finland, Greece, Iceland and Poland; EAP is very unlikely to reach this target. But the other two regions can reach the target as the implied growth rates are achievable (Table 11). The average MMR for the European Union is 8 deaths per 100,000 live-births whereas for the group of high income countries it is 13 deaths per 100,000 live-births. EAP is unlikely to reach the level of

the European Union or high-income countries because of the inelastic relation between the decline in MMR and growth of per capita income.

As in the previous two cases related to mortality, EAP and SAS showed an inelastic response to growth of per capita income. The highest elasticity is shown by LAC and MNA, and SSA showed a lower but elastic response. Again, MNA is the closest to achieving the SDG, and is likely to overshoot the target by 2030, going at the present pace. SSA showed inelastic response during 2000-10, but this reversed in 2010-15, which is a positive sign. SAS would need a lower average annual reduction of MMR than SSA to reach the target. However, owing to lower present elasticity levels, it would need a higher growth rate of income per capita to achieve the target. They are likely to reach the target in the present circumstances.

MNA needs the lowest rates of increase of per capita income among all the regions to achieve the target. EAP and LAC have to lower mortality rates by almost by the same percentage every year to achieve the lowest rates prevailing in the world. However, as EAP showed an inelastic response, it would require a very high growth of per capita income. Thus, LAC has a better chance of reaching the target sooner as in the previous case.

In brief, the regions have varied considerably regarding the progress they have achieved towards reaching the MDG goals. By and large, EAP, LAC and MNA were successful and SAS and SSA lagged. SSA had fallen considerably short of the MDG targets for 2015. This has been by and large because per capita income grew very slowly in the countries of this region. Elasticity of improvement in the social indicators has been higher in SSA than in Asia, both EAP and SAS, for all the indicators examined – poverty, malnutrition, and the mortality rates – and in some cases the elasticities are substantially higher in SSA than in Asia. The

stellar performance of EAP on the social front has been because of the high growth rates achieved in the region. But the rather low elasticities in EAP would make the task of achieving the SDGs harder for these countries. The poorest performance in terms of the indicators was in malnutrition. All the regions have fallen short of the target.

We now discuss the implications of the past performance with regard to the MDGs for achieving the SDGs. It has been observed that all the regions are likely to eliminate poverty by 2030, if they grow at rates they achieved in the past. Furthermore, the EAP, LAC, and MNA regions may even eliminate poverty by 2025. The only region that is unlikely to eliminate poverty by 2030 is SSA. But despite this, none of the regions are likely to eliminate malnutrition. In a number of areas of infant, child and maternal mortality, some of the regions has already met by 2015 the target set for 2030. They could now improve their performance to levels reached by the developed countries. While they are unlikely to reach the performance of the best countries they can reach the average of the high-income countries.

The region that is likely to fall considerably short of the target is SSA. They are very far away from the target at the moment and cannot be expected to reach the absolute levels. A relative target may have been more achievable. But as the targets have been set, two sorts of efforts need to be mounted to help them reach the targets. One is to raise investment levels. The fall in savings and investment rates since the 2008 financial crisis makes this difficult. Initially, raising investment rates may require more foreign aid. Furthermore, effort must be made to discover growth strategies and paths that create more benefits for the disadvantaged sections of society.

3. The Performance of developing country members of the G20

After analyzing the performance of the regions in achieving the MDGs, and what this portends towards progressing in achieving the SDGs for

poverty, malnutrition and mortality, a similar analysis is done for the countries among the G-20 member-countries, which do not belong to the highly developed category. The countries under consideration are Argentina, Brazil, China, India, Indonesia, Mexico, Russia, Saudi Arabia, South Africa and Turkey.

Poverty

Achievement of the poverty MDG

Poverty data was not available for Saudi Arabia, and hence no meaningful analysis was possible. For other countries, the missing data was either extrapolated or interpolated. And in other cases, the missing data was assumed to maintain the status quo (no change in level from the previous year), and analysed.

Table 12: Poverty Rates (2011 PPP) (% of population)

									Compound Annual Growth Rate		
	1990	1995	2000	2005	2010	2015	MDG	Difference	2000-05	2005-10	2010-15
Argentina	5.70	4.10	5.70	5.40	2.00	1.71	2.85	1.14	-1.08	-18.02	-3.08
Brazil	20.60	13.00		9.60	9.60	4.30	10.30	6.00	-	0.00	-14.84
China	66.60	42.05	40.54	18.80	11.20	1.85	33.30	31.45	-14.25	-9.84	-30.24
India	45.91	-	-	38.21	21.23	21.23	22.96	1.73	-	-11.09	0.00
Indonesia	57.30	45.89	39.80	21.60	15.90	7.50	28.65	21.15	-11.51	-5.94	-13.95
Mexico	7.07	9.92	11.00	3.29	3.80	3.04	5.50	2.46	-21.45	2.92	-4.36
Russia	2.37	3.60	2.30	0.50	0.10	0.00	1.80	1.80	-26.30	-27.52	-
Saudi Arabia	-	-	-	-	-	-	-	-	-	-	-
South Africa	33.81	32.59		25.44	16.56	16.56	16.91	0.35	-	-8.23	0.00
Turkey	-	2.57	1.71	2.60	0.80	0.33	1.29	0.96	8.74	-21.00	-16.23

Source: World Bank Data Bank

All these countries reduced their poverty by at least half and attained their MDG target (Table 12). Russia and Turkey achieved almost zero poverty level by 2010 itself. This was unprecedented.

Argentina had very low levels of poverty to start with, but with population growth, currency crisis and other pressures, poverty reached its peak in 2000. Thereafter, it declined at an impressive rate. In Brazil a steady decline has occurred since 1990. Mexico showed the highest fall in 2000-05. The experience of Argentina, Brazil and Mexico corresponded with the experience of the LAC region as a whole.

China started with very high rates of poverty, but experienced a drastic reduction, particularly during 2000-05 and 2010-15. Most of the success of the EAP region in controlling poverty can be attributed to China due to its policy of manufacturing export-led high growth, population control measures and massive drive in the social sectors. India and Indonesia show steady declines and high reduction rates. Russia had low rate to begin with and was the only country to achieve a zero poverty rate in 2015 with decline rate as high as 27 per cent. South Africa almost achieved the target by 2010 itself. In this, the country did not represent the experience of other countries of the region. Turkey also had unprecedented rate of poverty reduction and achieved a near zero poverty level. China, Indonesia and Mexico showed high decline in 2000-05 and 2010-15, with lower rate in 2005-10. This might have been due to negative impacts of the GFC.

Prospects for achieving SDGs

Given their performance, these countries are on track to achieve SDG 1 of zero poverty by 2030 (Table 13).²⁸

Table 13: Poverty Analysis

	Elasticity			Avg annual % change		Avg annual growth rate to SDG	
	2000-05	2005-10	2010-15	by 2030	by 2025	by 2030	by 2025
Argentina	-1.27	-3.06	-6.70	-2.77	-4.15	0.41	0.62
Brazil		0.00	-48.64	-5.12	-7.67	0.11	0.16
China	-0.98	-0.61	-1.97	-3.06	-4.59	1.56	2.34
India		-1.15	-1.15	-6.35	-9.53	5.51	8.27
Indonesia	-2.61	-1.12	-2.30	-5.78	-8.67	2.51	3.76
Mexico	-101.10	-32.40	-2.57	-4.47	-6.71	1.74	2.61
Russia	-2.08	-4.09	-16.40				
Saudi Arabia							
South Africa		-3.41	-3.41	-6.26	-9.40	1.84	2.76
Turkey	2.95	-6.84	-1.94				

Source: Author's calculations

All the countries have shown a highly elastic response of decline in poverty rates to growth of per capita income, especially Brazil and Russia. The average annual decline in poverty required to achieve SDG is highest for India and South Africa, followed by Indonesia, Brazil and Mexico. Considering current elasticity levels, the average annual growth of per capita income required to reach the SDG target was calculated for the countries. The highest growth of per capita income is required for India, followed by Mexico. While India achieved this required growth rate for many years, the country may still require a robust plan to achieve the SDG goal. For this, it is necessary to appropriately calculate poverty. The actual poverty rate in the country is controversial. Merely taking a general approach to poverty alleviation without a specific target would not lead to desired results. There are substantial social cleavages in the country, and special programmes may be needed to reach groups, who are not covered by general growth. Average annual increase in per capita income is quite achievable for the other countries. Thus, all the countries are reducing poverty at a fast pace, and will most likely achieve zero poverty level by 2030, and meet SDG1.

Malnutrition: Achievement of the malnutrition MDG

The MDG goal was to halve between 1990 and 2015 the proportion of people suffering from hunger. Data on malnutrition were missing for the 1990s and was available only from 2000.

Table 14: Prevalence of undernourishment (% of population)

							Compound Annual Growth Rate		
	2000	2005	2010	2015	MDG	Difference	2000-05	2005-10	2010-15
Argentina	3.50	4.70	4.00	3.60	1.75	-1.85	6.07	-3.17	-2.09
Brazil	12.00	4.50	2.50	2.50	6.00	3.50	-17.81	-11.09	0.00
China	15.90	15.30	11.90	9.60	7.95	-1.65	-0.77	-4.90	-4.20
India	17.20	20.50	15.60	14.50	8.60	-5.90	3.57	-5.32	-1.45
Indonesia	17.80	18.60	12.50	7.90	8.90	1.00	0.88	-7.64	-8.77
Mexico	4.40	5.50	4.60	4.20	2.20	-2.00	4.56	-3.51	-1.80
Russia	5.10	2.50	2.50	2.50	2.55	0.05	-13.29	0.00	0.00
Saudi Arabia	6.20	8.00	6.90	4.40	3.10	-1.30	5.23	-2.92	-8.61
South Africa	4.70	4.20	3.90	4.60	2.35	-2.25	-2.22	-1.47	3.36
Turkey	2.50	2.50	2.50	2.50	1.25	-1.25	0.00	0.00	0.00

Source: World Bank Data Bank.

The performance on malnutrition was at best mixed one. Only three of the developing countries in the G 20 reached their MDG target – Brazil, Indonesia and Russia (Table 14). Indonesia’s performance was especially commendable as it had one of the highest prevalence of undernourishment in 2000s, almost at par with India. An increase in malnutrition was first observed in 2000-05 in India, Indonesia, Mexico and Saudi Arabia, but it decreased afterwards. The fastest decline was in Brazil and Russia, followed by Indonesia. Russia and Brazil achieved a very high decline rate during 2000-05. The decline rate was also very fast in China, India and Indonesia in 2005-10.

The country needing special focus is South Africa. It had been reducing malnutrition at a slow pace since 2000, but in 2010-15, it showed a sudden increase in malnourishment. This is a cause of concern.

Prospects for achieving the SDG goal for malnutrition

SDG2 aims at eradicating global hunger, malnutrition, child stunting and wasting, among others, so that each one in the world has availability and accessibility to safe and nutritious food.

Table 15: Malnutrition Analysis

	Elasticity			Avg annual % change		Avg annual growth rate to SDG	
	2000-05	2005-10	2010-15	by 2030	by 2025	by 2030	by 2025
Argentina	8.26	-0.72	-4.62	-4.81	-7.22	1.04	1.56
Brazil	-7.66	-2.44	0.00	-4.00	-6.00	1.64	2.46
China	-0.07	-0.33	-0.46	-5.97	-8.96	13.12	19.68
India	0.70	-0.62	-0.23	-6.21	-9.31	27.02	40.53
Indonesia	0.26	-1.39	-1.60	-5.82	-8.73	3.63	5.44
Mexico	36.06	34.20	-1.12	-5.08	-7.62	4.54	6.82
Russia	-1.36	0.00	0.00	-4.00	-6.00	2.95	4.42
Saudi Arabia	5.07	53.39	-3.10	-5.15	-7.73	1.66	2.49
South Africa	-0.82	-0.70	4.36	-5.22	-7.83	7.48	11.22
Turkey	0.00	0.00	0.00	-4.00	-6.00		

Source: Author's calculations

In China and India, malnutrition rates show an inelastic response to growth of per capita income (Table 15). Otherwise, all countries show an elastic response to increased per capita income. South Africa shows a positive elasticity as malnourishment increased despite the increased per capita income.

To fulfill the SDG target India would require the highest average annual growth in GDP, a higher rate than any achieved in the past. Other

countries that need high rate of growth to reach the 2030 target are China, Indonesia and South Africa. As has been assessed from the regional analysis, the problem is the gravest in Asia and Africa. Turkey showed no change in its low rate of malnutrition in the 2000s. It could be that accurate data is not available and the earlier figures were repeated. But if the lack of progress during the past reflects the true state of affairs, considerable efforts would be needed to break this stagnation to reach the SDG target.

All the countries except India, China and South Africa, are likely to reach SDG target. Concerted efforts and innovative techniques would be required on the parts of India, China and South Africa to reach the target.

Achievement of the mortality MDGs and prospects for achieving the mortality SDGs

We now examine the progress made by these countries in achieving Goal 4 and Goal 5. A comparison was also made with the average health expenditure incurred by these countries as a percentage of their GDP in 2015.

Table 16: Health Expenditures (% of GDP)

Country	Expenditure
Argentina	4.8
Brazil	8.3
China	5.5
India	4.7
Indonesia	2.8
Mexico	6.3
Russia	7.1
Saudi Arabia	4.7
South Africa	8.8
Turkey	5.4

Source: CIA World Fact Book

The countries with the highest expenditure on health were Brazil, Russia and South Africa, and the countries with the lowest expenditure on health were Indonesia, India and Argentina.

Table 17: Mortality rate, infant (per 1,000 live births)

									Compound Annual Growth Rate		
	1990	1995	2000	2005	2010	2015	MDG	Difference	2000-05	2005-10	2010-15
Argentina	25.50	21.60	17.30	14.80	12.90	10.30	8.50	-1.80	-3.07	-2.71	-4.40
Brazil	53.40	41.90	31.30	23.10	17.70	14.00	17.80	3.80	-5.89	-5.19	-4.58
China	42.20	37.70	30.10	20.30	13.50	9.20	14.07	4.87	-7.58	-7.83	-7.38
India	88.40	77.80	66.60	55.70	45.50	36.20	29.47	-6.73	-3.51	-3.96	-4.47
Indonesia	62.00	50.60	41.10	33.50	27.50	22.90	20.67	-2.23	-4.01	-3.87	-3.59
Mexico	36.50	29.20	22.50	17.60	14.80	12.90	12.17	-0.73	-4.79	-3.41	-2.71
Russia	18.40	18.70	16.60	12.00	8.60	6.80	6.13	-0.67	-6.28	-6.45	-4.59
Saudi Arabia	35.80	24.90	18.80	15.60	13.50	11.40	11.93	0.53	-3.66	-2.85	-3.32
South Africa	44.60	43.60	46.30	48.90	37.30	35.50	14.87	-20.63	1.10	-5.27	-0.98
Turkey	55.60	42.80	31.90	23.00	16.40	11.70	18.53	6.83	-6.33	-6.54	-6.53

Note: Figures in bold are for countries, that did not meet their MDG target.

Source: World Bank Data Bank

The countries, which could achieve their MDG targets were Brazil, China, Saudi Arabia and Turkey (Table 17). The lowest IMR was in Russia, followed by China and Argentina. Russia despite having the lowest IMR was short of reaching its MDG target. The three countries with the largest shortfalls from their IMR goal were also the ones with the lowest expenditure on health. India had the highest IMR in 1990 among all the countries; so despite showing a continuous decline at a rate of around 4 per cent per year it still was short of its MDG target. The highest decline rate was shown by China, followed by Turkey and Russia. China's implementation of the One Child Policy helped to reduce mortality by enabling focus on a smaller infant population. However

some ethical, moral and social issues related to such a policy remain the main hindrances to its application to other countries.

South Africa is the only country where IMR first increased and then declined steadily, especially in 2005-10. All the other countries showed consistent decline.

Table 18: IMR Analysis

	Elasticity			Avg annual % change		Avg annual growth rate to SDG	
	2000-05	2005-10	2010-15	by 2030	by 2025	by 2030	by 2025
Argentina	-3.48	-0.62	-9.32	-5.37	-8.06	0.58	0.87
Brazil	-3.21	-1.28	-18.42	-0.95	-1.43	0.05	0.08
China	-0.60	-0.50	-0.75	-5.22	-7.83	6.95	10.43
India	-0.60	-0.47	-0.67	-4.46	-6.69	6.69	10.04
Indonesia	-1.05	-0.76	-0.73	-3.17	-4.76	4.35	6.53
Mexico	-31.41	33.25	-1.65	-0.47	-0.70	0.28	0.42
Russia	-0.74	-1.45	-3.43	-4.71	-7.06	1.37	2.06
Saudi Arabia	-2.97	52.27	-1.33	-5.50	-8.25	4.13	6.19
South Africa	0.43	-2.32	-1.17	-4.41	-6.62	3.77	5.65
Turkey	-1.58	-2.84	-0.95	-5.53	-8.29	5.83	8.75

Source: Author's calculations

SDG3 envisages a NNMR of 12. Argentina, China, Mexico, Russia, Saudi Arabia and Turkey have already achieved this target. Mortality risks are much higher in the neo-natal stage. Elasticity calculations show that India, Indonesia and Turkey had inelastic response of IMR to growth in per capita income in 2010-15 (Table 18). All other countries showed an elastic response. The average annual growth rate required to reach the SDG target is the lowest for Mexico and Brazil, and highest for India and South Africa (among countries which are yet to reach the SDG). The countries with the lowest rates in the world were Australia, Austria, Belarus, Belgium. To be at par with these countries, the countries which have already reached the SDG target require an average annual decline rate of around 5 per cent – which is easily achievable, given the pace of

reduction in IMR in these countries in the past. The only countries which may not achieve these best IMRs are Saudi Arabia and Turkey. But they could reach the average IMR in high income countries. The required per capita GDP annual growth rates for Saudi Arabia and Turkey are 2.8 and 4 per cent, respectively

Given the elasticities, the per capita increase in growth rate required to meet the SDG target is highest in India, followed by Indonesia and South Africa. The other countries require very modest increases which are easily achievable.

Table 19: Mortality Rate, under-5 (per 1,000 live births)

									Compound Annual Growth Rate		
	1990	1995	2000	2005	2010	2015	MDG	Difference	2000-05	2005-10	2010-15
Argentina	28.80	24.30	19.40	16.60	14.50	11.60	9.60	-2.00	-3.07	-2.67	-4.36
Brazil	64.20	49.10	35.80	26.10	19.80	15.70	21.40	5.70	-6.12	-5.38	-4.53
China	53.90	47.50	36.90	24.00	15.70	10.70	17.97	7.27	-8.24	-8.14	-7.38
India	125.90	109.10	91.50	74.40	58.80	45.20	41.97	-3.23	-4.05	-4.60	-5.12
Indonesia	84.30	66.50	52.30	41.50	33.30	27.30	28.10	0.80	-4.52	-4.31	-3.90
Mexico	45.70	35.50	26.80	20.60	17.30	15.00	15.23	0.23	-5.13	-3.43	-2.81
Russia	21.60	22.00	19.40	13.90	10.00	8.00	7.20	-0.80	-6.45	-6.37	-4.36
Saudi Arabia	44.70	29.80	22.10	18.20	15.70	13.30	14.90	1.60	-3.81	-2.91	-3.26
South Africa	57.40	57.20	66.70	74.30	53.70	44.10	19.13	-24.97	2.18	-6.29	-3.86
Turkey	74.20	54.80	39.20	27.40	19.10	13.60	24.73	11.13	-6.91	-6.96	-6.57

Source: World Bank Data Bank

Note: Figures in bold are for countries that did not meet their MDG target.

Quite a few countries achieved their MDG targets for under five mortality (U5MR) – Brazil, China, Indonesia, Mexico, Saudi Arabia, and Turkey (Table 19). Brazil, China and Turkey not only achieved the MDG, but overshot their target by a sizeable amount.

India had a very high U5MR to begin with, but significantly reduced

it at a steady rate of around 4.5 per cent per year and achieved 45 deaths per 1000 live-births, a reduction of more than 50 per cent since 1990. The countries with the lowest U5MR in 2015 were Russia, China and Argentina.

As noted in the case of IMR, South Africa showed an increase in U5MR initially in the 1990s and the rate declined at a fast pace only in 2005-10. Indonesia which started with the second highest rate among all the countries in 1990 halved its U5MR by 2005 with steady decline rate of around 4 per cent.

Table 20: U5MR Analysis

	Elasticity			Avg annual % change		Avg annual growth rate to SDG	
	2000-05	2005-10	2010-15	by 2030	by 2025	by 2030	by 2025
Argentina	-3.48	-0.61	-9.24	-5.52	-8.28	0.60	0.90
Brazil	-3.32	-1.33	-18.24	-5.82	-8.73	0.32	0.48
China	-0.64	-0.52	-0.75	-5.42	-8.13	7.23	10.84
India	-0.68	-0.54	-0.75	-2.98	-4.47	3.95	5.93
Indonesia	-1.18	-0.84	-0.79	-0.56	-0.84	0.71	1.07
Mexico	-33.37	33.48	-1.71	-5.78	-8.67	3.38	5.07
Russia	-0.76	-1.43	-3.28	-5.00	-7.50	1.52	2.29
Saudi Arabia	-3.08	53.34	-1.31	-5.66	-8.50	4.33	6.49
South Africa	0.87	-2.71	-4.34	-2.89	-4.33	0.67	1.00
Turkey	-1.70	-3.00	-0.95	-5.69	-8.53	5.97	8.95

Source: Autohor's calculations

The SDG for U5MR is 25 per 1,000 live -births, which would be achieved by all the countries. The only countries which had a rate higher than this, in 2015, were India, Indonesia and Mexico. All other countries already had a rate lower in 2015. For these countries, the target to be achieved is set at a level equivalent to the best performing nations of the world with respect to U5MR-2 per 1000 live-births achieved by Iceland, Luxembourg, etc.

China, India, Indonesia and Turkey showed an inelastic response to growth of per capita income with respect to U5MR reduction. Argentina and Brazil had a highly elastic response as a small change in per capita income was enough to greatly reduce U5MR. The highest average annual change is required to achieve SDG while in India, followed by South Africa; Indonesia requiring extremely modest changes. Given the current pace of reduction of U5MR, these countries would be able to meet their SDG easily by 2030 (if not earlier). For the countries which have already achieved SDG, to reach the level of the best performing nations in terms of lowest U5MR, an average annual reduction of approximately 5 per cent is required which is almost at par (if not lower) with the current decline rate (Table 21).

Table 21: Maternal mortality ratio (modeled estimate, per 100,000 live births)

									Compound Annual Growth Rate		
	1990	1995	2000	2005	2010	2015	MDG	Difference	2000-05	2005-10	2010-15
Argentina	72	63	60	58	58	52	18	-34	-0.68	0.00	-2.16
Brazil	104	84	66	67	65	44	26	-18	0.30	-0.60	-7.51
China	97	72	58	48	35	27	24.25	-2.75	-3.71	-6.12	-5.06
India	556	471	374	280	215	174	139	-35	-5.62	-5.15	-4.14
Indonesia	446	326	265	212	165	126	111.50	-14.50	-4.36	-4.89	-5.25
Mexico	90	85	77	54	45	38	22.50	-15.50	-6.85	-3.58	-3.32
Russia	63	82	57	42	29	25	15.75	-9.25	-5.92	-7.14	-2.92
Saudi Arabia	46	33	23	18	14	12	11.5	-0.5	-4.78	-4.90	-3.04
South Africa	108	62	85	112	154	138	27	-111	5.67	6.58	-2.17
Turkey	97	86	79	57	23	16	24.25	8.25	-6.32	-16.60	-7.00

Source: World Bank Data Bank.

Note: Highlighted in bold countries had not yet achieved SDG in 2015.

Due to inelastic response to growth of per capita income, India requires the highest growth in per capita income to reach the desired SDG among the countries who are yet to reach the SDG target. Indonesia and South Africa both require minute changes and will be able to reach the

target level soon. Among the countries which have already reached SDG, the highest growth rates required to achieve the level of the countries with the lowest mortality rates are China (due to inelastic response), followed by Turkey.

The MDG target was to reduce MMR to three-quarters of the 1990 value, but even though the countries showed very high reduction rate, none of them could meet their MDG target. The highest MMR was shown by India in 1990 after which it showed remarkable reduction of almost 70 per cent. The country with the lowest MMR in 2015 was Saudi Arabia, followed by Turkey, Russia and China. South Africa proved to be an anomaly among all these well performing countries. It started with a moderate rate in 1990s which initially declined till the 2000. However, a huge spike in the rate was noticed in 2000-10 after which it showed a slow decline in 2010-15. All other countries showed secular decline in MMR from 1990-2015.

The highest decline rate was shown by Brazil and Turkey in 2010-15. Even though the decline in Brazil was slow initially, it showed rapid decline later. The best performing country was Turkey which showed a consistently high decline rate.

The success of the MDG5 was very encouraging to the world leaders, but they also marked the huge disparities among the countries. Thus while formulating SDGs they tried to achieve a uniform goal for all the countries of the world. The countries which couldn't reach the SDG target by 2015 (70 deaths per 100,000 live births) were India, Indonesia and South Africa. The target for all other countries was set at par with the best performing countries in the world in terms of MMR-3 per 100000 live births achieved by Finland, Greece, Iceland and Poland.

Table 22: MMR Analysis

	Elasticity Avg annual growth rate to SDG				Avg annual % change		
	2000-05	2005-10	2010-15	by 2030	by 2025	by 2030	by 2025
Argentina	-0.80	0.00	-4.78	-6.28	-9.42	1.31	1.97
Brazil	0.19	-0.16	-28.46	-6.21	-9.32	0.22	0.33
China	-0.32	-0.41	-0.54	-5.93	-8.89	11.01	16.51
India	-0.92	-0.60	-0.62	-3.98	-5.98	6.41	9.62
Indonesia	-1.14	-0.94	-1.03	-2.96	-4.44	2.88	4.31
Mexico	-43.09	34.83	-2.00	-6.14	-9.21	3.07	4.61
Russia	-0.70	-1.58	-2.26	-5.87	-8.80	2.59	3.89
Saudi Arabia	-3.80	86.29	-1.22	-5.00	-7.50	4.09	6.13
South Africa	2.44	3.66	-2.52	-3.29	-4.93	1.30	1.95
Turkey	-1.58	-5.90	-1.01	-5.42	-8.13	5.38	8.07

Source: Autohor's calculations

Of the countries which could aspire to the level of the best countries China may not achieve this goal of MMR of 3 per 1000,000 births. An inelastic response of decline in MMR to growth rate of per capita income implies that China would require per capita GDP to grow by almost 11 per cent annually for it to reach this MMR (Table 22). Turkey may also not be able to reach this high target. But both can reach the average MMR for high income countries with per capita income growing just under 5 per cent annually.

India also shows an inelastic response of decline in MMR to growth of per capita GDP. Per capita GDP would have to grow at almost 6.5 per cent per year. All the other countries show elastic response, with Brazil showing very high decline in MMR to slight increases in per capita income. The highest annual decline rates to achieve the target are required in India, followed by South Africa and Indonesia. Due to inelastic response, the increase in per capita income for India is also high in comparison to the other two countries. However, it is highly plausible that all these three countries will succeed in achieving their SDG easily

by 2030 (if not earlier).

In brief, the developing country members of the G 20 are by and large well placed to meet their SDG goals.

Conclusions

Assessing progress towards the goals of the MDGs or monitoring progress towards the SDGs is not possible without reliable and consistent data. For instance, without proper data on births and on deaths during childbirth, it is not possible to accurately judge whether the goal of reducing maternal mortality has been met. It is reported that only a few African countries registered births and deaths; and health-related data often came from various household surveys that sometimes provided conflicting data (Attaran 2005). It is important to develop the data collection and analysis capability in developing countries. The Millennium Development Goals Report states that “the monitoring of the MDGs taught us that data are an indispensable element of the development agenda.”²⁹

Our analysis points to the importance of having international goals. Social progress was considerably faster after acceptance of the MDGs in 2000. This accelerated progress was not merely because the pace of the growth was faster but the nature of growth changed as with the same growth rate there was higher improvement in the social indicators.

EAP, LAC, and MNA regions were by and large successful in meeting their MDG goals. The causes of shortfall in SAS and SSA were different. SAS did not achieve the MDGs despite rapid growth, as the nature of its growth was such that the growth resulted in limited improvement in social conditions. In SSA, on the other hand, growth had a considerable effect on social indicators, but the growth rates were low.

All the developing country members of the G 20 are likely to meet the poverty target in the SDGs. The required growth rates to achieve the target are moderate for almost all the countries. Only India needs to continue growing rapidly to achieve the target. Reducing malnutrition

will be difficult. New research and new mechanisms will be particularly important for curbing malnutrition as high growth or lower poverty levels do not automatically translate into better nutrition. India and China are unlikely to succeed in abolishing hunger because of the low degree of responsiveness of malnutrition to growth in per capita income. South Africa may also find it difficult to achieve the goal despite a high elasticity because it has an ambitious target given the past lack of success in reducing malnutrition.

As far as the mortality rates are concerned, some of the countries have already achieved their SDG targets. They are in a position to achieve mortality rates close to those in the developed countries, even if they cannot reach the levels achieved by the best of them. Countries such as Argentina, Brazil, Russia are best placed to reach the levels in the developed countries. While China may have already reached the SDG target, it is unlikely that it will reach the levels of the developed countries as it has a very low response of these indicators to growth in income. South Africa is likely to meet most of the SDG goals examined unlike the region.

The likely shortfall in SSA region in reaching the SDGs points to a weakness in their formulation. These countries are so far away from the target; the target maybe meaningless and may actually be a disincentive. The international community needs to act urgently if the SSA region is going to have any chance of reaching the SDGs. Growth needs to be accelerated and this requires more investment by these countries. Their own saving rates are inadequate and have fallen since 2008 financial crisis. They definitely need more aid if investment rates are to be increased. But furthermore, research needs to be undertaken how to change the nature of growth so that it has a greater impact on the social situation. In this regard the recent increase of aid from China and India may not be helpful as social gains in these countries have been limited, and what social progress has been reached has been because of their high growth rate.

Another important aspect which needs focus is reducing regional disparities. MDG studies showed that advancements were uneven across regions, between the sexes, and among people of different ages, wealth and locales, including urban and rural dwellers.³⁰ Thus, a holistic approach of equitable and inclusive growth and development should be formulated. Developed country aid plays a very crucial role in sustaining these efforts. Even developing countries can pool their resources together and share experiences, strategies and funds as developing partners. An effort in this regard shown by India, Brazil, and South Africa have shown an effort in this regards in the form of IBSA Fund for Poverty Alleviation and Hunger, which was set up with the objective of facilitating execution of human development projects to advance the fight against poverty and hunger in developing countries. Recently, China has offered \$60 billion aid to Africa which would help counter hunger, in addition to other concerns like boosting industry and enhancing security. Such partnerships and mutual cooperation among countries may make ambitious SDGs a little easier to achieve. However, as noted above, the experience of these countries may not always help in achieving the SDGs.

Endnotes

- ¹ See Agarwal for a brief description of the process by which the MDGs were adopted.
- ² UN Secretary General. (2001). *Road map towards the implementation of the United Nations Millennium Declaration*. UN General Assembly
- ³ For a discussion of the causes of the crisis and its consequences see Sachs (1989).
- ⁴ The interplay of growth and poverty as objectives of policy has a fascinating history. The UN stressed that Growth was an instrument for reducing poverty; a sentiment echoed by Prime Minister Nehru in the preface to India's First Five Year Plan. See also Bhagwati (1966)
- ⁵ The WB's World Development Report (WDR) for 1990 also returned to the theme of poverty after McNamara's 1974 speech, (Hulme, 2009, Yusuf 2019).
- ⁶ In 1990 there was the UN World Summit for children which became a model for future summits as it resulted in commitments by governments to improve the condition of children as well as provide greater financial resources (Bradford year). In 1990 there was also a conference on education for all and an United Nations Conference on Trade And Development (UNCTAD) conference on the Least Developed Countries. In 1992

a conference on food and nutrition was held in Rome; in 1993 there was a conference on human rights in Vienna; in 1994 there was a conference in Cairo on population and development and on environment in Rio de Janeiro; in 1995 a world summit on social development in Copenhagen and a conference on women in Beijing; in 1996 a Habitat conference in Istanbul and a food summit in Rome. International non-governmental organisations (NGOs) played an important role in these UN summits. For instance, the International Coalition on Women's Health played an important role in mobilising support at the Cairo conference on Population and Development.

⁷ See Hulme (2009) for a discussion of the process by which some of the goals espoused by the conferences were included in the IDGs and which were relegated to either an inferior status or ignored altogether.

⁸ The US was ambivalent to many of the goals adopted in the IDGs and the MDGs. Many NGOs believed that important aspects of the social condition had been neglected in the adopted goals and developing countries were lukewarm in their acceptance of the MDGs. Also see Hulme (2009), for details of the negotiation process.

⁹ The UN agencies had been in the forefront of development policy debates in the 1950s particularly, Prebisch's work on the declining terms of trade for primary commodities and therefore the need for industrialisation done when he was at the Economic Commission for Latin America. The UN agencies had also been active in developing the tools for development planning. In the 1970s United Nations Conference for Trade and Development (UNCTAD) had been in the forefront of debates about a New International Economic Order (Bhagwati and Ruggie, 1984).

¹⁰ They reflect a general trend towards accountability and selection of monitorable goals of aid. However, this created a conflict in that aspects of development that are not quantifiable are neglected.

¹¹ The regions are as defined by the World Bank.

¹² UN, 2015.

¹³ UN, 2015.

¹⁴ This was because a goal of 0 resulted in strange results when the elasticities were used to examine whether the goals were achievable.

¹⁵ <https://borgenproject.org/5-poverty-statistics-on-sub-saharan-africa/>

¹⁶ The concentration of investment by China and India may mean that the ICOR may not be sufficiently lowered.

¹⁷ UN, 2015.

¹⁸ UN, 2015.

¹⁹ Given the large degree of uncertainty about these numbers it is not clear whether there was an actual increase or a better enumeration of those malnourished.

²⁰ MNA and SSA show positive elasticity as their malnutrition levels increased in this given period.

²¹ UN. 2017. *The Sustainable Development Goals Report*. UN.

²² UN. 2017. *The Sustainable Development Goals Report*. UN.

²³ The paradoxical growth rate values for MNA and SSA are due to the increase in

malnutrition levels from 2010-15.

²⁴ (<http://www.un.org/millenniumgoals/childhealth.shtml>).

²⁵ UN, 2015.

²⁶ UN, 2015.

²⁷ For a detailed analysis see the report prepared jointly by the WHO, UNICEF, UNFPA, and the World Bank. Available at <http://www.un.org/millennium/declaration/ares552e.htm>

²⁸ As noted above to avoid the purely mathematical difficulties that arise when the target is set as zero, a poverty target of 1 was set for the above analysis and average annual percentage change required to achieve target was computed.

²⁹ UN, 2015.

³⁰ UN, 2017.

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