

Graduation out of aid research

As Ghana starts to transition out of aid, the paper looks at how development indicators for Ghana changed over time. For a few indicators, it looks at how Ghana compares with groups of other countries that have been transitioning out of aid.

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Abbreviations

DFID	Department for International Development
GDP	Gross Domestic Product
GNI	Gross National Income
IBRD	International Bank of Reconstruction and Development
LIC	Low Income Countries
LMIC	Lower Middle Income Countries
MIC	Middle Income Countries
ODA	Overseas Development Aid

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1 Overview

DFID is continuously reviewing the status of the countries to which it provides aid and in this context, is looking at the key drivers and indicators for countries transitioning out of aid. Ghana has recently been categorised as a lower-middle income country, and DFID Ghana is interested to assess how the country's level of development compares with other relevant countries, including those who might be on track to transition to lower-middle income, similar lower-MICs, and those countries that have transitioned out of aid. This preliminary study will feed into a research project looking in more detail at countries transitioning out of aid.

As Ghana starts to transition out of aid, the paper looks at how development indicators for Ghana changed over time. For a few indicators, it looks at how Ghana compares with groups of other countries that have been transitioning out of aid.

Thus the **key questions** this paper examines include the following:

- a. How have development indicators for Ghana changed over time?
- b. How do Ghana and comparator groups of countries compare on the same indicator?

Summary insights:

We find that Ghana has experienced very significant improvements across its development indicators since the early 2000, but with different changes for different indicators. This is broadly consistent with or, in some cases better than, the lower middle income country averages. However, there is also considerable heterogeneity.

Comparing Ghana's development indicators when other country groups, we find the following:

- Ghana's GDP per capita level tracked closely the LICs average until 2005. However, Ghana's GDP took off in 2006 and caught up with the comparable LMICs.
- In terms of net ODA received as a percentage of GDP, Ghana is much more similar to an upper LIC throughout the 1990s. This figure started to rapidly reduce after 2004 and started to track LMICs from 2006 onwards.
- A similar pattern is observed for the external debt stock (% GNI) for Ghana, as the figure began to rapidly decline in 2000. By 2010, Ghana's external debt stock as a percentage of GNI has come down to a level comparable consistent with the comparable LMICs.
- However, most of the other indicators such as health and education have experienced more gradual changes.
- We have included a number of further insights in this paper, but a more complete analysis can be undertaken on the basis of the substantial database of 89 indicators for which we have collected data on a country and country group basis (see the appendix for further details).

1.1 Methodology and overview

We first compiled a database of 89 development indicators for Ghana and 40 other developing countries that are split into three groups – comparable lower middle income countries (LMICs), aspirational middle income countries (MICs)¹ and upper lower income countries (LICs). The data are sourced primarily from the World Development Indicators available from the World Bank's website. This paper presents data for only a few countries but the database contains for the other variables.

The Bank's analytical income categories (low, middle, high income) are based on the Bank's operational lending categories (civil works preferences, IDA eligibility, etc.). We discuss this in more detail later on.

We have also used World Bank's method in classifying income groups. Economies are divided according to 2011 GNI per capita, calculated using the [World Bank Atlas method](#). The groups are: low income, \$1,025 or less; lower middle income, \$1,026 - \$4,035; upper middle income, \$4,036 - \$12,475; and high income, \$12,476 or more. In 2011, Ghana's GNI per capita is 1410 in current US dollars. That puts it firmly in in the lower middle income country category.

This paper focuses on 2 types of questions:

- 1) Examine the evolution of different types of indicators for Ghana over time (see section 2.1);
- 2) Compare the same indicator across countries (see section 2.2);

We group comparator countries. There are various ways in which to do this. We cannot undertake an extensive analysis and have decided to focus on the following groups. The database allows you to construct different groupings.

Comparable LMIC (8)	Côte d'Ivoire, Honduras, India, Nigeria, Paraguay, Senegal, Vietnam, Zambia
Aspirational MIC (8)	Botswana, Brazil, China, Indonesia, Malaysia, Namibia, South Africa, Thailand
Upper LIC (24):	Angola, Bangladesh, Benin, Burkina Faso, Burundi, Cambodia, Chad, Ethiopia, Georgia, Kenya, Kyrgyz Rep., Lao PDR, Liberia, Malawi, Mozambique, Rwanda, Sierra Leone, Sri Lanka, Tajikistan, Tanzania, Togo, Uganda, Uzbekistan, Zimbabwe

2 Analysis of database: illustrative examples

It is challenging to determine which countries are on course to graduate out of aid. One indicator could be the amount of aid received and if that drops below a certain level or percentage the country could then be considered to graduate out of aid. However, the precise conditions and reasons for providing or withdrawing aid can be a unilateral decision motivated by political considerations. Therefore, this study therefore begins with a thorough analysis on the commonalities and key trends across countries that are/might be on course to transition out of aid, with particular comparison to Ghana.

¹ Aspirational is used here to select some countries that have reached MIC status long before Ghana has; these countries have grown rapidly across the last few decades.

Aid graduation is sometimes linked to country categories used by international institutions. For example, the World Bank has traditionally had [five lending categories](#):

- I. Civil Works Preference;
- II. IDA Eligibility on 20-year IBRD terms;
- III. 17-year IBRD terms;
- IV. 15-year IBRD terms;
- V. IBRD graduation;

The economies whose per capita GNI falls below the Bank's operational cut-off for "Civil Works Preference" are classified as low-income economies; economies whose per capita GNI is higher than the Bank's operational threshold for "Civil Works Preference" and lower than the threshold for 17-year IBRD loans are classified as lower-middle income economies; and those economies whose per capita GNI is higher than the Bank's operational threshold for 17-year IBRD loans and lower than the threshold for high-income economies are classified as upper-middle income economies. [Note: In 2008, the Bank streamlined IBRD categories to eliminate the 17-year term operational threshold. The analytical threshold between lower-middle and upper-middle income remains and is updated each year as explained above.]

Beginning in the financial year of 2009, the number of IBRD levels are reduced in accordance with the Memorandum to the Executive Directors dated January 17, 2008 (R2008-0007). Level II becomes the effective IDA eligibility threshold with the historic IDA eligibility threshold footnoted; Level III is described as "IBRD terms"; Level IV becomes "IBRD Graduation".

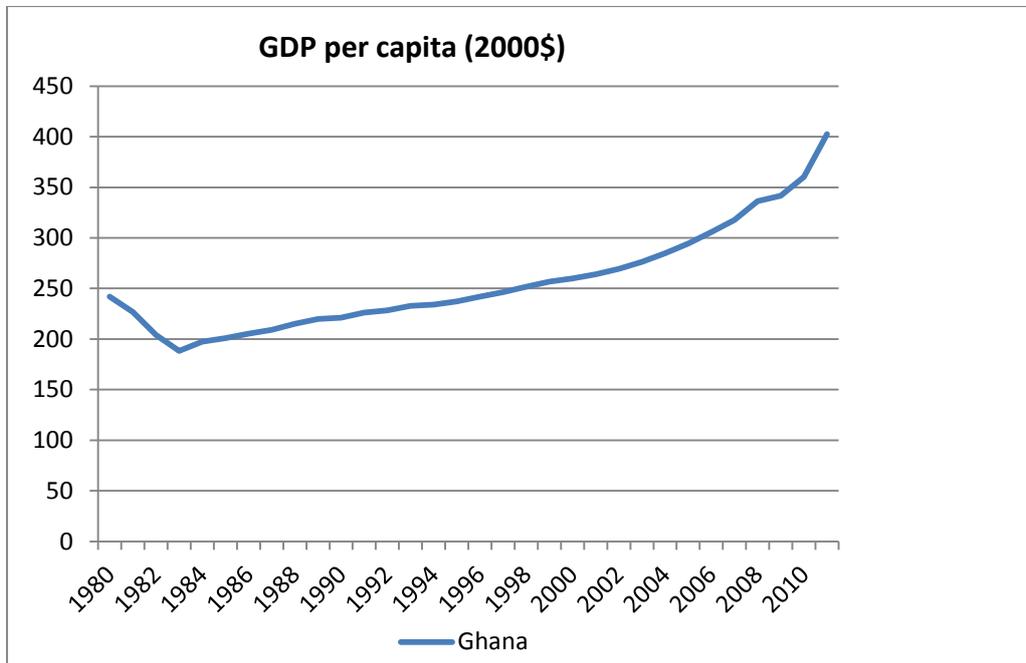
Ghana was a low income economy until 2009. In 2010, the World Bank changed Ghana's status from a low income economy to a lower middle economy. World Bank's operational lending category for Ghana also changed from 'Civil Works Preference' (the lending category for the poorest countries) to '17-year IBRD terms' (which is a lending category for middle income countries) in 2012.²

In the rest of this paper, we offer a preliminary analysis on the changes in Ghana's development indicators across time and then examine at how they compare to each country groups over time.

² <http://data.worldbank.org/about/country-classifications/a-short-history>

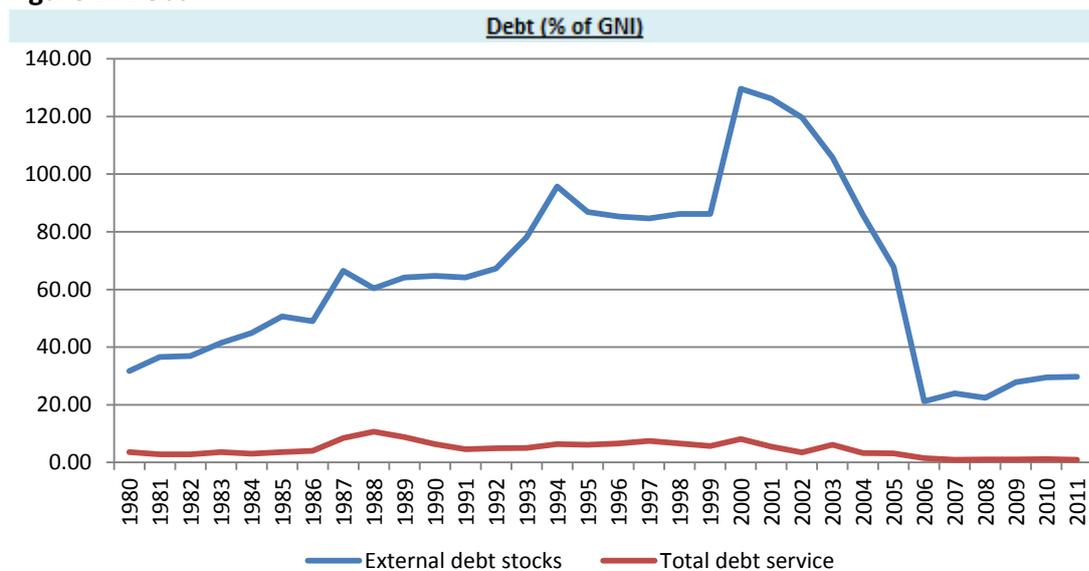
2.1 Development indicators for Ghana over time

Figure 1: GDP per capita (in constant 2000 US\$)



Ghana’s level of GDP per capita experienced steady increase between 1980 and the early 2000s. A more rapid increase is observed from 2000 onwards with a short-lived slow-down in growth caused by the 2008-2009 global economic downturn.

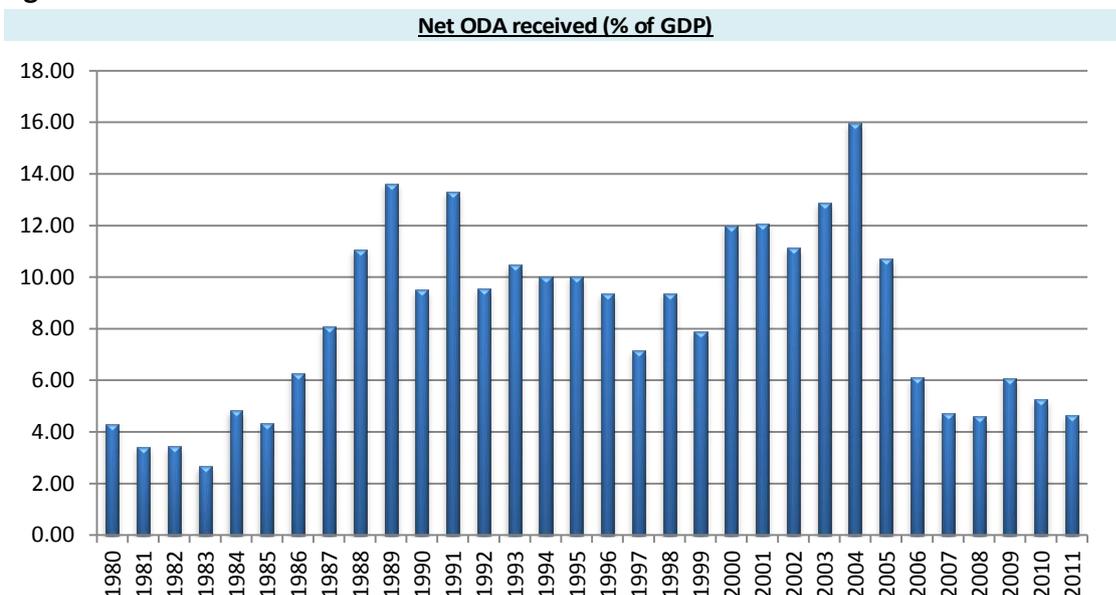
Figure 2: Debt



Ghana’s external debt stocks as a percentage of Gross National Income (GNI) increased from about 30% to approximately 130% in 2002. This percentage was reduced dramatically after 2000, as a result of the World Bank and IMF’s debt relief package that started to be implemented in 2002. In

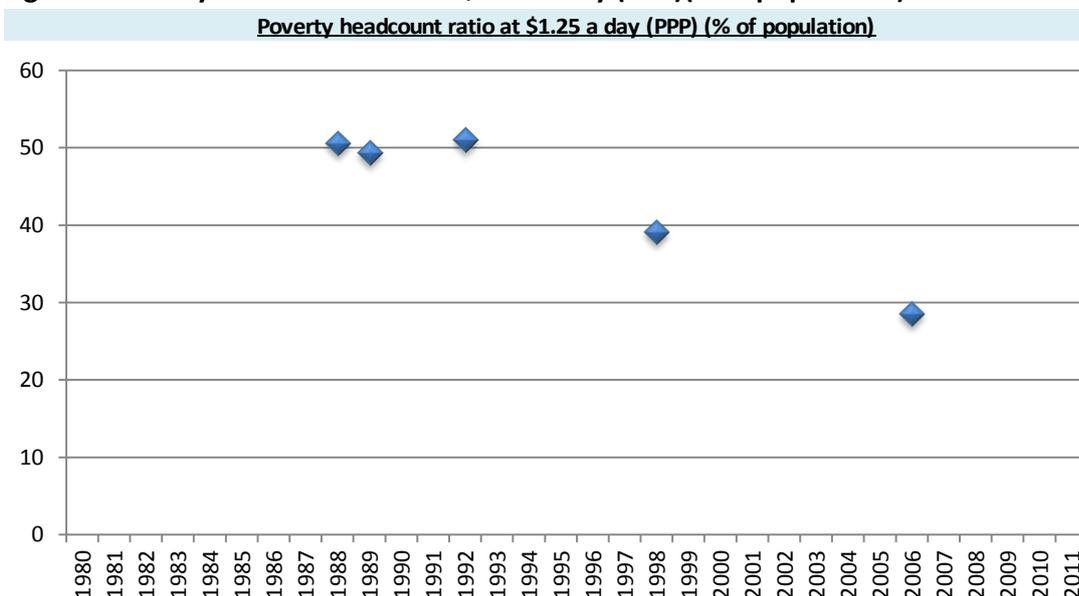
2006, Ghana's debt as a percentage of GNI level reached a new low of 20% and only relatively modest increase was observed from 2006 until 2011.

Figure 3 Net ODA received % of GDP



The net ODA received by Ghana as a percentage of GDP fluctuated between 1980 and 2011. It increased from 4.7% of GDP in 1980 to 13.6% of GDP in 1989. The figure fluctuated between 9.5% in 1990 and 13% in 2003. After reaching a high of almost 16% in 2004, it declined significantly to 4.6% in 2011.

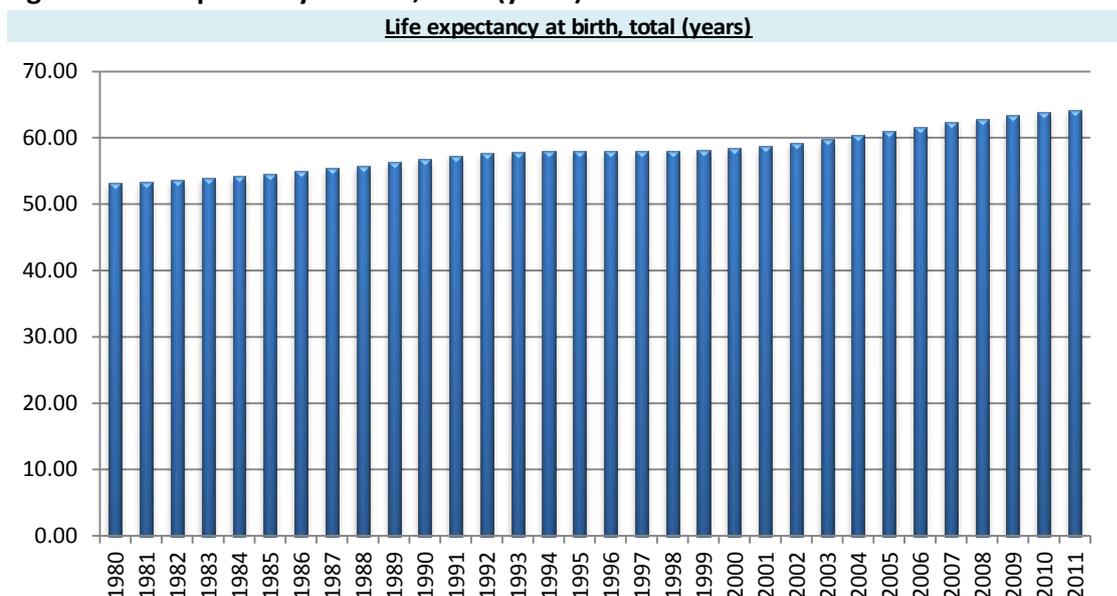
Figure 4 Poverty headcount ratio at \$1.25 a day (PPP)(% of population)



The proportion of the population in Ghana living under \$1.25 a day has also significantly reduced from over 50% in 1992 to about 29% in 2006.

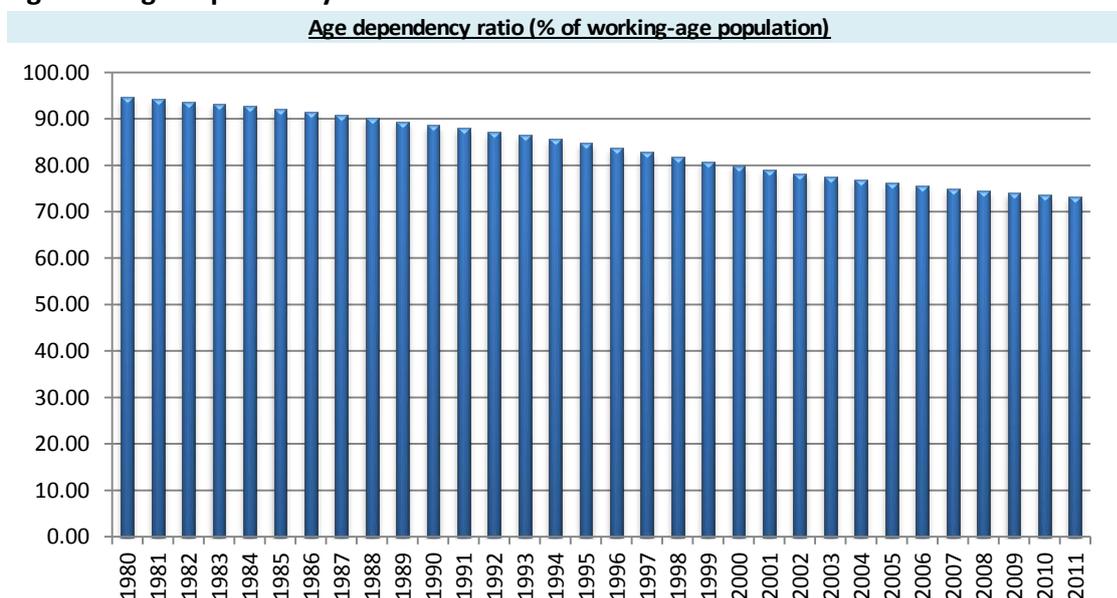
HEALTH

Figure 5 Life expectancy at birth, total (years)



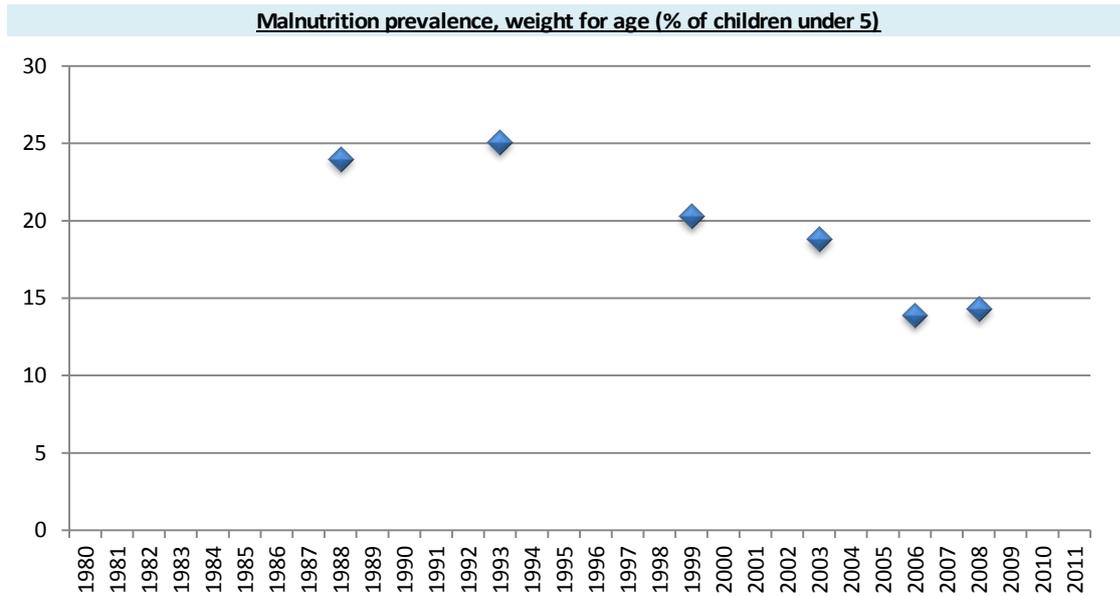
Life expectancy in Ghana has improved steadily since the 1980s – from 53 years old to 64 years old in 2011. The evolution of this indicator has been smoother than recent changes in economic variables such as GDP or debt.

Figure 6: Age dependency ratio



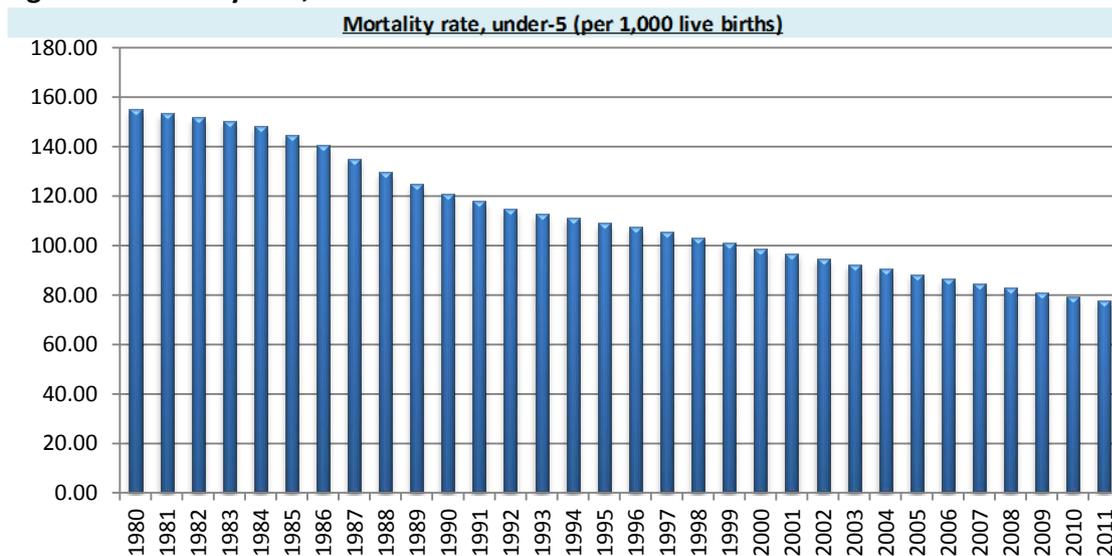
This figure shows that the population dependency ratio has decreased significantly since 1980. This figure has declined from 94% in 1980 (implying that for every one working adult, there is another non-working adult) to 73% in 2011. Given that life expectancy has increased in Ghana during the last 30 years, this could signal in a decreasing trend in birth rate.

Figure 7: Malnutrition prevalence



Malnutrition prevalence, measured by the percentage of underweight children under 5 years old has also declined from 25% in 1993 to 14% in 2006, although it has stabilised over 2006-2008 (despite rapid growth) .

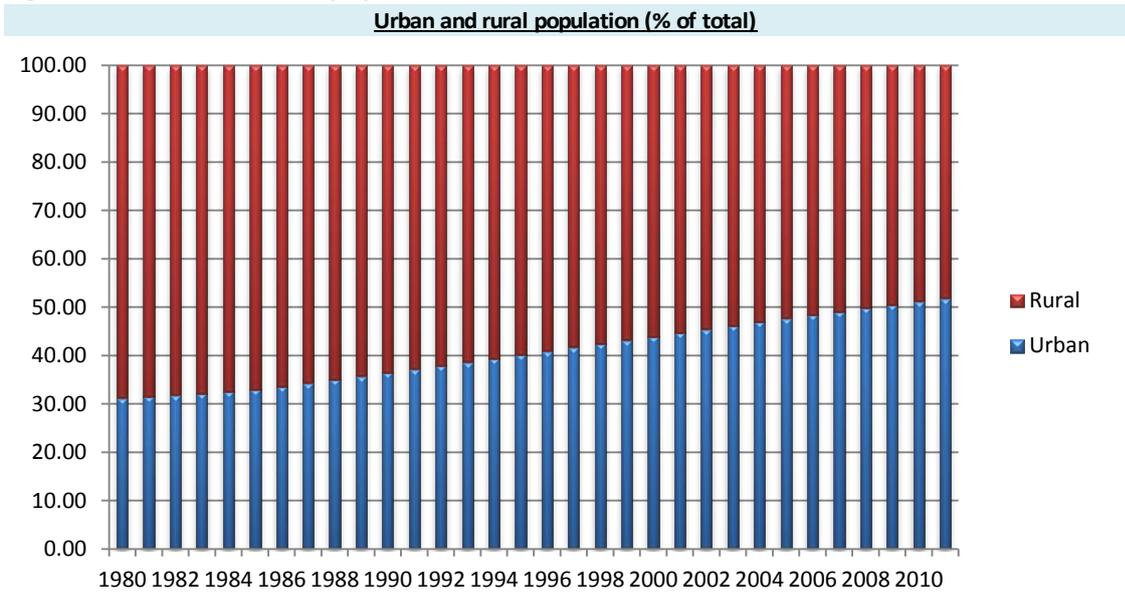
Figure 8: Mortality rate, under 5



A very rapid decline in under-five mortality rate took place in Ghana between 1980 and 2011. This number dropped from 155 to 78 deaths per 1000 live births in 30 years' time. The change has been steady over time.

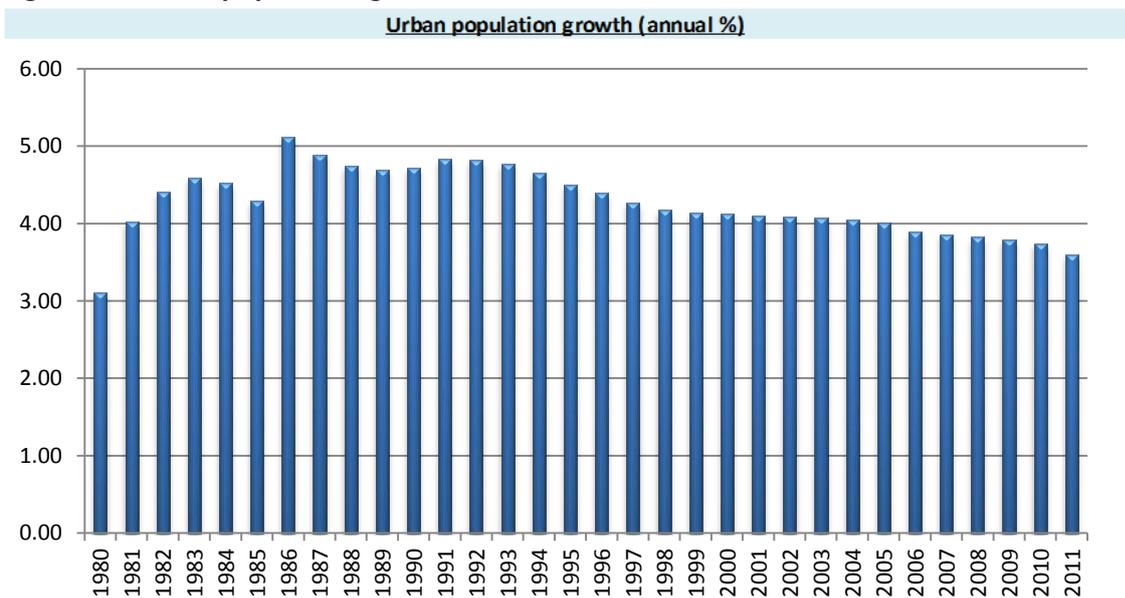
SOCIAL

Figure 9: Urban and rural population



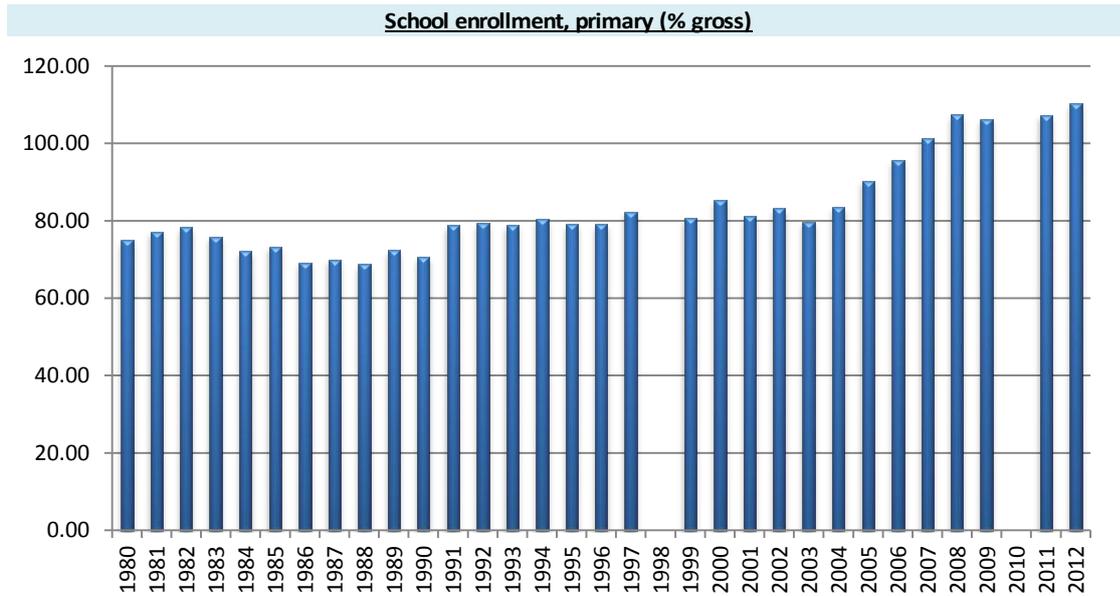
The percentage of people living in cities has increased steadily in Ghana – from just above 30% to over 50% in 2010.

Figure 10: Urban population growth



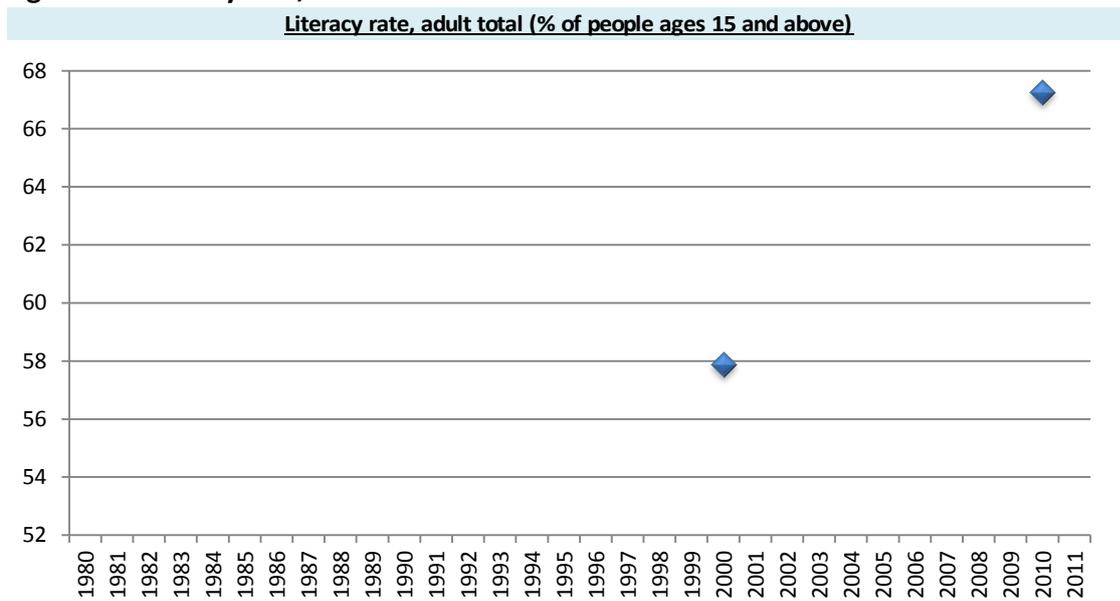
Urban population growth rate has been more volatile since 1980, as this figure fluctuated between 1980 and 1990, while reaching a peak of over 5% in 1986. Urban population growth started to slow after 1992 and reaching a new low of 3.6% in 2011.

Figure 11 School enrollment, primary



Primary school enrolment rate has also increased dramatically. Starting with a modest level at 75% in 1980, it increased to over 100% in 2012.

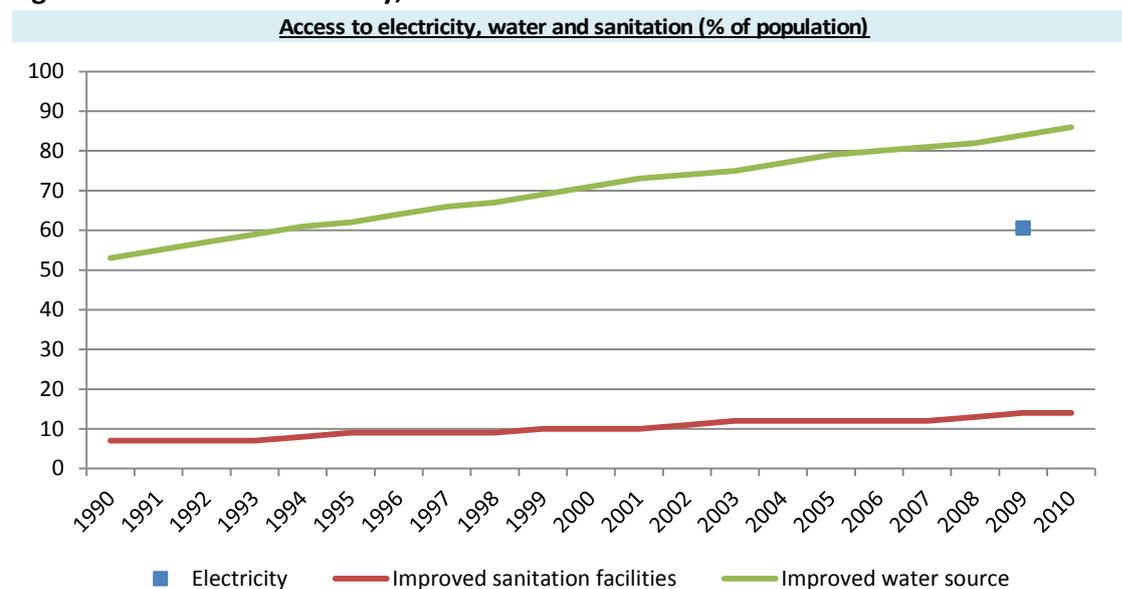
Figure 12: Literacy rate, adult total



Here are two readings of data for literacy rate in Ghana. It demonstrates a clear improvement from 58% in 2000 to 67% in 2010.

INFRASTRUCTURE

Figure 13: Access to electricity, water and sanitation

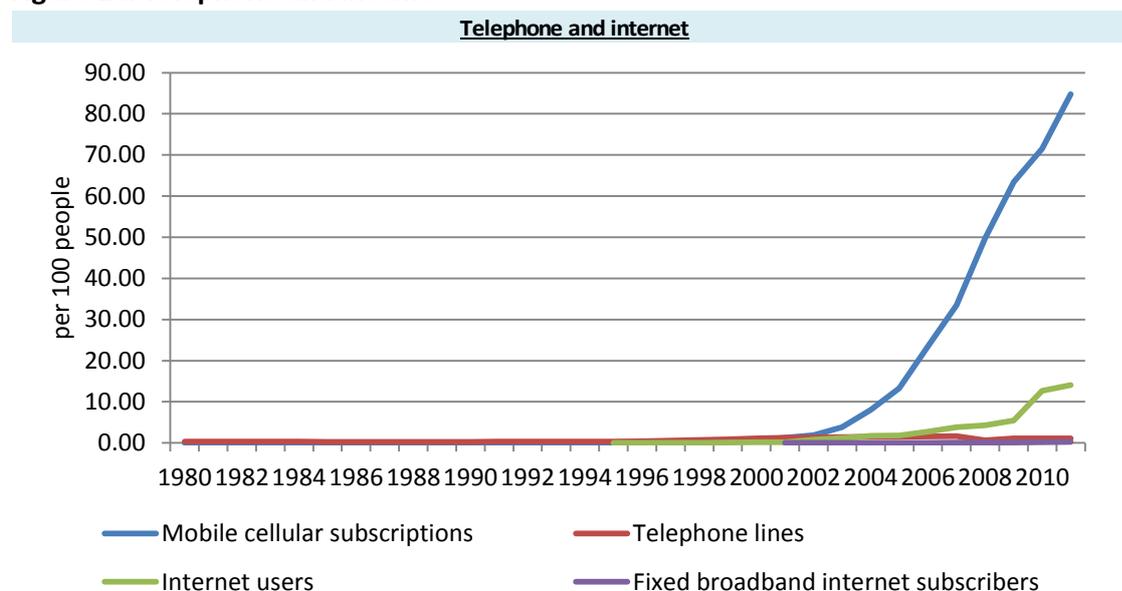


One of measurement proxies we have adopted in measuring the development of infrastructure is the percentage of population that have access to electricity, water and sanitation.

While the percentage of the population with improved sanitation facilities has slowly increased from 7% in 1990 and 14% in 2010, the percentage of population with improved water resource has increased from 53% in 1990 to 86% in 2010.

There is only data on electricity coverage for the year of 2009 (60.5%).

Figure 14: Telephone and internet



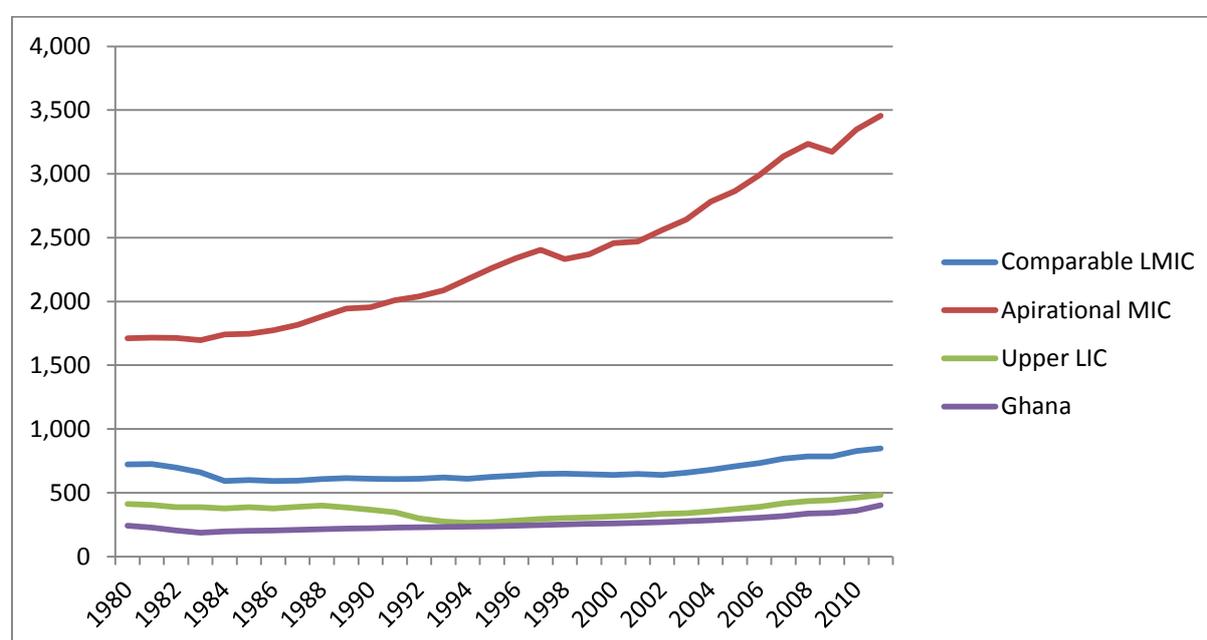
The other proxy for infrastructure development in this study is communication technology coverage. Among these technologies, the most dramatic increase arrived in mobile cellular subscription. Since its inception in 1992, it went from less than 1% of population coverage in 2000 to almost 85% in 2011.

In summary, the Ghanaian economy has grown rapidly over the last 15 years, which has led to improvements in major development indicators across the board. The country is also becoming increasingly urbanised and since 2009, more than half of the population live in urban areas. The biggest improvement in infrastructure was due to the sharp rise in mobile cellular subscriptions since the early 2000s, while other infrastructure provisions such as water access are also steadily improving.

2.2 Comparing Ghana with other countries

This section compares a number of indicators for Ghana against a range of comparator groups. We use the unweighted average for each group. The database provides data for some 90 variables for these country groupings – here we illustrate its potential on the basis of four charts.

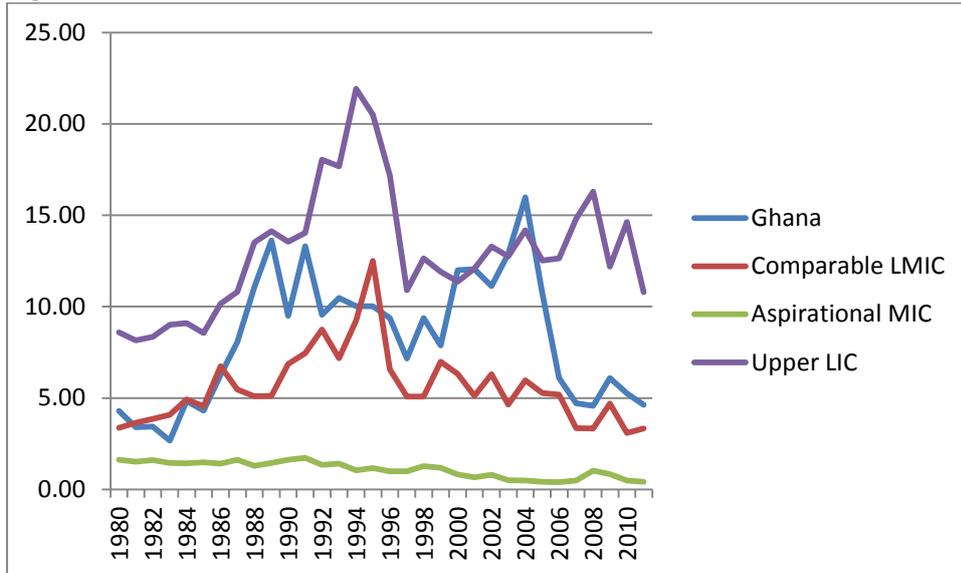
Figure 15 GDP per capita (constant 2000 US\$)



According to the World Bank, economies are divided according to 2011 GNI per capita, calculated using the World Bank Atlas method. The groups are: low income, \$1,025 or less; lower middle income, \$1,026 - \$4,035; upper middle income, \$4,036 - \$12,475; and high income, \$12,476 or more.³ In 2011, Ghana's GNI per capita is 1410 in current US dollars. That puts it firmly in the lower middle income country category. Further research could focus on the effects of revision to Ghana's GNI data in recent years.

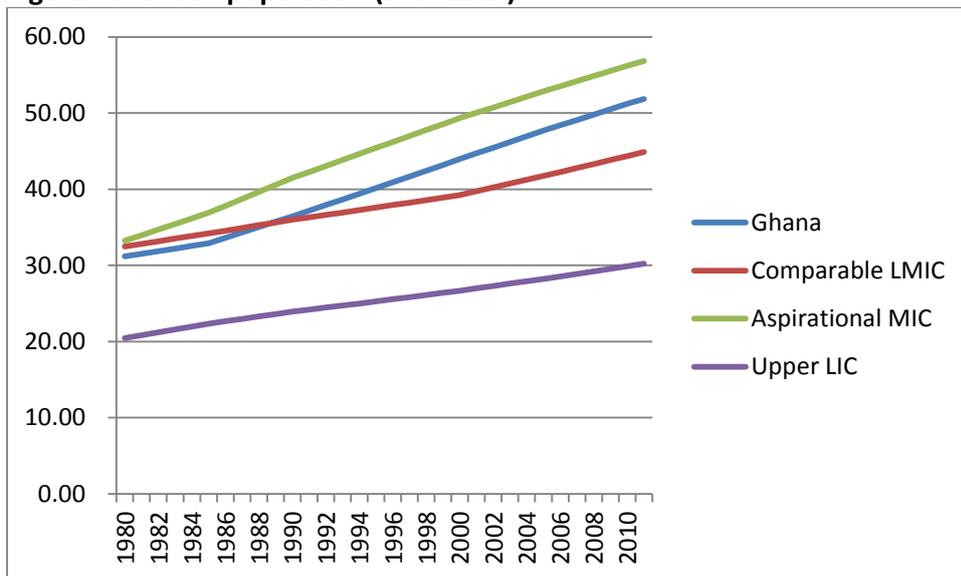
³ <http://data.worldbank.org/about/country-classifications>

Figure 15: Net ODA received as % of GDP



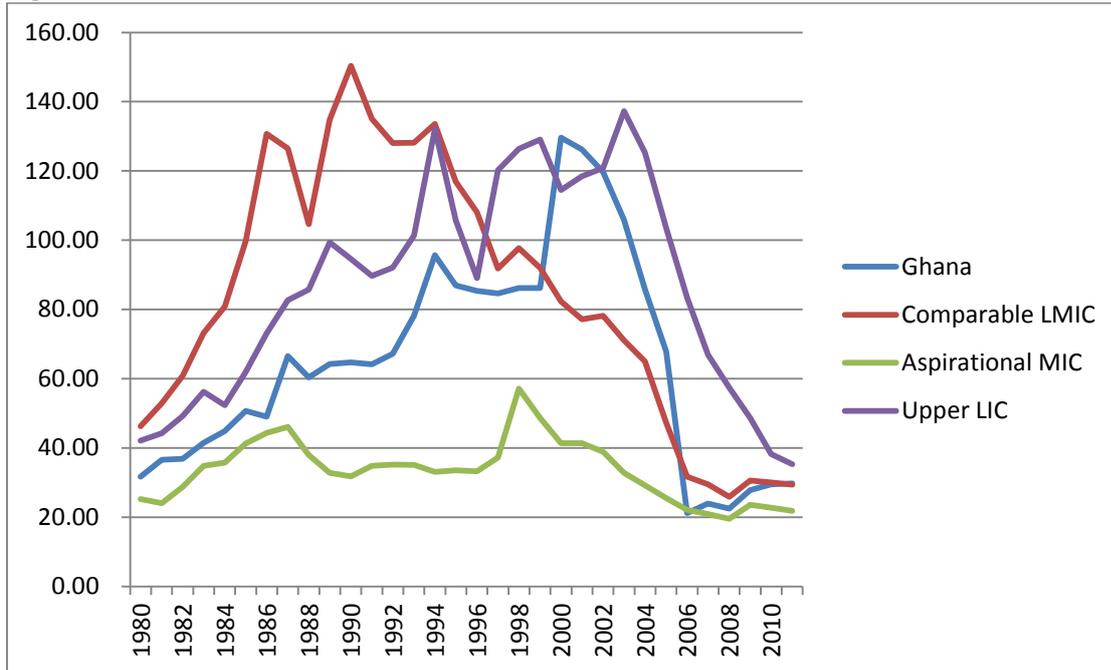
In terms of net ODA received as a percentage of GDP, Ghana sits between the upper LICs and comparable LMICs. In the last five years, Ghana is becoming similar to the group of LMICs, as the net ODA received as a percentage of GDP continues to fall. Compared to the other groups, the changes have been rather rapid.

Figure 16: Urban population (% of total)



Ghana currently has a higher degree of urbanisation than the group average of the comparable LMICs, but still lower in the aspirational MICs.

Figure 17: External debt stock as % GNI



By 2010, Ghana’s external debt stock as a percentage of GNI has come down to a level comparable consistent with the comparable LMICs.

3 Conclusions and summary insights

Ghana's economy grew significantly over the last 15 years, which has led to a very impressive improvement across its development indicators. Consequently, the World Bank reclassified Ghana from a low income country to a lower middle income country in 2010 and upgraded its lending category from 'civil works preference' to 'IBRD terms'.

This study has built up a database on Ghana and 40 other countries on 89 development indicators between 1980 and 2010. It offers a preliminary comparative analysis on how Ghana's indicators have evolved over time and has begun to examine how Ghana's indicators are compared with other country groups. We have presented data and comparisons for four indicators for illustrative purposes with 86 more are available in the database.

We find that Ghana has experienced very significant improvements across its development indicators since the early 2000, but with different changes for different indicators. This is broadly consistent with or, in some cases better than, the lower middle income country averages.

Comparing Ghana's development indicators when other country groups, we find the following:

- i) Ghana's GDP per capita level tracked closely the LICs average until 2005. However, Ghana's GDP took off in 2006 and caught up with the comparable LMICs.
- ii) In terms of net ODA received as a percentage of GDP, Ghana is much more similar to an upper LIC throughout the 1990s. This figure started to rapidly reduce after 2004 and started to track LMICs from 2006 onwards.
- iii) A similar pattern is observed for the external debt stock (% GNI) for Ghana, as the figure began to rapidly decline in 2000. By 2010, Ghana's external debt stock as a percentage of GNI has come down to a level comparable consistent with the comparable LMICs.
- iv) However, most of the other indicators such as health and education have experienced more gradual changes.

The spreadsheet accompanying this paper compares Ghana with other country groups on some 90 indicators. This reveals that Ghana sometimes demonstrates the attributes of upper LICs and sometimes those of aspirational MIC attributes.

- v) For instance, Ghana is broadly similar to the upper LICs on mortality rate but is more similar to the aspirational MICs on ease of doing business rankings.
- vi) It is also interesting to note that although Ghana is very similar to the upper LICs, it is ranked much more closely to an aspirational MIC on corruption perception index.
- vii) Ghana compares extremely similar to the average of a comparable LMIC in terms of mobile phone usage.
- viii) Nevertheless, Ghana has one of the lowest fixed broadband internet subscriber rate – even lower than the upper LICs average.
- ix) This pattern is also observed in the adult literacy rate where Ghana has a lower literacy rate than upper LIC average.

There are a number of other questions that may require further investigation:

1. We would need to examine in more detail the effects of recent revisions of Ghana's GNI/GDP.
2. It is important to note that many of the lower middle income countries still receive aid. Being classified as a (lower) middle income country could be a useful indication for transitioning out of aid, but hardly a good measure for aid graduation.
3. We have used a set of plausible country comparisons, but other comparisons with different country groupings can also be used.
4. It might also be useful to compare Ghana not only with a country group but also with individual countries; in other words, taking the comparison to a country level analysis. In particular, one could take a number of indicators (GDP per capita, education, health) for Ghana and determine a point of graduation, and then compare those to similar indicators for countries around the same point of graduation.
5. More generally, it is possible to undertake more analysis with the database: <https://partnerplatform.org/?l0xw6qs8>; <https://partnerplatform.org/?7v757m98>.

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Appendix

We have collected and organised data into two databases, one that examines data specifically for Ghana and another that compares Ghana with country groupings. For the Ghana specific illustrations we have used the following indicators:

1. GNI/GDP
2. Debt (as a percentage of GNI)
3. Net ODA received (as a percentage of GDP)
4. Poverty headcount ratio at \$1.25 a day at PPP (as a percentage of total population)
5. Life expectancy at birth
6. Age dependency ratio
7. Malnutrition prevalence (percentage of children under 5)
8. Mortality rate (under 5, per 1000 live birth)
9. Urban/rural population (as a percentage of total)
10. Urban population growth
11. School enrolment (primary)
12. Literacy rate
13. Access to electricity, water and sanitation (as a percentage of population)
14. Telephone and internet access (per 100 people)
15. GDP compared with other country groups (Constant 2000 US \$)
16. Net ODA received as a percentage of GDP compared with other country groups
17. Percentage of urban population compared with other country groups
18. External debt shock compared with other country groups

However, we have collected data for Ghana and comparator groups for 89 indicators (and the data are available upon request from z.hou@odi.org.uk), of which we have used 4 in the graphical analysis and a few more when discussing our summary insights:

GDP per capita (constant 2000 US\$)
 GDP per capita (current US\$)
 Urban population (% of total)
 Rural population (% of total population)
 Life expectancy at birth, total (years)
 Age dependency ratio (% of working-age population)
 Urban population growth (annual %)
 Maternal mortality ratio (modeled estimate, per 100,000 live births)
 Maternal mortality ratio (national estimate, per 100,000 live births)
 Mortality rate, under-5 (per 1,000 live births)
 Physicians (per 1,000 people)
 Nurses and midwives (per 1,000 people)
 Net ODA % GDP
 Poverty headcount ratio at \$1.25 a day (PPP) (% of population)
 GINI index
 Malnutrition prevalence, weight for age (% of children under 5)
 School enrollment, primary (% gross)
 Trained teachers in primary education (% of total teachers)
 Literacy rate, adult total (% of people ages 15 and above)
 Agricultural raw materials exports (% of merchandise exports)
 Food exports (% of merchandise exports)
 Fuel exports (% of merchandise exports)
 Manufactures exports (% of merchandise exports)
 Ores and metals exports (% of merchandise exports)
 ICT goods exports (% of total goods exports)
 High-technology exports (% of manufactured exports)
 Merchandise exports to developing economies outside region (% of total merchandise exports)
 Merchandise exports to developing economies within region (% of total merchandise exports)
 Merchandise exports to developing economies in East Asia & Pacific (% of total merchandise exports)
 Merchandise exports to developing economies in Europe & Central Asia (% of total merchandise exports)
 Merchandise exports to developing economies in Latin America & the Caribbean (% of total merchandise exports)
 Merchandise exports to developing economies in Middle East & North Africa (% of total merchandise exports)
 Merchandise exports to developing economies in South Asia (% of total merchandise exports)
 Merchandise exports to developing economies in Sub-Saharan Africa (% of total merchandise exports)
 Merchandise exports to economies in the Arab World (% of total merchandise exports)
 Merchandise exports to high-income economies (% of total merchandise exports)
 Doing Business Rankings
 CPIA building human resources rating (1=low to 6=high)
 CPIA business regulatory environment rating (1=low to 6=high)
 CPIA debt policy rating (1=low to 6=high)
 CPIA economic management cluster average (1=low to 6=high)
 CPIA efficiency of revenue mobilization rating (1=low to 6=high)
 CPIA equity of public resource use rating (1=low to 6=high)
 CPIA financial sector rating (1=low to 6=high)
 CPIA fiscal policy rating (1=low to 6=high)

CPIA gender equality rating (1=low to 6=high)
 CPIA macroeconomic management rating (1=low to 6=high)
 CPIA policies for social inclusion/equity cluster average (1=low to 6=high)
 CPIA policy and institutions for environmental sustainability rating (1=low to 6=high)
 CPIA property rights and rule-based governance rating (1=low to 6=high)
 CPIA public sector management and institutions cluster average (1=low to 6=high)
 CPIA quality of budgetary and financial management rating (1=low to 6=high)
 CPIA quality of public administration rating (1=low to 6=high)
 CPIA social protection rating (1=low to 6=high)
 CPIA structural policies cluster average (1=low to 6=high)
 CPIA trade rating (1=low to 6=high)
 CPIA transparency, accountability, and corruption in the public sector rating (1=low to 6=high)
 Corruption Perception Index Score 2012 (0=highly corrupt, 100=very clean)
 Foreign direct investment, net inflows (% of GDP)
 Portfolio equity, net inflows (BoP, current US\$)
 External debt stocks (% of GNI)
 Revenue, excluding grants (% of GDP)
 Tax revenue (% of GDP)
 Access to electricity (% of population)
 Improved sanitation facilities (% of population with access)
 Improved water source (% of population with access)
 Rail lines (total route-km)
 Renewable internal freshwater resources per capita (cubic meters)
 Roads, paved (% of total roads)
 Borrowers from commercial banks (per 1,000 adults)
 Depositors with commercial banks (per 1,000 adults)
 Commercial bank branches (per 100,000 adults)
 Mobile cellular subscriptions (per 100 people)
 Telephone lines (per 100 people)
 Internet users (per 100 people)
 Fixed broadband Internet subscribers (per 100 people)
 GNI per capita (constant 2000 US\$)
 GNI per capita, Atlas method (current US\$)
 Poverty gap at national poverty line (%)
 Gross fixed capital formation (% of GDP)
 General government final consumption expenditure (% of GDP)
 Public spending on education, total (% of GDP)
 Total debt service (% of GNI)
 Labor force with secondary education (% of total)
 Unemployment with secondary education (% of total unemployment)
 Merchandise exports (current US\$)
 Merchandise imports (current US\$)
 Merchandise trade (% of GDP)
 Service exports (BoP, current US\$)
 Service imports (BoP, current US\$)
 Trade in services (% of GDP)