



# GHANA'S MIDDLE-INCOME REALITY CHECK PART II

**SOCIAL AND INFRASTRUCTURE DIMENSIONS**





## Executive Summary

---

According to new rebased GDP figures released by the Ghana Statistical Service (GSS) in November 2010, Ghana joined the ranks of Middle Income Countries (MICs) from 2007 based on its elevated per capita GDP. The per capita GDP measure is used by the World Bank to classify countries basically into less developed, middle income, and advanced countries. This measure is, however, seen to be too narrow as it does not even include key economic indicators let alone important social and development indicators.

In the second of a two-part paper, this paper assesses Ghana's MIC status using a broader range of social and infrastructure indicators<sup>2</sup>. To make the assessment more meaningful and credible, instead of assessing Ghana in its own right, the country is pitched against two of the best MIC performers—Malaysia and South Africa. Apart from its spectacular socio-economic performance as a member of the “Asian Tigers,” Malaysia had a lot in common with Ghana at the time of their common year of independence, 1957, although they have since moved along quite dissimilar development paths. South Africa, on the other hand, is the African giant and powerhouse that has made tremendous economic strides and is a reference point in Africa. Its inclusion is also intended to provide geographical balance to the assessment. These two countries provide excellent development models for Ghana.

The paper compares the performance of Ghana with Malaysia and South Africa on the basis of selected social and infrastructure indicators for extended periods, given data availability. The performance indicators selected for the assessment broadly relate to education, health, poverty and the stock of infrastructure.

For education, assessment was based on school enrolment, completion rates, pupil-teacher ratios, literacy and resource allocation to the sector. In terms of school enrolment, Ghana has lagged behind Malaysia and South Africa, especially at the secondary and tertiary levels. Ghana also has had the lowest completion rates at the primary level. Ghana needs to improve its school enrolment and completion rates generally if it has to meet its long-term development capacity needs. In terms of pupil-teacher ratios, which affect the quality of teaching and the outcomes, Ghana seems to have been at par with South Africa at the primary level but underperformed Malaysia. At the secondary level, Ghana has outperformed South Africa, but slightly underperformed Malaysia. Ghana's ratio has, however, declined slightly over the period, which is a positive development. In terms of literacy, Ghana has had the lowest rates of the three countries. This is the case across all categories of people—adults, youth, and the elderly. In terms of expenditure on education, Ghana has been spending slightly less of its GDP compared to Malaysia and South Africa.

Thus, although Ghana has not been far behind in terms of expenditure, it has fallen substantially behind in terms of education outcomes relating to enrolment, completion, and literacy rates. Therefore, it is not the mere level of expenditure that is important but the results derived

---

<sup>2</sup> The first part of the series was based largely on economic indicators.



from the expenditure or what it is able to achieve. Where the expenditure goes, as well as the efficiency of spending, are crucial. In Ghana, it is known that a disproportionately high share of education expenditure goes to the payment of salaries. While this is important in motivating teachers to offer their best, it leaves deficits in school facilities, which ultimately affect the quality of education. Expenditure prioritization and efficiency will be key to ameliorating these deficiencies.

Ghana's health situation was compared with that of Malaysia and South Africa in terms of a range of indicators, including life expectancy, death rate, infant mortality rate, maternal mortality rate, prevalence of undernourishment, nurses-to-population ratio, physicians-to-population ratio, hospital beds-to-population ratio, access to improved sanitation, urban population living in slums, access to improved water supply and resource allocation to health. In terms of life expectancy, Ghana's has seen a steady increase during 1995-2009, Malaysia has had higher and increasing levels, while South Africa has witnessed a decline in its levels, ostensibly due to the effects of exceptionally-high HIV/AIDS prevalence and related deaths. In terms of death rate, Ghana's declined marginally during 1995-2009, while South Africa's increased, again largely influenced by HIV/AIDS. Malaysia has the best record of the three countries, with its death rate holding steady at a very low level throughout the period. In terms of infant mortality rate, Ghana has had the worst, albeit improving, record of the three countries; South Africa has seen its rate rise and then decline. In sharp contrast; Malaysia has had the best record, with its rate declining sharply. When it comes to maternal mortality, Ghana also has had the worst, albeit improving, record; South Africa follows, however, with deteriorating rates. Infant and maternal mortality is an area where Ghana is known to have fallen behind in meeting the Millennium Development Goals (MDGs).

In terms of prevalence of malnutrition, Ghana has had the worst record of the three countries. Remarkably, however, Ghana has made considerable progress over the period 1992-2007 (for which data is available). In terms of nurses-to-population ratio, the scanty data available shows Ghana trailing both Malaysia and South Africa. The same situation is seen for physicians-to-population ratio. Even disappointingly, Ghana has not seen any improvement in these ratios for the entire period, 1965-2008, while Malaysia and South Africa have recorded steady improvements. In terms of hospital beds-to-population ratio also, Ghana has had the lowest of the three countries. In terms of access to improved water source, Ghana has fallen behind both Malaysia and South Africa. As expected, rural access falls behind urban access. Remarkably, however, Ghana has made steady progress during 1990-2008 in improving water access across the country, just as Malaysia and South Africa have done. In terms of access to improved sanitation, Ghana, to say the least, has had an abysmal record compared with Malaysia and South Africa. In terms of urban population living in slums, Ghana has had higher proportions than South Africa. (Comparative data is not available for Malaysia). In terms of health expenditure (as a percentage of GDP), Ghana has been spending slightly below South Africa, while Malaysia falls far behind. However, in terms of health expenditure per capita, Ghana has been spending only a fraction of Malaysia's and South Africa's. It is notable however, that Ghana's per capita health expenditure has risen steadily during 1995-2009. The achievement of only modest progress in several areas of health again brings into question, the issue of end-use and efficiency of spending. Like in the case of education, it will be important to ensure that health spending is used as intended and in an efficient manner to maximise results in the sector.

In terms of poverty, Ghana's has generally had the worst record of the three countries. Measured in terms of poverty gap based on both \$2 and \$1.25 dollars a day, Ghana has fallen behind South Africa and substantially behind Malaysia. Further, in terms of regional variation, the available data, as expected, shows that rural poverty has been higher in Ghana than urban poverty. Therefore, greater success would be achieved if remedial interventions target rural areas, including through agricultural productivity-enhancing measures, provision of social amenities, and targeted subsidies for public goods and services.

In terms of infrastructure, comparison is made for the stock and quality of roads, length of rail lines, volume of air transport, access to personal computers, volume of electricity production and access, agricultural machinery stock, mobile cellular subscription, stock of telephone lines, and internet use. In terms of both road length and density, Ghana trails both Malaysia and South Africa, though not by a significant margin in terms of the latter. However, it is not only the quantity of roads that is important but also the quality. Measured by the portion of roads paved, Ghana seems to have matched South Africa, but fallen substantially behind Malaysia. In terms of length of rail lines, again, Ghana has fallen substantially behind Malaysia, and much farther behind South Africa. As we know, Ghana's railway system has seen a substantial decline over the years, in terms of lines and coaches, to the extent where it has ceased to play a significant role in the transportation of people and goods. This has put enormous strain on the road network system, particularly in the carriage of goods, and has, thereby, retarded economic activity.

In terms of electricity production, Ghana has lagged far behind Malaysia and much farther behind South Africa. In terms of population access to electricity (for which scanty data is available), Ghana has lagged behind both Malaysia and South Africa. While industry access to electricity is not available, inadequate supply of power is invariably cited as one of the major constraints to doing business in Ghana and that undermines Ghana's competitiveness. In terms of agricultural machinery, Ghana's stock has fallen behind Malaysia's and much farther behind South Africa's. Notably, while Ghana and Malaysia started with equal stocks as far back as 1961, Ghana has seen its stock almost stagnate through 1995, whereas Malaysia multiplied its stock nearly thirty times. Lack of significant agricultural mechanization has led to low agricultural yields and perennial food insecurity in Ghana. In terms of mobile cellular subscriptions, Ghana has lagged far behind Malaysia and South Africa, although South Africa's figures may be influenced by its larger population. Ghana and Malaysia, however, have similar population size, and their figures for 2009 show a ratio of 1 to 2 respectively. What is remarkable for Ghana, however, is the explosion in its mobile subscription during 1991-2009. The explosion has completely transformed communication in the country, particularly in terms of speed, with positive economic externalities. In terms of telephone lines, Ghana has substantially lagged behind both Malaysia and South Africa. Here also, Ghana has significantly added to its stock during 1975-2009. It may be surmised that the expansion has probably not been that dramatic because of the emergence of competing cellular communication. In terms of internet use, Ghana has lagged behind South Africa and much farther behind Malaysia. Here also, Ghana has expanded its usage significantly. Inadequate infrastructure and power supply constitute important constraints to Ghana's competitiveness and to doing business in the country. To address this problem requires prioritization of public expenditures in favour of these areas and the use of interventions based on public-private partnerships.

## CONTENTS

Abstract	1
Executive Summary	3
1. Introduction	7
2. The Rebasing Exercise: Rationale and Results	8
3. Middle Income-Country (MIC) Assessment	11
3.1 Social Indicators	12
3.1.1 Education	12
3.1.2 Health	21
3.1.3 Poverty	34
3.2 Infrastructure	36
4. Summary of Results and Conclusion	46
References	48

## 1. Introduction

---

In 2010, the Ghana Statistical Service (GSS) rebased Ghana's National Accounts (or Gross Domestic Product (GDP)). The exercise involved a change in the base year, changes in methodologies and concepts and data revisions.

The GSS announced that following the rebasing, Ghana had become a Middle-Income Country (MIC). The determination of MIC status was based on the fact that the calculated per capita GDP had increased to within the per capita GDP bracket for MICs.

The rebasing and the proclaimed ascendancy of Ghana to MIC status have generated a lot of debate in the country. The debate has focussed on two main issues. The first relates to the justification for the rebasing, while the second relates to the MIC qualification for Ghana.

As a follow-up to our first paper on the subject,<sup>3</sup> this paper seeks to throw more light on these issues. The main purpose of the paper is to provide an objective assessment of Ghana's MIC status. To set the stage for this assessment, and also for the benefit of those who may not have had access to the first paper, this paper presents an elaboration of the rebasing exercise, its rationale, and results.

The whole paper is structured as follows. After this introduction, the national accounts rebasing exercise is expatiated in Chapter 2. In Chapter 3, Ghana's MIC status is assessed using various social and infrastructure indicators.<sup>4</sup> Comparison is made with Malaysia and South Africa for stated reasons. Chapter 4 contains the summary of the results and the conclusion to the paper.

---

<sup>3</sup> The first paper issued in January 2012, was titled: Ghana's Middle Income Reality Check Part I: The Economic Dimension.

<sup>4</sup> The first paper used largely economic indicators to assess Ghana's MIC status, with Malaysia and South Africa as comparator MICs.

## 2. The Rebasing Exercise: Rationale and Results

---

Prior to the rebasing in 2010, the GSS used 1993 as the reference year in the compilation of Ghana's National Accounts. The compilation was also based on the 1968 international system of national accounts (SNA68), which had its related methodologies and concepts.

The GSS justified the rebasing of the national accounts on several factors.

First, the rebasing was to update base-year prices, as more current prices were more representative of component economic activities.

Second, the rebasing was to reflect structural changes in the economy by capturing new activities and reweighting the GDP component activities.

Third, the rebasing was to adopt the more current 1993 system of national accounts (SNA93), which, according to GSS, almost all countries had adopted to replace the old system (SNA68). Adopting SNA93 entailed using new methodologies and concepts. These related, among others, to: valuation of reforestation; more disaggregation of data for wholesale and retail trade; new model to value livestock production; and use of multiple rather than single-indicators as extrapolators for forward estimates for the GDP subsectors.

Fourth, the rebasing entailed improvements and revisions to data sources. These included: the industrial census; Ghana Living Standards Survey (GLSS); Value-Added Tax (VAT); banks' consolidated profit and loss accounts; telephone call volumes; updating and using broader and more disaggregated services sector; and inclusion of oil extraction activities.

Fifth, the rebasing involved reconciliation of the output, income and expenditure methods of computing GDP.

In fact, the UN recommends rebasing of national accounts in 10-year intervals for the foregoing reasons. Clearly, Ghana's GDP compilation had become outdated. This called GDP values, especially in real terms, into question and also made international comparisons difficult.

According to GSS, the rebasing resulted in the 2006 GDP increasing from GH¢11,672 million (US\$12,687 million) to GH¢18,705 million (US\$20,332 million) (Tables 2.1 and 2.2). The 2006 per capita GDP also rose from GH¢533 (US\$580) to GH¢855 (US\$929). Corresponding figures for 2010 show GDP increasing from GH¢25,603 million (US\$18,030 million) to GH¢44,799 million (US\$31,548 million) and per capita GDP from GH¢1,070 (US\$753) to GH¢1,872 (US\$1,318).

**Fig. 2.1: Old Series: GDP and Per Capita GDP**

	2006	2007	2008	2009*	2010*
Nominal GDP (GH¢ m)	11,672	14,046	17,452	21,747	25,603
Cedi/dollar rate	0.92	0.94	1.07	1.42	1.42
Nominal GDP (US\$ m)	12,687	14,942	16,310	15,423	18,030
Population estimate (m.)	21.88	22.39	22.90	23.42	23.93
Per capita (GH¢)	533	627	762	929	1,070
Per capita (US\$)	580	667	712	659	753

**Fig. 2.2: New Series GDP and Per Capita GDP**

	2006	2007	2008	2009*	2010*
Nominal GDP (GH¢ m)	18,705	23,154	30,179	36,867	44,799
Cedi/dollar rate	0.92	0.94	1.07	1.42	1.42
Nominal GDP (US\$ m)	20,332	24,632	28,204	25,963	31,548
Population estimate (m.)	21.88	22.39	22.90	23.42	23.93
Per capita (GH¢)	855	1,034	1,318	1,574	1,872
Per capita (US\$)	929	1,100	1,232	1,109	1,318

**Source: GSS website**

\*Provisional

The World Bank classifies a country with per capita Gross National Income (GNI)—a measure that is close to the GDP—of US\$976-US\$11,905 as a middle income country. On this basis, Ghana became a middle income country from 2007, when the rebased per capita GDP of US\$1,100 fell within this range for the first time.

As can be seen, the MIC per capita GDP range is quite wide. Assuming the range is divided into three equal sub-ranges: US\$976-4,619, US\$4,620-8,263, and US\$8,264-11,905, and countries belonging to these sub-ranges are respectively called: Lower Middle- Income Countries (LMICs), Middle Middle-Income Countries (MMICs), and Upper Middle-Income Countries (UMICs). Ghana's per capita GDP for the period 2007-10 falls in the first sub-range. Thus, based on per capita income alone, Ghana is at best an LMIC.

But the fundamental question many people have been asking is whether income alone is a sufficient MIC yardstick. There is a swell of opinion that one may have to look at a broader range



of socio-economic factors to assess Ghana's MIC status. In this second part of a two-part series, the assessment is based on social indicators and infrastructure.<sup>5</sup>

---

<sup>5</sup> Part I of the series assessed Ghana's MIC assessment on largely economic indicators.

### 3. Middle Income-Country (MIC) Assessment

---

To assess Ghana's MIC status, the paper follows the tradition of comparing the country with other MICs. As noted above, the field of MICs is, however, wide, ranging from LMICs to UMICs. A decision has to be made, therefore, regarding which MIC(s) to compare Ghana with.

The IEA and UNDP recently produced a collaborative paper on Ghana's MIC status that was presented at a roundtable conference attended by government officials, parliamentarians, academia, civil society organizations, donors, the media and other stakeholders.<sup>6</sup> In that paper, Ghana was compared largely with other MICs in Sub-Saharan Africa (SSA). The paper asserted that Ghana compared favorably in many dimensions with SSA MICs, "particularly with respect to socio-economic and governance indicators and attainment of the MDGs." Comparisons with MICs, overall, however, were "much less favorable." The paper pointed out that progress for Ghana would require efforts to fully exploit the opportunities for growth and development utilizing the country's advantages. Ghana's continued progress would depend on rising incomes and paying attention to the other elements that support and sustain development. These included solid economic performance, food security, improved governance, and broad improvements in personal and social capabilities, particularly health, education, infrastructure, participation and empowerment. The paper stressed the importance of Ghana continuing to receive aid following achievement of MIC status. Given the economy's structural imbalances, an overly abrupt withdrawal of development assistance was likely to undercut the capacity for sustained growth and the ability to reduce extreme poverty and promote other dimensions of the MDGs.

Comments from participants at the conference were dominated by doubts about Ghana's MIC status. Many argued that income was not an adequate measure of MIC status and that Ghana was lacking important economic facilities and social amenities, including in the areas of infrastructure, education, health, energy, water supply, and sanitation. Moreover, poverty was still deep and widespread and the standard of living of majority of Ghanaians was considerably low. Further, Ghana still heavily depended on foreign aid to fund its development and social budget. The overwhelming view was that comparing Ghana with SSA MICs was less ambitious.

This paper is more or less a follow-up to the IEA/UNDP one, taking many of the participants' comments on board. To be more ambitious in the assessment, this paper compares Ghana with two renowned MICs—Malaysia and South Africa. The reason for the selection of these two countries is two-fold. These countries have achieved high socio-economic performance that provides good example for Ghana. They also provide geographical balance to the assessment. Four South East Asian Countries (SEACs)—Malaysia, Singapore, South Korea, and Taiwan—dubbed the "four tigers," have had spectacular economic transformation over a relatively short

---

<sup>6</sup> See: *Moving Towards Middle Income Country Status: Potential Implications For Development Assistance And Achievement of MDGs In Ghana*, mimeo, by the UNDP and IEA, 2011 (Feb.)

period of time that has propelled them into the upper echelons of the MICs. They have, thus, become a reference point when comparing the achievements of other emerging MICs.

Among the SEACs, none of them is probably a better candidate to compare Ghana with as Malaysia. This is due to several reasons. Malaysia is a country that had similar characteristics as Ghana at the time of their independence. In fact, the two countries have a common colonial legacy; they were both colonized by Britain and obtained their independence just months apart in 1957— Ghana in March and Malaysia in August of that year. Economically, both Ghana and Malaysia were similar in several respects in 1957, especially in terms of their level of international reserves and per capita incomes. Ghana and Malaysia have similar geographical characteristics and demographics. Ghana has a population of about 24 million (2010 census), while Malaysia's is only slightly higher at about 28 million (2010 census). Both Ghana and Malaysia are multi-ethnic, multicultural, and multilingual. Both countries have tropical climate and vegetation, and a range of natural resources. Ghana's natural resource endowment includes: gold, cocoa, timber, diamond, bauxite, manganese, and (recently) oil. Malaysia is a major exporter of natural and agricultural resources, with petroleum being the most valuable exported resource. Malaysia is a major producer of tin, rubber and palm oil.

South Africa, on the other hand, is the African giant and powerhouse that has made tremendous economic strides before and after apartheid. South Africa is a medium-sized country, bigger than Ghana. It has a population of about 51 million, more than twice that of Ghana. Like Ghana, South Africa is mostly warm and sunny. It boasts a diverse landscape of semi-desert, mountainous, coastal, and subtropical terrain. Like Ghana, South Africa has an abundance of natural resources, including gold, chromium, coal, iron ore, manganese, nickel, phosphates, tin, uranium, diamonds, platinum, copper, salt, and small natural gas. Also, like Ghana, South Africa is a nation of diversity, with a variety of cultures, languages and religious beliefs.

### **3.1 Social Indicators**

#### **3.1.1 Education**

Ghana's education situation is compared with that of Malaysia and South Africa in terms enrolment rates, completion rates, pupil-teacher ratios, literacy, and resource allocation to the sector.

In terms of school enrolment, Ghana lagged behind Malaysia and South Africa at the primary level for most part of the earlier period, i.e. 1975-2004. Thereafter, Ghana's rates rose rapidly (Tables 3.1.1a.)

Table 3.1.1a: Primary School Enrolment (% gross)

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Indicator	School Enrolment (Primary)	School Enrolment (Primary)	School Enrolment (Primary)
Unit	% gross		
Year/ Scale			
1975	65	94	99
1976	69	94	93
1977	71	93	87
1978	71	93	81
1979	73	92	81
1980	74	93	
1981	76	94	81
1982	77	96	79
1983	75	99	
1984	71	100	
1985	72	101	
1987	69	97	
1988	68	95	
1989	71	94	106
1990	70	92	107
1991	78	93	109
1992	78	94	
1993	78	95	
1994	79	95	116
1995	78	96	118
1996	78	96	
1997	81		
1998		95	114
1999	81	100	113
2000	85	98	106
2001	81	97	106
2002	83	95	107
2003	80	95	107
2004	84		107
2005	90		105
2006	95		104
2007	101		105
2008	107		103
2009	106		102

Source: WDI

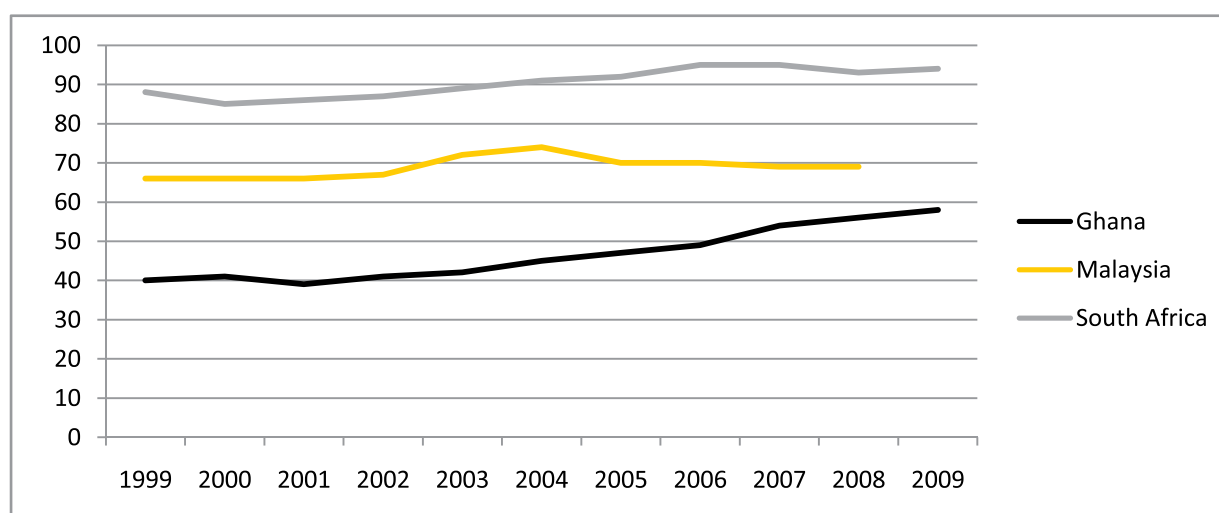
At the secondary level also, Ghana's enrolment rate lagged behind that of Malaysia and South Africa for the entire period 1998-2009 (for which data is available) (Table 3.1.1b and Chart 3.1.1b.). It is noteworthy, however, that Ghana's rates showed a general increase during the period.

Table 3.1.1b: Secondary School Enrolment (% gross)

Indicator	Ghana	Malaysia	South Africa
Unit	School enrolment, secondary	School enrolment, secondary	School enrolment, secondary
Year/ Scale	(% gross)	(% gross)	(% gross)
1998		66	90
1999	40	66	88
2000	41	66	85
2001	39	66	86
2002	41	67	87
2003	42	72	89
2004	45	74	91
2005	47	70	92
2006	49	70	95
2007	54	69	95
2008	56	69	93
2009	58		94

Source: WDI

## 3.1.1b.: Secondary School Enrolment (% gross)



Source: WDI

Regarding tertiary enrolment, where data is a bit scanty, Ghana also lagged behind Malaysia and South Africa during 1970-2009 (Table 3.1.1c.). Ghana's rates, in fact, stagnated at an exceedingly low level of 1 percent during 1971-1994, ostensibly reflecting stagnation in the public tertiary school system. The rate then increased markedly during 2006-09, apparently reflecting the advent of private tertiary school systems.

**Table 3.1.1c: Tertiary School Enrolment (% gross)**

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Indicator	School Enrolment (Tertiary)	School Enrolment (Tertiary)	School Enrolment (Tertiary)
Unit	% gross	% gross	% gross
Year/Scale			
1970			4
1971	1		
1972	1		
1973	1		4
1974	1		
1975	1		
1976	1		
1979		4	
1980		4	
1981		4	
1982	2	5	
1983		5	
1984		5	
1985		6	
1986		7	
1987		7	
1988		7	11
1989		7	12
1990		7	12
1991	1	8	12
1992	1	9	13
1993	1	10	14
1994	1	11	15
1995		11	
1998		22	
1999		23	
2000		26	
2001		25	
2002		28	
2003		32	
2004		31	
2005	6	29	
2006	5	31	
2007	6	33	
2008		37	
2009	9		

Source: WDI

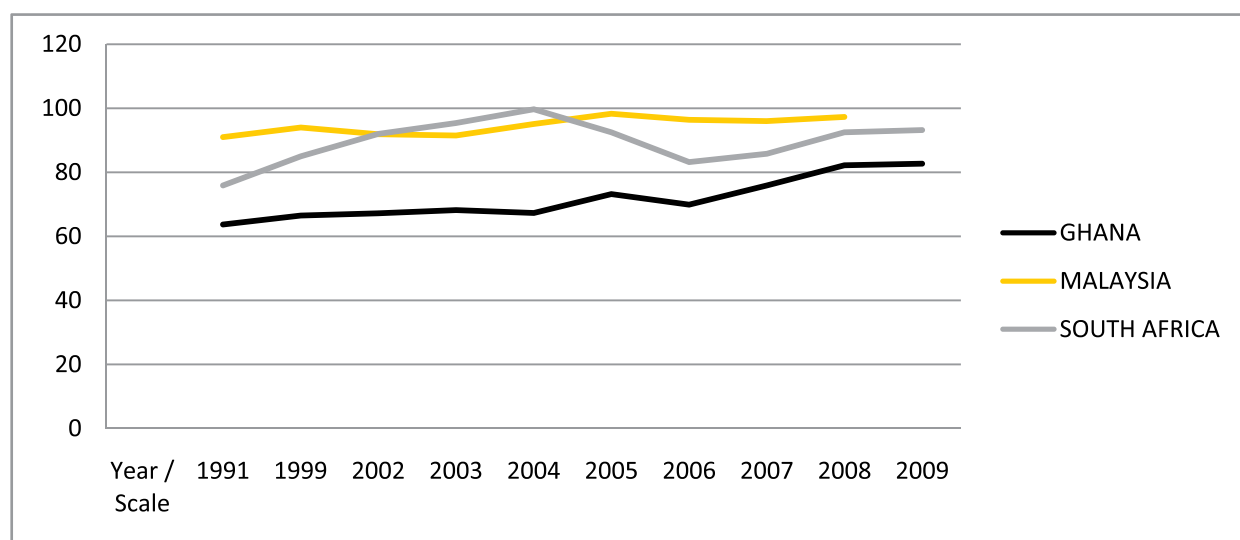


Table 3.1.1cc: Total Primary Completion Rate (% of relevant age group)

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Year	Primary completion rate, total (% of relevant age group)	Primary completion rate, total (% of relevant age group)	Primary completion rate, total (% of relevant age group)
1991	63.7	91	75.9
1999	66.5	94	85
2002	67.2	91.9	92
2003	68.2	91.5	95.4
2004	67.3	95.1	99.7
2005	73.2	98.3	92.5
2006	69.9	96.4	83.2
2007	75.9	96	85.8
2008	82.2	97.3	92.5
2009	82.7		93.2

Source: WDI

Chart 3.1.1cc: Total Primary Completion Rate (% of relevant age group)



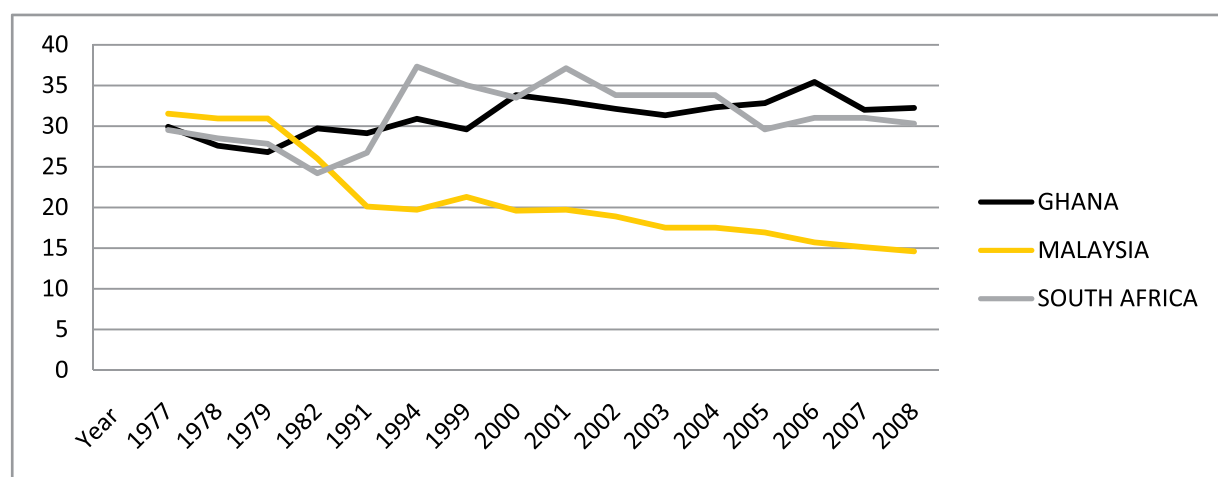
Source: WDI

Table 3.1.1d: Primary Pupil-Teacher Ratio

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Year	Pupil-teacher ratio. Primary	Pupil-teacher ratio. Primary	Pupil-teacher ratio. Primary
1977	29.9	31.5	29.5
1978	27.6	30.9	28.5
1979	26.8	30.9	27.8
1982	29.7	26.0	24.2
1991	29.1	20.1	26.7
1994	30.9	19.7	37.3
1999	29.6	21.3	35.0
2000	33.8	19.6	33.5
2001	33.0	19.7	37.1
2002	32.1	18.9	33.8
2003	31.3	17.5	33.8
2004	32.3	17.5	33.8
2005	32.8	16.9	29.6
2006	35.4	15.7	31.0
2007	32.0	15.1	31.0
2008	32.2	14.6	30.3

Source: WDI

Chart 3.1.1d.: Primary Pupil-Teacher Ratio



Source: WDI

Compared to Malaysia, however, while the two countries had similar ratios in the initial period, Ghana's ratio increased generally during the period (i.e. worsened) whereas Malaysia's declined steadily, reaching, at the end of the period, half of the level at the beginning (Table 3.1.1d and Chart 3.1.1d.).

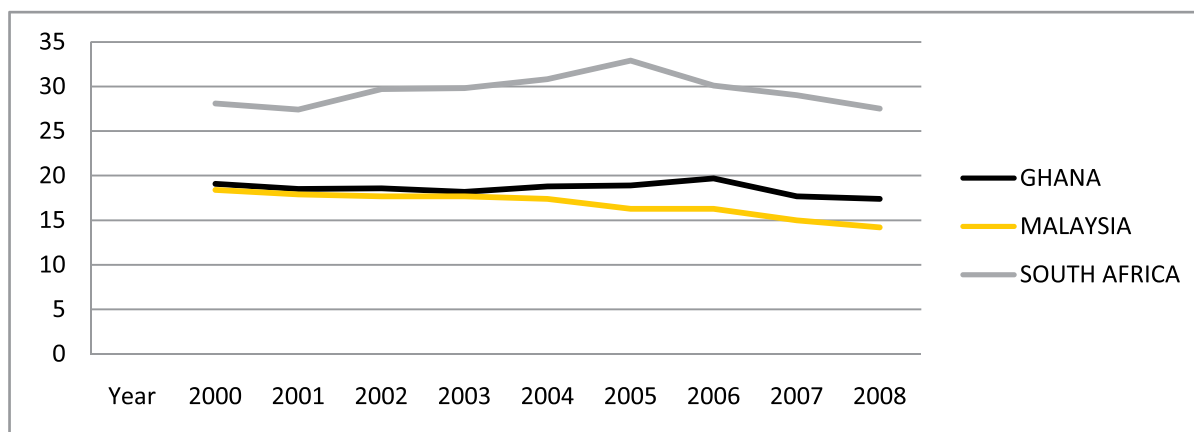
At the secondary level, Ghana outperforms South Africa, but slightly underperforms Malaysia. Notably, Ghana's ratio declines slightly over the period, but Malaysia's declines more steeply (Table 3.1.1e and Chart 3.1.1e).

Table 3.1.1e: Secondary Pupil-Teacher Ratio

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Year	Pupil-teacher ratio. Secondary	Pupil-teacher ratio. Secondary	Pupil-teacher ratio. Secondary
2000	19.1	18.4	28.1
2001	18.5	17.9	27.4
2002	18.6	17.7	29.7
2003	18.2	17.7	29.8
2004	18.8	17.4	30.8
2005	18.9	16.3	32.9
2006	19.7	16.3	30.1
2007	17.7	15.0	29.0
2008	17.4	14.2	27.5

Source: WDI

3.1.1e: Secondary Pupil-Teacher Ratio



Source: WDI

In terms of literacy, which enhances peoples' awareness and increases their participation in and contribution to national development, Ghana has the lowest rates of the three countries. This is the case across all categories of people—adults, youth, and the elderly (Tables 3.1.1f, 3.1.1g, 3.1.1h, and 3.1.1i)

**Table 3.1.1f: Total Adult Literacy Rate (%)**

	<b>Ghana</b>	<b>Malaysia</b>	<b>South Africa</b>
Year / Scale	Adult literacy rate (%). Total	Adult literacy rate (%). Total	Adult literacy rate (%). Total
1980		69.5	76.2
1991		82.9	
1996			82.4
2000	57.9	88.7	
2007			88.7
2009	66.6	92.5	

Source: WDI

**Table 3.1.1g: Total Adult Literacy Rate (% of people aged 15 and above)**

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Indicator	Literacy rate, adult total	Literacy rate, adult total	Literacy rate, adult total
Unit	% of people ages 15 and above	% of people ages 15 and above	% of people ages 15 and above
Year			
2000	58	89	
2007			88.7

Source: WDI

**Table 3.1.1h: Total Youth Literacy Rate (%)**

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Indicator	Literacy rate, adult total	Literacy rate, adult total	Literacy rate, adult total
Unit	% of people ages 15 and above	% of people ages 15 and above	% of people ages 15 and above
Year			
2000	58	89	
2007			88.7

Source: WDI

**Table 3.1.1i: Total Elderly (65+) Literacy Rate (%)**

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Year	Elderly (65+) literacy rate (%). Total	Elderly (65+) literacy rate (%). Total	Elderly (65+) literacy rate (%). Total
2000	29.5	44.3	
2007			56.4

Source: WDI

In terms of expenditure on education, Ghana spends slightly less of its GDP compared to Malaysia and South Africa (Table 3.1.1j and 3.1.1k).

**Table 3.1.1j: Public Expenditure on Education (% of GDP)**

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Year / Scale	Public expenditure on education as % of GDP	Public expenditure on education as % of GDP	Public expenditure on education as % of GDP
1975	4.9	5.7	
1980	3.6	5.7	
1985	2.5	6.0	
1999	4.1	5.7	6.0
2000		6.0	5.6
2001		7.5	5.3
2002		7.7	5.2
2003		7.5	5.1
2004		5.9	5.3
2005	5.4	7.5	5.3
2006		4.7	5.3
2007		4.5	5.3
2008		4.1	5.1

Source: WDI

Table 3.1.1k: Public Expenditure on Education (% of Government total expenditure)

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Year	Public expenditure on education as % of total government expenditure	Public expenditure on education as % of total government expenditure	Public expenditure on education as % of total government expenditure
1971	19.6		
1975	19.6	19.3	
1980		14.7	
1981	17.1		
1985	19.0	16.3	
1990	24.3		
1995	21.4		
1999		25.2	22.2
2000		26.7	18.1
2001		20.0	23.4
2002		20.3	18.5
2003		28.0	18.5
2004		25.2	18.1
2007		18.2	17.4
2008		17.2	16.2

Source: WDI

Given, however, that Ghana falls substantially behind the other two countries in terms of education outcomes relating to enrolment, completion, and literacy rates, it is not the mere level of expenditure that is important but the results derived from the expenditure. In other words, what the spending is able to achieve is the essence. This brings to the fore the importance of where the expenditure goes as well as the efficiency of spending. In Ghana, it is known that a disproportionately high share of education expenditure goes to the payment of salaries. While this is important in motivating teachers to offer their best, it leaves deficits in school facilities, which ultimately affects the quality of education.

### 3.1.2 Health

Ghana's health situation is compared with that of Malaysia and South Africa in terms of life expectancy, death rate, infant mortality rate, maternal mortality rate, prevalence of under-nourishment, nurses-population ratio, physicians-population ratio, hospital beds-population ratio, access to improved sanitation, urban population living in slums, access to improved water supply and resource allocation to the sector.

In terms of life expectancy, which signifies improvements in the quality of life, Ghana's has seen a steady increase during 1995-2009 by 5 years from 58 to 63.

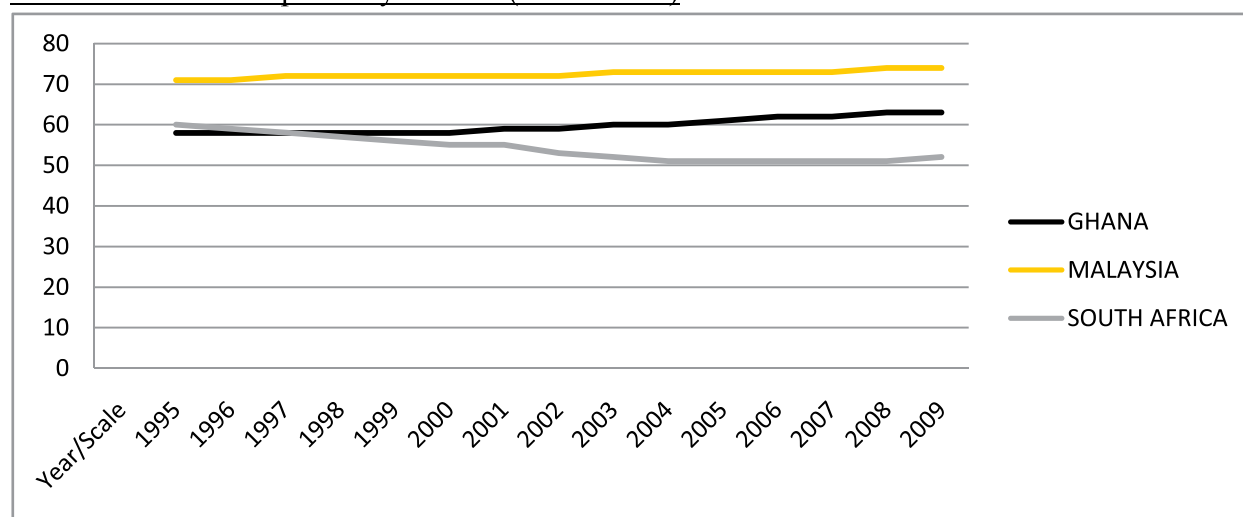


Table 3.1.2a: Life expectancy at Birth (Total Years)

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Indicator	Life expectancy at birth, total	Life expectancy at birth, total	Life expectancy at birth, total
Unit	years	years	years
Year/Scale			
1995	58	71	60
1996	58	71	59
1997	58	72	58
1998	58	72	57
1999	58	72	56
2000	58	72	55
2001	59	72	55
2002	59	72	53
2003	60	73	52
2004	60	73	51
2005	61	73	51
2006	62	73	51
2007	62	73	51
2008	63	74	51
2009	63	74	52

Source: WDI

Chart 3.1.2a: Life Expectancy at Birth (Total Years)



Source: WDI

Malaysia has had higher and increasing life expectancy, rising by 3 years from 71 to 74. On the other hand, South Africa has witnessed a decline in its life expectancy by 8 years from 60 to 52, ostensibly due to the effects of its exceptionally-high HIV/AIDS prevalence and related deaths (Table 3.1.2a and Chart 3.1.2a).

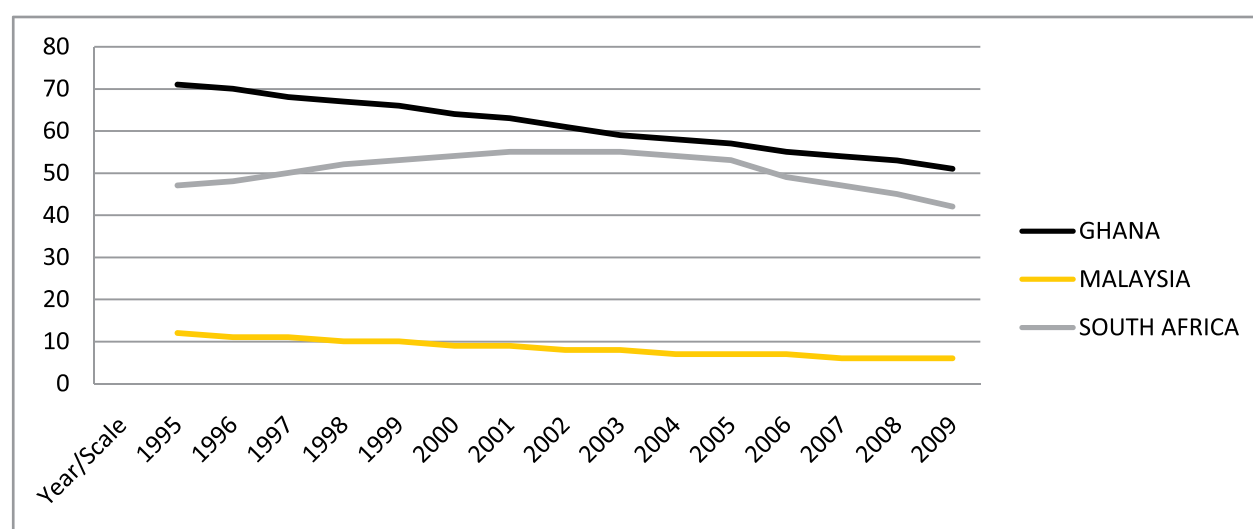
In terms of infant mortality rate (deaths per 1,000 live births), Ghana has had the worst, albeit improving, record of the three countries, with rates of 71 in 1995 and 51 in 2009. South Africa has seen its rate rising from 47 to 55 through 2003, before declining to 42 by 2009. In sharp contrast, Malaysia has had the best record, with its very low rate of 12 in 1995 halving to 6 by 2009 (Table 3.1.2b and Chart 3.1.2b).

Table 3.1.2b: Infant Mortality Rate (per 1,000 live births)

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Indicator	Mortality rate, infant	Mortality rate, infant	Mortality rate, infant
Unit	per 1,000 live births	per 1,000 live births	per 1,000 live births
Year/Scale			
1995	71	12	47
1996	70	11	48
1997	68	11	50
1998	67	10	52
1999	66	10	53
2000	64	9	54
2001	63	9	55
2002	61	8	55
2003	59	8	55
2004	58	7	54
2005	57	7	53
2006	55	7	49
2007	54	6	47
2008	53	6	45
2009	51	6	42

Source: WDI

Chart 3.1.2b: Infant Mortality Rate (per 1,000 live births)



Source: WDI

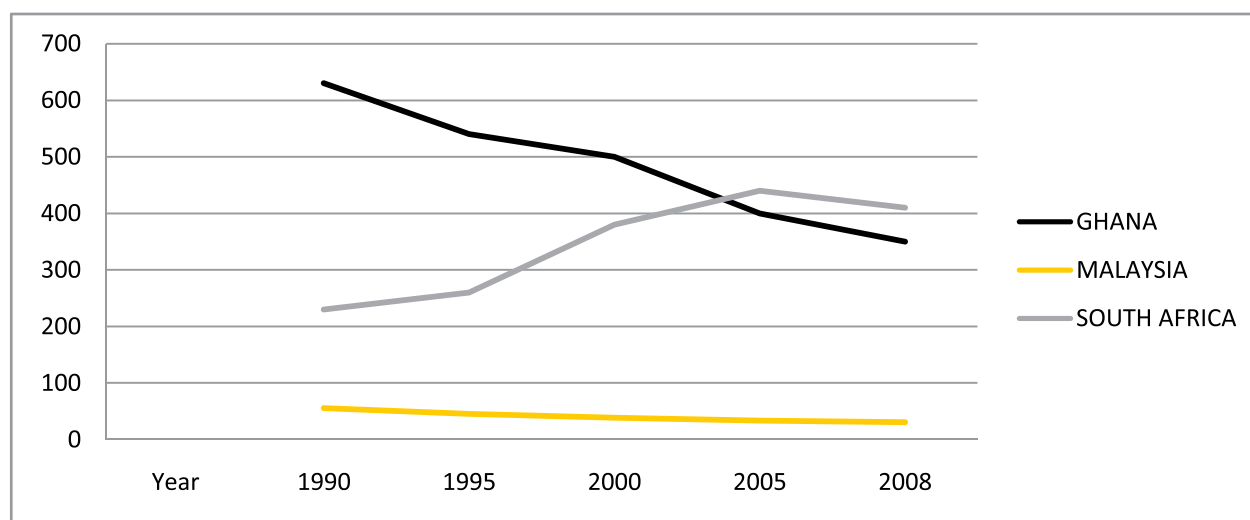
When it comes to maternal mortality (deaths per 100,000 live births), Ghana also has the worst, albeit improving, record, with rates of 630 in 1990 and 350 in 2008. South Africa follows, however, with deteriorating rates from 230 to 410 (Table 3.1.2c and Chart 3.1.2c). Infant and maternal mortality are areas where Ghana has fallen behind in meeting the Millennium Development Goals (MDGs).

Table 3.1.2c: Maternal Mortality Ratio (per 100,000 live births)

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Year / Scale	Maternal mortality ratio (modeled estimate, per 100,000 live births)	Maternal mortality ratio (modeled estimate, per 100,000 live births)	Maternal mortality ratio (modeled estimate, per 100,000 live births)
1990	630	56	230
1995	540	46	260
2000	500	39	380
2005	400	34	440
2008	350	31	410

Source: WDI

Chart 3.1.2c: Maternal Mortality Ratio (per 100,000 live births)



Source: WDI

In terms of prevalence of malnutrition, Ghana has the worst record of the three countries (Table 3.1.2d). Remarkably, however, Ghana has made considerable progress over the period 1992-2007 (for which data is available), reducing the ratio of the malnourished population from 27 percent to 5 percent to be at par with both Malaysia and South Africa.

**Table 3.1.2d: Prevalence of Undernourishment (% of Population)**

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Year / Scale	Prevalence of undernourishment (% of population)	Prevalence of undernourishment (% of population)	Prevalence of undernourishment (% of population)
1992	27	5	5
1997	12	5	5
2002	9	5	5
2007	5	5	5

Source: WDI

In terms of nurses-population ratio, the scanty data available shows Ghana trailing both Malaysia and South Africa (Table 3.1.2e). The same situation is seen for physicians-population ratio, with Ghana trailing both Malaysia and South Africa (Table 3.1.2f).

**Table 3.1.2e: Nurses (per 1,000 people)**

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Year / Scale	Prevalence of undernourishment (% of population)	Prevalence of undernourishment (% of population)	Prevalence of undernourishment (% of population)
1992	27	5	5
1997	12	5	5
2002	9	5	5
2007	5	5	5

Source: WDI

**Table 3.1.2f: Physicians (per 1,000 people)**

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Year / Scale	Physicians (per 1,000 people)	Physicians (per 1,000 people)	Physicians (per 1,000 people)
1965	0.1	0.2	0.5
1975	0.1	0.2	0.5
1987	0.0	0.3	0.6
1992		0.4	0.6
1996	0.1	0.5	0.6
2002	0.1	0.7	
2004	0.2		0.8
2008	0.1	0.9	

Source: WDI

Even disappointingly, Ghana has not seen any improvement in this ratio for the entire period, 1965-2008, while Malaysia and South Africa have recorded steady improvements.

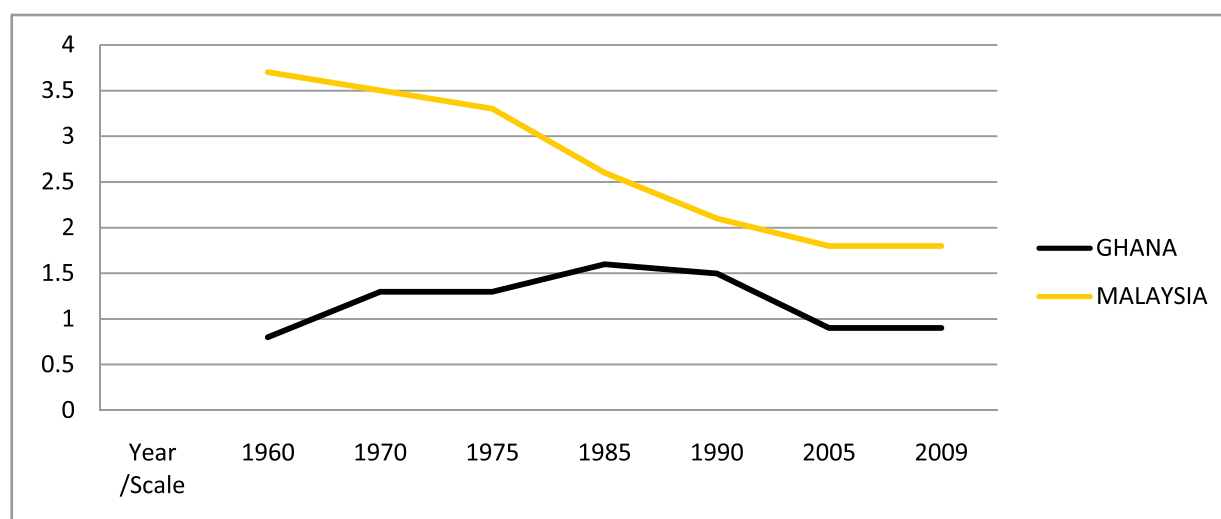
Table 3.1.2g: Hospital Beds (per 1,000 people)

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Year /Scale	Hospital beds (per 1,000 people)	Hospital beds (per 1,000 people)	Hospital beds (per 1,000 people)
1960	0.8	3.7	
1970	1.3	3.5	
1975	1.3	3.3	
1985	1.6	2.6	
1990	1.5	2.1	
2005	0.9	1.8	2.8
2009	0.9	1.8	

Source: WDI

In terms of hospital beds-population ratio also, Ghana has the lowest of the three countries (Table 3.1.2g and Chart 3.1.2g).

Chart 3.1.2g: Hospital Beds (per 1,000 people)



Source: WDI

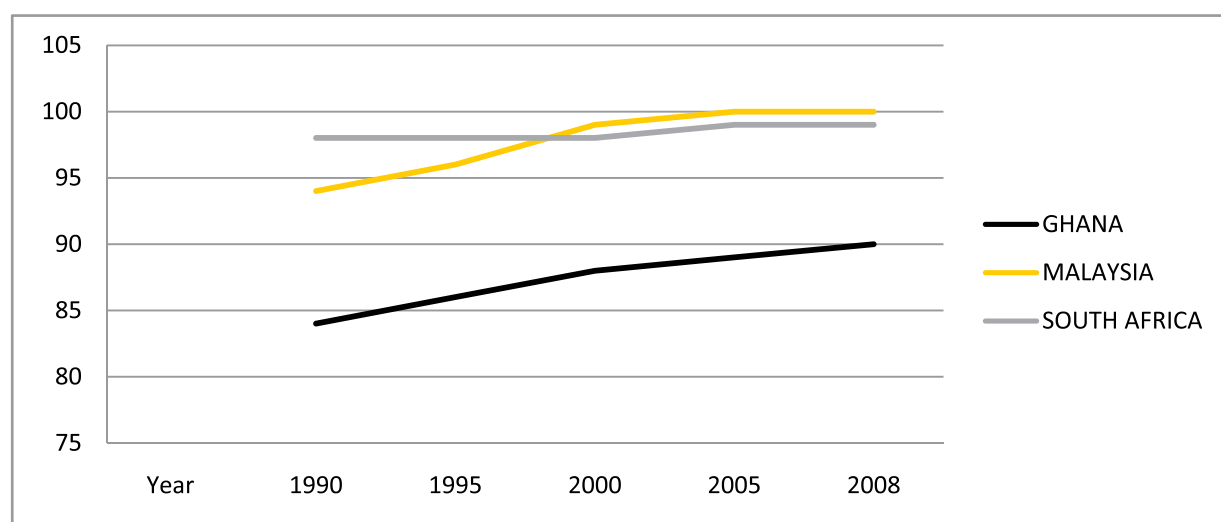
In terms of access to improved water source, Ghana falls behind both Malaysia and South Africa. As expected, rural access falls behind urban access (Tables 3.1.2h, 3.1.2i, 3.1.2j and Charts 3.1.2h, 3.1.2i, 3.1.2j). Remarkably, however, Ghana has made steady progress during 1990-2008 in improving water access across the country, just as Malaysia and South Africa have done.

Table 3.1.2h: Access to Improved Water Source (% of population with access)

	<b>GHANA</b>		<b>MALAYSIA</b>		<b>SOUTH AFRICA</b>	
Year / Scale	Improved source (population with access)	water (% of with access)	Improved source (population with access)	water (% of with access)	Improved source (population with access)	water (% of with access)
1990	54		88		83	
1995	63		92		84	
2000	71		97		86	
2005	78		100		89	
2008	82		100		91	

Source: WDI

Chart 3.1.2h: Access to Improved Water Source (% of population with access)



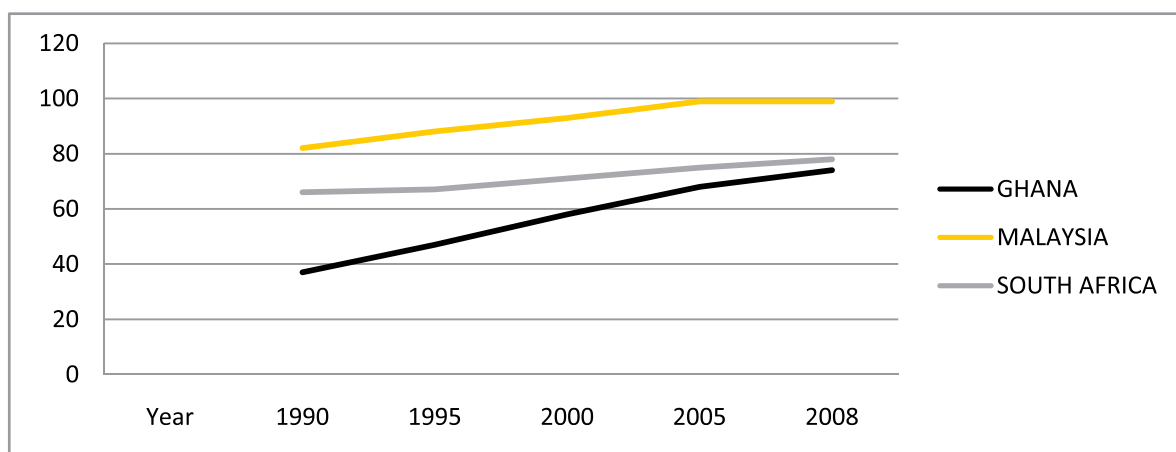
Source: WDI

Table 3.1.2i: Rural Access to Improved Water Source (% of rural population with access)

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Year / Scale	Improved water source, rural (% of rural population with access)	Improved water source, rural (% of rural population with access)	Improved water source, rural (% of rural population with access)
1990	37	82	66
1995	47	88	67
2000	58	93	71
2005	68	99	75
2008	74	99	78



Chart 3.1.2i: Rural Access to Improved Water Source (% of rural population with access)



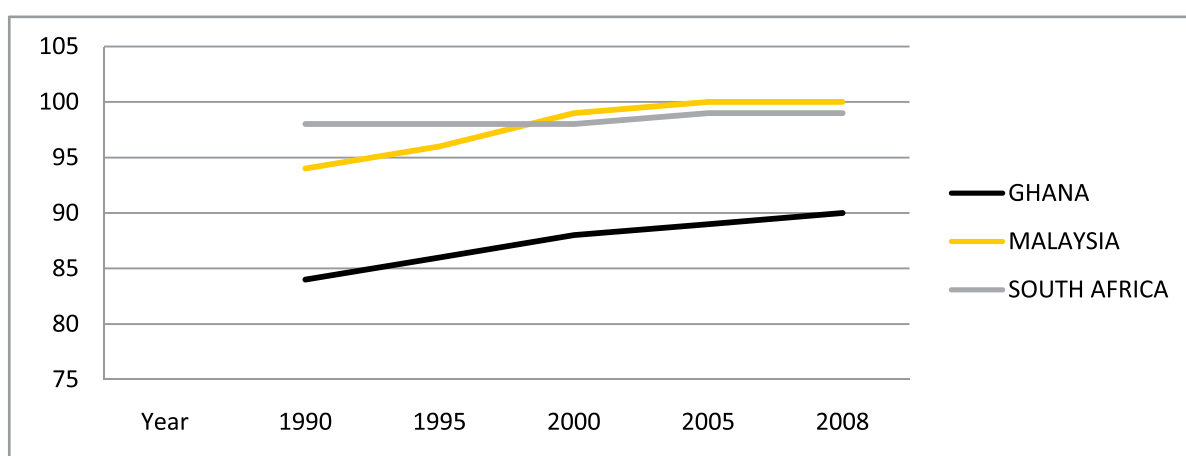
Source: WDI

Table 3.1.2j: Urban Access to Improved Water Source (% of urban population with access)

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Year / Scale	Improved water source, urban (% of urban population with access)	Improved water source, urban (% of urban population with access)	Improved water source, urban (% of urban population with access)
1990	84	94	98
1995	86	96	98
2000	88	99	98
2005	89	100	99
2008	90	100	99

Source: WDI

Chart 3.1.2j: Urban Access to Improved Water Source (% of urban population with access)



Source: WDI

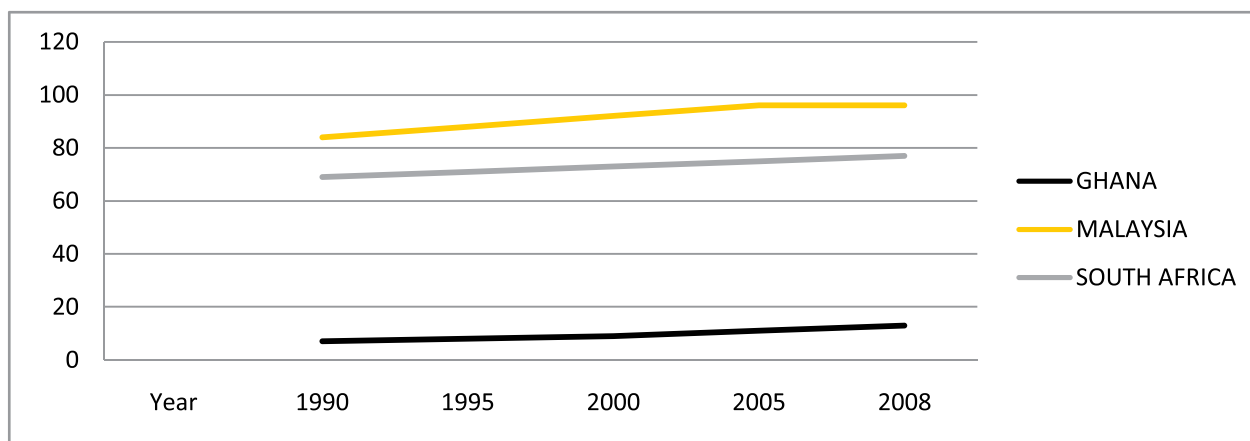
In terms of access to improved sanitation, Ghana has, to say the least, an abysmal record compared with Malaysia and South Africa. Ghana had only 7% of its population with access to improved sanitation in 1990 and 13% in 2008. Comparatively, Malaysia had 84% and 96% respectively, while South Africa had 69% and 77%. (Table 3.1.2k and Chart 3.1.2k)

Table 3.1.2k: Access to Improved Sanitation Facility (% of population with access)

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Year / Scale	Improved sanitation facilities (% of population with access)	Improved sanitation facilities (% of population with access)	Improved sanitation facilities (% of population with access)
1990	7	84	69
1995	8	88	71
2000	9	92	73
2005	11	96	75
2008	13	96	77

Source: WDI

Chart 3.1.2k: Access to Improved Sanitation Facility (% of population with access)



Source: WDI

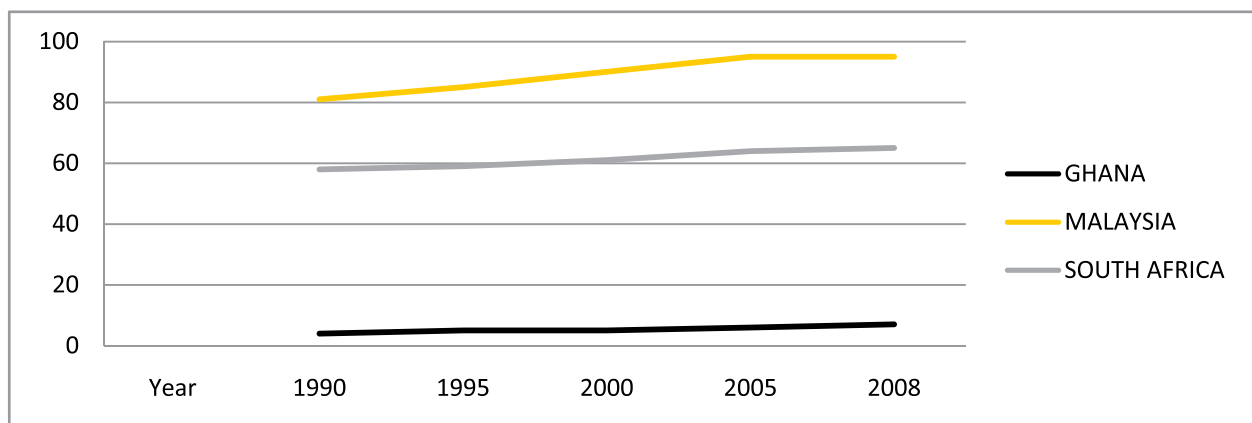
Further, Tables 3.1.2l, 3.2.1m and Charts 3.1.2l, 3.2.1m show that the situation in the rural areas is much worse than in the urban areas.

Table 3.1.2l: Rural Access to Improved Sanitation Facility (% of rural population with access)

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Year / Scale	Improved sanitation facilities, rural (% of rural population with access)	Improved sanitation facilities, rural (% of rural population with access)	Improved sanitation facilities, rural (% of rural population with access)
1990	4	81	58
1995	5	85	59
2000	5	90	61
2005	6	95	64
2008	7	95	65

Source: WDI

Chart 3.1.2l: Rural Access to Improved Sanitation Facility (% of rural population with access)



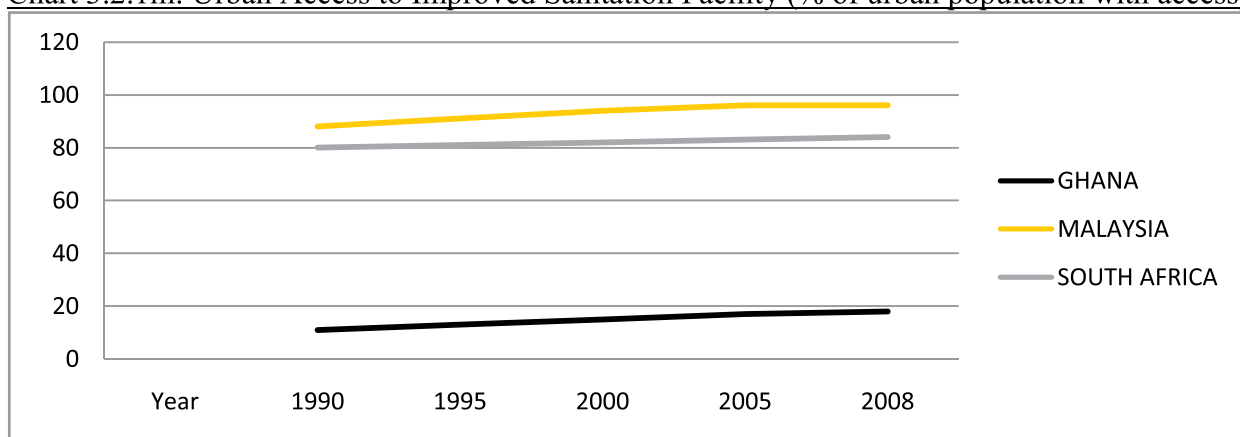
Source: WDI

Table 3.1.2m: Urban Access to Improved Sanitation Facility (% of urban population with access)

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Year / Scale	Improved sanitation facilities, urban (% of urban population with access)	Improved sanitation facilities, urban (% of urban population with access)	Improved sanitation facilities, urban (% of urban population with access)
1990	11	88	80
1995	13	91	81
2000	15	94	82
2005	17	96	83
2008	18	96	84

Source: WDI

Chart 3.2.1m: Urban Access to Improved Sanitation Facility (% of urban population with access)



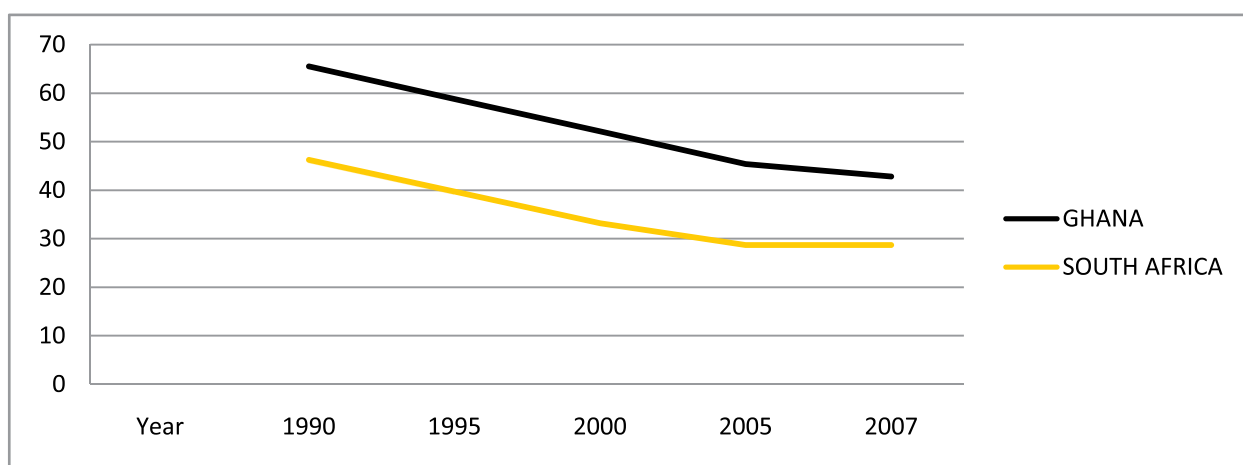
Source: WDI

In terms of population of urban population living in slums, Ghana has higher proportions than South Africa (Table 3.1.2n and Chart 3.1.2n). Comparative data is not available for Malaysia.

Table: 3.1.2n Urban Population Living in Slums

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Year / Scale	Population living in slums (% of urban population)	Population living in slums (% of urban population)	Population living in slums (% of urban population)
1990	65.5		46.2
1995	58.8		39.7
2000	52.1		33.2
2005	45.4		28.7
2007	42.8		28.7

Chart 3.1.2n: Urban Population Living in Slums



Source: WDI

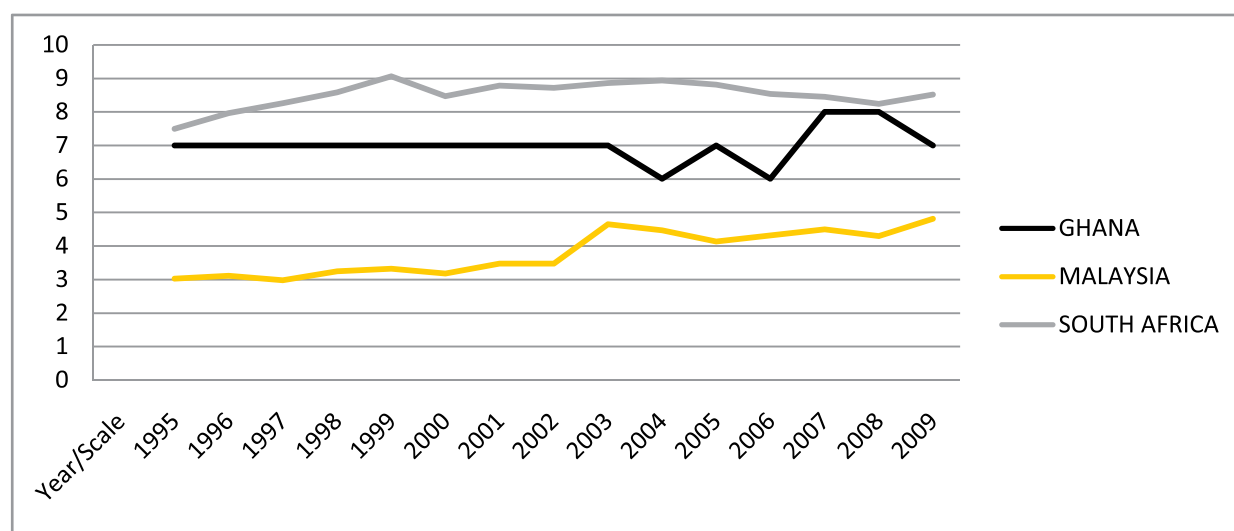
In terms of health expenditure (as a percentage of GDP), Ghana spends slightly below South Africa, while Malaysia falls far behind (Table 3.1.2o and Chart 3.1.2o).

Table 3.1.2o: Total Health Expenditure (% of GDP)

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Indicator	Health expenditure, total	Health expenditure, total	Health expenditure, total
Year/Unit	% of GDP	% of GDP	% of GDP
1995	7	3.0	7.5
1996	7	3.1	8.0
1997	7	3.0	8.3
1998	7	3.3	8.6
1999	7	3.3	9.1
2000	7	3.2	8.5
2001	7	3.5	8.8
2002	7	3.5	8.7
2003	7	4.7	8.9
2004	6	4.5	8.9
2005	7	4.1	8.8
2006	6	4.3	8.5
2007	8	4.5	8.5
2008	8	4.3	8.2
2009	7	4.8	8.5

Source: WDI

Chart 3.1.2o: Total Health Expenditure (% of GDP)



Source: WDI

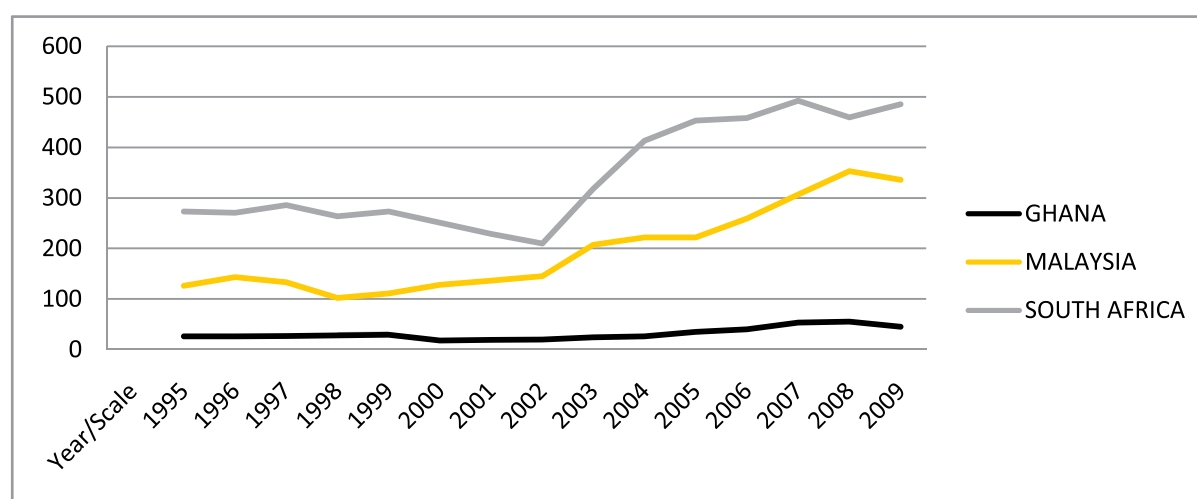
However, in terms health expenditure per capita, Ghana spends about 1/7th of Malaysia's and 1/10th of South Africa's (Table 3.1.2p and Chart 3.1.2p).

Table 3.1.2p: Health Expenditure per Capita (US\$)

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Indicator	Health expenditure per capita	Health expenditure per capita	Health expenditure per capita
Unit	current US\$	current US\$	current US\$
Year/Scale			
1995	26	126	273
1996	26	143	271
1997	27	133	286
1998	28	102	264
1999	29	111	273
2000	18	128	251
2001	19	136	229
2002	20	145	210
2003	24	207	318
2004	26	222	413
2005	35	222	453
2006	40	259	458
2007	53	307	492
2008	55	353	459
2009	45	336	485

Source: WDI

Chart 3.1.2p: Health Expenditure per Capita (US\$)



Source WDI

Putting the per GDP and per capita figures together, one can deduce that even though Ghana performs fairly well in terms of the former, because of the relative smallness of its GDP, it spends much less per head. It is notable to note, however, that Ghana's per capita health expenditure has risen steadily during 1995-2009. The achievement of only modest progress in

several areas of health, therefore, again brings into issue the question of end-use and efficiency of spending.

### 3.1.3: Poverty

In terms of poverty, Ghana fares poorest compared to Malaysia and South Africa. Poverty gap data, measured as percentage of the population living below \$2 and \$1.25 dollars a day, puts Ghana behind South Africa and substantially behind Malaysia (Tables 3.1.3a and 3.1.3b)

Table 3.1.3a: Poverty Gap [% below \$2(PPP) a day]

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Indicator	Poverty gap	Poverty gap	Poverty gap
Unit	%	%	%
Year/Scale	at \$2 a day (PPP)	at \$2 a day (PPP)	at \$2 a day (PPP)
1992	36.3	2.4	
1995		2.5	16.8
1997		1.3	15
1998	28.5		
2004		1.4	
2006	22.3		18.3
2009		0.2	12.3

Source: WDI

Table 3.1.3b: Poverty Gap [% below \$1.25(PPP) a day]

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Indicator	Poverty gap	Poverty gap	Poverty gap
Unit	%	%	%
Year/Scale	at \$1.25 a day (PPP)	at \$1.25 a day (PPP)	at \$1.25 a day (PPP)
1992	18.3	0.1	
1995		0.3	6.9
1997		0.1	5.2
1998	14.4		
2004		0.1	
2006	10.5		8.2
2009			3.3

Source: WDI

Further, in terms of regional variation, the available data show, as expected, that rural poverty is higher in Ghana than urban poverty (see Table 3.1.3c, 3.1.3d and 3.1.3e). Remedial interventions should, therefore, target rural areas for maximum effect.

**Table 3.1.3c: National Poverty Gap (% below the poverty line)**

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Indicator	Poverty gap at national	Poverty gap at national	Poverty gap at national
Unit	(%)	(%)	(%)
Year/Scale	poverty line	poverty line	Poverty line
1992	18.5		
1995			
1997			12
1998	13.9		
2004		1.4	
2006	9.6		16
2007		0.8	
2009		0.8	7

Source: WDI

**Table 3.1.3d: Rural Poverty Gap (% below the poverty line)**

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Indicator	Poverty gap at rural	Poverty gap at rural	Poverty gap at rural
Unit	(%)	(%)	(%)
Year/Scale	Poverty line	Poverty line	Poverty line
1992	24		
1995			
1997			
1998	18.2		
2004		2.9	
2006	13.5		
2007		1.6	
2009		1.8	

Source: WDI



Table 3.1.3: Urban Poverty Gap (% below the poverty line)

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Indicator	Poverty gap at urban	Poverty gap at urban	Poverty gap at urban
Unit	(%)	(%)	(%)
Year/Scale	Poverty line	Poverty line	Poverty line
1992	7.4		
1995			
1997			
1998	5.3		
2004		0.5	
2006	3.1		
2007		0.4	
2009		0.3	

Source: WDI

### 3.2 Infrastructure

A country's stock of infrastructure signifies its level of development. Here, we compare Ghana's infrastructure stock with that of Malaysia and South Africa, covering: stock and quality of roads, length of rail lines, volume of air transport, access to personal computers, volume of electricity production and access to electricity, stock of agricultural machinery, mobile cellular subscriptions, telephone lines and internet users.

In terms of total network of roads, Ghana has fallen far behind Malaysia and much farther behind South Africa (Table 3.2a).

Table 3.2a: Total Road Network ('000 km)

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Indicator	Roads, total network	Roads, total network	Roads, total network
Year /Unit	Thousand km	Thousand km	Thousand km
1990	38.1		
1991	36.7		
1992	37.0		
1993	37.2		
1994	37.4		
1995	37.6		331.3
1996	37.8		357.6
1997			357.6
1998			357.6
1999	39.4		362.1
2000	39.4		362.1
2003	47.8	92.4	
2004	54.3	98.7	
2005	57.6		

Source: WDI

Since total road length may, however, depend on the size of a country, road density is a fairer measure. Here too, Ghana has fallen behind both Malaysia and South Africa, but not by a significant margin (Table 3.2b).

Table 3.2b: Road Density (km of road per 100sq km of land area)

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Indicator	Road density	Road density	Road density
Year /Unit	km of road per 100 sq. km of land area	km of road per 100 sq. km of land area	km of road per 100 sq. km of land area
2001			30
2003	20	28	
2004	23	30	
2005	24		

Source: WDI

However, it would seem the quality of roads is more important than the quantity. Measured by the portion of roads paved, Ghana seems to have matched South Africa, but fallen substantially behind Malaysia (Table 3.2c).

Table 3.2c: Roads Paved (% of total roads)

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Indicator	Roads, paved	Roads, paved	Roads, paved
Year /Unit	% of total roads	% of total roads	% of total roads
1990	19.6	70	
1991	23	71.3	
1992	23.5	73.3	
1993	23.9	74.1	
1994	24.4	73.9	
1995	24.9	73.9	
1996	24.1	74	19.7
1997		74.5	19.7
1998		75.6	19.7
1999	29.6	75.3	20.3
2000	29.6	76.2	20.3
2001	18.4	77.9	17.3
2003	17.9	80.8	
2004		81.3	
2005	14.9		
2006		82.8	

Source: WDI

In terms of length of rail lines, again, Ghana has fallen substantially behind Malaysia, and much farther behind South Africa (Table 3.2d).

Table 3.2d: Rail Lines [total routes (Km)]

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Indicator	Rail lines	Rail lines	Rail lines
Year /Unit	total route-km	total route-km	total route-km
1980	950.0	1,639.0	23,596.0
1981	950.0	1,639.0	23,596.0
1982	950.0	1,639.0	23,581.0
1983	950.0	1,668.0	23,664.0
1984	950.0	1,668.0	23,720.0
1985	950.0	1,668.0	23,821.0
1986	950.0	1,668.0	23,790.0
1987	950.0	1,668.0	23,607.0
1988		1,668.0	23,507.0
1989		1,668.0	21,244.0
1990	953.0	1,668.0	21,617.1
1991		1,668.0	21,635.0
1992		1,668.0	21,635.0
1993		1,668.0	22,233.0
1994		1,668.0	22,621.0
1995		1,668.0	20,319.0
1996		1,668.0	20,319.0
1997		1,648.0	20,189.0
1998		1,648.0	20,189.0
2000	953.0	1,622.0	22,657.0
2001		1,636.0	22,657.0
2002		1,636.0	22,657.0
2003	977.0	1,667.0	20,041.0
2004	977.0	1,667.0	20,247.0
2005		1,657.0	20,047.0
2006		1,667.0	20,047.0
2007		1,667.0	24,487.0
2008	953.0	1,665.0	24,487.0
2009		1,665.0	22,051.0

Source: WDI

As we know, Ghana's railway system has seen a substantial decline over the years in terms of lines and coaches to an extent where it does not play a significant role in terms of transportation of people and goods. This has put enormous strain on the road network system, particularly in the carriage of goods and has also retarded economic activity.

In terms of electricity production, Ghana lags far behind Malaysia and much farther behind South Africa (Table 3.2e and Chart 3.2e).

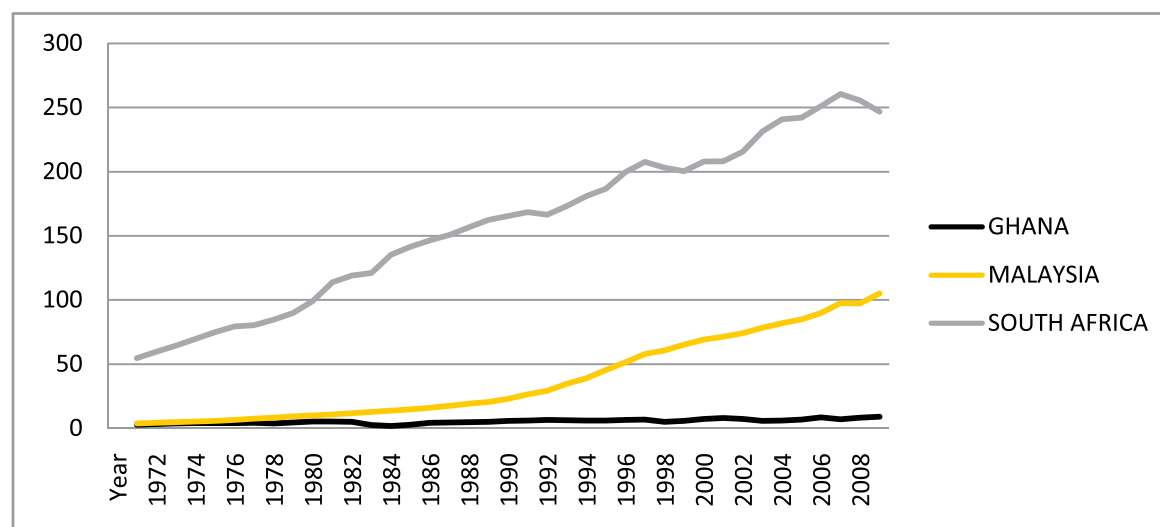
Table 3.2e: Electricity Production (billion kWh)

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Indicator	Electricity production	Electricity production	Electricity production
Year /Unit	billion kWh	million kWh	million kWh
1971	2.9	3.8	54.6
1972	3.4	4.3	59.5
1973	3.9	4.8	64.4
1974	4.1	5.3	69.6
1975	4.0	5.8	74.9
1976	4.2	6.5	79.4
1977	4.4	7.5	80.3
1978	3.8	8.3	84.5
1979	4.7	9.2	89.7
1980	5.3	10.0	99.0
1981	5.4	10.8	113.7
1982	5.0	11.8	119.0
1983	2.6	12.8	121.1
1984	1.9	13.7	135.3
1985	3.0	14.9	141.4
1986	4.4	16.1	146.5
1987	4.7	17.4	150.6
1988	4.8	19.3	156.7
1989	5.2	20.5	162.3
1990	5.7	23.0	165.4
1991	6.1	26.5	168.3
1992	6.6	29.3	166.4
1993	6.3	34.7	173.2
1994	6.1	39.1	180.9
1995	6.1	45.5	186.6
1996	6.6	51.4	199.5
1997	6.9	57.9	207.7
1998	5.0	60.7	203.0
1999	5.9	65.2	200.4
2000	7.2	69.2	207.8
2001	7.9	71.4	208.2
2002	7.3	74.2	215.7
2003	5.9	78.5	231.2
2004	6.0	82.0	240.9
2005	6.8	84.8	242.1

2006	8.4	89.8	250.9
2007	7.0	97.5	260.5
2008	8.3	97.4	255.5
2009	9.0	105.1	246.8

Source: WDI

Chart 3.2e: Electricity Production (billion kWh)



Source: WDI

In terms of population access to electricity (for which scanty data is available), Ghana has lagged behind both Malaysia and South Africa (Table 3.2f)

Table 3.2f: Access to Electricity (% of Population)

	GHANA	MALAYSIA	SOUTH AFRICA
Indicator	Access to electricity	Access to electricity	Access to electricity
Year /Unit	% of population	% of population	% of population
2009	60.5	99.4	75

Source: WDI

While data on industry access to electricity is not available, inadequate supply of power is invariably cited as one of the major constraints to doing business in Ghana and that undermines Ghana's investment competitiveness.

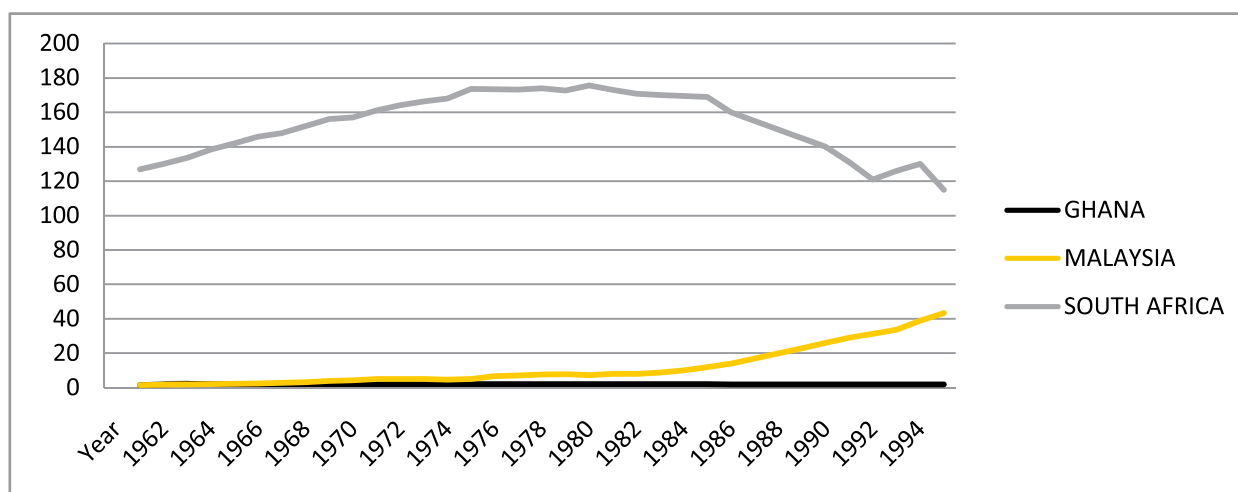
In terms of agricultural machinery, Ghana's stock has fallen behind Malaysia's and much farther behind South Africa's (Table 3.2g and Chart 3.2g).

Table 3.2g: Agricultural Machinery (thousands of tractors)

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Indicator	Agricultural machinery	Agricultural machinery	Agricultural machinery
Year /Unit	Thousands of tractors	Thousands of tractors	Thousands of tractors
1961	1.5	1.6	126.9
1962	1.8	1.8	130.0
1963	2.2	2.0	133.6
1964	2.1	2.2	138.4
1965	2.1	2.4	142.0
1966	2.1	2.6	145.9
1967	2.1	2.9	147.9
1968	2.1	3.3	152.0
1969	2.1	4.0	156.0
1970	2.1	4.3	157.1
1971	2.1	5.1	161.1
1972	2.1	5.2	164.1
1973	2.1	5.1	166.3
1974	2.0	4.8	168.0
1975	2.0	5.1	173.6
1976	2.0	6.7	173.4
1977	2.0	7.1	173.1
1978	2.0	7.7	174.0
1979	2.0	7.9	172.7
1980	2.0	7.4	175.6
1981	2.0	8.0	173.0
1982	2.0	8.0	170.7
1983	2.0	8.9	170.0
1984	2.0	10.2	169.5
1985	2.0	12.0	169.0
1986	1.9	14.0	160.0
1987	1.9	17.0	155.0
1988	1.9	20.0	150.0
1989	1.9	23.0	145.0
1990	1.9	26.0	140.0
1991	1.9	29.0	131.0
1992	1.9	31.2	121.0
1993	1.9	33.7	125.9
1994	1.9	38.9	130.1
1995	1.9	43.3	115.0

Source: WDI

Chart 3.2g: Agricultural Machinery (thousands of tractors)



Source: WDI

Notably, while Ghana and Malaysia started with equal stocks as far back as 1961, Ghana has seen its stock almost stagnate through 1995, whereas Malaysia multiplied its stock nearly thirty times. Lack of significant mechanization in Ghana has led to low agricultural yields and perennial food insecurity.

In terms of mobile cellular subscriptions, Ghana has lagged far behind Malaysia and South Africa (Table 3.2h and Chart 3.2h).

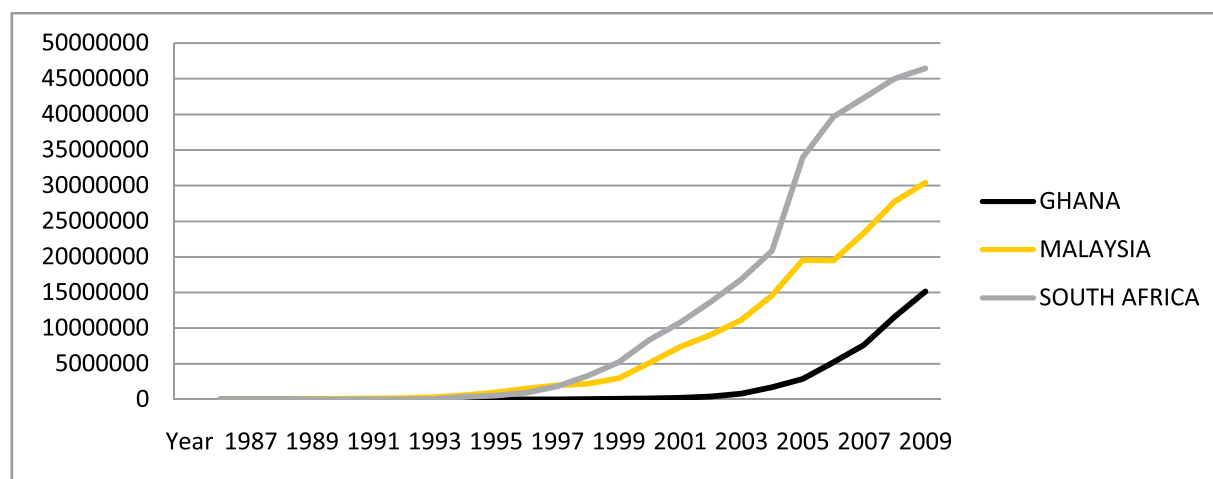
Table 3.2h: Mobile Cellular Subscriptions

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Indicator	Mobile cellular subscriptions	Mobile cellular subscriptions	Mobile cellular subscriptions
Year			
1986	0	10,817	0
1987	0	17,411	0
1988	0	27,302	0
1989	0	39,419	3,980
1990	0	86,620	5,680
1991	0	130,000	7,100
1992	400	200,573	12,510
1993	1,742	340,022	40,000
1994	3,336	571,720	340,000
1995	6,200	1,005,066	535,000
1996	12,766	1,520,320	953,000
1997	21,866	2,000,000	1,836,000
1998	41,753	2,200,000	3,337,000
1999	70,026	2,990,000	5,188,000
2000	130,045	5,121,748	8,339,000
2001	243,797	7,385,000	10,787,000
2002	386,775	9,053,000	13,702,000

2003	795,529	11,124,000	16,860,000
2004	1,695,000	14,611,000	20,839,000
2005	2,874,560	19,545,000	33,959,960
2006	5,207,242	19,463,722	39,662,000
2007	7,604,053	23,347,000	42,300,000
2008	11,570,430	27,713,000	45,000,000
2009	15,108,916	30,379,000	46,436,000

Source: WDI

Chart 3.2h: Mobile Cellular Subscriptions



Source: WDI

South Africa's figures may be influenced by its larger population. Ghana and Malaysia, however, have similar population size, a figures for 2009 shows a ratio of 1 to 2 respectively. What is remarkable for Ghana, however, is the explosion in its mobile subscription from nil in 1991 to over 15 million in 2009. The explosion in mobile subscription has completely transformed communication in the country, particularly in terms of speed, with positive economic externalities.

In terms of telephone lines, Ghana also has substantially lagged behind both Malaysia and South Africa (Table 3.2i and Chart 3.2i).

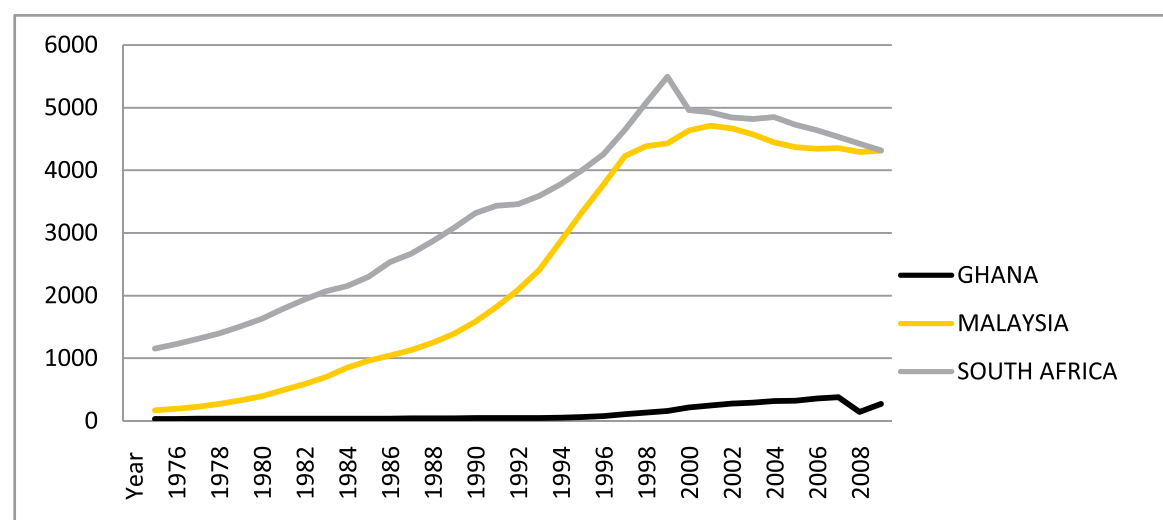


Table 3.2i: Telephone Lines (Thousands)

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Indicator	Mobile cellular subscriptions	Mobile cellular subscriptions	Mobile cellular subscriptions
Year			
1986	0	10,817	0
1987	0	17,411	0
1988	0	27,302	0
1989	0	39,419	3,980
1990	0	86,620	5,680
1991	0	130,000	7,100
1992	400	200,573	12,510
1993	1,742	340,022	40,000
1994	3,336	571,720	340,000
1995	6,200	1,005,066	535,000
1996	12,766	1,520,320	953,000
1997	21,866	2,000,000	1,836,000
1998	41,753	2,200,000	3,337,000
1999	70,026	2,990,000	5,188,000
2000	130,045	5,121,748	8,339,000
2001	243,797	7,385,000	10,787,000
2002	386,775	9,053,000	13,702,000
2003	795,529	11,124,000	16,860,000
2004	1,695,000	14,611,000	20,839,000
2005	2,874,560	19,545,000	33,959,960
2006	5,207,242	19,463,722	39,662,000
2007	7,604,053	23,347,000	42,300,000
2008	11,570,430	27,713,000	45,000,000
2009	15,108,916	30,379,000	46,436,000

Source: WDI

Chart 3.2i: Telephone Lines (Thousands)



Source: WDI

Here also, Ghana has significantly added to its stock during 1975-2009. It may be surmised that the expansion has probably not been that dramatic given the emergence of competing cellular communication.

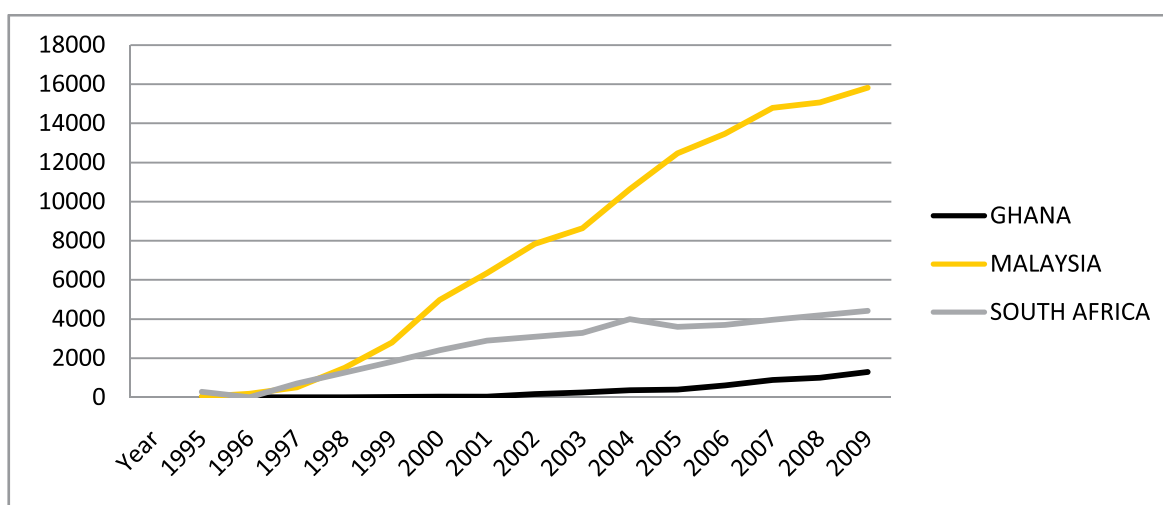
In terms of internet use, Ghana has lagged behind South Africa and much farther behind Malaysia (1995-2009) (Table 3.2j and Chart 3.2j). Here also, Ghana has expanded its usage significantly during 1995-2009.

Table 3.2j: Internet Users (Thousands)

	<b>GHANA</b>	<b>MALAYSIA</b>	<b>SOUTH AFRICA</b>
Indicator	Internet users	Internet users	Internet users
Year / Unit	Thousands	Thousands	thousands
1995	0.1	30.0	280.0
1996	1.0	180.0	355.0
1997	5.0	500.0	700.0
1998	6.0	1,500.0	1,266.0
1999	20.0	2,800.0	1,820.0
2000	30.0	4,977.0	2,400.0
2001	40.0	6,346.0	2,890.0
2002	170.0	7,842.0	3,100.0
2003	250.0	8,643.0	3,283.0
2004	368.0	10,636.5	4,000.0
2005	401.3	12,465.3	3,600.0
2006	609.8	13,474.8	3,700.0
2007	880.0	14,792.7	3,966.0
2008	997.0	15,074.0	4,187.0
2009	1,297.0	15,823.7	4,420.3

Source: WDI

Chart 3.2j: Internet Users (Thousands)



Source: WDI

## 4. Summary of Results and Conclusion

---

Ghana's MIC status has been assessed vis-a-vis Malaysia and South Africa based on a range of social and infrastructure indicators.<sup>7</sup> The selected performance indicators relate broadly to education, health, poverty and stock of infrastructure.

For education, the paper finds that Ghana has trailed both Malaysia and South Africa in terms of most of the selected indicators, including school enrolment, completion rates, pupil-teacher ratios and literacy. Ghana needs to improve its school enrolment and completion rates generally if it has to meet its long-term development needs. Ghana spends slightly less of its GDP on education compared to Malaysia and South Africa, but seems to have much less successful outcomes. This suggests that it is not the mere level of expenditure that is important but the results derived from the expenditure, or what it is able to achieve. Where the expenditure goes as well as the efficiency of spending are crucial. In Ghana, it is known that a disproportionately high share of education expenditure goes to the payment of salaries. While this is important in motivating teachers, it leaves deficits in school facilities, which ultimately affect the quality of education. Expenditure prioritization and efficiency will be key to ameliorating these deficiencies.

In the health sector, Ghana trails Malaysia and South Africa in terms of a range of indicators, including life expectancy, death rate, infant mortality rate, maternal mortality rate, prevalence of undernourishment, nurses-population ratio, physicians-population ratio, hospital beds-population ratio, access to improved sanitation, and urban population living in slums. In terms of health expenditure (as a percentage of GDP), Ghana spends slightly below South Africa, while Malaysia falls far behind. However, in terms health expenditure per capita, Ghana spends only a fraction of Malaysia's and South Africa's. It is notable, however, that Ghana's per capita health expenditure has risen steadily during 1995-2009. The achievement of only modest progress in several areas of health, therefore, again brings into question the issue of end-use and efficiency of spending. Like in the case of education, it will be important to ensure that health spending is used as intended and in an efficient manner to maximise results in the sector.

In the area of poverty, indicators investigated include poverty gaps and their regional variation. Ghana has generally had the worst poverty record of the three countries, with higher poverty gaps, measured in terms of people living below given income thresholds. Moreover, as expected, rural poverty has been higher in Ghana than urban poverty. Therefore, maximum effect would be achieved if remedial interventions target rural areas, including through agricultural productivity-enhancing measures, provision of social amenities and targeted subsidies for public goods and services.

In terms of infrastructure, comparison is made between the three countries regarding the stock and quality of roads, length of rail lines, volume of air transport, access to personal comput-

---

<sup>7</sup> The first part of the series was based largely on economic indicators.

ers, volume of electricity production and access, agricultural machinery stock, mobile cellular subscription, stock of telephone lines, and internet use. In almost all these areas, Ghana has fallen far behind Malaysia and South Africa. What has been remarkable for Ghana, however, is the explosion in its mobile subscription during 1991-2009. This has completely transformed communication in the country, connecting people in time and space, with positive economic externalities. Inadequate infrastructure and power supply constitute important constraints to Ghana's competitiveness and to doing business in the country. To address this problem requires prioritization of public expenditures in favour of these areas and the use of public-private partnership initiatives to improve the stock of infrastructure and the supply of energy.

## References

---

Barro, R.J.,1991, "Economic Growth in a Cross Section of Countries," *Quarterly Journal of Economics* 106, pp 407-43.

\_\_\_\_\_, 1997, *Determinants of Economic Growth*, MIT Press, Cambridge.

\_\_\_\_\_, "Inequality and Growth in a Panel of Countries," *Journal of Economic Growth* 5, pp 5-32.

Bhagwati, J., 1966, *The Economics of Underdeveloped Countries*, McGraw Hill, New York.

Collier, P., and J. Gunning, 1999, "Why Has Africa Grown Slowly?" *Journal of Economic Perspectives*, Vol. 13 (No. 3).

Kapur, I., M. T. Hadjimichael, P. Hilbers, J. Schiff, and P Szmczak, 1991, "Ghana: Adjustment and Growth, 1983-91, Occasional Paper, No. 86, International Monetary Fund, Washington, D.C.

Kwakye, J. K., 2011 (Sept.), *Africa's Long Road To Development: It Is Not Just Economics, But Also History, Geography, Politics, And Leadership*, Frontiers Publishing Co., Accra.

Limao, N., and A. J. Venables, 2001, "Infrastructure, Geographical Disadvantage and Transport Costs and Trade," *World Bank Economic Review* 15, pp. 451-79.

Ndulu, B.J., 2006 (Dec.), "Infrastructure, Regional Integration and Growth in Sub-Saharan Africa: Dealing with the Disadvantages of Geography and Sovereign Fragmentation," *Journal of African Economies*, pp 212-44.

Nsouli, Saleh M. (ed.), 2004, *The New Partnership for Africa's Development—Macroeconomics, Institutions, and Poverty*, International Monetary Fund, Washington, D.C.

O'Connell, and B.J. Ndulu, 2000, "Explaining African Economic Growth," A Focus on Sources of Growth," Working Paper Series, AERC, Nairobi.

Okun, B., and R.W. Richardson, 1961, *Studies in Economic Development*, Holt, Rinehart and Winston, Inc.

Pattillo, C., S. Gupta, and K. Carey, *Sustaining and Accelerating Pro-Poor Growth in Africa*,

Sachs, J. D., 2005, *The End of Poverty: Economic Possibilities of Our Time*, The Penguin Press, New York.

Sarel, M., 1997, "Growth in East Asia: What We Can and What We Cannot Infer," *Economic Issues*, No. 1, International Monetary Fund, Washington, D.C.

UNDP and IEA, 2011 (Feb.), Moving Towards Middle Income Country Status: Potential Implications For Development Assistance And Achievement of MDGs In Ghana, mimeo.

World Bank, 1993, The East Asian Miracle: Economic Growth and Public Policy, Oxford University Press.

—————, 1994, "Adjustment in Africa: Reforms, Results and the Road Ahead," A World Bank Policy Research Report, Washington, D.C.

—————, Africa Development Indicators, various issues, The World Bank, Washington, D.C.

—————, World Development Indicators, various issues, The World Bank, Washington, D.C.

The Institute of Economic Affairs, A Public Policy Institute  
P. O. Box OS 1936, Osu, Accra, Ghana.  
Tel: +233-302244716 / 0307010714  
Fax: +233-302-22313. Email: [iea@ieagh.org](mailto:iea@ieagh.org).  
Website: [www.ieagh.org](http://www.ieagh.org)