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Consult your gods: the questionable economics of development assistance in Africa

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Abstract

This paper assesses the aid-development nexus in 52 African countries using updated data (1996-2010) and a new indicator of human development (adjusted for inequality). The effects of Total Net Official Development Assistance (NODA), NODA from the Development Assistance Committee (DAC) and NODA from Multilateral donors on economic prosperity (at national and per capita levels) are also examined. The findings broadly indicate that development assistance is detrimental to GDP growth, GDP per capita growth and inequality adjusted human development. The magnitude of negativity (which is consistent across specifications and development dynamics) is highest for NODA from Multilateral donors, followed by NODA from DAC countries. Given concerns on the achievement of the MDGs, the relevance of these results point to the deficiency of foreign aid as a sustainable cure to poverty in Africa. Though the stated intents or purposes of aid are socio-economic, the actual impact from the findings negates this. It is a momentous epoch to solve the second tragedy of foreign aid; it is high time economists and policy makers start rethinking the models and theories on which foreign aid is based. In the meantime, it is up to people who care about the poor to hold aid agencies accountable for piecemeal results. Policy implications and caveats are discussed.

JEL Classification: B20; F35; F50; O10; O55

Keywords: Foreign Aid; Political Economy; Development; Africa

1. Introduction

Foreign aid has been motivated by a mixture of economic interests, altruism, historical ties and geo-strategic (imperialist) considerations¹. Donors, mostly from the Western capitalist world have offered foreign aid to developing countries in the form of grants and soft loans,

¹ The imperialist origin of poverty is still widely debated. See Alam (2004).

especially after the emergence of dozens of states with the decolonization process (Oya, 2006). While foreign aid may be necessary in the short-term due to certain humanitarian concerns, there has been an endless debate over the effectiveness of aid to Africa and the linkage between aid, conditionality and economic policies in recipient countries². This debate has led many analysts to question the usefulness of aid and the need for alternatives (Oya, 2006)³. It has been substantially documented that the Cold war and the battle for geopolitical control in Africa between superpowers was perhaps the most important determinant of aid increases in the 1980s (Degnbol-Martinussen & Engberg-Pedersen, 2003).

Over five decades since the Official Development Assistance (ODA) programs were instituted, the concern over the effectiveness of foreign aid remains widely debated and unsolved. In 2005 the West tried hardest to save Africa. In July of that year, the Group of Eight (G8) agreed to double foreign aid to Africa from \$25 billion a year to \$50 billion to finance the ‘Big push’, as well as cancel African aid-loans contracted during previous attempts at a ‘Big push’. Before this effort, Africa was already the most aid-intensive region in the world. In September of that same year, world leaders gathered at the United Nations to further discuss progress on ending poverty in the continent. To point out some frustrating statistics, sub-Saharan Africa contains 11% of the world’s population, but produces only 1% of the world’s GDP (Easterly, 2005a). In the median African nation, 43% of the population lives on less than one dollar a day. On the World Food Program list, of the 23 countries with more than 35% of the

² This debate on conditionality has recently intensified when the British and the U.S governments threatened to cut-off aid to African nations because of the prosecution of homosexuals in recipient countries. Many African government officials and activists have seen the threat as an insult to both African values and moral wellbeing.

³ The debate extends to areas of external assistance like structural adjustment policies by the International Monetary Fund (IMF). There is substantially documented evidence that the IMF’s neoliberal policies have been perilous to South Korean development after the 1997 crisis (Crotty & Lee, 2002, 2006, 2009) and the main cause of the Argentinean crisis in the late 1990s and early 2000s (Levy & Duménil, 2006). Even recent findings from Africa suggest that the IMF’s structural adjustment policies may not have the investment effects in the future (Asongu, 2013a).

population malnourished, 17 are in Africa. The long and brutal civil wars in Angola, Chad, Somalia, Sierra Leon, Liberia...etc, not to mention Rwanda's genocide and recent carnages in Darfur-Sudan and the Democratic Republic of Congo (registering the world's highest war casualties since World War II). In fact, seven of the eight recent cases of total societal breakdown into anarchy in the world known to literature have been in Africa: Angola, Burundi, Liberia, Sudan, Sierra Leone, Somalia and Zaire/Congo (beside Afghanistan).

Much of the literature has focused on the macroeconomic impact of aid, but mixed results have been reported and those that have revealed significant positive effects face heavy methodological criticisms. In assessing the impact of development assistance, a great chunk of studies focus on the effect of aid-flows on GDP growth and other macroeconomic variables (investment or public consumption). The underlying assumption here is the notion that aid is destined to bridge the saving-investment gap poor countries face (Rostow, 1960; Chenery & Strout, 1966; Easterly, 2005a). Surprisingly there has been much less research conducted on the impact of foreign aid on the evolution of human development (Masud & Yontcheva, 2005), in spite of the change in objectives announced by the donor community which have evolved from intensive industrialization programs advocated in the 1950s to more recent poverty-reducing objectives such as the Millennium Development Goals (MDGs). With the year 2015 drawing nigh, it is imperative to assess the donors' objective of reaching the MDGs. In plainer terms, investigating the effectiveness of development assistance on human development in developing countries in the run-up to 2015 could provide crucial policy options to donor and multilateral agencies on their assistance impact.

The contribution of this paper to the literature is sixfold. Firstly, we cut adrift existing literature and assess the aid-development nexus from three dimensions (GDP growth, GDP per

capita growth and human development). Another important contribution worth pointing out is the use of a hitherto human development measure unemployed in the literature: the Inequality Adjusted Human Development Index (IHDI) first published in the 2010 Human Development Report⁴. Secondly, a great bulk of the literature is based on data collected between 1960 and 1995. By using recent data (1996-2010), this paper provides an updated account of trends in the nexuses. Also, results from recent data will enable a more robust projection of the MDGs⁵. Thirdly; the global economic downturn has sparked concerns about donor's continued willingness to give (Ahmed et al., 2011). Hence, assessing the development effects of foreign aid in the most aid-intensive continent could throw more light into the debate⁶. Fourthly, there is currently a shifting of policy space to aid alternatives from East Asia. Learning from the East Asian success stories has been hampered by an unequal bargaining power of African governments, vis-à-vis Western development partners. For example, the Chinese 'cooperative and non-interference' oriented aid and foreign direct investment (FDI) policy in Africa is viewed by some as a better alternative. Thus, the outcome of this study may either reinforce the growing mentality or negate it. Fifthly, this paper broadly extends the Okada & Samreth (2012) and Asongu (2012a, 2013b) debate 'on the effect of foreign-aid on corruption' from an institutional

⁴As suggested by Boone (1996), aid effectiveness should not only be measured by its impact on GDP growth. Therefore, our analysis can both capture GDP and human development targeted development assistance. Moreover, while past research on the aid-development nexus has used the HDI unadjusted for inequality, this paper is to the best of our knowledge the first that uses the IHDI in the aid-development assessment.

⁵ A great chunk of the literature is based on data collected between 1960 and 1995. By using recent data (1996-2010), this paper provides an updated account of the nexus.

⁶ Koechlin (2007) has recently reframed the debate by assessing three ambitious books (Sachs's *The End of Poverty*, Bhagwati's *In Defense of Globalization*, and Easterly's *The Elusive Quest for Growth*), and has concluded that, the insights and shortcomings of these three books remind us that the status quo is not working and that a rich understanding of globalization and development requires a serious consideration of alternative visions of each. Some new ways of theorizing development in light of the globalized systems of food production have included the USA led 'genetically modified food aid' to the Southern African region, which is widely criticized by the European Union (Herrick, 2008).

to an economic perspective⁷. Sixthly; our focus on 52 of the 54 countries in Africa provides a broad view on the continent in which the aid-development debate is most intense⁸.

The remainder of the paper is organized in the following manner. Section 2 presents the literature on aid effectiveness. Data and methodology are presented and described respectively in Section 3. Empirical analysis is covered in Section 4. Section 5 concludes.

2. Theoretical highlights, conflicts in the literature, Africa's need and Western responses

2.1 Theoretical highlights and conflicts in the literature

The concern of whether aid improves GDP growth can be traced back to the two-gap model (Chenery & Strout, 1966), which remains the most influential theoretical underpinning of the aid effectiveness literature. In this model, developing countries face constraints on savings and export earnings that deter investment and economic growth. In spite of the severe criticisms since its inception, this model has provided the underlying principles both for early aid policies (Easterly, 1999) and regression specifications of a great many aid-growth (savings) empirical papers (Masud & Yontcheva, 2005).

The literature on the effectiveness of aid has almost exclusively been focused on the macroeconomic impacts of aid, assessing the effects of aid on economic savings, investment and growth. The lack of analytical framework, heavy reliance on empirical evidence (which is often

⁷ “The Okada & Samreth (2012, EL) finding that aid deters corruption could have an important influence on policy and academic debates. This paper partially negates their criticism of the mainstream approach to the aid-development nexus. Using updated data (1996-2010) from 52 African countries, we provide robust evidence of a positive aid-corruption nexus. Development assistance fuels (mitigates) corruption (the control of corruption) in the African continent. As a policy implication, the Okada & Samreth (2012, EL) finding for developing countries may not be relevant for Africa” (Asongu, 2012a, p. 1). In response to some informal discussions that have emerged citing that the Okada & Samreth (2012) and Asongu (2012a) findings are not directly comparable because of differences in methodological underpinnings, Asongu (2013b) has confirmed his stance on the debate by using the Okada & Samreth methodology and extending the grounds of his position from corruption to eight institutional quality dynamics.

⁸ We focus mainly on Africa where the aid-development debate is most tensed. While previous studies have mixed countries in various continental regions or focused on a restricted set of countries owing to constraints in data availability, this paper uses data from 52 of the 54 African countries.

ambiguous at best) and inconclusive results with recently refined methodologies (Masud & Yontcheva, 2005), have left the subject matter widely open to debate. For the purpose of clarity, literature pertaining to the effectiveness of aid on growth (development) could be clubbed into two strands as summarized in Table 1: one advocating the negative consequences of aid and the other acknowledging the positive rewards of development assistance.

The first strand entails authors presenting the case for the insignificant impact of aid on investment, savings or growth. Aid has been shown to breed unproductive public consumption (Mosley et al., 1992) without increasing investment. This latter point has been supported by Boone (1996) and Reichel (1995). Ghura (1995) has pointed to the negative effect of aid on domestic savings while Pedersen (1996) asserts, foreign aid distorts development and leads to aid dependency. Very recent African aid-development literature has established that aid fuels corruption (Asongu, 2012a), a negative nexus that has been extended to other government quality dynamics of political stability, government effectiveness, rule of law, voice & accountability and regulation quality (Asongu, 2012b; Asongu, 2013b).

In the second strand, we find studies favoring positive effects of aid on growth and development. Among these works, we shall highlight that of Burnside & Dollar (2000) which concludes that aid can be effective when economic (monetary, fiscal and trade) policies are good. The Burnside & Dollar (2000) work has received abundant comments from researchers (Guillaumont & Chauvet, 2001; Colier & Dehn, 2001; Easterly et al., 2003), whose results have been challenged as being “extremely data dependent” (Clemens et al., 2004). While Clemens et al., (2004) have shown that aid is beneficial in the short-term; Minou & Reddy (2010) have recently established that the beneficial effects could also be in the long-run. Gomanee et al. (2003) have concluded that aid has both a direct effect on welfare and an indirect impact through

public spending and social services. The indirect perspective has been confirmed by Mosley et al. (2004) on poverty and wellbeing in recipient countries.

Table 1: Summary of conflicts in the literature

Researchers	Main findings
First-strand: Aid does not lead to growth (development)	
Mosley et al. (1992)	Aid increases unproductive public consumption and fails to promote growth.
Reichel (1995)	Aid fails to promote savings owing to the substitution effect.
Ghura (1995)	Aid negatively impacts savings.
Boone (1996)	Aid is insignificant in improving economic development for two reasons: poverty is not caused by capital shortage and it is not optimal for politicians to adjust distortionary policies when they receive aid flows.
Pedersen (1996)	Foreign Aid distorts development and leads to aid dependency.
Asongu (2012a)	Foreign aid fuels corruption and mitigates the control of corruption
Asongu (2012b)	Development assistance is perilous to government quality dynamics
Asongu (2013b)	Foreign aid is detrimental to institutional quality irrespective of initial levels in institutional development.
Second-strand : Aid improves growth (development)	
Ghura (1995)	Aids positively impacts savings for good adjusters.
Burnside & Dollar (2000)	Aid can be effective when policies and economic management are good.
Guillaumont & Chauvet (2001)	Aid effectiveness is contingent on environmental factors (shocks and hazards).
Collier & Dehn (2001)	Aid effectiveness depends on negative supply shocks. Targeting aid contingent on negative supply shocks is better than targeting based on good policies.
Collier & Dollar (2001)	The positive effect of aid on poverty depends on its impact on per capita income growth and the impact of per capita income growth on poverty reduction.
Feeny (2003)	The sectoral allocation of foreign aid to Papua New Guinea has been broadly in line with a strategy to effectively reduce poverty and increase human wellbeing.
Gomanee et al. (2003)	Aid has both a direct effect on welfare and an indirect effect through public spending on social services.
Clement et al. (2004)	Aid has a short-term positive impact on growth.
Ishfaq (2004)	Foreign aid, in a limited way though, has helped in reducing the extent of poverty in Pakistan.
Mosley et al. (2004)	Foreign assistance has an indirect impact on poverty and the wellbeing of recipient countries.
Addison et al. (2005)	Aid increases pro-poor public expenditure and has a positive effect on growth. Aid broadly works to mitigate poverty, and poverty would be higher in the absence of aid.
Fielding et al. (2006)	There is a straight forward positive impact of aid on development outcomes.
Minou & Reddy (2010)	Development assistance positively affects growth in the long-term.
Okada & Samreth (2012)	Foreign aid reduces corruption.

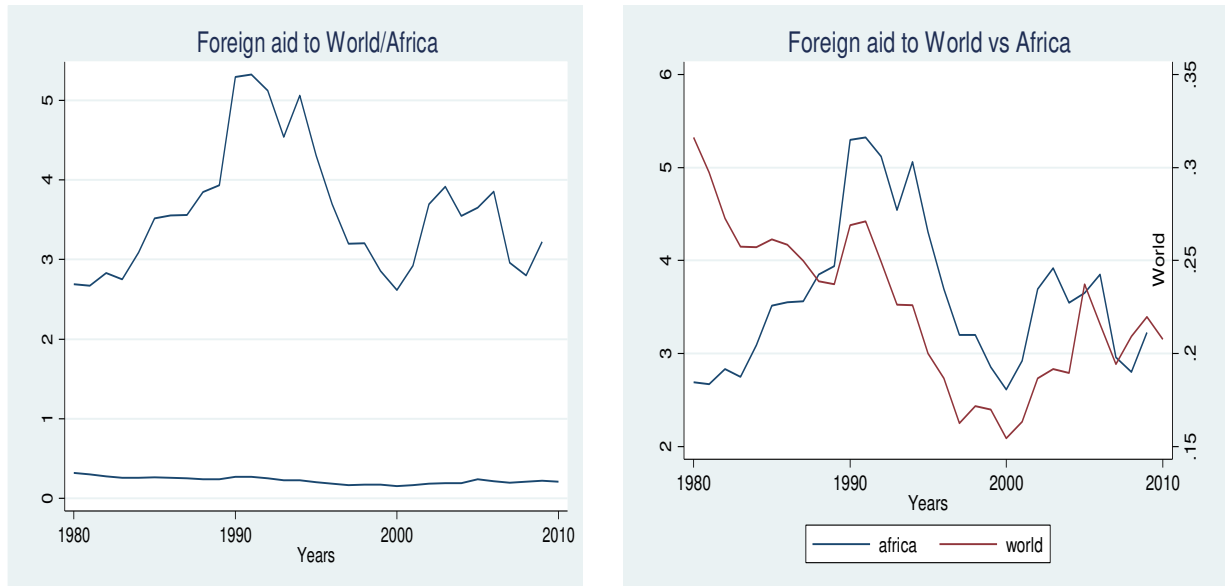
Source (Author)

While the effectiveness of aid is more straightforward for some (Ishfaq, 2004; Addison et al., 2005; Fielding et al., 2006), the Okada & Samreth (2012) findings ‘on the effect of foreign aid on corruption’ have recently been object of intense debate from an African perspective (Asongu, 2012a; Asongu, 2013b). Addison et al. (2005) have concluded that aid strengthens pro-poor public expenditure and has a positive impact on growth because it broadly mitigates poverty. Their position that poverty will be higher in the absence of aid has been confirmed by Ishfaq (2004). Of all examined proponents of a positive aid-development nexus, Fielding et al. (2006) have been the most optimistic in their conclusion on a straight forward positive impact of aid on development outcomes.

2. 2 Africa’s need and Western responses

The bulk of African countries lie low on standard international comparisons. In line with Easterly (2005a), they occupy most of the bottom places in income per capita, percent of population living in extreme poverty (less than one US dollar a day), life expectancy, infant mortality, literacy, AIDS prevalence and the HDI. The last four decades have been those of some growth disappointment in Africa. The West has responded to Africa’s tragedy with intensive involvement of foreign aid agencies and international organizations. On average, African countries receive much more aid as a percentage of their GDPs than other developing countries. The West does more because Africa is poor, however its efforts are supposed to have a positive impact on the GDPs of recipient countries.

Figure 1: Foreign aid to Africa/World



Source (World Bank)

As illustrated in Figure 1 above, Africa has received more aid in terms of GDP relative to World aid in terms of Gross National Income. The sharp drop in aid from the 1990s marks the end of the Cold war with the fall of the Berlin wall. This confirms the thesis that one of the prime motivations for development assistance was imperialism and the quest for geo-political influence. Accordingly, among donors most engaged in the Cold war struggle (particularly the United States and the Soviet Union) domestic support for aid evaporated with the end of the global ideological clash. Consistent with Hopkins (2000), among the Organization for Economic Co-operation (OECD) members, the largest declines in aid since 1992 are reported in the United States, followed by close military allies: Germany, Japan, Australia...etc. According to the author, the decline in aid from 1992 to 1998 from each of the OECD countries corresponds fairly well to a rank ordering countries in terms of the intensity of their involvement in cold war activities. However, the erosion of cold war motivations did not affect all donors. Nonaligned

states like Finland and Switzerland which did not use aid for strategic purposes avoided substantial declines in the 1990s.

After the year 2000, with the adoption of the MDGs, foreign aid soared in Africa and only declined again in the wake of the global financial crisis when donors' commitment reduced owing to budget austerity measures. From the first graph in Figure 1, it could also be noticed that while aid to Africa varied with the above discussed factors, World aid remained relatively stable. Even if World aid varied as shown in the second graph, the variations are marginal compared to those of African aid because the units of their corresponding y axes are not directly comparable.

Consistent with Easterly (2005a), theories and empirics on Western assistance to Africa can be discussed in five main strands: the Big-Push models and foreign aid; project interventions in terms of education and health; policies and growth models; aid, institutions and development; dysfunctional donors and; the shift in focus of aid from development to poverty alleviation.

In the first strand, 'Big-Push' models suggest that Africa is poor because it is stuck in a "poverty trap". To emerge from the poverty trap, it needs a large aid-financed increase in investment: a 'Big Push'. Both the Harrod-Domar and the Solow growth models have been used to discuss the mechanisms of circumstances surrounding the poverty trap. The first mechanism suggests that savings are quite low for people who are very close to subsistence (as would be predicted by a Stone-Geary utility function). In a closed economy saving equals investment and therefore investment is low. In the Harrod-Domar model with the capital constraint binding, growth of GDP per capita is simply a linear function of the investment (=saving) rate minus the population and depreciation rates. If the saving is quite low to compensate for population growth and the depreciation of per capita, per capita growth will be zero or negative. In the 1950s and 1960s, early development economists postulated a desirable per capita growth rate and calculated

the “investment requirement” to meet this target: the distance between the low domestic saving rate and the “investment requirement” was termed the “Financing Gap”. The purpose of aid was to cover the Financing Gap (Rostow, 1960; Chenery & Strout, 1966). Accordingly, this model predicted a strong growth effect for foreign aid through its role in boosting domestic investment above what domestic savings would finance. Although this model soon went out of favor in the academic literature on development, it remained interesting in international organizations like the World Bank. Current policies advocating for the promotion of foreign aid to Africa have explicitly cited this model (Devarajan et al., 2002 at the World Bank; Blair Commission on Africa, 2005; Sachs, 2005). Sach (2005, p. 1) argues: “*success in ending the poverty trap will be much easier than it appears*”. He foretells that an increase in foreign aid and debt relief can end Africa’s poverty in our generation. In a closed economy, savings depend not only on the distance from subsistence but also on the incentive to save depending on the rate of return to saving and investment. In an open economy, investment is not only a function of domestic saving but also depends on the rate of return to investment. As shown by Collier et al., (2001), Africa’s extensive capital flight is estimated at 39%. Thus, this large chunk of Africa’s capital stock is held outside the continent because domestic investors compare the returns to domestic and foreign investments before investment decisions. More so bank lenders will invest in the economy if returns are attractive enough. In the Solow model, a strong relationship between income and savings rates could generate multiple equilibria at low and high levels of capital stock, resurfacing the possibility of a poverty trap. Again, the low domestic savings would not be a qualm in an open economy in which investment responds to incentives. Kraay & Raddatz (2005) have shown that the relationship between initial capital and saving must follow an S-

shaped curve to generate a poverty-trap; however they fail to find evidence for this shape in the data.

The second mechanism on poverty is some kind of nonconvexity of the production function in the Solow model. There could be strong external economies to investment or there maybe high fixed costs to investment projects such that a minimum threshold must be surpassed for investment to be productive. This notion was part of the inspiration for the original article that first proposed a ‘Big Push’ (Rosentein-Rodan, 1943). This strand has had a longer shelf-life in the academic literature than the “Financing Gap” model because theorists have a great zeal in models with multiple equilibria (Murphy et al., 1989). In emphasizing such nonconvexities, Sach (2005) suggests that Africa is in a poverty trap. ‘Big Push’ models predict strong effects of aid on investment and growth (development). This prediction has been the subject of a vast empirical literature which this paper has already detailed above (see Table 1). As we shall discuss in the last strand below, critics of these mechanisms (Boone, 1996, Masud & Yontcheva, 2005) believe that the effect of aid ought not to be measured by macroeconomic indicators like investment (and GDP growth), but by socio-economic indicators that reflect the direct impact of aid in terms of improvements in social services and consumption by the poor.

In the second strand, we discuss policy measures on education and health. Another view of Africa’s poverty has been that, it results from low human capital (poor health and education) and infrastructure. This emphasis which began in the 1960s is still a major theme in explaining Africa’s poverty. While enrollments have expanded rapidly, the quality of education is hampered by missing inputs like textbooks and other school material, weak incentives for teachers, corruption in education bureaucracies and disruption of schooling by political crisis (Filmer & Pritchett, 1997). In health, some of the initial progress has slowed, possibly due to corruption in

the health system (studies in Cameroon, Guinea, Uganda and Tanzania estimated that 30 to 70% of government drugs disappeared before reaching patients). Also, there are more complicated health problems that cannot be solved with routine methods (Filmer et al., 2000; Pritchett & Woolcock, 2004).

The third strand highlights growth models. The structural adjustment program is another view of why Africa remains poor. It gained prominence in the early 1980s with the advent of the “Washington consensus” and the ‘pro-free market’ arguments from personalities like the World Bank chief economist Anne Krueger. According to this view, Africa is poor because its governments have chosen bad policies. Indeed, it is obvious that many African governments pursued policies very destructive of growth and economic development: artificially overvalued currencies, high black market premiums on foreign exchange, controls on interest rates that led to negative real interest rates for savers, drastic restrictions on international trade and reliance on state enterprise. This ‘bad policies’ view of Africa’s poverty led to a different perception of the role of aid. The role of Western donors and international institutions within this framework was to induce changes in African macroeconomic policies by making aid conditional on such changes. Structural adjustment loans of the IMF and the World Bank were therefore embodied in this approach: which had as objective an “adjustment with growth”. How successful were these loans in facilitating “adjustment”; that is to say: changing policy? How successful was development assistance in inducing better policies? The answer has been consistently that, Western donors and international institutions were not very successful in changing policy (Alesina & Dollar, 2002; Burnside & Dollar, 2000; Van de Walle, 2001; Easterly, 2005b). However answers from these studies are based on old data (1970-2000). The current paper uses updated data to find new answers.

In the fourth strand on ‘aid, institutions and development’, a large literature on institutions and development suggests that Africa is poor because it has poor institutions: dictatorship, lack of property rights, weak courts and contract enforcement, violence and political instability, hostile regulatory environment for private business and high inflation. In a bid to end African poverty, according to this view the West needs to promote good institutions. Svensson (2000) finds that aid increases corruption in ethnically fractionalized countries (which is the situation of most African states). Knack (2001) discovers that higher aid worsens bureaucratic quality, leads to violating the law with increasing impunity and more corruption (controlling for potential reverse causality). Similarly, Djankov et al. (2005) find that high aid caused setbacks to democracy between 1960-1999. Indeed they found aid’s effect on democracy to be worse than that of the “natural resource curse”.

The fifth strand presents some evidence on dysfunctional donors. According to Easterly (2005a), while all the attention in the aid and development debate is focused on Africa, it is also interesting to assess how effective donors have been at delivering valuable services to Africa. There have been alarming signs of donor dysfunction. A case in point is the over 2 billion US dollars spent on roads in Tanzania over the last 20 years. Yet roads have not improved. Even by bureaucratic standards, foreign aid bureaucracy is dire. Why? Perhaps it is because efforts and results in aid are largely unobservable and noticed only by the voiceless poor. Thus, the lack of results visibility makes aid bureaucracies unaccountable. Unlike private firms or democratic governments in rich countries, aid agencies do not face a “voter test” or “a market test”. Africa’s poor could be conceived as political orphans; with no voice or feedback on whether aid is helping them and nobody accountable to them.

In the sixth strand, it is interesting to discuss the shift in focus of aid from development to more poverty reducing initiatives like the MDGs. Consistent with Masud & Yontcheva (2005, p. 5-6), there was a change in strategic motivations of aid donors in the late 1990s. As suggested by Boone (1996), one of the reasons advanced for the disappointing results of most aid oriented studies is that GDP growth is not the right measure of aid effectiveness. Accordingly, aid could be increasing consumption rather than investment (which would explain the disappointing results of studies on growth) and still mitigate poverty via either ‘higher consumption of the poor or greater provision of services to the poor’. In light of these developments (on studies that measured the impact of aid on social indicators instead of macroeconomic variables), the avowed objectives of the donor community evolved from industrialization programs to poverty reduction initiatives, reflected by the adoption of the MDGs. Many of the targets of these MDGs first discussed at international conferences and summits held during the 1990s were later compiled and became known as the International Development Goals. In September 2000, member states of the United Nations unanimously adopted the Millennium Declaration and the General Assembly acknowledged the MDGs as part of the road map for implementing the Millennium Declaration.

3. Data and Methodology

3.1 Data

Borrowing from Clement et al. (2004), aggregate aid could be divided into three categories: (1) emergency and humanitarian aid (likely not to be positively correlated with growth in the short-term)⁹; (2) aid that affects growth only over the long-term (if at all); such as aid to support democracy, the environment, health or education; and (3) aid that plausibly could

⁹ “Funding for a new road might affect economic activity in short order, funding for a vaccination campaign might only affect growth decades later, and humanitarian assistance may never affect growth” (Clements et al., 2004, p. 4).

stimulate growth in the long-term, including budget and balance of payments support, investments in infrastructure and aid for productive sectors such as agricultural and industrial. While studies on aid effectiveness implicitly define donors' objective as solely the promotion of economic growth or the reduction of poverty in the recipient countries, a parallel strand of the literature on aid allocation has shown that most donors often pursue a different underlying agenda: allocating aid according to their own strategic interest. Masud & Yontcheva (2005) have pointed-out that if a significant part of aid is allocated for strategic purposes, no positive impact in terms of growth or poverty alleviation should be expected. We partially refute this claim by asserting that, foreign aid irrespective of vested donor-interest should contribute to development or economic deterioration (even in marginal terms) either directly or indirectly. This is essentially because strategic foreign aid could be assimilated to foreign direct investment that also has strategic business interests. Accordingly, even if the strategic foreign aid was to end-up in the pockets of corrupt officials, it may still be laundered and reinvested in the domestic economy.

We examine a panel of 52 African countries with data from African Development Indicators (ADI) of the World Bank (WB). Details of summary statistics (Appendix 1), correlation analysis (Appendix 2), variable definitions (Appendix 3) and presentation of countries (Appendix 4) are found in the appendices. In a bid to obtain results with more updated policy implications, the dataset spans from 1996 to 2010. Dependent variables include: GDP growth, GDP per capita growth and IHDI, while independent variables are dynamics of Net Official Development Assistance (NODA). For robustness purposes we use three measures of NODA: total NODA, NODA from Multilateral donors and NODA from the Development

Assistance Committee (DAC) countries¹⁰. In the regressions we control for population growth rate, regulation quality, democracy and public investment. The choice of control variables is constrained by the degrees of freedom necessary for overidentifying restrictions tests at second-stage regressions (more than two control variables will result in exact or under-identification; meaning instruments are either equal to or less than the number of endogenous explaining variables respectively). Instrumental variables are: income-levels, religious-dominations and legal-origins. These instruments have been largely documented in the economic development literature (La Porta et al., 1997; Beck et al., 2003; Agbor, 2011). The choice of the instruments is also consistent with recent African human development (Asongu, 2013c), institutions (Asongu, 2012a) and finance (Asongu, 2012c) literature. Religion has been documented as a significant determinant of foreign aid (Nelson, 1988). From intuition, high-income countries are less prone to aid than their middle- and low-income counterparts.

3.2 Methodology

The methodological underpinning largely borrowed from Beck et al. (2003) is typically consistent with recent African human development (Asongu, 2013c), institutions (Asongu, 2012a) and finance (Asongu, 2012c) literature. Accordingly, we first regress the foreign aid indicators on the instrumental variables and then save the fitted values that are subsequently used as regressors in the main (second-stage) equation of the Instrumental Variable (IV) empirical strategy. The intuitions motivating the choice of the instrumental variables are the following. (1) Economic prosperity (in terms of income-levels) affects aid decisions since it is normal to expect

¹⁰ Multilateral donors are international organizations such the World Bank that provide development assistance. They also act as an agency for channeling funds between donor countries and recipient countries. There are 24 DAC members. They include Australia, Austria, Belgium, Canada, Denmark, European Union, Finland, France, Germany, Greece, Ireland, Italy, Japan, Korea, Luxembourg, The Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom and the United States.

that aid might be higher in low-income countries. (2) The colonial heritage in terms of legal origins also influences how former colonial powers allocate aid to poorer countries. Accordingly, it should be expected that more aid would be allocated to former colonies in view of preserving some strategic interests. (3) Few would object to the view that faith matters in foreign aid allocation decisions. This position has been empirically confirmed by recent literature on the ‘Muslim-ness’ of aid recipients: oil, immigration and terrorism (Loud et al., 2008).

3.2.1 Endogeneity

While development assistance has a bearing on the development of the recipient country (Addison et al., 2005; Fielding et al., 2006), the reverse effect cannot be ruled-out as aid from donor agencies (countries) is conditional on development (institutional) characteristics of recipient countries. Such factors maybe environmental (Guillaumont & Chauvet, 2001), supply-shocks (Collier & Dehn, 2001) or even effective policies and economic management standards (Burnside & Dollar, 2000). We are thus faced with an issue of endogeneity owing to reverse-causality and omitted variables, since the NODA indicators are correlated with the error term in the equation of interest. To address this issue we shall confirm the presence of endogeneity with the Hausman-test and employ an estimation technique that takes account of the endogeneity issue.

3.2.2 Estimation technique

In accordance with Beck et al. (2003) and recent African law-finance literature (Asongu, 2011) the paper adopts an IV estimation method. IV estimation addresses the puzzle of endogeneity and thus avoids the inconsistency of estimated coefficients by Ordinary Least Squares (OLS) when the exogenous variables are correlated with the error term in the main

equation. In line with Asongu (2011), the Two-Stage-Least-Squares (TSLS) estimation method adopted by this study will entail the following steps.

First-stage regression:

$$NODA_{it} = \gamma_0 + \gamma_1(\text{legalorigin})_i + \gamma_2(\text{religion})_i + \gamma_3(\text{incomelevel})_i + \alpha_i X_{it} + v_{it} \quad (1)$$

Second-stage regression:

$$Growth_{it} = \beta_0 + \beta_1(NODA)_{it} + \delta_i X_{it} + \mu_{it} \quad (2)$$

NODA stands for Net Official Development Assistance (Total NODA, NODA from Multilateral donors and NODA from DAC countries). Instrumental variables are legal-origins, dominant-religions and income-levels. Growth stands for economic prosperity (at aggregate and per capita levels) and human development. In Eq. (1), the NODA dynamics are regressed on the instruments and the fitted values are used as regressors in the second-stage regressions (Eq. 2). In the two equations, X is a set of control variables. For the first and second equations, v and u , respectively denote the disturbance terms. γ_1 , γ_2 , γ_3 are the respective effects of legal origin, religious domination and income-levels on NODA, while α_i is the incidence of the control variables on NODA. β_1 and δ_i represent the impact of NODA and the control variables on development dynamics respectively.

We adopt the following steps in the analysis:

- justify the choice of a TSLS over an OLS estimation technique with the Hausman-test for endogeneity;
- show that the instruments are exogenous to the endogenous components of explaining variables (aid channels), conditional on other covariates (control variables);

-ensure the instruments are valid and not correlated with the error-term in the main equation with an Over-identifying Restrictions (OIR) test.

3.2.3 Robustness checks

To ensure robustness in the analysis, the following checks will be carried-out: (1) usage of alternative indicators of aid; (2) employment of two distinct interchangeable sets of moment conditions that encompass every category of the instruments; (3) usage of alternative indicators of growth and development; (4) account for the concern of endogeneity and; (5) regressions under both restricted and unrestricted hypotheses.

4. Empirical analysis

This section addresses the ability of the exogenous components of NODA dynamics to account for differences in human development, GDP growth and GDP per capita growth; the ability of the instruments to explain variations in the endogenous components of NODA dynamics and the possibility of the instruments to account for growth and human development beyond NODA dynamic channels. To make these assessments, we use the panel TSLS-IV estimation method with legal-origins, income-levels, and religious-dominations as instrumental variables.

4.1 Development assistance and instruments

Table 2 below assesses the validity of the instruments in explaining cross-country differences in NODA dynamics.

Table 2: First-stage regressions

		Net Official Development Assistance (NODA)					
		NODAgdp		NODAMDgdp		NODADACgdp	
		1 st Set	2 nd Set	1 st Set	2 nd Set	1 st Set	2 nd Set
Instruments	Constant	3.675* (1.889)	-1.244 (-0.740)	1.835** (2.271)	-1.237* (-1.771)	1.794 (1.381)	0.007 (0.006)
	English	1.009 (0.928)	---	0.677 (1.500)	---	0.294 (0.405)	---
	French	---	-1.009 (-0.928)	---	-0.677 (-1.500)	---	-0.294 (-0.405)
	Christianity	2.084* (1.901)	---	0.081 (0.178)	---	2.051*** (2.801)	---
	Islam	---	-2.084* (-1.901)	---	-0.081 (-0.178)	---	-2.051*** (-2.801)
	L.Income	---	8.014*** (6.102)	---	3.831*** (7.022)	---	4.132*** (4.710)
	M. Income	-9.093*** (-6.051)	---	-4.112*** (-6.587)	---	-4.924*** (-4.905)	---
	LMIncome	1.079 (0.674)	---	0.281 (0.422)	---	0.792 (0.740)	---
	UMIncome	---	-1.079 (-0.674)	---	-0.281 (-0.422)	---	-0.792 (-0.740)
	Control Variables	Popg	3.342*** (5.784)	3.342*** (5.784)	1.559*** (6.496)	1.559*** (6.496)	1.755*** (4.548)
Regulation		-2.377*** (-2.811)	-2.377*** (-2.811)	-0.739** (-2.106)	-0.739** (-2.106)	-1.625*** (-2.877)	-1.625*** (-2.877)
Adjusted R ²		0.257	0.257	0.285	0.285	0.193	0.193
Fisher Statistics		32.845***	32.845***	37.627***	37.627***	22.922***	22.922***
Observations		551	551	551	551	551	551

L: Low. LM: Lower Middle. UM: Upper Middle. Ivt: Investment. Pop: population. ***,**:***: significance levels of 10%, 5% and 1% respectively. NODAgdp: NODA on GDP. NODAMDgdp: NODA from Multilateral Donors on GDP. NODADACgdp: NODA from DAC countries on GDP. Student statistics ratios in brackets. 1st Set: First Set of Instruments. 2nd Set: Second Set of Instruments.

Clearly, it could be observed that distinguishing African countries by legal-origins, income levels and religious-dominations help explain cross-country differences in NODA. Based on the Fisher-test, the instruments taken together enter significantly in all regressions at the 1% significance level. Broadly the following findings could be established. (1) Christian-dominant countries have received more aid than their Islam-oriented counterparts. (2) Consistent with common sense and economic theory, Low-income countries are prone to more aid than Middle-income countries. The control variables are significant with the right signs as development aid increases with population growth and decreases with improvement in regulation quality (which ensures better management and distribution of national wealth).

4.2 Human development, growth and development assistance

Table 3 investigates two main issues: (1) the ability of the NODA channels to account for development dynamics and, (2) the possibility of the instrumental variables explaining development dynamics beyond NODA channels. Whereas we address the first issue by assessing the significance of estimated coefficients, the second is investigated with the Cragg-Donald and Sargan-OIR tests for instrument strength and validity respectively. The null hypothesis of the Sargan test is the view that the instruments account for development dynamics only through NODA channels. Thus a rejection of the null hypothesis is the rejection of the view that the instruments explain development dynamics through no other mechanisms than NODA channels. The null hypothesis of Cragg-Donald test is the stance that the instruments are weak; thus its rejection points to the strength of the instruments at first-stage regressions. The Hausman-test for endogeneity precedes the IV regressions and thus justifies the choice of the estimation technique. The null hypothesis of this test is the position that OLS estimates are efficient and consistent. Therefore a rejection of the null hypothesis points to the issue of reverse causality (endogeneity) we have elucidated earlier (see Section 3.2.1) and hence lends credit to the choice of a TSLS-IV estimation technique. Otherwise we model by OLS. For robustness purposes, results are replicated using an alternative set of instrumental variables, as shown towards the end of Table 3. In the unrestricted regressions of Table 3, the null hypothesis of the Hausman-test is rejected for all the regressions; confirming the presence of endogeneity and hence the choice of the TSLS-IV approach.

With regard to the first concern which is addressed by the significance of estimated coefficients, it can firmly be established that NODA dynamics significantly decrease development and growth in Africa. The negative effect is most in aid from Multilateral donors

and more in aid from DAC countries. These results are broadly consistent with the aid-development literature on developing countries (Boone, 1996; Reichel, 1995; Ghura, 1995; Pedersen, 1996).

Table 3: Unrestricted Two Stage Least Squares

	Human Development			GDP growth			GDP per capita growth		
Constant	5.530 (1.294)	5.295 (1.269)	5.663 (1.294)	-1.832 (-0.537)	-1.822 (-0.535)	-1.906 (-0.555)	-2.214 (-0.712)	-2.208 (-0.715)	-2.326 (-0.734)
NODAgdp	-0.172** (-2.036)	---	---	-0.105* (-1.862)	---	---	-0.170*** (-3.305)	---	---
NODAMDgdp	---	-0.423** (-2.062)	---	---	-0.234* (-1.829)	---	---	-0.378*** (-3.251)	---
NODADACgdp	---	---	-0.289** (-1.989)	---	---	-0.188* (-1.852)	---	---	-0.305*** (-3.255)
Democracy	1.217*** (4.845)	1.218*** (4.871)	1.219*** (4.801)	0.023 (0.107)	0.041 (0.193)	0.013 (0.060)	0.080 (0.405)	0.109 (0.566)	0.063 (0.313)
Public Investment	-0.780 (-1.350)	-0.755 (-1.326)	-0.797 (-1.354)	1.000** (2.343)	0.980** (2.299)	1.019** (2.371)	0.788** (2.025)	0.756* (1.953)	0.819** (2.064)
Hausman-test	35.241***	35.115***	35.398***	14.624***	15.384***	13.638***	19.129***	18.691***	19.98***
OIR-Sargan test	1.286	1.231	1.361	0.042	0.212	0.000	0.186	0.789	0.002
P-value	[0.256]	[0.267]	[0.243]	[0.836]	[0.644]	[0.994]	[0.665]	[0.789]	[0.959]
Cragg-Donald	3.020	3.016	2.983	3.719	3.645	3.780	3.719	3.645	3.780
Adjusted R ²	0.052	0.053	0.050	0.010	0.009	0.009	0.016	0.016	0.014
Fisher Statistics	10.827***	10.957***	10.567***	3.723**	3.718**	3.652**	6.581***	6.529***	6.338***
Observations	447	447	447	584	584	584	584	584	584
First-Set of Instruments	Constant; English; Christianity; Middle Income; Lower Middle Income								
Second-Set of Instruments	Constant; French; Islam; Lower Income; Upper Middle Income								

***, **, *: significance levels of 10%, 5% and 1% respectively. (): z-statistics. []: p-values corresponding to OIR-Sargan test. OIR: Overidentifying Restrictions test. NODAgdp: NODA on GDP. NODAMDgdp: NODA from Multilateral Donors on GDP. NODADACgdp: NODA from DAC countries on GDP.

As concerns the second-issue, failure to reject the null hypothesis of the OIR test in all regressions indicates that the instruments do not explain development dynamics through other mechanisms beyond NODA channels. Thus the instruments are valid and not correlated with the error term in the main equation; the instruments do not suffer-from endogeneity. The control variables are significant with the right signs since democracy and public investment improve growth and human development. The analysis in Table 3 is replicated with the second-set of instruments for robustness in the results.

Table 4 below presents restricted TSLS results. First and foremost, the results for the Hausman-test confirm the choice of our estimation approach. Results of the Cragg-Donald and Sargan-OIR tests confirm the strength and validity of the instruments respectively. While the

null hypothesis for weak instrument is rejected (the relative bias is probably less than 5% since the critical value for TSLS bias over OLS is 9.53), the alternative hypothesis of the Sargan-OIR test is rejected. Broadly, findings based on restricted regressions confirm those in Table 3 even after they are replicated with an alternative set of instruments. In substance, both the endogenous regressors and control variables are significant with the right signs.

Consistent with Andrés & Asongu (2013), the models are comparable because they have the same specifications. Hence, it will be interesting to also discuss differences in the magnitude of the estimated coefficients. The negative incidence of NODA is highest for aid from Multilateral donors, followed by aid from DAC countries. This finding is consistent across development dynamics and specifications (restricted or unrestricted). Two explanations could be provided for these differences in magnitude. Firstly, the weight of ‘negative aid effects’ over ‘positive aid effects’ is highest in development assistance from Multilateral donors, followed by aid from DAC countries and tailed by total NODA. Secondly, development assistance that transits through multilateral agencies may go through a lot of bureaucracy (with the increased risks of corruption and delay in timely execution) that entail substantial administrative costs which ultimately reduced its intended positive effects.

The conventional diagnostic tests have been taken into account because the estimation procedure has used: (1) a correlation analysis to mitigate multicollinearity and overparametisation issues; (2) a Hausman test to assess evidence of endogeneity; (3) Cragg-Donald and Sargan OIR tests to assess instrument strength and validity respectively and; (4) restricted and unrestricted modeling hypotheses.

Table 4: Restricted Two Stage Least Squares

	Human Development			GDP growth			GDP per capita growth		
NODAgdp	-0.107 (-1.589)	---	---	-0.116** (-2.348)	---	---	-0.184*** (-4.041)	---	---
NODAMDgdp	---	-0.274* (-1.645)	---	---	-0.260** (-2.323)	---	---	-0.410*** (-3.993)	---
NODADACgdp	---	---	-0.175 (-1.535)	---	---	-0.208** (-2.329)	---	---	-0.329*** (-3.974)
Democracy	1.118*** (4.714)	1.119*** (4.754)	1.119*** (4.688)	-0.010 (-0.051)	0.009 (0.049)	-0.022 (-0.110)	0.040 (0.221)	0.071 (0.402)	0.020 (0.110)
Public Investment	-0.056 (-0.391)	-0.056 (-0.394)	-0.059 (-0.409)	0.779*** (7.223)	0.759*** (7.441)	0.790*** (7.035)	0.520*** (5.263)	0.488*** (5.229)	0.538*** (5.173)
Hausman-test	59.718***	60.848***	58.845***	46.555***	47.966***	45.426***	22.303***	21.634***	22.657***
OIR-Sargan test	3.009	2.889	3.111	0.369	0.557	0.345	0.765	1.425	0.600
P-value	[0.222]	[0.235]	[0.211]	[0.831]	[0.756]	[0.841]	[0.682]	[0.490]	[0.740]
Cragg-Donald	15.651**	15.643**	15.289**	17.469**	17.788**	16.785**	17.469**	17.788**	16.785**
Adjusted R ²	0.024	0.025	0.022	0.010	0.010	0.010	0.017	0.017	0.013
Fisher Statistics	16.329***	16.557***	16.082***	86.000***	86.947***	84.351***	27.897***	28.126***	26.800***
Observations	447	447	447	584	584	584	584	584	584
First-Set of Instruments	Constant; English; Christianity; Middle Income; Lower Middle Income								
Second-Set of Instruments	Constant; French; Islam; Lower Income; Upper Middle Income								

***, **, *: significance levels of 10%, 5% and 1% respectively. (): z-statistics . []: p-values corresponding to OIR-Sargan test. OIR: Overidentifying Restrictions test. For the Cragg-Donald statistics the relative bias is probably less than 5% since the critical value for TSLS bias over OLS is 9.53. NODAgdp: NODA on GDP. NODAMDgdp: NODA from Multilateral Donors on GDP. NODADACgdp: NODA from DAC countries on GDP.

4.3 Further discussion, caveats and policy implications

Before engaging in the discussion of the findings, it is relevant to highlight the intuition motivating the term ‘questionable economics’. A great chunk of development assistance is intended directly or indirectly to boost prosperity at overall economic or per capita income levels. This can be qualified as the ‘economics of development assistance’. Within the framework of our study, any suggestion (theoretical or empirical) to the contrary of the intuition can also logically be termed ‘questionable economics’.

Findings in this paper do not provide grounds for the hope that Western aid can save Africa. Perhaps current views on the roots of poverty in Africa are too simplistic and attempts to change these root causes have underestimated the difficulty of doing so from the outside. The failure of the West’s attempted rescue through aid does not necessarily imply a disastrous outlook for Africa. Africans on their own will have to achieve economic and political changes that promote African economic development and some of these changes are already on course

(such as the movement towards freer markets and the expansion of democracy). There are therefore hopeful signs of the growth of enterprise in Africa. The explosion of cell phones for example has enabled Africa edge the phase of fixed phones in the development process. Economic development in Africa depends on African private sector entrepreneurs, African civic activists and African political reformers... not on what ineffective, unaccountable, bureaucratic, poorly informed and unmotivated outsiders do.

So if anything, what can the West do for Africa? Just because the West cannot save Africa does not logically imply there is nothing the rich countries can do for the African continent. The evidence in the literature (Easterly, 2005a) suggests that aid has been more successful at delivering tangible outcomes like education, health and water. The micro development literature using randomized controlled trails also finds positive effects of some specific development interventions from foreign aid. In a nutshell the West cannot save Africa, but foreign aid can still be beneficial to recipient countries in a piecemeal way to alleviate the sufferings of those desperately poor.

More modest goals from aid in Africa would make it easier to hold aid agencies accountable for the results of aid-targeted projects. The sweeping ambitions of the current Western aid efforts in Africa do not lend themselves to accountability, since (for the most part) the outcome depends on many other factors beside aid agency efforts and attempts to isolate the effects of these efforts have proved fruitless. More accountable agencies might be encouraged to make more progress on piecemeal interventions. These modest goals would render the West much less intrusive in Africa, thus ending the historical tendency towards ever-increasing escalation of Western interventions in the continent. This could be an appealing prospect because the intrusive Western role has made African governments accountable to external actors instead

of their own citizens. It follows that insiders have better information and incentives to solve their own problems than outsiders do. Arguably, local democracy that eases citizen feedback has proven to be a more effective vehicle for good government than outside pressure. On a final note, the more intrusive large-scale interventions have lots of unintended consequences that are hard to evaluate, many of which could be detrimental.

The negative nexuses between foreign aid and development dynamics could also be traceable to how politics influences the allocation and results of aid. Accordingly, aid supplies are substantially conditioned on the willingness of recipients to accede to aid conditions and the political motivations of donor states. A political economy perspective of aid is really crucial in understanding our findings because intensions of aid are products of culture, institutions, power distribution and the dynamics of competitive interests (Schraeder et al., 1998; Hopkins, 2000). Aid is the outcome of bargaining in a kind of political market made up of donor aid bureaucracies, multilateral aid agencies and recipient government officials. Indeed donors pursue multiple goals and these vary over time. For instance, economic gains seem important in Japanese aid, global welfare improvement in Nordic aid and political goals in French aid. Hence, few would object to the inference that our findings may also be explained by a motivation of the French to maintain their colonial legacies and influence in Africa.

This is evident because until the nineties, cold war concerns provided a core motivation for aid. Recipient states did not fail because it was in the interest of the cold war combatants that they did not fail since development was a secondary concern. Hence, rent-seeking elites were not obliged to account to donors for aid effectiveness. It is therefore not surprising that after the cold war, states once propped-up by strategically motivated aid are now openly failing. Some analysis

blame this failure on donor governments, pointing out they had undercut development results by giving priority to other donor state purposes, particularly political and commercial interests.

Imperialism and neocolonialism dominated the agenda on vested donor interests. Accordingly, donors have sought to increase influence for each aid dollar. Except for the rapidly growing countries in Asia, recipients (especially African states) have moved towards offering more concessions to donor preferences. For instance, the ease with which Egypt resisted aid and policy pressures from the West in the 1960s is over. Especially in the African continent, recipient countries have become supplicants, trotting out a range of projects in the hope to capture aid (Lancaster, 1999; Hopkins, 2000). Hence, donors (especially former colonial powers) can bargain for more influence. They can now ask for higher policy standards for their money and what they demand often does not necessarily advance the economics of development assistance. For example, a recent decision by the British and USA governments to cut aid to certain African countries because of anti-gay laws explains this point in a nut shell.

Before concluding, we devote space to discuss the caveats of the paper. Firstly, the assertion to refute the Masud & Yontcheva (2005) claim documented in the data section may not be enough. Minou & Reddy (2010) have decomposed aid into developmental assistance and non-developmental assistance and found that the former has a positive impact on growth. However it should be noted that, we have only partially dismissed the Masud & Yontcheva claim. Secondly, the generalization of our findings to every dimension of development assistance should be treated with caution. We have only provided a global macroeconomic assessment of the incidence of aid on development dynamics. The overall negative incidence could be the result of the weight of ‘negative aid effects’ on ‘positive aid effects’. Hence, the findings by no means indicate that foreign aid is perilous from all standpoints. For instance, we have documented

evidence in the literature where-by, foreign aid has been instrumental in the domains of education, health and infrastructure. More so, from common sense, emergency relief aid in times of natural disasters is logically positive. A critical dimension of this caveat is the need for significant income transfers from rich countries to poor countries to cope with the effects of global warming.

5. Conclusion

Past research on the African aid-growth (development) nexus has been based on data collected before the year 2000 and mostly focused on growth. Literature investigating the effect of aid on human development presents the shortcoming of using an index that is unadjusted for inequality. This paper has used more updated data (1996-2010) and the Inequality adjusted Human Development Index first published in 2010 to complement existing literature. The findings broadly indicate that development assistance is detrimental to GDP growth, GDP per capita growth and human development. Given concerns on the achievement of the MDGs, the relevance of these results point to the deficiency of foreign aid as a sustainable cure to poverty in Africa.

Perhaps the success of action in society depends on more particular facts than anyone can possibly know. As Hayek (1988, p. 76) suggested *“the curious task in economics is to demonstrate to men how little they know about what they imagine they can design”*. The escalation of Western interventions in Africa demonstrates arrogance in the face of very imperfect knowledge. Once economists discard arrogance, there is hope to hold donors accountable for such piecemeal outcomes as well-maintained roads, medicines, water supply, textbooks and nutritional supplements to improve the wellbeing of the poorest people in the world. It is thus momentous time to solve the second tragedy of foreign aid; it is time for

economists and policy makers to start rethinking the models and theories on which foreign aid is based. In the meantime, it is up to people who care about the poor to hold aid agencies accountable for results.

Though the stated intents or purposes of aid are socio-economic, the actual impact from the findings negates this. A potential solution to aid dependence is the development of alternative sources of finance through access to private markets or development of market-based domestic financial systems capable of generating resources for industrialization and long-term development. Caveats have been discussed.

Appendices

Appendix 1: Summary Statistics

	Variables	Mean	S.D	Min.	Max.	Observations
Development Assistance	Net Development Assistance(NODA)	10.811	12.774	-0.251	148.30	704
	NODA from Multilateral Donors	4.481	5.512	-1.985	64.097	704
	NODA from DAC countries	6.244	8.072	-0.679	97.236	704
Growth & Development	Human Development	1.351	6.341	0.127	47.486	551
	GDP growth	4.822	7.351	-31.30	106.28	744
	GDP per capita growth	2.380	6.754	-33.07	90.140	753
Control Variables	Population growth	2.359	1.015	-1.081	10.043	780
	Regulation Quality	-0.673	0.673	-2.729	0.905	620
	Democracy	2.307	4.089	-8.000	10.000	735
	Public Investment	7.489	4.535	0.000	39.984	641
Instrumental Variables	English Common-Law	0.384	0.486	0.000	1.000	780
	French Civil-Law	0.615	0.486	0.000	1.000	780
	Christianity	0.634	0.481	0.000	1.000	780
	Islam	0.365	0.481	0.000	1.000	780
	Low Income	0.576	0.494	0.000	1.000	780
	Middle Income	0.423	0.494	0.000	1.000	780
	Lower Middle Income	0.230	0.421	0.000	1.000	780
	Upper Middle Income	0.192	0.394	0.000	1.000	780

S.D: Standard Deviation. Min: Minimum. Max: Maximum.

Appendix 2: Correlation Analysis

Growth and Development			Development Assistance			Control Variables				Instrumental Variables								
HDI	GDPg	GDPpcg	TA	MLD	DAC	Popg	Reg	Demo	Publ	Eng.	Frch.	Chris	Islam	LI	MI	LMI	UMI	
1.000	-0.026	-0.025	-0.072	-0.079	-0.060	-0.014	0.160	0.131	-0.151	0.185	-0.185	0.101	-0.101	-0.080	0.089	-0.081	0.231	HDI
	1.000	0.987	0.053	0.073	0.034	0.335	0.058	0.059	0.117	-0.002	0.002	0.029	-0.029	-0.052	0.052	-0.000	0.067	GDPg
		1.000	0.000	0.013	-0.008	0.187	0.106	0.075	0.115	0.013	-0.013	0.030	-0.030	-0.125	0.125	0.034	0.122	GDPpcg
			1.000	0.900	0.955	0.368	-0.242	-0.031	0.195	-0.050	0.050	0.058	-0.058	0.450	-0.450	-0.265	-0.281	TA
				1.000	0.733	0.400	-0.220	0.011	0.220	-0.035	0.035	-0.006	0.006	0.475	-0.475	-0.284	-0.293	MLD
					1.000	0.304	-0.230	-0.056	0.141	-0.056	0.056	0.098	-0.098	0.382	-0.382	-0.222	-0.242	DAC
						1.000	-0.195	-0.063	0.043	-0.107	0.107	0.008	-0.008	0.425	-0.425	-0.222	-0.296	Pog
							1.000	0.519	0.078	0.134	-0.134	0.077	-0.077	-0.274	-0.274	0.106	0.231	Reg.
								1.000	0.147	0.177	-0.177	0.163	-0.163	-0.034	0.034	-0.162	0.228	Demo
									1.000	-0.138	0.138	0.008	-0.008	-0.049	0.049	0.002	0.059	Publ
										1.000	-1.000	0.189	-0.189	-0.043	0.043	-0.057	0.115	Eng.
											1.000	-0.189	0.189	0.043	-0.043	0.057	-0.115	Frch.
												1.000	-1.000	-0.003	0.003	-0.153	0.167	Chris
													1.000	0.003	-0.003	0.153	-0.167	Islam
														1.000	-1.000	-0.639	-0.569	LI
															1.000	0.639	0.569	MI
																1.000	-0.267	LMI
																	1.000	UMI

HDI: Human Development Index. GDPg: GDP growth. GDPpcg: GDP per capita growth. TA: Total development assistance. MLD: Development Assistance from Multilateral Donors. DAC: Development Assistance Committee. Popg: Population growth. Reg: Regulation quality. Demo: Democracy. Publ: Public Investment. Eng: English Common-Law. Frch: French Civil-Law. Chris: Christian Religion. LI: Low Income. MI: Middle Income. LMI: Lower Middle Income. UMI: Upper Middle Income.

Appendix 3: Variable Definitions

Variables	Signs	Variable Definitions	Sources
Net Development Assistance (NODA)	NODAgdp	NODA (% of GDP)	World Bank (WDI)
NODA from Multilateral Donors	NODAMDgdp	NODAMDgdp (% of GDP)	World Bank (WDI)
NODA from DAC Donors	NODADACgdp	NODADACgdp (% of GDP)	World Bank (WDI)
Human Development	HDI	Human Development Index	World Bank (WDI)
GDP Growth	GDPg	GDP Growth (annual %)	World Bank (WDI)
GDP Per Capita Growth	GDPpcg	GDP Per Capita Growth (annual %)	World Bank (WDI)
Regulation Quality	R.Q	Regulation Quality (estimate)	World Bank (WDI)
Population growth	Popg	Average annual population growth rate	World Bank (WDI)
Democracy	Demo	Level of Institutionalized Democracy	World Bank (WDI)
Public Investment	PubI	Gross Public Investment (% of GDP)	World Bank (WDI)

WDI: World Bank Development Indicators. DAC: Development Assistance Committee.

Appendix 4: Presentation of Countries

Instruments	Instrument Category	Countries	Num.
Legal-origins	English Common-Law	Botswana, The Gambia, Ghana, Kenya, Lesotho, Liberia, Malawi, Mauritius, Namibia, Nigeria, Seychelles, Sierra Leone, Somalia, South Africa, Sudan, Swaziland, Uganda, Zambia, Tanzania, Zimbabwe.	20
	French Civil-Law	Algeria, Angola, Benin, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Congo Republic, Congo Democratic Republic, Djibouti, Egypt, Eritrea, Equatorial Guinea, Ivory Coast, Ethiopia, Gabon, Guinea, Guinea-Bissau, Libya, Madagascar, Mali, Mauritania, Morocco, Mozambique, Niger, Rwanda, Sao Tome & Principe, Senegal, Togo, Tunisia.	32
Religions	Christianity	Angola, Benin, Botswana, Burundi, Cameroon, Cape Verde, Central African Republic, Congo Republic, Congo Democratic Republic, Ivory Coast, Equatorial Guinea, Ethiopia, Eritrea, Gabon, Ghana, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Rwanda, Seychelles, Sao Tome & Principe, South Africa, Swaziland, Togo, Uganda, Zambia, Tanzania, Zimbabwe.	33
	Islam	Algeria, Burkina Faso, Chad, Djibouti, The Gambia, Egypt, Guinea-Bissau, Guinea, Libya, Mali, Mauritania, Morocco, Niger, Nigeria, Senegal, Sierra Leone, Somalia, Sudan, Tunisia.	19
Income Levels	Low Income	Benin, Burkina Faso, Burundi, Central African Republic, Chad, Congo Republic, Congo Democratic Republic, Djibouti, Ethiopia, Eritrea, The Gambia, Ghana, Guinea-Bissau, Guinea, Kenya, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Niger, Rwanda, Sierra Leone, Somalia, Togo, Uganda, Zambia, Tanzania, Zimbabwe.	30
	Middle Income	Algeria, Angola, Botswana, Cameroon, Cape Verde, Egypt, Ivory Coast, Equatorial Guinea, Gabon, Lesotho, Libya, Mauritius, Morocco, Namibia, Nigeria, Senegal, Seychelles, Sao Tome & Principe, South Africa, Sudan, Swaziland, Tunisia.	22
	Lower Middle Income	Angola, Cameroon, Cape Verde, Egypt, Ivory Coast, Lesotho, Morocco, Nigeria, Sudan, Swaziland, Tunisia.	11
	Upper Middle Income	Algeria, Botswana, Equatorial Guinea, Gabon, Libya, Mauritius, Namibia, Sao Tome & Principe, Seychelles, South Africa.	10

Num: Number of countries

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