INCLUSIVE GROWTH, HEALTH FOREIGN AID AND HEALTH OUTCOMES IN AFRICA:

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1. Introduction

Inclusive growth has been thought of as growth that promotes development, with development understood as comprehensive improvements in multiple dimensions contemplating both living conditions and empowerment (Centre for Inclusive Growth, 2013). Although what exactly the concept means and how best to measure it has been a subject of much controversy among scholars and development experts, there is a consensus that inclusive growth should reduce poverty and inequality, two of the most prominent ailments that African countries need to grapple with. Unfortunately, efforts aimed at accelerating growth and reducing poverty and inequality in many African countries has not yielded the desired results. No doubt, overall GDP growth rate, driven by surging commodity prices and, perhaps, improvements in economic policy, improved significantly in the period before the global financial crisis averaging about 5.6 per cent a year between 2002 and 2008. Hit by the global financial crisis and steep rise in fuel and food prices, growth declined to about 2.2 per cent in 2009 but immediately recovered at 4.6 per cent in 2010. The uncertainties in North Africa caused growth to dip in 2011 but immediately rebounded in 2012 when a growth rate of 5.0 per cent was recorded. Between 2000 and 2010, six of the ten fastest–growing countries in the world were African-Angola, Nigeria, Ethiopia, Mozambique, Chad and Rwanda. Progress on the MDGs has been rapid and a few of the countries is likely to reach some of the goals by 2015 or immediately after. However, impressive as the recent growth performance may appear, the rates are inadequate and very much below the 7–8 per cent required to halve poverty by 2015.

Africa still faces a number of development challenges making it difficult to achieve inclusive growth. The interaction between poverty, inequality and unemployment still delivers a constrained development outcome. The percentage of the population living on less than $1.25 a day is highest in Africa compared to other regions of the world[1]. The continent houses some of the most unequal nations in the world (see Figure 6 on Gini-coefficient). Youth unemployment currently runs at 20.4 per cent. Although much progress has been recorded in addressing poverty incidence, the results from many countries coupled with the stubborn prevalence of high poverty rates in the rural areas belie the efforts the governments have put into fighting poverty. HIV prevalence among pregnant women and the age group 25-34 is still relatively high. The challenges identified have created certain risk patterns in the economies that will need to be addressed. For instance, the HIV prevalence takes its toll on productivity and creates a dependence on foreign aid. Unemployment is compounded by skills shortage with its attendant effect on social security, competitiveness and productivity.
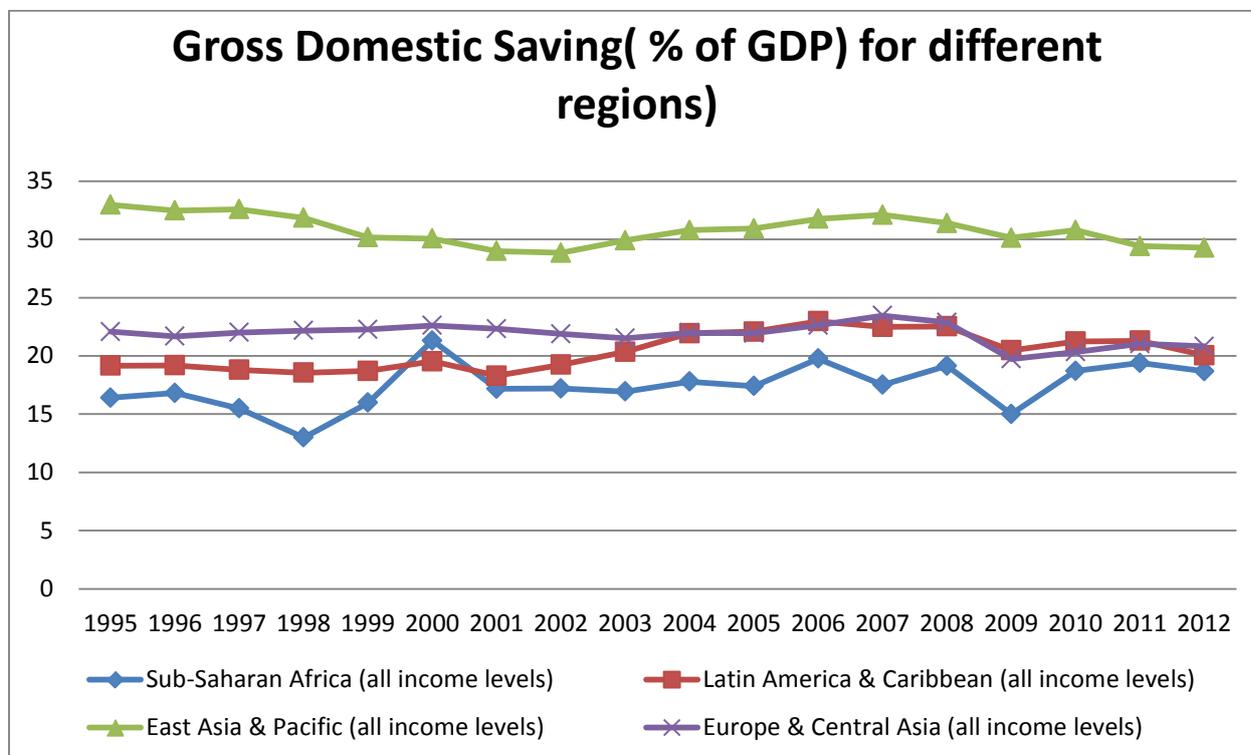
One major challenge the world faced in its bid to address the crippling problem of poverty through its various initiatives such as the poverty reduction strategy programmes, the MDGs and the HIPC, was how to mobilize resources for investment in key development projects necessary for substantial economic growth. Savings ratios in Africa are low relative to developing countries averages as well as domestic investment requirements (see Figure 1).

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[1] East Asia & Pacific 14.3%, Europe & Central Asia 0.5%, Latin America & Caribbean 6.5%, Middle East & North Africa 2.7%, South Asia 36.0%, Sub-Saharan Africa 47.5%.(2008)

The problem of mobilising savings has always been the bane of economic growth and development in the African region.

Figure 1: Gross Domestic Saving as a percentage of GDP for different regions of the world

Gross Domestic Saving(% of GDP) for different regions)

Legend:
- Sub-Saharan Africa (all income levels)
- Latin America & Caribbean (all income levels)
- East Asia & Pacific (all income levels)
- Europe & Central Asia (all income levels)

**Source: World Development Indicators Database, 2013**

The low levels of domestic savings rates in African countries condemns them to uncomfortable choice between low investment and growth, or excessive reliance upon Private capital flows or foreign capital in the form of foreign direct investment (FDI), foreign portfolio investment (FPI), equity and debt flows, remittances and foreign aid (development assistance). Africa has experienced a huge increase in the various flows during the last two decades. While FDI has witnessed rapid flows to SSA, there are huge concerns that most of these flows go to resource base economies. Private capital flows ebb and flow with economic conditions[2] (see fig 1) while remittances suffer constraints from highly regulated domestic capital flows underlining the fact that private capital flows cannot be solely relied upon for the purpose of sustainable development in the economy. Given the current state of capital markets development in most of Africa, ODA flows will remain a major source of development financing in the immediate future while efforts are geared towards increasing future flows of private capital. Thus, the search for the massive and growing resource input needed to raise incomes and living standards to acceptable levels continues to remain a major source of concern. Failure to significantly reduce the massive inequalities in income and

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[2] Net international private capital flows to developing countries and economies in transition fell by more than 50 per cent, from $425 billion in 2011 to an estimated $206 billion in 2012 (ECA 2012)

consumption levels that currently characterizes African economies constitutes a potential threat to global peace.

Figure 2A: FDI inflows by major donors

Figure 2: Foreign Direct Investment (FDI) outflows by major sources

FDI Outflows
1998- 2013

Source: OECD International Direct Investment database
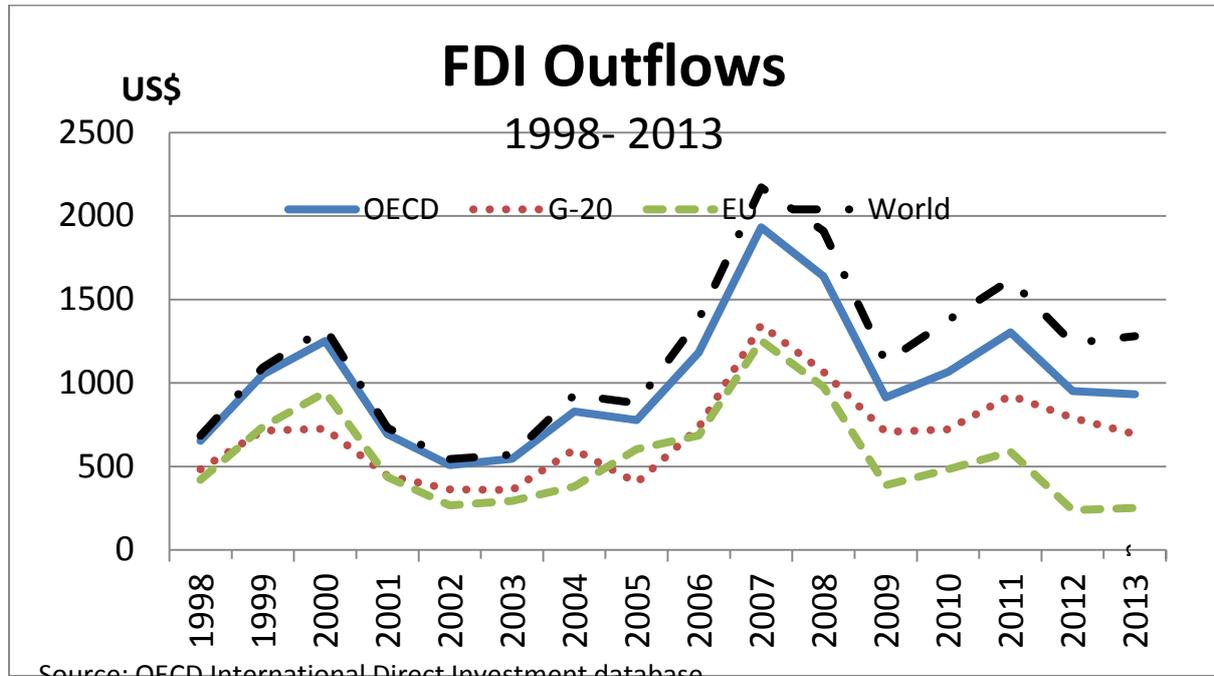
Outside of the growing interest in the role of aid in development, it is now well established that without peace and security, there can be no development. Conflicts, natural disasters, social upheavals all cause poverty and underdevelopment. Peace keeping and humanitarian intervention in different parts of the world remains an important complement to development aid.

The objectives of this study are to address two issues. First the paper will utilise a structural GAPS approach complemented by a needs based methodology to classify African economies (as opposed to the World Bank approach where countries are classified mainly by per capita income) in order to highlight the vulnerabilities of these economies and their need for foreign aid. Second, we will use a panel data estimation technique to gauge the impact of health sector targeted aid on health outcomes such as infant mortality, under-five mortality and life expectancy. Our focus on health sector is based on the fact that even though literature might not be able to establish a direct causality between foreign aid and economic growth, improved health outcomes resulting from health sector targeted foreign aid might hold substantial potential for inclusive growth.

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2. Issues in the flow of aid to Africa

The mobilization of both domestic and external resources including development aid to implement projects and programs in their development plans has been a major concern in many African nations. Although many of these countries have witnessed significant economic growth performance in the past decade, development assistance still remains a major recourse in the implementation of development agenda in bringing to fruition the various Vision Plans and MDGs and other Internationally Agreed Goals (IAGs) which are very fundamental to enhancing inclusive growth and building enduring peace. Development is a broad and multifaceted concept that envisions not only improving living standards but also achieving sustainable and inclusive growth that addresses the social and economic inequalities that characterize the countries in Africa. It also implies fostering conditions to create and establish political, economic and social systems that will promote respect, diversity, human dignity and equality. There are developmental challenges that require intervention in these economies such as poverty and inequality, unemployment, HIV/AIDS, malaria and a poor skills base. Consequently, development assistance will continue to play a crucial role in the social sectors of the economy especially health, education and social infrastructure. However, the decline in aid effort by major bilateral and multilateral agencies in the face of the global financial crisis and the classification of many African countries as middle income economies have raised serious concerns on the role of development assistance in the future development agenda of these countries.

Despite the huge commitments and declarations that have been made since the Monterrey Consensus, fears remain that very limited progress may have been attained in terms of meeting the goals of the Consensus in the core areas of ownership, alignment, harmonization, managing for results, and mutual accountability. The concern about low delivery on promises particularly to Africa led African governments to take the lead in monitoring the implementation of commitments by donors through an annual African Ministerial Conference on Financing for Development in Abuja in 2006 and later in Accra in 2007. In a survey of countries in the continent conducted by UNECA recently to find out the views and perceptions on the degree of progress in meeting the goals of the consensus in the six core areas, the report showed that 'very limited progress has been made in realizing the objectives of the Monterrey Consensus'. Progress was recorded with debt relief but 'performance in the areas of international trade, as well as external and domestic resource mobilization has been disappointing' (UNECA, 2007).

Outside the general concern about the declining response of donors to commitments[3], two important developments might spell further concern and demand immediate and appropriate response by national governments. First is the decline in aid effort by major bilateral agencies

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[3] The G8 at Gleneagles, Scotland made a landmark commitment to advancing the fight against infectious diseases (HIV/AIDS, Tuberculosis and Malaria) by pledging to increase development assistance by $50 billion, from $80 billion in 2004 to nearly $130 billion by 2010. 50 per cent of this was to go to Africa. According to the Muskoka accountability report prepared by G8 members in June 2010, donors were $10 billion short of the target..

in the face of the global financial crisis. The few studies that have examined the effect of economic downturns on the level of aid provision are inconclusive. Frot (2009) examined the relationship between financial crises and foreign aid budgets for the United States in 1988, Japan in 1990, Finland, Norway and Sweden in 1991, and South Korea in 1997 and found that those donors decreased aid by 13% following crises. Mold et al. (2009), Tingley (2010) argue that there is no clear relationship between GDP growth and aid. Dang, Knack, and Rogers found that aid declined by 20 per cent for over a decade after a country undergoes a banking crisis. Decreases in income per capita also have a negative effect on aid; they estimate that the current financial crisis will depress aid budgets by 20 to 30 per cent over the next decade. The UNDP report (2012) shows that increases and decreases in aid are frequently a manifestation of economic conditions in donor countries; thus, aid increases when times are good and falls when times are bad. What has been generally observed without inferring causality is that foreign aid declined following the global financial crisis in SSA

Figure 3: ODA Flows to Different Regions
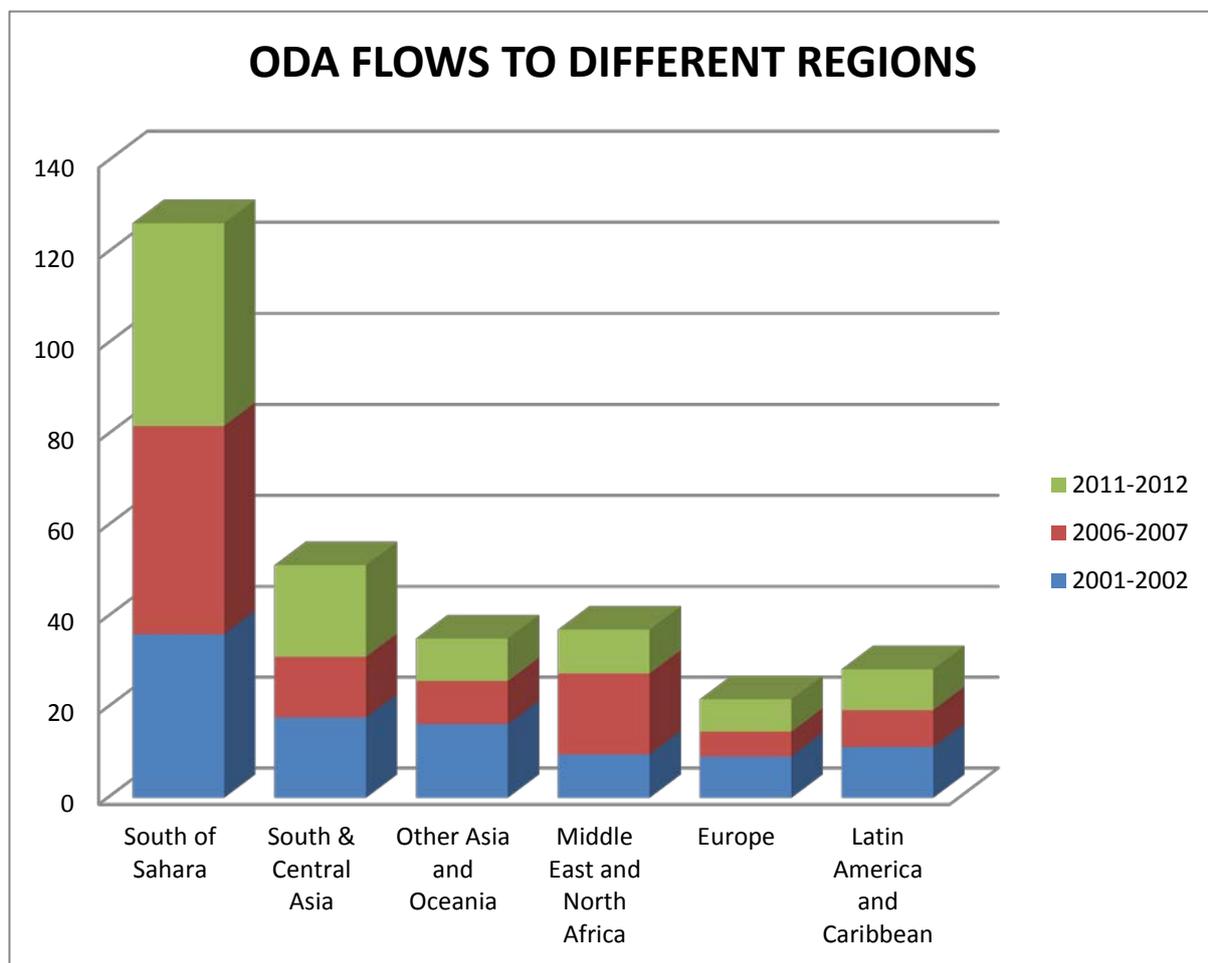
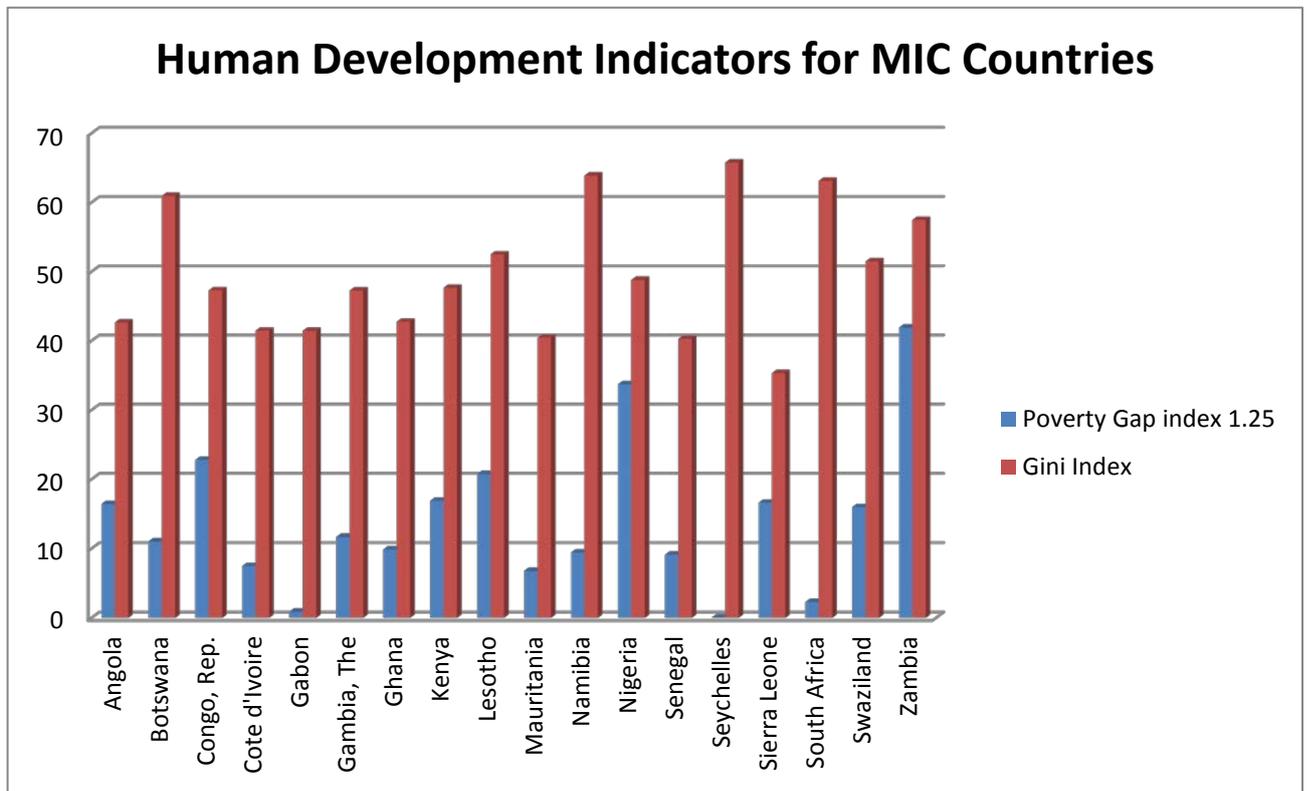**Source: World Development Indicators Database, 2013**

The second factor is the recent classification of many SSA economies as middle income economies in 2009. The Continent of Africa consists of 54 countries among which 21 are Middle Income Countries (MICs). These economies are widely different in terms of socio-economic characteristics, poverty levels, vulnerabilities and unemployment even though they are classified as mostly MICs based on per capita income. This will have severe implications for the amount of foreign aid that these countries might qualify for in the future. For instance the new European Commission (EC) policy of 'differentiation' aims to recalibrate its development cooperation with middle-income countries (MICs), and introduced new allocation criteria and differentiated development partnerships for different categories of countries.

Table 1: Development Indicators for Middle Income Countries in Africa

	Country Name	Life expectancy		Infant Mortality		Per CAPITA GNI		Health ODA	
		2000	2011	2000	2011	2000	2011	2000	2011
1	Angola	45.20	51.06	120.90	102.20	420	3970	.	.
2	Botswana	50.49	46.67	54.60	42.90	3120	7200	0.28	1.90
3	Cameroon	51.94	54.14	92.00	63.00	600	1140	14.42	36.92
4	Cape Verde	69.59	74.21	30.80	19.50	1310	3610	0.17	4.36
5	Comoros	57.88	60.43	71.40	59.30	410	830	0.57	0.78
6	Congo Rep.	52.30	57.78	74.80	63.90	570	2200	1.41	13.49
7	Cote d'Ivoire	46.45	50.05	99.00	78.10	670	1140	1.73	11.44
8	Gabon	59.69	62.69	56.30	43.90	3100	8710	.	2.07
9	Ghana	56.99	60.79	66.40	49.90	340	1410	11.02	127.08
10	Kenya	52.84	60.37	68.40	49.80	420	800	43.39	217.13
11	Lesotho	47.18	48.22	79.90	72.70	580	1250	2.42	0.36
12	Namibia	55.12	63.28	48.00	29.20	1950	5160	0.88	12.30
13	Nigeria	46.62	51.71	112.40	80.10	270	1260	13.90	171.28
14	Sao Tome and Principe	63.29	66.00	56.80	39.00	.	1240	0.14	4.62
15	Senegal	57.77	63.04	69.80	46.20	510	1030	3.68	122.93
16	Seychelles	.	73.46	11.90	11.50	7390	11140	.	0.11
17	South Africa	55.84	55.30	51.40	34.20	3050	6950	9.64	9.94
18	Swaziland	48.66	48.66	79.50	57.00	1520	2830	0.08	0.75
19	Zambia	41.78	55.83	99.40	58.70	310	1180	22.72	51.14

Source: World Development Indicators Database, 2013

Figure 4: Human development Indicators for Middle Income Countries in Sub-Saharan Africa

Human Development Indicators for MIC Countries

(Legend: ■ Poverty Gap index 1.25, ■ Gini Index)

Source: World Development Indicators Database, 2013

3. Foreign aid and economic growth

The debate on aid centres around three main issues. First is the contentious issue on whether foreign aid enhances economic growth. Most studies that examined the effectiveness of aid on economic growth and poverty reduction found largely inconclusive results. Burnside and Dollar (2000) found that while aid may not significantly promote economic growth in a typical recipient country, it has a positive effect under 'good policy' conditions. Not many people agree with this conclusion. Easterly et al. (2000) and Guillaumont and Chauvet, (2001) have quarrelled with the sample period and specification methods used by Burnside and Dollar. In many countries, a lot of pessimism has grown up around aid. This is to be understood against the background of many years of aid dependence with little to show in terms of positive contributions of aid to economic growth in many African countries.

The second strand of studies focus on donors' motives for aid disbursements and the characteristics of recipients. There are clear evidences to show that aid allocation is not entirely consistent with the underlying socioeconomic needs of recipients or with their policy directions. Colonial history, geopolitical interests, and other strategic factors drive bilateral aid even though multilateral aid may derive from underlying socio-economic conditions

(Maizels and Nissanke, 1984; Alesina and Dollar, 2000; Schraeder et al., 1998). There are a few studies that suggest that even multilateral aid is influenced by the strategic interests of their main financial contributors (Kuziemko and Werker, 2006).
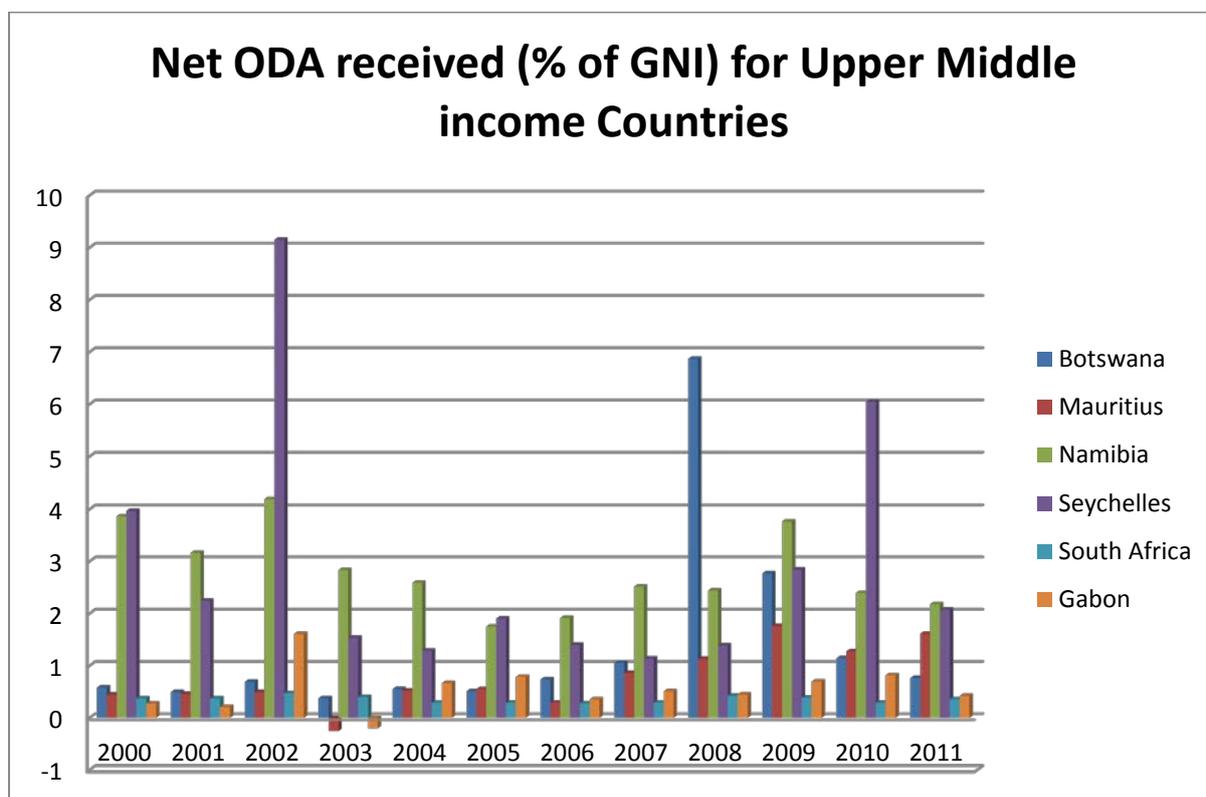
The third area of focus in the literature is on the ill effects of aid-dependence, with particular attention to governance issues, mainly the shift in government accountability to donors rather than to citizens in recipient nations. While foreign aid can help governments more quickly and effectively meet their development objectives, and improve the standard of living of the poor when appropriately managed, most countries do not currently have a good institutional environment, and in these countries, high levels of aid have a much less certain impact. Continued over long periods of time, dependence on aid may make it more difficult for good governance and better institutions to develop. Large amounts of aid delivered over long periods, create incentives for governments and donors that have the potential to undermine good governance and the quality of state institutions. Thus, it is argued a high level of aid dependence over an extended period of time-as is the case in much of Sub-Saharan Africa-could have a retarding effect on growth and development due to harmful effects on the overarching governance structure and institutional quality of the recipient economy (Bräutigam, D. 2000)

In spite of the lingering sharp division on the effectiveness of aid between those who believe that foreign aid works under certain conditions and those who hold the position that foreign aid is ineffective under most circumstances, aid recipients will continue to depend on foreign aid to meet developmental requirements. Countries are challenged to varying degrees by the HIV/AIDs pandemic, low literacy rates, limited access to drinking water, budgetary crisis, drought, and in some cases governance issues. Donors provide aid for a wide variety of projects: retroviral medications, classrooms, water wells, food aid and election monitoring just to mention a few. The extent to which recipient countries depend on donor support to address these challenges will vary from country to country.

4. Structural GAPS approach to foreign aid

Per capita income is the principal criterion currently used by the World Bank and OECD DAC in allocating funds for development cooperation. Combined with the MDGs, this has meant that resources are now channelled toward lower-income countries to the detriment of the middle-income group. As a result MICs in SSA have seen a decline in their share of official development assistance (ODA) inflows, both as a percentage of gross national income (GNI) and in comparison with other developing countries especially since 2000.

Figure 5: Net ODA received as a percentage of GNI for High and Upper Middle income Countries in SSA

Net ODA received (% of GNI) for Upper Middle income Countries

Legend: Botswana, Mauritius, Namibia, Seychelles, South Africa, Gabon

Source: World Development Indicators Database, 2013

This trend stems from the decision to concentrate international cooperation funds on combating poverty and its most immediate effects, and thus to give priority to lower-income countries despite the fact that 70% of the world's poor live in middle-income countries. Estimates for global poverty in 2008 based on the improved POVcalNet (2012) confirm that the world's poor (by both $1.25 and $2 poverty lines) largely live in middle-income countries (MICs)[4]. The proportion of the world's $1.25 and $2 poor accounted for by MICs is respectively 74 per cent and 79 per cent (Summer, 2012).

On the other hand, the channelling of funds to lower-income countries reflects the assumption that, as countries increase their per capita incomes, they will have more resources and tools for combating poverty and for financing their own development. Consequently, middle-

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[4] Andy Summer (2012) in a characterisation of the distribution of the world's poor found that half of the world's poor live in India and China (mainly in India), a quarter of the world's poor live in other MICs (primarily populous lower MICs such as Pakistan, Nigeria and Indonesia) and a quarter of the world's poor live in the remaining 35 low-income countries. Underlying this pattern is a slightly more surprising one: only 7 per cent of world poverty remains in low-income, stable countries.

income countries would supposedly need less support from the international cooperation system. Some authors have referred to this process as "graduation". We have seen a number of countries "graduate" into the middle income class in Africa over the past decade.

This approach of equating development constraints with per capita income growth is flawed on a number of grounds. Overcoming poverty is a multifaceted process that not only involves improving living standards but also requires attention to a great variety of structural gaps that limit and retard inclusive growth of the kind that addresses poverty and inequality issues. Lower-middle and upper- middle-income countries do not fall into homogenous categories: they are very different in terms of poverty rates, social inclusion, and production, institutional and financial capacity.

Development is a broad and multifaceted concept that envisions not only improving living standards but also achieving sustainable and inclusive growth that addresses the social and economic inequalities that characterize countries. It also implies fostering conditions to create and establish political, economic and social systems that will promote respect, diversity, human dignity and equality. The consequences of grouping together countries whose economic and social circumstances are sometimes very distinct and heterogeneous in terms of development challenges is that polices such as on when to terminate foreign aid may be misapplied. Moreover, both in terms of needs and vulnerabilities and in terms of capacities and potential, channels through which policy outcomes may be harnessed might be distorted. Finally, these countries might differ both in size and social conditions dictating that different treatments be meted out to them.

The structural gaps approach recognises this limitation in the use of per capita income as the basis for grouping countries as lower, middle or upper income. There are a great many countries that have been progressing toward higher per capita income levels —and are thus classified as middle-income— but that still face many development challenges that are not captured using the per capita income approach. Classifying countries by putting the per capita income gap before other gaps will not necessarily provide an adequate picture of the needs and vulnerabilities of economies. Rising per capita income does not necessarily improve these gaps and thus the need for development assistance. While not jettisoning the use of per capita income, the approach compliments this with a vulnerability analysis and uses this as a basis for negotiating future aid support.

Countries in SSA prior to the recent classification were predominantly low income and could thus attract development assistance. With the recent reclassification, (Table 3), there are now 6 Upper Middle Income Countries, 14 Lower Middle Income Countries and 34 Least Developed Countries in Africa. However, this classification does not explain or document the profound differences that exist between and within the upper middle income, lower middle income and least developed groups. If socio-economic variables such as per capita income, income distribution, inequality and poverty level are considered, the variation interval width clearly reveals differences between countries.

The GAPs approach identifies the set of structural gaps (per capita income, poverty, inequality, investment and savings, productivity and innovation, infrastructure, education, health, fiscal, gender and environment) and possibly resources for closing these gaps. Identifying and quantifying the relative magnitude of these gaps for each country is an essential first step for determining where the greatest challenges for the region's economies lie and which areas should be incorporated into new development cooperation agenda. An empirical analysis of these gaps shows that countries may be grouped in different ways, depending on the type of gap considered. It also makes clear that classifying countries by putting the per capita income gap before other gaps will not necessarily provide an adequate picture of the needs and vulnerabilities of the countries of the region. The approach stresses that raising per capita income- and thus narrowing the income gap- does not necessarily mean that the other gaps will disappear or improve. Targeting social services and social infrastructure will reduce poverty but may be ineffective if identified gaps are not dealt with. The gaps analysis finds that the obstacles holding back the development of middle-income countries are greater and more varied and that these countries differ in terms of their capacities to address them (ECLAC, 2012). A major advantage in this approach is that countries in a particular region might then focus on advocacy to deal with peculiar gaps or vulnerabilities and mobilise international resources towards this end irrespective of their classification.

Outline of the Gap-Based approach.

The structural gaps approach uses a hierarchical cluster analysis cum median method to identify countries that fall into certain clusters using a number of identified gaps that are adjudged critical for development. There are four major steps involved in this approach.

Step 1: Identify the major gaps. This means identifying a number of structural development gaps that not only impede vigorous and sustainable economic growth in the countries of the region but also limit the potential for attaining inclusive growth. Some of the gaps identified for this study are: Per capita income gap, poverty gap, equality gap, savings and investment gap, Infrastructure gap, health gap, fiscal gap, gender gap and environmental gap.

Step 2: Select indicators to be used as proxies for development gaps (see Appendix … for selected indicators and their measurements)

Step 3: Do a cluster analysis to allocate countries into groups. Cluster analysis (CA) is an exploratory data analysis tool for organizing observed data (in our case the various indicators of gaps) to meaningful groups, or clusters, which maximizes the similarity of cases within each cluster while maximizing the dissimilarity between groups. Identifying and quantifying the relative magnitude of these gaps for each country is an essential first step for determining where the greatest challenges for the group of countries lie and which areas should be incorporated into new development cooperation agenda.

An analysis of structural gaps based on this methodology using a 4 cluster analysis is shown in Table 4. For brevity, we have selected only five indicators for our discussion in this analysis. The other indicators would benefit from the same analysis.

Per capita income

The discussion of clustering under this category is quite illustrative. Only one country comes under cluster 4 which is the highest per capita GDP. Three other countries come next- Botswana, Mauritius, South Africa and Gabon. It is instructive to note that these countries also feature as Upper Middle Income Countries using the World Bank and OECD/DAC classification. All the other countries except Angola, Namibia, Swaziland, and Congo Republic fall under cluster 2. Angola, Namibia, Swaziland and Congo republic fall under cluster 1 which is the group with the lowest per capita GDP. It is instructive to note that Angola and Namibia are classified as Upper Middle Income countries by the World Bank. while Swaziland is classified a lower middle income economy.

Poverty gap

Our poverty gap is measured as the mean shortfall from the poverty line using the $2 per day poverty measure expressed as a percentage of the poverty line. It reflects the depth of poverty as well as its incidence. The clustering here shows the depth of poverty in SSA irrespective of what the patterns indicate going by the World Bank classification. Cluster 4 reports only one country, Congo. In cluster 3, we have 5 countries, Burundi, CAR, Liberia, Madagascar and Nigeria. The preponderance of countries come under cluster 2 and I. In cluster 2, we have Botswana, Cape Verde, Cameroon, Cote d'Ivoire, Ethiopia, Gabon, Gambia, Ghana, Mauritania, Senegal, Seychelles and South Africa while the rest of the countries fall under cluster 1. The mix of developed and developing economies represented in both clusters shows that when it comes to the issue of the depth and incidence of poverty, it is difficult to discriminate between countries in SSA.

Health gap

There are a number of health indicators that could be used in measuring health gap but we have used the number of assisted births per total births. The data was available across countries hence this was used. Cluster 4 reported one country, Nigeria. In cluster 3, there were 3 countries, Sudan, Niger, and Ethiopia. In cluster 2 we have Benin, Botswana, Cape Verde, Congo, the DRC, Namibia, Sao Tome and Principe, Seychelles, and South Africa. All the other countries are in cluster 1. This again underlines the fact that most of the countries in Africa have similar health deficiencies.

Inequality gap

For inequality, we used the Gini coefficient. There are broad similarities between the clustering in poverty gap and health gap. In cluster 4, we have Zimbabwe, Swaziland, Sao Tome and Principe, Rwanda, Nigeria, Lesotho, Kenya, Gambia, Congo and Cape Verde. In cluster 3, we have Botswana, CAR, Namibia, Seychelles, South Africa, and Zambia. In cluster 2, we have Benin, Burkina Faso, Burundi, Cameroon, Chad, Ethiopia, Guinea Bissau,

Liberia, Mali, Niger, Sierra Leone, Sudan, Tanzania, and Togo. All other countries are in cluster 1. By our ordering, cluster 4 will represent the countries with the greatest inequality. Surprisingly, Gabon and Angola rated as two UMICs also fall into cluster 1 which reports the least inequality. A cursory look at Figure 3 shows that our clustering behaviour closely reflects the pattern reported in the figure.

Figure 6: Gini Coefficient for selected African countries
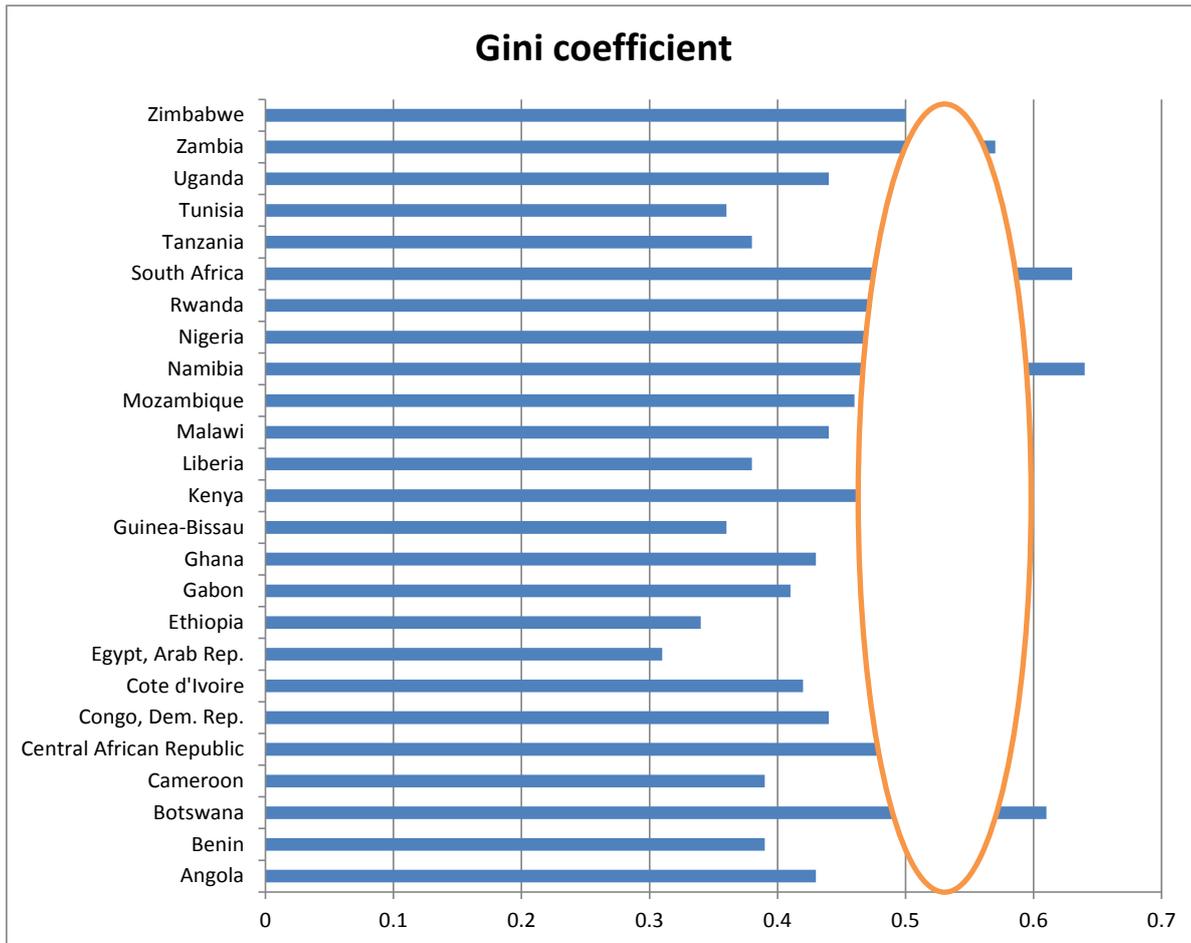
Our Analysis of variance (ANOVA) confirmed the results in Table 5. The decision rule is to reject the null hypothesis if the significance value is less than alpha (0.005) and to accept otherwise. The intragroup similarity and intergroup differences were confirmed by the tests conducted. The significance values in the case of Education gap, health gap and poverty gap respectively are less than alpha = .05, leading us to reject the null hypothesis. We ran both the Brown Forsythe test and the Welch test to confirm the robustness of our results.

The results are shown in Appendix 3

TABLE 2: ANOVA TABLE FOR SSA DEVELOPMENTALGAP						
		Sum of Squares	df	Mean Square	F	Sig.
Health index	Between Groups	8973.589	3	2991.196	31.913	.000
	Within Groups	2905.658	31	93.731		
	Total	11879.246	34			
Poverty Gap index using 1.25	Between Groups	3924.168	3	1308.056	23.907	.000
	Within Groups	1696.142	31	54.714		
	Total	5620.310	34			
Inequality Gap Clusters	Between Groups	709.187	3	236.396	5.462	.004
	Within Groups	1341.753	31	43.282		
	Total	2050.939	34			
Education Gap Clusters	Between Groups	27.517	3	9.172	2.673	.065
	Within Groups	106.367	31	3.431		
	Total	133.884	34			

Also of much importance to us is the intragroup similarity of countries. Countries with high per capita income and those with rather low incomes shared the same clusters for many of our structural group variables thus underlining the inappropriateness of using per capita income as the basis for allocating foreign aid. For instance on all counts, classifying countries such as Namibia, South Africa and Seychelles as Upper middle Incomes Countries(UMICs0 and reducing foreign aid to these economies on account of this undermines the structural defects and vulnerabilities of these economies and their need for aid.

To conclude this section, our analysis shows that the ranking and classification of countries by per capita income may not coincide with the classification obtained on the basis of other gaps. The analysis shows that income level cannot be equated with development level, because an increase in income and hence a reduction in the income gap does not necessarily mean an improvement in the other gaps. There are as many classifications as there are criteria for identifying the principal obstacles to development in each case and thereby determining

which of the specific gaps should be given the greatest consideration and weighting. Since the importance of the gaps for different countries may differ according to priorities and objectives, there is a need for greater dialogue between donor and recipient countries, and recipients will have to play a proactive role in determining priority areas and ways of channelling foreign aid.

6. Foreign Aid to the health sector and health outcomes in Africa

The issue of foreign aid to health is crucial for Africa because of the role that health plays in economic development and inclusive growth. The preceding section clearly shows that the health gap cluster incorporates most economies. The intragroup similarity on the health gap variable shows clearly the intensity and the depth of the health challenges cutting across Africa. Although there has been a dramatic improvement in the health sector in most of Africa in the past 50 years, HIV/AIDS and other diseases still remain predominant. Africa is plagued with a double disease burden with traditional communicable diseases (HIV/AIDS, malaria and tuberculosis) and in recent times chronic conditions such as cardiovascular diseases, diabetes, and cancer becoming rampant. In spite of huge increase in health expenditures, health systems in Africa remain underfunded, ill-staffed, and overstretched. Rapid economic growth in the face of more unequal societies and slow poverty reduction outcomes has created problems of access.

Africa's demographic shifts are posing a severe health challenge. Population is expected to double by 2020 in Africa. The youth cohort in population is expected to rise. Africa is estimated to have the largest workforce in the world by 2040. Moreover, Africa has an aging population. In 2010, people aged 60 or older accounted for just 6% of Africa's population, but this is expected to rise to 13% over the next 50 years. The twin pressures of the youth bulge and population aging will exert increasing pressure on health systems. The changing environmental landscape threatens to increase poverty and health problems in Africa. The health impacts from climate change and increasing urbanization is bound to be pronounced.

Aid flows to African healthcare systems particularly the middle income countries are likely to decline. Foreign aid from traditional international donors to developing countries is declining and will likely play a reduced role in African development over the next 50 years. Official development assistance targeting health in Africa started to decline in 2009 in the wake of the global financial crisis. In the past, African healthcare systems have been heavily reliant on international donor funding from development banks, UN agencies, and organizations such as the Global Fund. The likelihood that this declining trend might continue is real for the MICs in spite of the fact that greater wealth has not translated into improved health, particularly for the poorest segments of society.

The exact nature of the relationship between health and economic growth has not been fully exploited in the literature partly because of the difficulty in separating cause and effect and partly because of the absence of long term data series in these economies. However, studies have confirmed the close links between poverty and well-being indicators like education and health (Ravallon, 1991, Thomas, 1991, Strauss, 1988). Over (1991) argues that poor health

outcomes affect both quality and quantity of labour and reduce the number of hours worked. Health increases human potentialities of all kinds. Everyone can benefit from better health in the present, and improved health for the young will lead to healthier population in the future. Better child health and nutrition promotes future productivity growth directly by helping children develop into stronger and healthier adults. Improved health increases the productivity in the developing countries as the work often relies on strength and endurance. Marginal productivity of health is likely to be higher relative to higher income countries. Adults in poorer countries are more likely to be afflicted with health problems, some of which stem from early childhood

Donors fund recipient countries' health projects with one goal in mind- to improve the health of their populations. This they do through building health infrastructures, training medical workers and increasing access to medical care. If aid can be linked to improvements in health outcomes, it can be considered effective.

The basic question we attempt to answer in this section is does health-targeted aid lead to improvements in health outcomes? Not much empirical work has been done in this area. In their survey of four developing countries, Croghan, Beatty and Ron (2006) using a qualitative methodology, argued that health interventions, foreign aid and technical assistance led to improvements in infant mortality rates irrespective of factors such as good governance, quality of health care systems and economic development. Easterly (2006) in spite of his scepticism about foreign aid agrees that foreign aid targeted at the health and education sectors could achieve positive outcomes in SSA. Our study benefited immensely from Kitterman et al (2008) which is one of the main quantitative analysis that has been done in this area.

Our hypothesis is that foreign aid targeted at the health sector will have significant effects on health outcomes. We expect that health-targeted aid will have negative effects on under-5-mortality rate and infant mortality rates and a positive effect on life expectancy. As a further extension of our analysis in the previous section, we also tested for these effects differently for UMICs, LMICs and developing countries. The use of the three indicators stem from their popularity in both medical and social science research as valid measures of well-being especially in developing economies.

In order to test the hypothesized relationship, we created a panel data set containing observations for 46 SSA countries for which the indicators of interest were reported at least once for the period 1995-2012. Data was obtained mostly form the World Development Indicators published by the World Bank. We transformed the aid totals by their natural logarithms to obtain a more linear relationship. We controlled for other factors such as GDP per capita, GDP growth rate, government expenditure on health so as to enable us isolate the effects of health targeted aid.

We analysed the effect of health-targeted aid using robust GLS panel regressions, We used both random and fixed effects methods to enable us compare the results. Our discussion is

based on the random-effects to enable us minimise the effect of variables omitted in our regressions which may vary in effect between countries and across time.

Results

Table 1 (b) shows the results using infant mortality rate as the dependent variable. The results clearly show that aid has a statistically significant negative effect on the variables of interest supporting the hypothesis that aid improves this health outcome. Controls for GNI growth rate, per capita income and health expenditure were also significant.

Table 1B: Using Life expectancy as the dependent variable we have the following result

VARIABLES	Random Effects
gni_growth	-0.0336
	(0.0356)
gni_cap	0.00905***
	(0.00257)
h_exp	0.110
	(0.870)
h_oda	0.0251*
	(0.0141)
Constant	48.56***
	(1.516)
Observations	507
Number of country	35

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 1B: Using Infant Mortality   as the dependent variable we have the following result

	(1)
VARIABLES	Random Effects
gni_growth	0.0810**
	(0.0393)
gni_cap	-0.00683***
	(0.00112)
h_exp	-2.756***
	(0.331)
h_oda	-0.217***
	(0.0193)
Constant	163.0***
	(6.760)
Observations	514

Number of country	37

<div align="center">
Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1
</div>

Table 1C: Using Infant Mortality Under 5 as the dependent variable we have the following result

VARIABLES	Random Effects
gni_growth	0.0404**
	(0.0200)
gni_cap	-0.00375***
	(0.000573)
h_exp	-1.367***
	(0.169)
h_oda	-0.115***
	(0.00981)
Constant	97.65***
	(3.743)
Observations	514

<div align="center">
Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1
</div>

Table 1(c) reports the results of the regression using under-5-mortality. Again, the results show that health targeted aid has a significant negative effect on this variable. GNI growth, and GNI per capita, health expenditure also had large , statistically significant relationship.

The impact of health aid on life expectancy is not as robust as in infant mortality and under-5-mortality rates. This is possible for a number of reasons. First, given the impact of HIV/AIDs in SSA during the period covered by our data, it is not impossible that the pandemic may have done considerable damage to life expectancy to the extent of obfuscating the positive effects of health development assistance. Moreover, life expectancy is an inherently sticky indicator which may take time to work itself out. In almost all our regressions health aid together with the other explanatory variables account significantly.

Our results for the groups based on the World Bank Atlas classification, displays similar results (see Appendix). Thus, we can conclude that together with other control variables, foreign aid on health is an important variable when we discuss health outcomes in Africa.

7. Conclusion

The unsettled nature of the results from most of the empirical work on the impact of foreign aid on economic growth and the recent declines in aid to countries in the aftermath of the global financial crisis and the graduation of many of these countries into higher income groups motivated this study. Our argument is that classifying countries using the per capita GDP variable as in the Atlas method could further endanger the flow of aid to developing countries. We established that many of these countries have a number of vulnerabilities as defined by structural gaps which will continue to inspire the need for foreign aid. We zeroed in on health aid because of the severity of the health gap identified by our hierarchical clustering. Our results clearly show that it is very difficult to discriminate between countries when it comes to the parlous nature of health delivery in Africa.

Specifically, our empirical analysis showed that health sector targeted aid is a significant variable in the explanation of health outcomes. An increase in health aid leads to a fall in infant mortality rate and under-5-mortality rate. Though not very significant, we found a positive relationship between health aid and life expectancy.

Health aid may lead to improved health outcomes in Africa. What our analysis therefore tells us is that efforts must be intensified in the bid to improve both new pledges and the disbursement of health aid especially in those countries plagued by HIV/AIDS, malaria and tuberculosis. The curtailment of aid founded on the notion that many countries in Africa have grown and should be weaned from foreign aid without encouraging policy makers could be counterproductive.

REFERENCES

Aizenman, J Jinjarak, Y and Park, D (2011) Capital Flows and Economic Growth in the Era of Financial Integration and Crisis, 1990-2010, NBER Working Paper No. 17502

Alesina, AF and Dollar, D (2000) "Who Gives Foreign Aid to Whom and Why?" (with David Dollar), Journal of Economic Growth, 5(1), p p. 33-63.

Bailliu, J N (2000) Private Capital Flows, Financial Development, and Economic Growth in Developing Countries, Working Paper 2000-15

Burnside, C and Dollar, D (2000) "Aid, Policies, and Growth," American Economic Review, 90(4): 847-868.

Croghan, Thomas W., Amanda Beatty, and Aviva Ron. 2006. Routes to better health for children in four developing countries. Milbank Quarterly 84: 333-358.

Easterly, William. 2006. The White Man's Burden: Why the West's Efforts to Aid the Rest Have Done So Much Ill and So Little Good. New York: Penguin Books.

ECLAC, 2012, Middle-Income Countries: a Structural-gap Approach,34th Session of ECLAC, San Salvador , August.

Frot, E (2009) "Early vs. Late in Aid Partnerships and Implications for Tackling Aid Fragmentation," SITE Working Paper Series 1, Stockholm Institute of Transition Economics, Stockholm School of Economics

Gebhard Nathaniel, Katherine Kitterman, Ashley Anne Mitchell and Daniel Nielson (2008) "Healthy Aid? The (In)effectiveness of health-targeted Development Assistance.

Giuliano P and Ruiz-Arranz M (2009) "Remittances, Financial Development and Growth," Journal of Development Economics, 90, 144-152.

Guillaumont, P and Chauvet,L (2001) "Aid and Performance: A Reassessment," The Journal of Development Studies, Taylor and Francis Journals, vol. 37(6), pages 66-92

Kasekende, L., D. Kitabire, and M. Martin (1997) "Capital Inflows and Macroeconomic Policy in sub-Saharan Africa", in UNCTAD, International Monetary and Financial Issues for the 1990s, Vol. VIII (New York and Geneva: United Nations).

Kuziemko I, Werker E, (2006) How much is a Seat on the Security Council Worth? Foreign Aid and Bribery at the United Nations, Journal of Political Economy 114;5; 905-930.

Maizels, A and Machinko, N. K (1984) Motivations for Aid to Developing Countries, World Development, September, 12(9), pp. 879-900.

Mold, A., Olcer, D., and A. Prizzon, 2008, "The fallout from the financial crisis: Will aid budget fall victim to the credit crisis?" OECD Development Center Policy Insights. No. 85 (Paris: Organization for Economic Co-operation and Development).

Murshid, A P and Ashoka M (2011) "Growth from International Capital Flows: The Role of Volatility Regimes," IMF Working Papers 11/90, International Monetary Fund.

Organization for Economic Co-operation and Development, 2009, International Development Statistics online (OECD-DAC). Available on: http://www.oecd.org/dataoecd/50/17/5037721.htm.

POVcalNet (2012): http://iresearch.worldbank.org/PovcalNet/index.htm?1#.

Prasad, E. S., R. G. Rajan, and A. Subramanian (2007) "Foreign Capital and Economic Growth," Brookings Papers on Economic Activity, 38, 153–230.

Ravallion, Martin (1991) Does Undernutrition Respond to Incomes and Prices? Dominance Tests for Indonesia. Living Standard Measurement Survey. Working Paper No. 82. Washington, DC: World Bank.

Sachs, J.D. and A.M. Warner (1995) "Economic Reform and the Process of Global Integration," Brookings Papers on Economic Activity, 1995:1, pp. 1-118.

Schraeder, P.J., Hook, S.W. and Taylor, B. (1998) 'Clarifying the Foreign Aid Puzzle: A Comparison of American, Japanese, French and Swedish Flows', World Politics 50(2): 294-323.

Strauss, John (1988) The Effects of Household and Community Characteristics on the Nutrition of Preschool Children: Evidence from Rural Cote d'Ivôire. Living Standard Measurement Survey. Working Paper No. 40. Washington, DC: World Bank.

Summer, Andy 2012: Where do the world's poor live? A new Update IDS WORKING PAPER Volume 2012 No 393.

Taslim, M A and Weliwita, A (2000) "The Inverse Relation between Saving and Aid: An Alternative Explanation," Journal of Economic Development, Chung-Ang Unviersity, Department of Economics, vol. 25(1), pages 75-94, June.

Thomas, Duncan (1991) Gender Differences in Household Resources Allocation. Living Standard Measurement Survey. Working Paper No. 79. Washington, DC: World Bank.

Tingley, Dustin. 2010. "Donors and Domestic Politics: Political influences on foreign aid effort." Quarterly Review of Economics and Finance 50 (1): 40-49.

UNECA, 2007: http://www.uneca.org/publications/economic-report-africa-2007.

United Nations Development Programme (2012) Towards Sustaining MDG Goals, Chapter 5, Available on www.undp.org/content/.../Towards_SustainingMDGProgress_Ch5.pdf.

World Bank (2013). World Development Indicators. Washington D.C.

APPENDIX

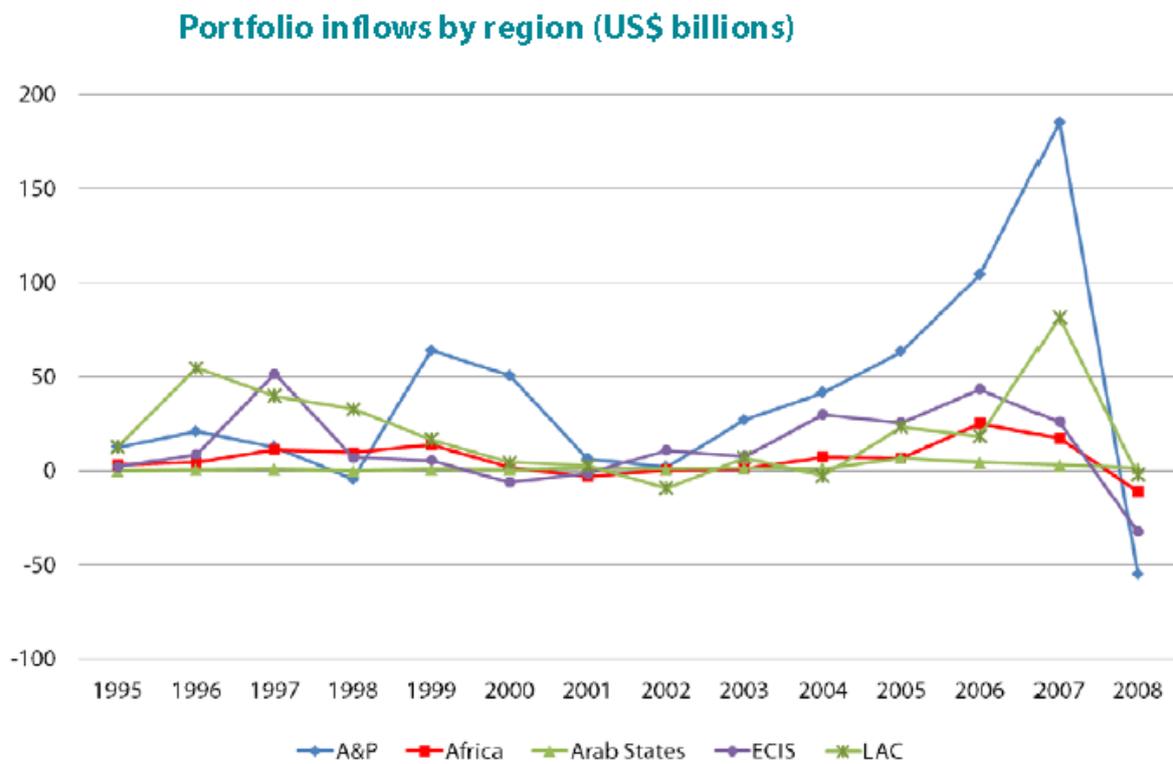## Appendix 2: Health Outcomes Summary for the Sub-Saharan African countries (SSA)

VARIABLES	(1) N	(2) mean	(3) sd	(4) min	(5) max
year	792	2,004	5.191	1,995	2,012
l_exp	742	52.98	6.677	31.24	74.21
m_inf	792	76.77	27.40	11.20	153.1
m_under5	792	123.1	49.70	13.10	278.9
gni_growth	554	2.661	22.21	-76.03	446.0
gni_cap	763	1,355	2,169	80	13,560
h_exp	726	9.366	3.984	0	26.90
h_oda	741	32.96	63.41	-2.770	568.2
country	792	22.50	12.71	1	44

Appendix 3: Health outcomes Summary for Upper middle Incomes Countries in SSA

VARIABLES	(1) N	(2) mean	(3) sd	(4) min	(5) max
year	90	2,004	5.217	1,995	2,012
l_exp	79	60.53	9.497	46.25	73.46
m_inf	90	32.66	16.52	11.20	54.60
m_under5	90	46.42	26.86	13.10	86.90
gni_growth	71	3.118	3.524	-3.923	13.85
gni_cap	90	5,284	2,587	1,890	12,350
h_exp	68	8.933	2.793	5.622	17.98
h_oda	75	11.13	23.81	-1.876	187.7
country	90	3	1.422	1	5
UMIC	90	1	0	1	1

Appendix3: Portfolio Inflows by regions

Portfolio inflows by region (US$ billions)

Source: *Calculated using data from IMF, Balance of Payments Statistics 2009*

Country	Education Gap Clusters	Per capita Gap Clusters	Innovation Gap Clusters	Saving Gap Clusters	Investment Gap Clusters	Health Gap Clusters	Poverty Gap Clusters	Inequality Gap Clusters	Gender inequality gap cluster
1:Angola	1	1	1	1	1	1	1	1	_
2:Benin	1	2	_	2	1	2	1	2	4
3:Botswana	1	3	_	2	2	2	2	3	2
4:Burkina Faso	1	2	1	2	1	1	1	2	4
5:Burundi	1	2	_	2	1	1	3	2	2
6:Cabo Verde	2	1	_	2		2	2	4	
7:Cameroon	1	2	1	2	2	1	2	2	4
8:Central African Republic	1	2	_	2	1	1	3	3	4
9:Chad	1	2	_	2	1	3	1	2	_
10:Comoros	1	2		2	1		1	3	_
11:Congo, Dem. Rep.	1	2	1	2	1	2	4	1	4
12:Congo, Rep.	1	1	_	2	1	2	1	4	4
13:Cote d'Ivoire	1	2	1	2	1	1	2	1	4
14:Eritrea	1	2	_	2	1	_	_	_	_
15:Ethiopia	1	2	1	2	2	3	2	2	
16.Gabon	_	3	_	2	1		2	1	2
17:Gambia, The	1	2	_	2	1	1	2	4	3
18:Ghana	1	2	2	2	1	1	2	1	3
19:Guinea-Bissau	1	2	_	2	1	1	1	2	_
20:Guinea	1	2	_	2	1	1	1	2	_
21:Kenya	1	2	1	2	2	1	1	4	4
22:Lesotho	1	2	_	2	1	1	1	4	3
23. Liberia	_	2	_	2	1	1	3	2	4
24:Madagascar	1	2	1	2	1	1	3	1	1
25:Malawi	1	2	1	2	1	1	1	1	3
26:Mali	1	2	1	2	1	1	1	2	4
27:Mauritania	1	2	_	2	1	1	2	1	2
28:Mauritius	3	3	_	2	1	2		_	_
29:Mozambique	1	2	2	2	1	1	1	1	3
30:Namibia	1	1	_	2	1	2		3	2
31:Niger	1	2	1	2	1	3	1	2	4
32:Nigeria	1	2	2	3	3	4	3	4	
33:Rwanda	1	2	_	2	1	1	1	4	2
34:Sao Tome and Principe	1	_	_	_	_	2	_	4	
35:Senegal	1	2	2	2	1	1	2	1	3
36:Seychelles	1	4	_			_	2	3	_
37:Sierra Leone	1	2	_	2	1	1	1	2	4
38:South Africa	4	3	3	4	4	2	2	3	2
39.Sudan	_	2	4			3	_	2	4
40:Swaziland	1	1	_	2	2	2	1	4	3
41:Tanzania	1	2	1	2	1	1	1	2	3
42:Togo	1	2	_	2	2	1	1	2	3
43:Uganda	1	2	1	2	1	1	1	1	3
44:Zambia	1	2	1	2	1	1	1	3	4
45:Zimbabwe	1	_	1	2	1	1	1	4	3

Developmental Gaps Clustering in SSA

NB: _ means data is not available for the specific country

Sources: World Development Index Database, UNDP Database , IMF Database