

Economic growth and poverty alleviation in Africa

Can economic growth reduce African poverty levels by 2015?



July 2010

Sequoia on Sustainability

The Sequoia Partnership is a think tank and supply chain consultancy firm specialising in the fast moving consumer goods industry. We bring clarity to our clients decision making through detailed analysis of their operations.

Our sustainability practice applies our numerical skills to socio-economic and environmental issues.

We believe that sustainability requires a balance - and that the need to reduce CO₂ emissions should be considered alongside the rights of developing nations to work their way to a better standard of living.

Why has a supply chain organisation written a report about poverty alleviation? Because in today's globalised economy, supply chains connect the rich world to the poor.

UK consumers touch the lives of millions of Africans everyday. For most consumers the relationship is invisible, but for Africans at the start of the supply chain, the shopping choices of UK consumers provide a livelihood that can free them from poverty.

We believe that understanding the impact of economic growth on the livelihoods of ordinary Africans is crucial if businesses are to maximise the positive contribution they can bring to society.

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Executive summary

- Economic growth has the potential to reduce poverty levels in Sub Saharan Africa from 52% to 47% by 2015.
- Population growth will more than offset this improvement and will place an additional 36 million Africans in poverty by 2015.
- Taking into account population growth, economic growth has the potential to prevent an additional 47 million Africans entering into poverty.

Introduction

Economic growth has helped to lift hundreds of millions of Asians out of poverty. This humanitarian leap has largely passed Africans by as their economy has been left on the international sidelines.

There are now signs however, that the African economy is starting to stir - the International Monetary Fund (IMF) predicts Sub Saharan Africa will grow at over 5.4% a year to 2015. For many Africans, the key question is whether this growth will help lift them out of poverty.

Sequoia have estimated the impact of this economic growth on African poverty levels by examining global trends of poverty alleviation from economic growth.

Simple income measures of poverty do not adequately convey the impact of poverty on people's livelihoods however, so we have also estimated the potential impact of economic growth on future levels of health, nutrition, sanitation and education.

Clearly, predicting future living standards is far from easy and we recognise economic growth is only one of several factors influencing standards of living. We have used economic growth projections from the International Monetary Fund to predict future growth, but are unable to predict African domestic policy, governance levels, and weather related events.

Despite these difficulties, we believe it is important to anticipate the impact of economic growth on Africa's development - as understanding Africa's likely development path gives society the best opportunity to improve it.



Our approach to estimating poverty alleviation

The IMF (April 2010) predicts annual economic growth of 5.4% for Sub Saharan Africa up to 2015 - highlighting the potential for growth to underpin poverty reduction and improve living standards in Africa.

We have estimated the social impact of this growth by assuming African countries will progress along the same development path experienced by other developing and emerging countries.

Figure 1 demonstrates that wealthier countries have lower poverty rates and illustrates this development path. The graph also reveals countries can have significantly different poverty levels even with the same GDP per capita - illustrating the significant impact other factors (e.g. government policy, climate, conflict) can have on poverty levels.

We have used data from the 2009 United Nations Human Development Report to ascertain the latest figures available for poverty levels and development indicators covering health, sanitation, nutrition and education.

The most recent data available are for the year 2007 and we have used this as our base year for comparison. Applying actual and forecast economic growth rates from the IMF allows us to determine the anticipated increase in GDP per capita from 2007 to 2015.

We have taken the increase in GDP per capita for each country and applied the average rate of poverty alleviation from economic growth to each country's current poverty level.

While this simple approach assumes all countries experience the average rate of poverty alleviation from economic growth, it is useful for understanding the typical levels of growth-induced poverty alleviation.

Using the same approach, we have calculated the likely impact of economic growth on the life expectancy, nutrition, sanitation & education of people in 35 countries in Sub Saharan Africa.

Note: we have excluded oil exporting countries from our analysis as data shows GDP growth from oil revenues rarely translates into poverty alleviation.

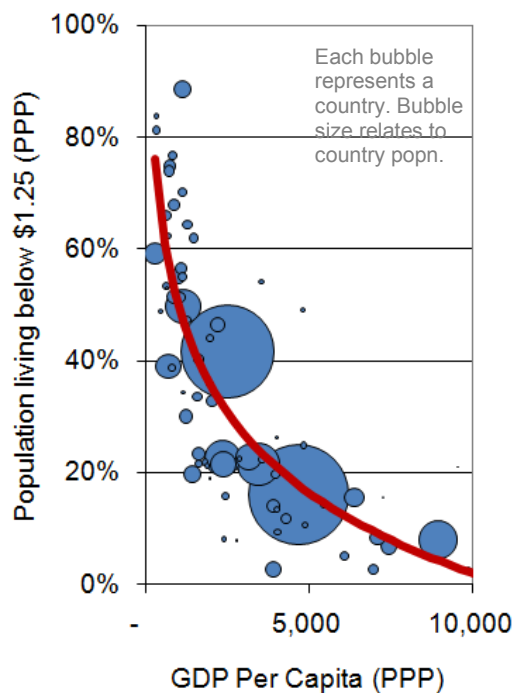


Figure 1: Poverty vs economic wealth
Source: UN HDR report 2009

Population effects

The African economy is not the only area of growth in Africa. Population is expected to grow by 2.5% per year in Sub Saharan Africa, leading to an increase in population of 155 million by 2015.

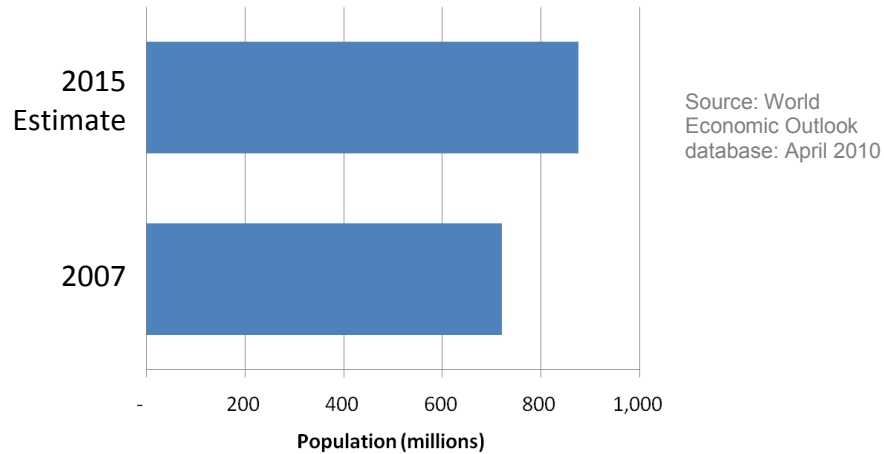


Figure 2: Population for Sub Saharan Africa

Improvements in poverty and living standards are correlated with GDP per person, so an increasing population dilutes GDP growth when expressed as a GDP per capita growth rate.

The IMF predict the GDP of Sub Saharan Africa will grow at 5% per year from 2007 to 2015, but the equivalent prediction for growth expressed as GDP per capita is a more modest 3%.

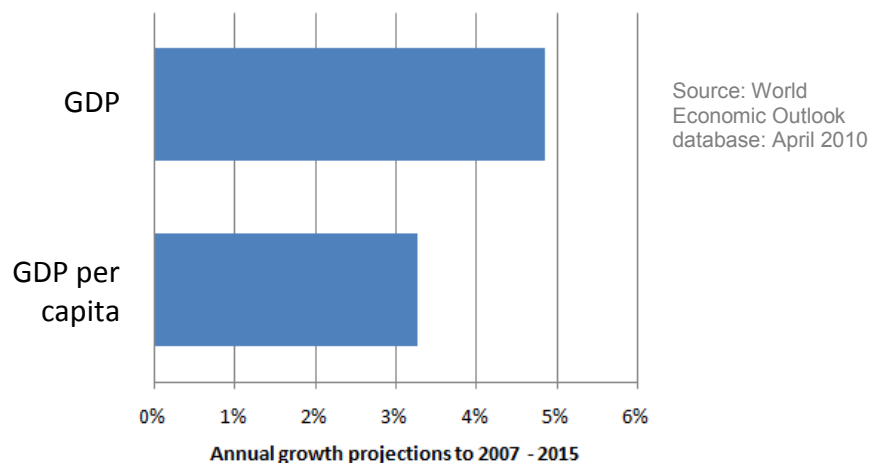


Figure 3: Economic growth projections for Sub Saharan Africa

As well as diluting economic growth, population growth has a significant impact on the absolute number of people living in poverty.

Whilst economic growth reduces the proportion of people living in poverty, if the population rises significantly, the number of people living in poverty can increase substantially.

Estimates of poverty alleviation

By 2015, we estimate economic growth will reduce the proportion of people living below \$1.25 per day in Sub Saharan Africa* from 52% to 47%.

Figure 4 shows the anticipated improvement for a range of living standard metrics expressed as a proportion of population. All of the indicators show improvement in the range of 3 to 7 percentage points.

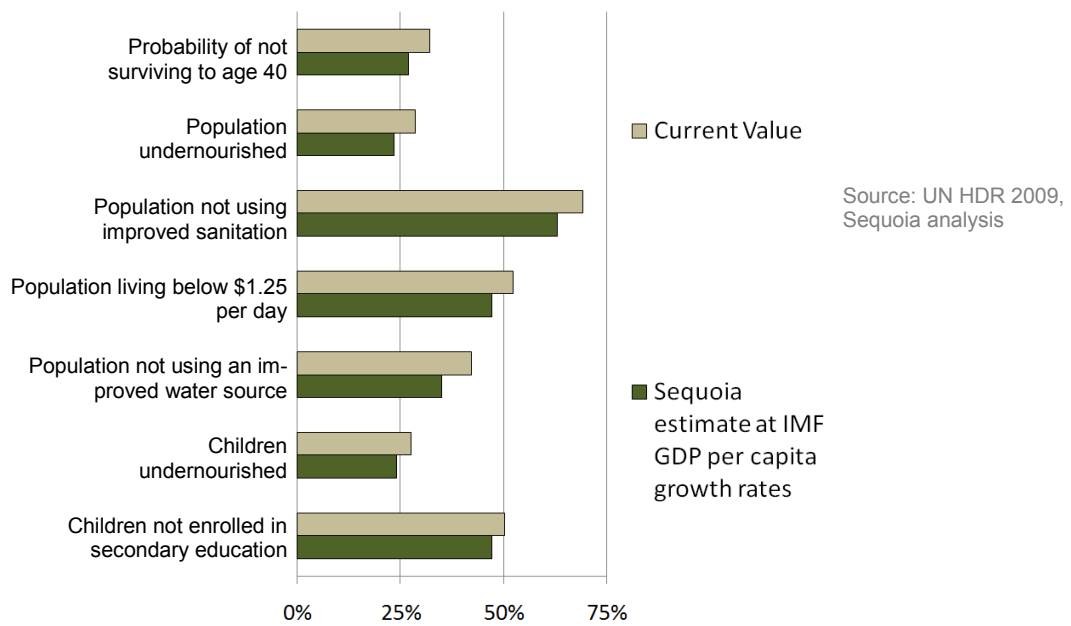


Figure 4: Estimates of living standards in 2015: Sub Saharan Africa*

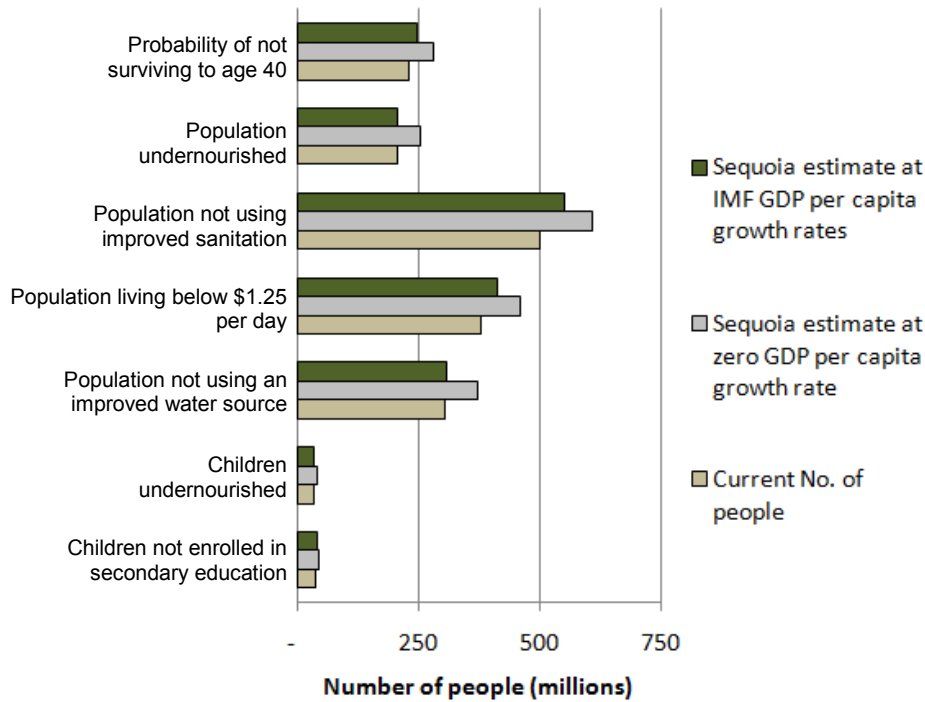
This positive news is tempered by the fact that population growth more than offsets the improvement from economic growth. We estimate that despite economic growth, population increases will result in an additional 36 million people living in poverty in Sub Saharan Africa* by 2015.

As figure 5 illustrates, the situation would be much worse without any growth in GDP per capita. Under this scenario, an additional 83 million Africans would be living below the poverty line of \$1.25 per day.

Consequently, the effect of economic growth is to prevent an additional 46 million Africans entering into poverty.

Given that population growth outpaces economic growth and places more people in poverty, how high would economic growth need to be simply to keep pace with population growth and maintain current poverty levels?

*Excludes Angola, Botswana, Chad, Congo, Equatorial Guinea, Eritrea, Gabon, Nigeria



Source: UN HDR 2009, Sequoia analysis

Figure 5: Estimates of living standards in 2015: Sub Saharan Africa*

*Excludes Angola, Botswana, Chad, Congo, Equatorial Guinea, Eritrea, Gabon, Nigeria

We estimate that GDP per capita would need to grow at nearly double the IMF’s predicted growth rate of 3% per year simply to keep pace with population growth.

Sensitivity of results

The results presented are highly sensitive to the input data sourced from the UN’s Human Development Report and the IMF growth forecasts.

The aggregate results for Sub Saharan Africa are particularly sensitive to a small number of countries that have large populations, very low levels of development and are predicted to experience high levels of growth.

For example, of the 47 million people that economic growth could prevent from entering poverty, 28 million are based in just 4 countries (Tanzania, South Africa, Ethiopia and Mozambique) with Tanzania alone contributing 14 million people.

Tanzania currently has 89% of it’s population living below \$1.25 per day and is predicted to experience GDP per capita growth of 5% per year for the period 2007-2015. With such a high proportion of it’s population living below \$1.25 per day and a high growth rate, Tanzania has enormous potential growth to lift it’s population out of poverty.

Conclusions

- Economic growth has the potential to reduce poverty levels in Sub Saharan Africa from 52% to 47% by 2015.
- Population growth will more than offset this improvement and will place an additional 36m Africans in poverty by 2015.
- Taking into account population growth, the effect of economic growth is to prevent an additional 47 million Africans entering into poverty.
- Economic growth would need to be double the current IMF growth forecasts in order to prevent population growth from increasing the number of Africans in poverty by 2015.
- Results are particularly sensitive to a small number of countries that have large populations, very low levels of development and are predicted to experience high levels of growth.



Appendices

Aggregate results for Sub Saharan Africa;*

Development indicator	Current*** value	2015 Estimated value	Current headcount	2015 estimated headcount (zero GDP per Capita growth)	2015 Estimated headcount (IMF predicted GDP per Capita growth)
Probability of not surviving to age 40	32%	27%	231,643,409	281,704,329	248,557,276
Population undernourished	29%	24%	206,583,800	252,685,580	206,035,818
Population not using improved sanitation	69%	63%	499,078,670	609,681,150	551,899,446
Population living below \$1.25 per day	52%	47%	377,641,103	460,904,209	413,503,254
Population not using an improved water source	42%	35%	304,359,660	372,839,730	306,628,921
Children underweight for age	28%	24%	32,766,340	40,127,439	34,873,165
Proportion of children not enrolled in secondary education	50%	47%	37,356,923	45,613,505	42,708,761

**Current value refers to latest data available in UN HDR 2009

Appendix A: Aggregate results for Sub Saharan Africa

Development indicator: Population living below \$1.25 per day

Country	Population (2007)	Population (2015)	CAGR %increase in GDP per capita (constant Local currency) from WEO	Current value	2015 Estimated value	Current headcount	2015 estimated headcount (zero GDP per Capita growth)	2015 Estimated headcount (IMF predicted GDP per Capita growth)
Benin	8,877,000	11,072,000	2.0%	47%	44%	4,198,821	5,237,056	4,820,028
Burkina Faso	13,727,000	16,465,000	2.9%	57%	49%	7,755,755	9,302,725	8,150,148
Burundi	7,794,000	9,131,000	2.5%	81%	75%	6,336,522	7,423,503	6,877,186
Cameroon	18,855,000	23,108,000	0.9%	33%	31%	6,184,440	7,579,424	7,272,043
Cape Verde	491,000	575,000	3.9%	21%	16%	101,146	118,450	90,280
Central African Republic	4,270,000	4,927,000	2.2%	62%	58%	2,664,480	3,074,448	2,846,091
Comoros	639,000	754,000	0.6%	46%	45%	294,579	347,594	340,610
Congo (Democratic Republic of the)	61,053,000	77,341,000	3.1%	59%	57%	36,143,376	45,785,872	43,805,201
Côte d'Ivoire	20,157,000	25,534,000	1.2%	23%	22%	4,696,581	5,949,422	5,708,617
Ethiopia	78,646,000	95,289,000	5.7%	39%	34%	30,671,940	37,162,710	32,604,212
Gambia	1,589,000	1,951,000	2.4%	34%	32%	545,027	669,193	622,322
Ghana	21,970,000	26,886,000	4.4%	30%	26%	6,591,000	8,065,800	6,993,839
Guinea	9,958,000	12,724,000	0.2%	70%	69%	6,980,558	8,919,524	8,783,870
Guinea-Bissau	1,541,000	1,918,000	1.3%	49%	48%	752,008	935,984	916,597
Kenya	34,653,000	39,710,000	3.1%	20%	18%	6,826,641	7,822,870	7,023,159
Lesotho	2,407,000	2,782,000	2.8%	43%	38%	1,044,638	1,207,388	1,065,633
Liberia	3,750,000	4,465,000	4.4%	84%	72%	3,138,750	3,737,205	3,208,496
Madagascar	19,683,000	24,107,000	0.5%	68%	66%	13,345,074	16,344,546	15,899,393
Malawi	13,386,000	15,546,000	5.2%	74%	57%	9,892,254	11,488,494	8,929,181
Mali	13,059,000	15,665,000	2.7%	51%	46%	6,712,326	8,051,810	7,244,308
Mauritius	1,261,000	1,335,000	3.6%					
Mozambique	20,340,000	23,832,000	5.2%	75%	57%	15,193,980	17,802,504	13,620,273
Namibia	2,028,000	2,188,000	1.3%	49%	40%	995,748	1,074,308	877,582
Niger	13,351,000	17,044,000	2.0%	66%	62%	8,798,309	11,231,996	10,484,814
Rwanda	9,394,000	11,093,000	4.5%	77%	59%	7,195,804	8,497,238	6,555,478
Sao Tome and Principe	158,000	180,000	3.7%					
Senegal	12,225,000	14,782,000	1.4%	34%	32%	4,095,375	4,951,970	4,692,483
Sierra Leone	5,737,000	7,045,000	2.9%	53%	49%	3,063,558	3,762,030	3,480,240
South Africa	47,851,000	52,666,000	1.9%	26%	17%	12,536,962	13,798,492	9,191,043
Swaziland	1,018,000	1,051,000	1.6%	63%	46%	640,322	661,079	485,230
Tanzania (United Republic of)	38,964,000	45,653,000	4.8%	89%	57%	34,483,140	40,402,905	26,006,973
Togo	6,460,000	7,889,000	0.7%	39%	38%	2,500,020	3,053,043	3,008,102
Uganda	30,928,000	41,043,000	3.4%	52%	45%	15,927,920	21,137,145	18,565,608
Zambia	11,524,000	13,569,000	4.0%	64%	50%	7,409,932	8,724,867	6,751,598

**Current value refers to latest data available in UN HDR 2009

Appendix B: Results for development indicator: Population living below \$1.25 per day

Development indicator: Probability of not surviving to age 40

Country	Population (2007)	Population (2015)	Annual % increase in GDP per capita (2007 - 2015)	Current indicator value**	Estimated indicator value (2015)	Current headcount	2015 estimated headcount (zero GDP per Capita growth)	2015 Estimated headcount (IMF predicted GDP per Capita growth)
Benin	8,877,000	11,072,000	2.0%	19%	18%	1,704,384	2,125,824	1,939,266
Burkina Faso	13,727,000	16,465,000	2.9%	27%	22%	3,692,563	4,429,085	3,689,496
Burundi	7,794,000	9,131,000	2.5%	34%	31%	2,626,578	3,077,147	2,868,608
Cameroon	18,855,000	23,108,000	0.9%	34%	30%	6,448,410	7,902,936	6,876,305
Cape Verde	491,000	575,000	3.9%	6%	6%	31,424	36,800	33,711
Central African Republic	4,270,000	4,927,000	2.2%	40%	34%	1,690,920	1,951,092	1,670,442
Comoros	639,000	754,000	0.6%	13%	12%	80,514	95,004	93,805
Congo (Democratic Republic of the)	61,053,000	77,341,000	3.1%	37%	34%	22,772,769	28,848,193	26,328,973
Côte d'Ivoire	20,157,000	25,534,000	1.2%	25%	22%	4,958,622	6,281,364	5,695,905
Ethiopia	78,646,000	95,289,000	5.7%	28%	21%	21,784,942	26,395,053	20,193,088
Gambia	1,589,000	1,951,000	2.4%	22%	19%	346,402	425,318	375,476
Ghana	21,970,000	26,886,000	4.4%	26%	19%	5,668,260	6,936,588	5,154,823
Guinea	9,958,000	12,724,000	0.2%	24%	23%	2,360,046	3,015,588	2,980,281
Guinea-Bissau	1,541,000	1,918,000	1.3%	37%	35%	576,334	717,332	676,278
Kenya	34,653,000	39,710,000	3.1%	30%	23%	10,499,859	12,032,130	8,937,293
Lesotho	2,407,000	2,782,000	2.8%	47%	30%	1,140,918	1,318,668	1,318,668
Liberia	3,750,000	4,465,000	4.4%	23%	21%	870,000	1,035,880	954,248
Madagascar	19,683,000	24,107,000	0.5%	21%	20%	4,094,064	5,014,256	4,919,680
Malawi	13,386,000	15,546,000	5.2%	33%	24%	4,363,836	5,067,996	3,787,568
Mali	13,059,000	15,665,000	2.7%	33%	26%	4,244,175	5,091,125	4,117,605
Mauritius	1,261,000	1,335,000	3.6%	6%	5%	73,138	77,430	61,516
Mozambique	20,340,000	23,832,000	5.2%	41%	27%	8,558,040	9,675,792	6,534,518
Namibia	2,028,000	2,188,000	1.3%	21%	17%	429,936	463,856	365,789
Niger	13,351,000	17,044,000	2.0%	29%	27%	3,871,790	4,942,760	4,552,527
Rwanda	9,394,000	11,093,000	4.5%	34%	25%	3,212,748	3,793,806	2,814,545
Sao Tome and Principe	158,000	180,000	3.7%	14%	12%	21,962	25,020	21,817
Senegal	12,225,000	14,782,000	1.4%	22%	20%	2,738,400	3,311,168	2,999,364
Sierra Leone	5,737,000	7,045,000	2.9%	31%	27%	1,778,470	2,183,950	1,893,039
South Africa	47,851,000	52,666,000	1.9%	36%	15%	17,274,211	19,012,426	19,012,426
Swaziland	1,018,000	1,051,000	1.6%	47%	25%	480,496	496,072	496,072
Tanzania (United Republic of)	38,964,000	45,653,000	4.8%	28%	20%	10,987,848	12,874,146	9,236,939
Togo	6,460,000	7,889,000	0.7%	19%	18%	1,201,560	1,467,354	1,438,913
Uganda	30,928,000	41,043,000	3.4%	31%	25%	9,711,392	12,887,502	10,091,057
Zambia	11,524,000	13,569,000	4.0%	43%	26%	4,943,796	5,821,101	3,552,665

**Current value refers to latest data available in UN HDR 2009

Appendix C: Results for development indicator: Probability of not surviving to age 40

Development indicator: Population not using an improved water source

Country	Population (2007)	Population (2015)	CAGR %increase in GDP per capita (constant Local currency) from WEO	Current value	2015 Estimated value	Current headcount	2015 estimated headcount (zero GDP per Capita growth)	2015 Estimated headcount (IMF predicted GDP per Capita growth)
Benin	8,877,000	11,072,000	2.0%	35%	29%	3,106,950	3,875,200	3,186,840
Burkina Faso	13,727,000	16,465,000	2.9%	28%	23%	3,843,560	4,610,200	3,799,410
Burundi	7,794,000	9,131,000	2.5%	29%	27%	2,260,260	2,647,990	2,504,951
Cameroon	18,855,000	23,108,000	0.9%	30%	27%	5,656,500	6,932,400	6,184,876
Cape Verde	491,000	575,000	3.9%	20%	13%	98,200	115,000	75,844
Central African Republic	4,270,000	4,927,000	2.2%	34%	30%	1,451,800	1,675,180	1,485,266
Comoros	639,000	754,000	0.6%	15%	15%	95,850	113,100	110,974
Congo (Democratic Republic of the)	61,053,000	77,341,000	3.1%	54%	47%	32,968,620	41,764,140	36,729,689
Côte d'Ivoire	20,157,000	25,534,000	1.2%	19%	18%	3,829,830	4,851,460	4,502,929
Ethiopia	78,646,000	95,289,000	5.7%	58%	33%	45,614,680	55,267,620	31,742,204
Gambia	1,589,000	1,951,000	2.4%	14%	13%	222,460	273,140	252,195
Ghana	21,970,000	26,886,000	4.4%	20%	16%	4,394,000	5,377,200	4,244,339
Guinea	9,958,000	12,724,000	0.2%	30%	30%	2,987,400	3,817,200	3,756,490
Guinea-Bissau	1,541,000	1,918,000	1.3%	43%	40%	662,630	824,740	773,927
Kenya	34,653,000	39,710,000	3.1%	43%	28%	14,900,790	17,075,300	11,220,333
Lesotho	2,407,000	2,782,000	2.8%	22%	18%	529,540	612,040	506,785
Liberia	3,750,000	4,465,000	4.4%	36%	31%	1,350,000	1,607,400	1,396,791
Madagascar	19,683,000	24,107,000	0.5%	53%	50%	10,431,990	12,776,710	12,016,875
Malawi	13,386,000	15,546,000	5.2%	24%	19%	3,212,640	3,731,040	3,031,462
Mali	13,059,000	15,665,000	2.7%	40%	31%	5,223,600	6,266,000	4,844,990
Mauritius	1,261,000	1,335,000	3.6%					
Mozambique	20,340,000	23,832,000	5.2%	58%	34%	11,797,200	13,822,560	8,205,979
Namibia	2,028,000	2,188,000	1.3%	7%	6%	141,960	153,160	142,118
Niger	13,351,000	17,044,000	2.0%	58%	49%	7,743,580	9,885,520	8,287,267
Rwanda	9,394,000	11,093,000	4.5%	35%	26%	3,287,900	3,882,550	2,883,112
Sao Tome and Principe	158,000	180,000	3.7%	14%	12%	22,120	25,200	21,399
Senegal	12,225,000	14,782,000	1.4%	23%	21%	2,811,750	3,399,860	3,054,704
Sierra Leone	5,737,000	7,045,000	2.9%	47%	38%	2,696,390	3,311,150	2,658,975
South Africa	47,851,000	52,666,000	1.9%	7%	6%	3,349,570	3,686,620	3,014,453
Swaziland	1,018,000	1,051,000	1.6%	40%	23%	407,200	420,400	245,001
Tanzania (United Republic of)	38,964,000	45,653,000	4.8%	45%	27%	17,533,800	20,543,850	12,123,713
Togo	6,460,000	7,889,000	0.7%	41%	39%	2,648,600	3,234,490	3,062,282
Uganda	30,928,000	41,043,000	3.4%	36%	27%	11,134,080	14,775,480	11,190,982
Zambia	11,524,000	13,569,000	4.0%	42%	26%	4,840,080	5,698,980	3,590,159

**Current value refers to latest data available in UN HDR 2009

Appendix D: Results for development indicator: Population not using an improved water source

Development indicator: Children underweight for age

Country	Population (2007)	Population (2015)	CAGR %increase in GDP per capita (constant Local currency) from WEO	Current value	2015 Estimated value	Current headcount	2015 estimated headcount (zero GDP per Capita growth)	2015 Estimated headcount (IMF predicted GDP per Capita growth)
Benin	8,877,000	11,072,000	2.0%	23%	20%	331,272	413,184	364,765
Burkina Faso	13,727,000	16,465,000	2.9%	37%	28%	984,705	1,181,115	890,231
Burundi	7,794,000	9,131,000	2.5%	39%	36%	607,232	711,398	650,852
Cameroon	18,855,000	23,108,000	0.9%	19%	18%	532,627	652,768	610,970
Cape Verde	491,000	575,000	3.9%	14%	11%	7,098	8,312	6,366
Central African Republic	4,270,000	4,927,000	2.2%	29%	26%	187,888	216,797	194,815
Comoros	639,000	754,000	0.6%	25%	24%	28,157	33,224	32,037
Congo (Democratic Republic of the)	61,053,000	77,341,000	3.1%	31%	29%	3,575,897	4,529,892	4,207,757
Côte d'Ivoire	20,157,000	25,534,000	1.2%	20%	18%	589,553	746,819	690,570
Ethiopia	78,646,000	95,289,000	5.7%	38%	25%	5,484,412	6,645,019	4,445,850
Gambia	1,589,000	1,951,000	2.4%	20%	18%	55,859	68,585	60,936
Ghana	21,970,000	26,886,000	4.4%	18%	15%	571,577	699,472	571,091
Guinea	9,958,000	12,724,000	0.2%	26%	26%	406,220	519,054	511,721
Guinea-Bissau	1,541,000	1,918,000	1.3%	19%	19%	43,016	53,539	52,279
Kenya	34,653,000	39,710,000	3.1%	20%	17%	1,242,700	1,424,051	1,179,734
Lesotho	2,407,000	2,782,000	2.8%	20%	17%	50,073	57,874	48,977
Liberia	3,750,000	4,465,000	4.4%	26%	23%	138,485	164,889	149,007
Madagascar	19,683,000	24,107,000	0.5%	42%	40%	1,343,625	1,645,622	1,558,971
Malawi	13,386,000	15,546,000	5.2%	19%	16%	470,433	546,343	467,137
Mali	13,059,000	15,665,000	2.7%	33%	26%	794,282	952,785	760,590
Mauritius	1,261,000	1,335,000	3.6%	15%	7%	14,346	15,188	7,514
Mozambique	20,340,000	23,832,000	5.2%	24%	19%	817,304	957,620	768,254
Namibia	2,028,000	2,188,000	1.3%	24%	18%	60,569	65,348	48,804
Niger	13,351,000	17,044,000	2.0%	44%	38%	1,248,975	1,594,452	1,373,292
Rwanda	9,394,000	11,093,000	4.5%	23%	19%	386,888	456,860	376,868
Sao Tome and Principe	158,000	180,000	3.7%	9%	8%	3,182	3,625	3,334
Senegal	12,225,000	14,782,000	1.4%	17%	16%	354,871	429,097	399,108
Sierra Leone	5,737,000	7,045,000	2.9%	30%	26%	240,328	295,121	255,763
South Africa	47,851,000	52,666,000	1.9%	12%	9%	571,608	629,126	460,961
Swaziland	1,018,000	1,051,000	1.6%	10%	9%	18,052	18,637	16,655
Tanzania (United Republic of)	38,964,000	45,653,000	4.8%	22%	17%	1,393,449	1,632,664	1,257,979
Togo	6,460,000	7,889,000	0.7%	26%	25%	231,180	282,318	272,998
Uganda	30,928,000	41,043,000	3.4%	20%	17%	1,172,721	1,556,259	1,345,612
Zambia	11,524,000	13,569,000	4.0%	20%	16%	390,686	460,015	371,089

**Current value refers to latest data available in UN HDR 2009

Appendix E: Results for development indicator: Children underweight for age

<i>Development indicator: Proportion of children not enrolled in Secondary Education</i>									
Country	Population (2007)	Population (2015)	CAGR %increase in GDP per capita (constant Local currency) from WEO	Current value	2015 Estimated value	Current headcount	2015 estimated headcount (zero GDP per Capita growth)	2015 Estimated headcount (IMF predicted GDP per Capita growth)	
Benin	8,877,000	11,072,000	2.0%	83%	76%	699,059	871,915	794,326	
Burkina Faso	13,727,000	16,465,000	2.9%	87%	76%	1,335,296	1,601,636	1,401,066	
Burundi	7,794,000	9,131,000	2.5%						
Cameroon	18,855,000	23,108,000	0.9%						
Cape Verde	491,000	575,000	3.9%	42%	38%	20,739	24,287	21,851	
Central African Republic	4,270,000	4,927,000	2.2%						
Comoros	639,000	754,000	0.6%						
Congo (Democratic Republic of the)	61,053,000	77,341,000	3.1%						
Côte d'Ivoire	20,157,000	25,534,000	1.2%						
Ethiopia	78,646,000	95,289,000	5.7%	72%	64%	5,789,015	7,014,081	6,254,571	
Gambia	1,589,000	1,951,000	2.4%	58%	55%	98,839	121,356	116,162	
Ghana	21,970,000	26,886,000	4.4%	53%	49%	1,248,212	1,527,511	1,416,212	
Guinea	9,958,000	12,724,000	0.2%	71%	70%	666,554	851,700	846,771	
Guinea-Bissau	1,541,000	1,918,000	1.3%	91%	88%	134,873	167,870	162,308	
Kenya	34,653,000	39,710,000	3.1%	56%	52%	2,069,388	2,371,380	2,215,878	
Lesotho	2,407,000	2,782,000	2.8%	75%	67%	172,548	199,431	178,462	
Liberia	3,750,000	4,465,000	4.4%						
Madagascar	19,683,000	24,107,000	0.5%	78%	77%	1,557,303	1,907,327	1,878,797	
Malawi	13,386,000	15,546,000	5.2%	77%	68%	1,138,855	1,322,624	1,175,638	
Mali	13,059,000	15,665,000	2.7%						
Mauritius	1,261,000	1,335,000	3.6%	18%	14%	16,807	17,793	13,933	
Mozambique	20,340,000	23,832,000	5.2%	97%	78%	2,157,062	2,527,390	2,013,560	
Namibia	2,028,000	2,188,000	1.3%	46%	43%	102,766	110,874	104,165	
Niger	13,351,000	17,044,000	2.0%	91%	85%	1,280,930	1,635,247	1,531,123	
Rwanda	9,394,000	11,093,000	4.5%						
Sao Tome and Principe	158,000	180,000	3.7%	62%	56%	13,063	14,882	13,426	
Senegal	12,225,000	14,782,000	1.4%	75%	70%	999,345	1,208,370	1,136,421	
Sierra Leone	5,737,000	7,045,000	2.9%	75%	71%	366,085	449,550	424,474	
South Africa	47,851,000	52,666,000	1.9%	28%	25%	1,329,102	1,462,843	1,302,758	
Swaziland	1,018,000	1,051,000	1.6%	71%	61%	99,834	103,070	87,846	
Tanzania (United Republic of)	38,964,000	45,653,000	4.8%						
Togo	6,460,000	7,889,000	0.7%	78%	77%	474,824	579,859	569,379	
Uganda	30,928,000	41,043,000	3.4%	81%	72%	2,701,286	3,584,742	3,184,346	
Zambia	11,524,000	13,569,000	4.0%	58%	54%	762,796	898,158	825,676	

**Current value refers to latest data available in UN HDR 2009

Appendix F: Results for development indicator: Proportion of children not enrolled in secondary education

Development indicator: Population not using improved sanitation

Country	Population (2007)	Population (2015)	CAGR %increase in GDP per capita (constant Local currency) from WEO	Current value	2015 Estimated value	Current headcount	2015 estimated headcount (zero GDP per Capita growth)	2015 Estimated headcount (IMF predicted GDP per Capita growth)
Benin	8,877,000	11,072,000	2.0%	70%	64%	6,213,900	7,750,400	7,084,016
Burkina Faso	13,727,000	16,465,000	2.9%	87%	72%	11,942,490	14,324,550	11,894,646
Burundi	7,794,000	9,131,000	2.5%	59%	58%	4,598,460	5,387,290	5,272,266
Cameroon	18,855,000	23,108,000	0.9%	49%	47%	9,238,950	11,322,920	10,972,184
Cape Verde	491,000	575,000	3.9%	57%	45%	279,870	327,750	256,720
Central African Republic	4,270,000	4,927,000	2.2%	69%	65%	2,946,300	3,399,630	3,217,368
Comoros	639,000	754,000	0.6%	65%	64%	415,350	490,100	480,449
Congo (Democratic Republic of the)	61,053,000	77,341,000	3.1%	69%	67%	42,126,570	53,365,290	51,548,983
Côte d'Ivoire	20,157,000	25,534,000	1.2%	76%	70%	15,319,320	19,405,840	17,850,308
Ethiopia	78,646,000	95,289,000	5.7%	89%	68%	69,994,940	84,807,210	65,166,350
Gambia	1,589,000	1,951,000	2.4%	48%	46%	762,720	936,480	889,154
Ghana	21,970,000	26,886,000	4.4%	90%	66%	19,773,000	24,197,400	17,649,191
Guinea	9,958,000	12,724,000	0.2%	81%	80%	8,065,980	10,306,440	10,169,114
Guinea-Bissau	1,541,000	1,918,000	1.3%	67%	66%	1,032,470	1,285,060	1,258,947
Kenya	34,653,000	39,710,000	3.1%	58%	52%	20,098,740	23,031,800	20,574,011
Lesotho	2,407,000	2,782,000	2.8%	64%	57%	1,540,480	1,780,480	1,580,507
Liberia	3,750,000	4,465,000	4.4%	68%	64%	2,550,000	3,036,200	2,864,050
Madagascar	19,683,000	24,107,000	0.5%	88%	85%	17,321,040	21,214,160	20,510,134
Malawi	13,386,000	15,546,000	5.2%	40%	38%	5,354,400	6,218,400	5,853,439
Mali	13,059,000	15,665,000	2.7%	55%	52%	7,182,450	8,615,750	8,078,036
Mauritius	1,261,000	1,335,000	3.6%	6%	3%	75,660	80,100	40,050
Mozambique	20,340,000	23,832,000	5.2%	69%	60%	14,034,600	16,444,080	14,225,259
Namibia	2,028,000	2,188,000	1.3%	65%	55%	1,318,200	1,422,200	1,197,233
Niger	13,351,000	17,044,000	2.0%	93%	84%	12,416,430	15,850,920	14,332,558
Rwanda	9,394,000	11,093,000	4.5%	52%	48%	4,884,880	5,768,360	5,321,042
Sao Tome and Principe	158,000	180,000	3.7%	76%	60%	120,080	136,800	108,734
Senegal	12,225,000	14,782,000	1.4%	72%	66%	8,802,000	10,643,040	9,786,731
Sierra Leone	5,737,000	7,045,000	2.9%	89%	78%	5,105,930	6,270,050	5,482,418
South Africa	47,851,000	52,666,000	1.9%	41%	32%	19,618,910	21,593,060	16,908,844
Swaziland	1,018,000	1,051,000	1.6%	50%	44%	509,000	525,500	460,373
Tanzania (United Republic of)	38,964,000	45,653,000	4.8%	67%	56%	26,105,880	30,587,510	25,550,582
Togo	6,460,000	7,889,000	0.7%	88%	85%	5,684,800	6,942,320	6,667,026
Uganda	30,928,000	41,043,000	3.4%	67%	60%	20,721,760	27,498,810	24,541,403
Zambia	11,524,000	13,569,000	4.0%	48%	44%	5,531,520	6,513,120	5,905,192

**Current value refers to latest data available in UN HDR 2009

Appendix G: Results for development indicator: Population not using improved sanitation

Development indicator: Population undernourished

Country	Population (2007)	Population (2015)	CAGR %increase in GDP per capita (constant Local currency) from WEO	Current value	2015 Estimated value	Current headcount	2015 estimated headcount (zero GDP per Capita growth)	2015 Estimated headcount (IMF predicted GDP per Capita growth)
Benin	8,877,000	11,072,000	2.0%	19%	18%	1,686,630	2,103,680	1,953,161
Burkina Faso	13,727,000	16,465,000	2.9%	10%	10%	1,372,700	1,646,500	1,588,304
Burundi	7,794,000	9,131,000	2.5%	63%	54%	4,910,220	5,752,530	4,945,275
Cameroon	18,855,000	23,108,000	0.9%	23%	21%	4,336,650	5,314,840	4,968,163
Cape Verde	491,000	575,000	3.9%	15%	12%	73,650	86,250	69,255
Central African Republic	4,270,000	4,927,000	2.2%	43%	37%	1,836,100	2,118,610	1,816,977
Comoros	639,000	754,000	0.6%	52%	48%	332,080	392,080	359,250
Congo (Democratic Republic of the)	61,053,000	77,341,000	3.1%	76%	61%	46,400,280	58,779,160	47,224,097
Côte d'Ivoire	20,157,000	25,534,000	1.2%	14%	14%	2,821,980	3,574,760	3,451,531
Ethiopia	78,646,000	95,289,000	5.7%	46%	30%	36,177,160	43,832,940	28,481,893
Gambia	1,589,000	1,951,000	2.4%	30%	25%	476,700	585,300	496,944
Ghana	21,970,000	26,886,000	4.4%	9%	9%	1,977,300	2,419,740	2,286,459
Guinea	9,958,000	12,724,000	0.2%	17%	17%	1,692,860	2,163,080	2,150,534
Guinea-Bissau	1,541,000	1,918,000	1.3%	32%	31%	493,120	613,760	589,385
Kenya	34,653,000	39,710,000	3.1%	32%	24%	11,088,960	12,707,200	9,637,924
Lesotho	2,407,000	2,782,000	2.8%	15%	14%	361,050	417,300	383,116
Liberia	3,750,000	4,465,000	4.4%	40%	34%	1,500,000	1,786,000	1,535,122
Madagascar	19,683,000	24,107,000	0.5%	37%	36%	7,282,710	8,919,590	8,585,725
Malawi	13,386,000	15,546,000	5.2%	29%	23%	3,881,940	4,508,340	3,627,008
Mali	13,059,000	15,665,000	2.7%	11%	11%	1,436,490	1,723,150	1,659,677
Mauritius	1,261,000	1,335,000	3.6%	6%	5%	75,660	80,100	66,855
Mozambique	20,340,000	23,832,000	5.2%	38%	28%	7,729,200	9,056,160	6,561,170
Namibia	2,028,000	2,188,000	1.3%	19%	16%	385,320	415,720	350,251
Niger	13,351,000	17,044,000	2.0%	29%	27%	3,871,790	4,942,760	4,608,105
Rwanda	9,394,000	11,093,000	4.5%	40%	29%	3,757,600	4,437,200	3,226,271
Sao Tome and Principe	158,000	180,000	3.7%	5%	5%	7,900	9,000	8,792
Senegal	12,225,000	14,782,000	1.4%	26%	23%	3,178,500	3,843,320	3,468,618
Sierra Leone	5,737,000	7,045,000	2.9%	47%	38%	2,696,390	3,311,150	2,659,232
South Africa	47,851,000	52,666,000	1.9%					
Swaziland	1,018,000	1,051,000	1.6%	18%	15%	183,240	189,180	157,502
Tanzania (United Republic of)	38,964,000	45,653,000	4.8%	35%	24%	13,637,400	15,978,550	10,993,172
Togo	6,460,000	7,889,000	0.7%	37%	35%	2,390,200	2,918,930	2,787,711
Uganda	30,928,000	41,043,000	3.4%	15%	14%	4,639,200	6,156,450	5,717,456
Zambia	11,524,000	13,569,000	4.0%	45%	28%	5,185,800	6,106,050	3,826,546

**Current value refers to latest data available in UN HDR 2009

Appendix H: Results for development indicator: Population undernourished