AID SELECTIVITY PRACTICE AND AID EFFECTIVENESS IN SUB-SAHARAN AFRICA

Adeniyi Jimmy Adedokun, Abiodun O. Folawewo

(1) Department of Economics, McPherson University, Seriki-Sotayo, Ogun State, Nigeria
(2) Department of Economics, Faculty of the Social Sciences, University of Ibadan, Nigeria

Adeniyi Jimmy Adedokun
Department of Economics, McPherson University
Seriki-Sotayo, Ogun State, Nigeria
jimmyades2005@yahoo.com

ABSTRACT

Foreign aid strategies have undergone restructuring as donors adopt aid selectivity practice to improve aid effectiveness. This study investigates the impact of aid selectivity practice on aid effectiveness (aid-growth relationship) in Sub-Saharan Africa (SSA) and several groups of countries within SSA from 1980 to 2012. Employing system generalized methods of moments (system GMM) technique; the study produces strong evidence that there is significant improvement in aid effectiveness due to aid selectivity practice.

1. INTRODUCTION

In theory, foreign aid is expected to serve as a means of transferring capital from developed economies to developing ones. By doing this, it is likely that aid would stimulate social and economic reforms by providing funds for development projects such as infrastructure, technologies, education, health, and revitalizing crises stricken economies; thus, resulting in economic growth. However, there has been a long standing and sustained debate about aid-growth relationship that has challenged the effectiveness of aid on several grounds; making the aid-growth link vague. Empirical evidences have shown that some of the high recipient countries of foreign aid in the world especially in Sub-Saharan Africa (SSA) such as Central African Republic and Malawi are still unable to account for positive corresponding growth, while few countries like Niger has recorded significant economic progress (see Leeson, 2008).

Interestingly, an important question to ask, is why aid works in certain countries and fails in some others? Past studies have highlighted several determinants of aid effectiveness. The study that made the most popular qualified analysis of aid effectiveness is that of Burnside and Dollar (2000), which posits that macroeconomic policy is an important determining factor of the growth promoting impact of foreign aid. For instance, foreign aid is expected to be more effective in countries with good macroeconomic policies than countries with bad macroeconomic policies. Other studies such as Collier and Dehn (2001), Dalgaard, *et al* (2004), and Ang (2010) opined that export price shocks, climate related differences and financial liberalisation, respectively are channels through which aid affects growth.

Against the background, foreign aid strategies have undergone fundamental reassessment as donors have come up with several measures to ensure that aid becomes more effective. Initially, the concept of aid conditionality[1] was the practice by the donor community. This practice went through little change after the influential study of Burnside and Dollar (2000). After the study, it was acknowledged that aid did promote growth but should be allocated to countries that have adopted good policies. As a result, aid selectivity or *ex-post* conditionality (Ramiarison, 2010) came into practice - where in some cases, foreign aid is attached to several considerations and prerequisites such as macroeconomic policy reforms, governance, and poverty or need, among others. As a general measure of adequacy in recipient countries, aid selectivity in the recent times, in most cases, is pinned on the state of governance. Consequently, efforts toward good governance in developing countries have become a condition for attracting development assistance. However, because donors also consider other factors related to living standards such as poverty when giving aid, it becomes difficult for donors to aim at good governance alone as prerequisite for aid as countries with weak governance most time record low living standards. As a result, aid selectivity practice becomes difficult to implement. Nevertheless, Collier

---

1   The act of conditioning aid on promises of policy reforms

(1999) suggested a dynamic case for a temporary increase in aid. That is, aid should be targeted at inducing policy reform and to increase it even after policies improve because the resulting growth needs to be sustained within a situation of low private investment. According to him, "aid needs to taper in with policy reform rather than to taper out with reform as it is the actual donor behaviour".

A lot of weaknesses can still be identified in developing countries as regards economic reforms. This situation is likely an important reason why donors are agitating for elements that can boost the effectiveness of aid. For instance, in a summit on combating poverty in Africa, held at Gleneagle, Scotland on July 7-8, 2005, the G-8 leaders reiterated the requirement for aid in their final Communiqué. They noted that aid is to be focused on low income countries committed to policy reforms such as growth and poverty reduction, democratic, accountable and transparent government, and sound public financial management (Gleneagles Communique, 2005). All these practices are within the framework of aid selectivity - where aid flows are expected to be channelled to countries that have the necessary environment that can promote effective aid management.

The motivation for this study is therefore to empirically investigate the claim by several studies in the past around aid selectivity. For instance, the World Bank study titled "Assessing Aid" (1998) opined that the allocation of foreign aid would have greater impact on poverty reduction if it were targeted to the poorest countries and among them favoured the ones with stronger economic institutions and policies. Also, the study by Burnside and Dollar (2000) empirically confirmed the view of "Assessing Aid", thus argued that aid is more effective in countries with good macroeconomic policies than others. To support the two above studies and related ones, Dollar and Levin (2006), argued that in year 2000-03, donors, especially multilateral ones are more selective in aid practice than in the year 1984-89. Dollar and Levin (2006) revealed that donors have over the years acted on the two earlier referenced studies and related ones to start aid selectivity practice around year 2000. To conclude the debate on aid selectivity in the literature, the next important investigation should centre on evaluating aid selectivity practice. Therefore, the main focus of this study is to investigate the impact of aid selectivity practice on aid effectiveness in SSA. This study investigates total aid, official development assistance (ODA), as against grouping into multilateral and bilateral aid. Beyond aggregate SSA regression, this study also investigates several groups of countries for robust analysis. Based on the information available to the author, this is the first study to carry out an empirical investigation on the effectiveness of aid selectivity practice.

This study employs a simple methodology by breaking the period of study into two. The first period covers 1980-2000 (pre-selectivity) and the second period covers 2001-2012 (post-selectivity). System generalized methods of moments (system GMM) estimator proposed by Arellano and Bover (1995) and Blundell and Bond

(1998) is used for estimations. The study concludes that aid is more effective in post-selectivity period as against its ineffective impact in pre-selectivity period.

The rest of this paper is organized as follows. Section 2 presents summary of past relevant empirical studies where aid effectiveness debate is well articulated. Section 3 presents the methodology. Section 4 covers analyses of results where the result for pre and post-selectivity period are presented for aggregate SSA and for other groups of countries in SSA. Finally, section 5 presents conclusion.

2. SUMMARY OF PAST RELEVANT EMPIRICAL STUDIES

The trend of debate in the literature on foreign aid and its effectiveness has been very interesting; starting from the justification for foreign assistance, built on the "Big Push" argument initiated by Rosenstein-Rodan (1943, 1944), and developed by Nurkse (1953) to the empirical studies by various authors. The "Big Push" argument suggests that underdeveloped countries need huge amount of investment to move away from backwardness to a path of economic development; but savings required for this huge investment was insufficient. Based on this, mainstream economics suggests a need for external sources of funds (the big push) aimed at complementing domestic savings. Through this means, the 'financing gap' that leaves the underdeveloped countries stuck in a 'poverty trap' can be closed. Because most of the underdeveloped countries have immature capital market coupled with high risk attached to business, they do not stand a chance of making that huge sum of money needed for investment purposes, enough to set them on the path of long run growth, both locally and through borrowing in international market. Accordingly, the 'big push' argument portrays external help (foreign aid) as the fundamental means to complement domestic savings, increase investment and in turn, ensure long run desired growth.

Since the big push argument, several studies have endeavoured to investigate the need for aid and the effectiveness of aid. To do this, extant empirical studies on aid effectiveness concentrated more on aid-growth nexus using different theories and methodologies. As a result, these studies came up with different results which made aid effectiveness literature inconclusive and mix. Among the several existing studies, some argued for a positive relationship between aid and growth (see Islam, 1992; Snyder, 1993; Gounder, 2001; Moreira, 2005; Chowdhury and Das, 2011; and Kargbo, 2012, among others). Authors in this category were of the opinion that aid increased growth by augmenting savings, financing investments and increasing productivity. Conversely, studies such as Friedman, 1958; Bauer, 1972; Boone, 1994 and 1996; Dhakal, Upadhyaya and Upadhyaya, 1996; Bowen, 1998; Easterly, 1999 and 2001; Kanbur, 2000; Radelet, 2006; Duc, 2006; Mallik, 2008; and Leeson, 2008, among others, argued for a negative relationship between aid and growth. A general consensus of this category of study was that aid failed to induce growth. However, each study gave different reasons for supporting this claim. Among the reasons given

are misused of aid (aid fungibility), corruption, poor administration, tying up of aid with precious resources in recipient countries and questionable aid allocation decisions by donors, aid caused investment disincentive for private sector, aid caused savings reduction, bad policies environment (e.g Boone 1996), extremely low level of human capital (e.g Kosack and Tobin, 2006) and volatility in aid disbursement by donors (e.g Kathavate, 2013).

The above highlighted two major strands in the literature caused several reflections and reconsiderations. Scholars started asking questions on the reasons why foreign aid would have significant negative relationship with economic growth. Thus, in a quest to find answers to this, the focus of aid effectiveness debate changed from ordinary aid-growth relationship investigation to a more in-depth one by investigating intermediate factors that could determine aid effectiveness. The ground breaking and leading study in this category was the study by Burnside and Dollar (2000) on 56 countries from 1970 to 1993. The study is focussed on answering two basic questions. One, is the effect of aid on growth conditional on economic policies? And two, do donor governments and agencies allocate more aid to countries with good policies? The answer to the first question is that aid had a positive impact on growth in developing countries with good macroeconomic policies (fiscal, monetary, and trade) but had little effect in the presence of poor policies. As a result, identifying good policies as important ingredient for growth, the study suggested that aid would be more effective if it were more systematically conditioned on good policy. Answer to the second question will be discussed shortly. Other related studies such as Hansen and Tarp, 2001; Dalgaard and Hansen, 2001; Denkabe, 2003; Dalgaard, *et. al.* 2004; Asiedu and Nandwa, 2007; Rajan and Subramanian, 2008; and Minoiu and Reddy, 2009, came up with more factors such as governance, export shocks, financial liberalization, geographical factors, and so on as intermediate factors that determine aid effectiveness.

As the debate on aid effectiveness broadens, scholars also investigated the second question of Burnside and Dollar (2000) that has to do with aid selectivity. For Burnside and Dollar (2000), their study argued that quality of policy had little impact on aid allocation. According to the study, there was no significant tendency for total aid or bilateral aid to favour good policy. In contrast, aid that was managed multilaterally (about one-third of the total) was allocated in favour of good policy. However, as the debate continues, studies started carrying out robust analysis on aid selectivity by employing different methodology from what was used in Burnside and Dollar (2000). Thus, many studies carried out periodic investigation and found that aid selectivity was not in practice in pre-2000, but was practiced in post-2000. For instance, Dollar and Levin (2006) focused their study on 1984-89 and 2000-2003. They found that multilateral aid was more selective than bilateral aid in targeting countries with good rule of law. During 1984-89, both bilateral and multilateral aid had significant negative relationships with rule of law; by 2000-03, this had shifted

to a significant positive relationship for multilateral aid, and a positive but statistically insignificant relationship for bilateral aid. To conclude their study, they found that total foreign aid was more selective in 2000-2003 than in 1984-89. Some studies such as Mohammad (2014) which focused its attention on 2001-2010, supported the findings of Dollar and Levin (2006) by producing strong evidence that countries with good governance were given preferential treatment by donors. The study found that among the six governance indicators, voice and accountability and control of corruption were critical in aid allocation decision.

As can be observed from the above studies, empirical investigation on the impact of aid selectivity practice on aid effectiveness has so far received little or no attention. The focus of investigation in the past related to aid selectivity practice was to examine the extent to which foreign aid (multilateral and bilateral) is selective in terms of democracy and property rights/rule of law. Giving the position of debates in the literature, beyond establishing the fact that donors have adopted aid selectivity practice in post-2000 more than any other period in history, it is therefore imperative to extend the investigation to the effectiveness of aid selectivity practice. Having established that this study has not been able to find a study that empirically investigated the impact of aid selectivity practice on aid effectiveness, it endeavours to bridge the gap in the literature, and to find an answer to an important subject in aid administration. Consequently, results from this study will assist donors to either stick to aid selectivity practice or jettison it. To achieve this result, a simple methodology is adopted where year 2000 is identified as the structural change year in aid administration.

3. METHODOLOGY

3.1. Empirical Model Specification and Variable Measurements

Following aid-growth literature, the objective of the study is investigated by estimating equation (1).

$$Y_{it} = \alpha + \beta_i X_{it} + \gamma_i Z_{it} + \varepsilon^Y_{it} \qquad (1)$$

where 'Y' is the growth rate of real GDP per capita, 'X' is a vector of explanatory variables, 'Z' is a vector of control variables, 'ε' is the error term, subscript 'i' refers to country, 't' refers to time, where β and γ are the estimated parameters. The explanatory variable in this study is foreign aid as a percentage of GDP *(ODA/GDP)*. Control variables are initial level of GDP per capita *(GDP$_{t-1}$)*, investment as a percentage of GDP *(INV/GDP)*, population growth *(POPN)* employed as a proxy for labour force growth, broad money as a percentage of GDP (*M2/GDP*) measures the development of financial markets, openness defined as total trade as a percentage of GDP *(OPEN)*,

inflation (*INF*), government consumption as a percentage of GDP *(GC/GDP)*, and ethnolinguistic fractionalization *(ELF)*.

Generally, data used for estimation in this study cover 47 countries[2] in SSA between the period 1980 and 2012. The study adopted the ELF indices computed by Roeder (2001), where countries with values close to zero are more homogeneous and countries with values close to one are more heterogeneous. GDP and other variables measured at year 2000 constant prices, US Dollars are sourced from the World Bank's World Development Indicators (2014). Aggregate measurement of aid (ODA) is used.

3.2. Estimation Issues and Procedures

In the literature (see Burnside and Dollar, 2000; and Hansen and Tarp 2001; among others), the estimates from aid regression may be biased due to three factors. One, the possibility of endogeneity problem is very likely when estimating relationship between foreign aid and growth. By definition, an explanatory variable is said to be endogenous if it correlates with error term. In such case, the inconsistency of estimation methods such as OLS cannot be overemphasized. Two, in estimating panel models, heterogeneity across countries and time is very likely due to a certain degree of cross-section dependence introduced by unobserved (heterogeneous) country and time-specific factors making the conventional estimators to be seriously biased. Finally, conditional convergence as a result of the inclusion of initial GDP in aid-growth model as common in past studies makes the estimates generated from pooled regression and ordinary instrumental variable methods bias.

To correct for the above shortcomings and at the same time build on previous studies (such as Burnside and Dollar, 2000; Dalgaard and Hansen, 2001; Dalgaard *et. al*., 2004; and Salisu and Ogwumike, 2010, among others) that employed OLS and instrumental variable (IV) methods of 2SLS, this study adopts the "system GMM" estimator, proposed by Arellano and Bover (1995) and Blundell and Bond (1998). The system GMM mitigates the problem of poor instrument in other dynamic panel GMM called "difference GMM[3]". It identified that lagged levels are often rather poor instruments for first differenced variables, especially if the variables are close to a random walk. Thus, it includes lagged levels as well as lagged differences. Specifically, the system GMM uses additional moment conditions in which lagged differences of the dependent variable are orthogonal to levels of the disturbances. According to Asiedu and Nandwa (2007), another advantage of the system GMM estimator is that it reduces finite sample bias by exploiting additional moment conditions where the autoregressive parameter is only weakly identified from the first-differenced equa-

---

2   See Appendix C for the lists of countries. Somalia and South Sudan are not included in the empirical analysis due to data limitation.

3   Difference GMM estimator is proposed by Arellano and Bond (1991). It uses lagged-levels of first difference of variables as instruments.

tion. This makes system GMM appropriate for regressions with small observations. Since the observations of the sub-samples in this study is small, system GMM becomes appropriate.

Aid selectivity effectiveness investigation is carried out by dividing the entire period of this study into two. Period before year 2000 is identified as pre-selectivity and period after year 2000 is identified as post-selectivity. The empirical models estimated for these two periods are the same to ensure uniformity. Consequently, comparisons are made between the two same sets of models of different time frames. Year 2000 is chosen for two major reasons. One, this is the year Burnside and Dollar published their popular paper and made campaign for good policies as a determinant of aid effectiveness widespread in the literature. Second, Dollar and Levin (2006) empirically found out that foreign aid was selective in 2000-03 other than 1984-89. Thus, year 2000 marks the time when aid practice changed and donors started engaging in what is popularly referred to as aid selectivity. Thereafter, the entire period of this study is divided into two - the pre-selectivity period (1980 to 2000), and post-selectivity period (2001 to 2012). This procedure to empirically investigate aid selectivity effectiveness is novel and also consistent with the claim by Ramiarison (2010), where it is stated that aid selectivity or *ex-post* conditionality practice is as a result of the study by Burnside and Dollar (2000).

To arrive at the different categories of groups of countries investigated, the following are done. For the sub-regions of SSA, the study focuses on West Africa, East Africa, Central Africa, and Southern Africa. Oil producing category (resource endowment) comprises oil producer and non-oil producer. Oil producers are countries that produce oil in commercial level and non-oil producer are those that do not produce oil in commercial level. Countries that newly discovered oil in commercial level are not included as oil producers in this study. Income level is determined by dividing SSA into two, using per capita income. The average income across SSA is determined after which countries that fall below the average income are categorised as low income and countries above are categorised as high income. Finally, aid intensity categorization is determined as in the case of income level. For reference purpose, the list of countries in each set of the several categories above is presented in the Appendices 1. - 7.

4. ANALYSES OF RESULTS

4.1. Descriptive Analysis

Descriptive statistics of the variables used in this study are presented in Table 1. The Table shows basic characteristics of the variables in terms of their average value (Mean), standard deviation (SD), minimum (Min) and maximum (Max) values, and coefficient of variation (CV). By definition, the mean value is the average outcome of a reference variable over specific time period. SD is the measure of dispersion of

variables from their reference mean, and it measures the variability of spread of data. Min and Max are the minimum and maximum values, respectively of the variable in question. As in SD, CV also measures dispersion but in a more standardized form. It is a normalized measure of dispersion of a probability or frequency distribution. It is defined as the ratio of standard deviation to mean. This definition makes it superior to SD as it provides a vivid picture of relative variability. If CV is higher than 0.50 (50%), dispersion is high, implying uneven distribution and higher variability; if otherwise, dispersion is low.

Table 1. is presented in such a way that facilitates comparisons of aggregate SSA statistics with that of the different regions such as West Africa, East Africa, Central Africa, and Southern Africa. The SSA countries are further classified into 3 other groups: oil and non-oil producers; high and low income countries; and high and low aid intensity countries. The analysis therefore follows a specific pattern. The average aggregate SSA statistics should be used as reference point for all other regions and groups. More importantly, comparisons should be made across regions and groups. For clarity and simplicity of analysis, reference should be made to the mean values.

Table 1.: Descriptive Statistics of Major Variables: Aggregate SSA and Other Categories

	West Africa						East Africa				
Variable	Mean	SD	Min	Max	CV	Variable	Mean	SD	Min	Max	CV
PC	544.58	363.44	50.04	2749.48	0.67	PC	1248.388	2528.63	111.79	13889.95	2.03
PCGRT	0.65	7.74	-50.24	91.67	11.83	PCGRT	0.92	5.60	-47.31	36.77	6.09
ODA	15.86	15.89	0.06	181.19	1.00	ODA	14.29	11.51	-0.25	94.95	0.81
INV	17.82	8.36	-2.42	58.96	0.47	INV	17.82	6.92	2.00	47.85	0.39
POPN	13600000	27500000	301591	169000000	2.03	POPN	10200000	10600000	64400	47800000	1.04
OPEN	66.64	26.42	6.32	179.12	0.40	OPEN	61.02	28.34	10.95	144.70	0.46
ELF	0.73	0.15	0.32	0.90	0.21	ELF	0.61	0.25	0.08	0.92	0.41
	Central Africa						Southern Africa				
PC	2077.70	2809.86	201.73	13518.04	1.35	PC	3028.55	1735.88	422.17	6693.75	0.57
PCGRT	2.10	12.27	-27.15	142.07	5.85	PCGRT	2.08	3.73	-8.69	16.96	1.80
ODA	10.02	11.63	-0.20	69.40	1.16	ODA	4.42	4.45	0.00	19.18	1.01
INV	29.62	32.39	1.93	219.07	1.09	INV	25.63	12.60	8.42	74.82	0.49
POPN	10200000	13400000	94953	65700000	1.31	POPN	9215433	15900000	603373	52300000	1.73
OPEN	97.36	80.62	20.06	531.74	0.83	OPEN	113.48	43.44	38.65	209.87	0.38
ELF	0.76	0.13	0.47	0.88	0.18	ELF	0.50	0.26	0.22	0.89	0.53
	Oil Producers						Non-oil Producers				
PC	2568.16	2788.94	201.73	13518.04	1.09	PC	1034.22	1834.61	50.04	13889.95	1.77
PCGRT	1.53	11.77	-27.15	142.07	7.72	PCGRT	1.11	6.51	-50.24	91.67	5.87
ODA	6.38	10.63	-0.20	69.40	1.67	ODA	14.45	13.33	-0.25	181.19	0.92
INV	27.48	31.10	2.10	219.07	1.13	INV	19.29	9.79	-2.42	79.35	0.51
POPN	27800000	35500000	726454	169000000	1.28	POPN	7740606	8722152	64400	47800000	1.13
OPEN	96.44	77.48	20.44	531.74	0.80	OPEN	69.42	35.59	6.32	209.87	0.51
ELF	0.78	0.14	0.47	0.90	0.18	ELF	0.64	0.22	0.08	0.92	0.35
	High Income Countries						Low Income Countries				
PC	4554.09	2929.69	1336.67	13889.95	0.64	PC	480.78	251.95	50.04	1324.99	0.52
PCGRT	3.03	10.21	-19.38	142.07	3.37	PCGRT	0.70	6.98	-50.24	91.67	9.97
ODA	4.04	5.01	-0.25	35.35	1.24	ODA	15.15	13.73	0.06	181.19	0.91
INV	27.27	22.35	3.62	218.99	0.82	INV	19.44	14.87	-2.42	219.07	0.77
POPN	6176610	11700000	64400	52300000	1.89	POPN	13300000	20600000	139428	169000000	1.55
OPEN	108.02	53.51	38.14	531.74	0.50	OPEN	65.74	42.18	6.32	504.88	0.64
ELF	0.61	0.20	0.27	0.92	0.33	ELF	0.68	0.22	0.08	0.92	0.32
	High Aid Intensity						Low Aid Intensity				
PC	633.85	907.53	50.04	6742.23	1.43	PC	1786.63	2551.49	111.79	13889.95	1.42
PCGRT	1.26	8.38	-50.24	91.67	6.64	PCGRT	1.15	7.46	-27.15	142.07	6.51
ODA	24.42	15.32	12.92	181.19	0.63	ODA	6.06	3.87	-0.25	12.88	0.64
INV	22.74	19	-2.42	219.07	0.84	INV	19.87	15.32	0.29	218.99	0.77
POPN	7920927	10800000	64400	120000000	1.36	POPN	14200000	22900000	65128	169000000	1.62
OPEN	74.67	50.20	20.96	504.88	0.67	OPEN	74.75	46.63	6.32	531.74	0.62
ELF	0.65	0.22	0.084	0.92	0.34	ELF	0.68	0.21	0.08	0.92	0.32

	Sub-Saharan Africa				
Variable	Mean	SD	Min	Max	CV
PC	1335.44	2144.57	50.04	13889.95	1.61
PCGRT	1.19	7.83	-50.24	142.07	6.57
ODA	12.89	13.24	-0.25	181.19	1.03
INV	20.97	16.88	-2.42	219.07	0.81
POPN	11600000	19100000	64400	169000000	1.65
OPEN	74.72	48.03	6.32	531.74	0.64
ELF	0.666	0.218	0.08	0.92	0.33

Source: Author's computation using STATA
Note: PC is per capita income, PCGRTB is PC growth, ODA is official development assistance as a percentage of GDP, INV is investment as a percentage of GDP, POPN is population, OPEN is openness, and ELF is ethnolinguistic fractionalization.

4.2 Empirical Analysis

Generally, for all the 22 models estimated, Hansen diagnostics tests show that the models are suitable. The Hansen J test statistic indicates that the instruments are appropriately uncorrelated with the disturbance process. Thus, this makes the instruments valid and satisfies the orthogonality conditions. Also, autocorrelation tests (AR1 and AR2) indicate that there is no problem of serial correlation in the models.

The major focus at this point is to investigate if aid selectivity practice has really improved aid effectiveness in SSA. Tables 2. and 3. show the results for pre-selectivity period, 1980 to 2000 (first period) and post-selectivity period, 2001 to 2012 (second period), respectively. Interestingly, in the pre-selectivity period, foreign aid has significant negative relationship with economic growth in aggregate SSA. This result shows that as foreign aid increased between 1980 and 2000 in SSA, economic growth reduced. Of course, this period in history marked the time when most of SSA countries' governance structures deteriorated greatly as many of the countries were governed by the military. However, if aid disbursement had been selective enough, may be the result would have been different. In terms of magnitude, a 1% increase in aid as a percentage of GDP reduces economic growth by 0.24% in SSA.

On the other hand, the post-selectivity period of the investigation reveals that foreign aid has insignificant positive relationship with economic growth in aggregate SSA. This result shows that this period (with the positive coefficient) is the period when increase in foreign aid is related with an increase in economic growth in SSA. Albeit, in terms of significance, the positive relationship that exists in the second period is not vital; meaning an increase in economic growth as a result of an increase in foreign aid is not different from zero in the second period. Comparing these two periods, it can be argued that at least for the aggregate SSA regression, as a result of aid selectivity practice, the significant *negative* relationship of foreign aid with economic growth in the first period has improved to an insignificant *positive* relationship in the second period. This change may not be a noticeable one because of the *insignificant* positive relationship in the second period. However, breaking SSA into various sub groups may make the findings more interesting.

Table 2.: System GMM for Foreign Aid and Economic Growth in Aggregate SSA and Other Categories (1980 - 2000); First Period

Variables	(1) Aggregate	(2) West Africa	(3) East Africa	(4) Central Africa	(5) Southern Africa	(6) Oil Producer	(7) Non-Oil Producer	(8) High Income	(9) Low Income	(10) High Aid Intensity	(11) Low Aid Intensity
Initial GDP per Capita (log)	-8.58* (-1.75)	-6.43*** (-2.61)	-3.61** (-2.34)	-7.6 (-1.56)	2.18** (1.97)	-7.01** (-1.93)	-4.86* (-1.83)	-7.43 (-1.34)	-10.25*** (-4.54)	-6.57** (-2.16)	-4.12* (-1.74)
ODA/ GDP	-0.24** (-2.19)	-0.01 (-0.72)	-0.21*** (-3.21)	-0.5 (-1.16)	-0.1 (-0.64)	-0.43** (-2.35)	-0.07* (-1.72)	-0.42* (-1.86)	-0.07 (-1.36)	-0.16** (-1.96)	0.13 (0.81)
Investment/ GDP (log)	4.36** (2.3)	1.64* (1.78)	5.81*** (3.39)	-0.28 (-0.11)	0.59 (0.14)	7.51*** (2.55)	1.45 (1)	10.5*** (3.05)	0.32 (0.2)	3.45** (2.39)	2.43** (2.11)
Population Growth	0.13 (0.37)	0.84* (1.86)	-0.31 (-1.27)	-0.23 (-0.18)	4.3*** (4.69)	-3.79 (-1.38)	0.21 (0.73)	5.38** (2.42)	0.48 (1.58)	0.21 (0.92)	0.65 (0.94)
M2/GDP (log, lagged)	2.56 (1.23)	1.2 (1.49)	1.44 (0.83)	9.44* (1.69)	3.24* (1.82)	7.29*** (2.95)	2.07 (1.35)	7.15*** (2.63)	2.64** (2.07)	0.6 (0.34)	3.34 (1.32)
Openness (log)	9.36* (1.89)	2.73*** (2.6)	4.09* (1.85)	21.47** (1.95)	-0.22 (-0.04)	12.6*** (3.43)	3.83** (1.97)	1.85 (0.54)	5.24*** (2.92)	4.64 (1.11)	7.46** (2.41)
Inflation	-0.01 (-0.46)	-0.02 (-1.27)	0.03 (1.28)	-0.05 (-0.94)	0.16 (1.45)	-0.04 (-0.93)	0 (0.31)	-0.2 (-1.32)	-0.01 (-0.59)	0.02 (0.73)	-0.01 (-0.82)
Government Consumption/GDP	-0.26** (-2.56)	-0.05 (-1.26)	-0.17*** (-3.56)	-0.52** (-2.28)	-0.03 (-0.17)	-0.22 (-0.77)	-0.13* (-1.81)	-0.59* (-1.82)	-0.12 (-1.42)	-0.17* (-1.85)	-0.42** (-2.15)
Elf	-1.13 (-0.31)	4.9 (1.19)	-4.57** (-2)	18.31 (0.6)	-11.66 (-1.13)	1.46 (0.07)	-3.84** (-2.01)	-10.07* (-1.84)	0.8 (0.2)	-2.81 (-0.94)	-3.7 (-1.04)
Constant	5.13 (0.43)	15.08 (1.37)	-5.43* (-1.84)	-63.24** (-2.43)	-32.54 (-0.75)	-30.42** (-2.08)	9.42 (0.88)	4.34 (0.08)	33.25** (2.38)	16.33 (1.53)	-12.68 (-1.42)
Hansen Test Chi-Sq	37.15 [1.000]	1.32 [1.000]	5.55 [1.000]	0.00 [1.000]	0.00 [1.000]	0.00 [1.000]	30.87 [1.000]	0.00 [1.000]	29.80 [1.000]	16.29 [1.000]	32.54 [1.000]
AR(1)	-2.31 [0.021]	-2.91 [0.005]	-1.67 [0.095]	-1.19 [0.235]	-1.70 [0.089]	-1.03 [0.301]	-2.63 [0.008]	-0.98 [0.325]	-2.60 [0.009]	-2.13 [0.033]	-1.38 [0.167]
AR(2)	-0.37 [0.71]	-1.87 [0.062]	-0.73 [0.463]	1.13 [0.260]	0.60 [0.505]	1.02 [0.308]	-1.07 [0.282]	0.79 [0.431]	-1.15 [0.249]	-0.95 [0.340]	0.22 [0.825]
Number of Observation	691	249	249	104	120	112	571	116	567	265	424

Source: Author's computation using STATA

Note: t-statistics of the GMM are in parentheses, while the figures in bracket are p-values for Hansen test and serial correlation test. ***, **, * represent statistical significance at 1%, 5% and 10%, respectively.

Table 3.: System GMM for Foreign Aid and Economic Growth in Aggregate SSA and Other Categories (2001 - 2012); Second Period

Variables	(1) Aggregate	(2) West Africa	(3) East Africa	(4) Central Africa	(5) Southern Africa	(6) Oil Producer	(7) Non-Oil Producer	(8) High Income	(9) Low Income	(10) High Aid Intensity	(11) Low Aid Intensity
Initial GDP per Capita (log)	1.02 (0.98)	3.58*** (3.51)	2.37* (1.9)	-10.22*** (-2.47)	-2.29* (-1.75)	1.32 (0.46)	2.34*** (2.48)	-0.17 (-0.04)	-2.8* (-1.92)	0.71 (0.58)	-0.46 (-0.21)
ODA/GDP	0.01 (0.45)	0.05*** (3.68)	0.12* (1.76)	-0.01 (-0.1)	0.09 (0.41)	0.19* (1.88)	0.04*** (2.67)	-0.06 (-0.36)	0.02 (0.89)	0.06*** (4.27)	0.47** (2.27)
Investment/ GDP (log)	2.07** (2.04)	2.56** (2.35)	3.3*** (2.79)	-5.19** (-2.42)	2.8* (2.01)	6.69** (1.93)	2.29*** (2.48)	1.65 (0.75)	4.03*** (3.01)	4.25** (2.12)	1.57 (0.87)
Population Growth	1.23** (1.93)	1.63 (0.83)	0.25 (0.39)	-4.72 (-1.29)	-1.65*** (-3.29)	8.77*** (3.24)	1.16 (1.29)	2.06** (2)	-1.62 (-1.39)	0.41 (0.39)	-0.04 (-0.03)
M2/GDP (log, lagged)	-0.03 (-0.04)	0.53 (0.14)	-2.88*** (-3.01)	11.9*** (3.46)	0.63 (0.5)	4.96 (1.39)	-0.3 (-0.28)	2.93* (1.95)	-4.14* (-1.88)	-1.44 (-0.62)	0.18 (0.17)
Openness (log)	0.74 (0.46)	-3.35 (-1.04)	-1.49 (-0.71)	27.05*** (3.29)	2.79*** (2.56)	10.06 (1.36)	-1.28 (-0.95)	11.02** (2.14)	-1.66 (-0.57)	-3.84 (-1.27)	6.7* (1.73)
Inflation	-0.03 (-1.12)	0.08 (0.95)	-0.12*** (-3.5)	0.01 (0.7)	-0.02 (-0.35)	-0.02 (-0.54)	-0.09 (-1.89)	-0.05 (-0.38)	-0.22*** (-2.64)	-0.12*** (-2.46)	0 (-0.2)
Government Consump- tion/GDP	-0.09 (-1.41)	-0.03 (-0.21)	-0.22*** (-4)	-0.75*** (-4.93)	-0.23 (-1.25)	-0.32 (-1.39)	-0.08 (-0.96)	0.27 (1.1)	0.11 (0.8)	-0.2** (-1.98)	-0.15 (-1.21)
Elf	0.65 (0.49)	10.72 (1.48)	1.38 (0.83)	55.99** (2.4)	1.34 (0.83)	79.3** (2.14)	1.7 (1)	9.24 (1.39)	2.76 (0.99)	1.91 (0.78)	5.59* (1.79)
Constant	-15.31*** (-3.49)	-28.19*** (-2.48)	-5.02 (-0.72)	-84.52*** (-2.45)	29.02*** (2.81)	-168.23*** (-2.46)	-15.42** (-2.11)	-75.81* (-1.92)	30.16** (2.35)	6.46 (0.98)	-32.88*** (-3.22)
Hansen Test Chi-Sq	42.46 [1.000]	5.38 [1.000]	4.79 [1.000]	0.00 [1.000]	0.00 [1.000]	0.00 [1.000]	27.05 [0.988]	3.72 [1.000]	27.55 [1.000]	15.19 [1.000]	29.51 [0.972]
AR(1)	-2.83 [0.005]	-2.03 [0.045]	-2.01 [0.045]	-1.42 [0.157]	-1.70 [0.088]	-1.56 [0.120]	-2.54 [0.011]	-1.06 [0.287]	-2.63 [0.009]	-1.73 [0.084]	-2.19 [0.029]
AR(2)	-1.17 [0.243]	-0.25 [0.800]	0.08 [0.934]	-1.11 [0.266]	-0.12 [0.901]	-0.81 [0.416]	-0.81 [0.417]	-1.13 [0.257]	-0.02 [0.988]	0.20 [0.844]	-1.15 [0.249]
Number of Observation	460	160	152	77	59	84	375	220	356	139	318

Source: Author's computation using STATA

Note: t-statistics of the GMM are in parentheses, while the figures in bracket are p-values for Hansen test and serial correlation test. ***, **,* represent statistical significance at 1%, 5% and 10%, respectively.

Regression results of sub groups of countries give clearer and more convincing results than aggregate SSA regression. In pre-selectivity period, foreign aid is negatively related with economic growth in all of the categories, except for low aid intensity group of countries which displays insignificant positive relationship. Moreover, half of the group of countries in pre-selectivity period (5 out of 10), excluding aggregate SSA regression display *significant negative* relationship at 10% level at least between foreign aid and economic growth. This result further confirms that in pre-selectivity period, aid has *no good* to offer SSA countries, as countries with low aid recorded positive relationship. The positive relationship in low-aid intensity group of countries lend support to the argument of Friedman (1958) and Bauer (1972) that foreign assistance to government is dangerous because it increases the power of the elite in the recipient governments, leads to corruption, discourages the growth of private sector investments, and encourages public sector-led growth, as well as economic growth.

Against pre-selectivity regression results, Table 3, which presents the result for post-selectivity period shows that 6 models, excluding aggregate SSA regression display *significant positive* relationship at 10% level at least between foreign aid and economic growth. In all, foreign aid is positively related with economic growth in 8 categories, out of which 3 are significant at 1% level (West Africa, non-oil producer and high aid intensity), 1 at 5% level (low aid intensity), 2 at 10% level (East Africa and oil producer); and 2 are insignificant (Southern Africa and low income).

These results show that there is significant improvement in aid effectiveness as a result of aid selectivity practice in SSA. However, reference to the results of post-selectivity period, there are 2 groups of countries that still experience negative relationship between foreign aid and economic growth. Also, among the ones that experience positive relationships, 3 including aggregate SSA are insignificant. Thus, donors should intensify the practice of selectivity by favouring countries with stronger economic institutions and policies in a set of poorest countries. This should be done not only by giving aid to countries with sound governance alone, but also by targeting aid at improving governance. To complement this, donors can also increase the amount of aid given to SSA countries to improve results.

5. CONCLUSION

Studies have vastly argued that donors favoured aid selectivity in post-2000 than what was the usual practice in pre-2000. However, the necessary question to ask is what is the impact of such practice on aid effectiveness? The answer to this question is straight forward. Aid selectivity practice improved aid effectiveness as aid translated to positive growth during period of post-selectivity as against negative growth in pre-selectivity period. Thus, the policy implications for this study are that donors should practice aid selectivity in aid administration to improve effectiveness. This

can be achieved by not only giving aid to countries with good governance, but also by using aid as a tool to improve governance. To complement this, volume of foreign aid flowing to favoured countries should be increased to ensure more and significant aid effectiveness in SSA countries.

Finally, this study identifies that perhaps it is ideal to investigate effectiveness of aid selectivity practice by differentiating between multilateral and bilateral aid. Thus, it suggests this demarcation for further research in order to address some grey areas in the literature.

REFERENCES

Ang, J.B., *"Does Foreign Aid Promote Growth? Exploring the Role of Financial Liberalization". Review of Development Economics*, Vol. 14(2), (2010): 197-212

Arellano, M., and Bond, S., *"Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application of Employment Equations." Review of Economic Studies 58 (2)*, (1991): 277-297

Arellano, M., and Bover, O., *"Another Look at the Instrumental Variable Estimation of Error Component Models." Journal of Econometrics 68 (1)*, (1995): 29-51

Asiedu, E. and Nandwa, B., *"On the Impact of Foreign Aid in Education on Growth: How Relevant is the Heterogeneity of Aid Flows and the Heterogeneity of Aid Recipients?" The Review of World Economy*, Springer, Vol. 143(4), (2007): 631-649

Bauer, P., (1972). *Dissent on Development*, Harvard University Press, Cambridge.

Blundell, R., and S. Bond, *"Initial Conditions and Moment Restrictions in Dynamic Panel Data Models." Journal of Econometrics 87 (1)*, (1998): 115-143

Boone, P., (1994). *"The impact of foreign aid on savings and growth." Mimeo, London School of Economics*

Boone, P., (1996). *"Politics and the Effectiveness of Foreign Aid." European Economic Review. 40:2 289 - 329*

Bowen, J.L., (1998): *"Foreign Aid and Economic Growth: A Theoretical and Empirical Investigation." Aldershot: Asghate Publishing LTD.*

Burnside, C. and Dollar, D., *"Aid,* Policies, and Growth." *American Economic Review*, Vol. 90, No. 4, (2000): 847-868

Chowdhury, M. and Das, A., *"Aid-Growth Nexus in South Asia: Evidence from Time Series and Panel Cointegration." Research in Applied Economics*, Vol. 3, No. 1: E3, (2011): 1 - 19

Collier, P., *"Aid Dependency: a Critique." Journal of African Economies*, Vol. 8(4), (1999): 528-545

Collier, P. and Dehn, J., (2001). *"Aid,* Shocks and Growth," Working Paper 2688, World Bank, Washington DC

Dalgaard, C.-J. and Hansen, H., *"On Aid,* Growth and Good Policies." *Journal of Development Studies*, Vol. 37, (2001): 17-41

Dalgaard, C.-J. Hansen H. and Tarp F., *"On the Empirics of Foreign Aid and Growth." The Economic Journal,* 114, (2004): F191 - F216

Denkabe, P., *"Policy,* Aid and Growth: A Threshold Hypothesis." *Journal of African Finance and Economic Development*, Vol. 6(1), (2003): 1-21

Dhakal, D., Upadhyaya, K. and Upadhyaya, M., *"Foreign Aid,* Economic Growth and Causality." *Rivista Internazionale di Scienze Economiche e Commerciali*. Vol. 43, (1996): 597-606

Dollar, D. & Levin, V., *"The Increasing Selectivity of Foreign Aid, 1984-2003." World Development*, Elsevier, vol. 34(12), pages (2006): 2034-2046

Duc, V.M., (2006). "Foreign Aid and Economic Growth in the Developing Countries: A Cross Country Empirical Analysis." Available at: http://cnx.org/content/m13519/latest/

Easterly, W., *"The Ghost of Financing Gap: Testing the Growth Model Used in the International Financial Institutions." Journal of development Economics*, Vol. 60:2, (1999): 423 - 438

Easterly, William. *The elusive quest for growth: economists' adventures and misadventures in the tropics*. MIT press, 2001.

Friedman, M., *"Foreign Economic Aid." Yale Review Vol.47(4)*, (1958): 500-516

Gleneagles Communique on Africa, Climate Change, Energy and Sustainable Development. (2005). July. G-8, www.g-8.org

Gounder, R., *"Aid-growth nexus: empirical evidence from Fiji." Applied Economics. Vol. 33*, (2001): 1009-1019

Hansen, H. and Tarp, F., *"Aid and Growth Regressions." Journal of Development Economics*, Vol. 64, (2001): 547-570

Islam, A., *"Foreign Aid and Economic Growth: An Econometric study of Bangladesh." Applied Econometric*, Vol. 24, (1992): 541 - 544

Kanbur, R., *"Income Distribution and Development." In A.B. Atkinson and F. Bourguignon (editors), Handbook of Income Distribution, Volume I.* Amsterdam. North Holland-Elsevier, 2000.

Kargbo, P.M., *"Impact of Foreign Aid on Economic Growth in Sierra Leone: Empirical Analysis." Working Paper No. 2012/07*, 2012., *UNU-WIDER*

Kathavate, J., *"Direct & Indirect Effects of Aid Volatility on Growth: Do Stronger Institutions Play a Role?" MPRA Paper No. 45187*, 2013., Available at: http://mpra.ub.uni-muenchen.de/45187/

Kihara, T., *"Effective Development Aid: Selectivity*, Proliferation and Fragmentation, and the Growth Impact of Development Assistance." ADBI Working Paper 342. Tokyo: Asian Development Bank Institute. 2012., Available: www.adbi.org/working-paper/2012/01/30/4847.effective.development.aid/

Kosack, S. and Tobin, T., *"Funding Self-Sustaining Development: The Role of Aid*, FDI

and Government in Economic Success." *International Organization*, Vol. 60, (2006): 205-243

Leeson, P.T., *"Escaping Poverty: Foreign Aid*, Private Property, and Economic Development." *The Journal of Private Enterprise* 23(2), (2008): 39-64

Mallik, G., *"Foreign Aid and Economic Growth: A Cointegration Analysis of the Six Poorest African Countries." Economic Analysis & Policy*, Vol. 38 No. 2, (2008): 251 - 260

Mohammad, I., *"Aid Allocation*, Selectivity, and the Quality of Governance." *Journal of Economics, Finance and Administrative Science*, Elsevier Vol. 19, (2014): 63-68

Minoiu, C. and Reddy, S.G., *"Development Aid and Economic growth: A Positive Long-Run Relation." The Quarterly Review of Economics and Finance*, 50(1), (2010): 27-39

Moreira, S.B., *"Evaluating the Impact of Foreign Aid on Economic Growth: A Cross-Country Study." Journal of Economic Development*, Vol. 30, No. 2, (2005): 25 - 49

Nurkse, R., *Problems of Capital Formation in Underdeveloped Countries*. Oxford: Oxford University Press, 1953.

Ramiarison, H.A., *"Assessing the Development Role of Foreign Aid in Developing Countries: A Special Reference to the Role of Japan's Aid in Far East Asia." IDE-JETRO, V.R.F. Series*, No 462, December 2010.

Radelet, S., *"A Primer on Foreign Aid." Working Paper Number 92. Centre for Global Development*, Washington DC, 2006.

Rajan, R.G. and Subramanian, A., *"Aid and Growth: What Does the Cross-Country Evidence Really Show?" The Review of Economics and Statistics*, Vol. 90, Issue 4, (2008): 643 - 665

Roeder, P.G., "Ethnolinguistic Fractionalization (ELF) Indices, 1961 and 1985." February 16., 2001. <http//:weber.ucsd.edu\~proeder\elf.htm>. Accessed 10-09-2014

Rosenstein-Rodan, P.N., *"Problems of Industrialisation of Eastern and South-Eastern Europe". Economic Journal,* Vol.53, No210/211, (1943): 202-211

Rosenstein-Rodan, P.N., *"The International Development of Economically Backward Areas", International Affairs (Royal Institute of International Affairs 1944-)*, Vol. 20, No. 2 , (1944): 157-165

Salisu, A.A. and Ogwumike, F.O., *"Aid-Macroeconomic Policy Environment and Growth: Evidence from Sub-Saharan Africa." Pakistan Journal of Applied Economics*, Vol. 20, Nos. 1&2, (2010): 1-12

Snyder, D.W., *"Donor Bias Toward Small Countries: An Overlooked Factor in the Analysis of Foreign Aid and Economic Growth." Applied Economics*, Vol. 25, (1993): 481 - 488

World Bank, *"Assessing Aid: What Works*, What Doesn't, and Why. Washington DC: The World Bank, 1998.

World Bank, *"World Development Indicators". Washington DC: The World Bank,* 2014.

APPENDIX 1. LIST OF COUNTRIES IN SSA

Angola	Ethiopia	Niger
Benin	Gabon	Nigeria
Botswana	The Gambia	Rwanda
Burkina Faso	Ghana	Sao Tome and Principe
Burundi	Guinea	Senegal
Cameroon	Guinea-Bissau	Seychelles
Cape Verde	Kenya	Sierra Leone
Central African Republic	Lesotho	South Africa
Chad	Liberia	Sudan
Comoros	Madagascar	Swaziland
Rep. of the Congo	Malawi	Tanzania
Dem.Rep. of the Congo	Mali	Togo
Cote d'Ivoire	Mauritania	Uganda
Djibouti	Mauritius	Zambia
Equatorial Guinea	Mozambique	Zimbabwe
Eritrea	Namibia	

APPENDIX 2. LIST OF COUNTRIES IN WEST AFRICA

Benin	Liberia
Burkina Faso	Mali
Cape Verde	Mauritania
Cote divoire	Niger
Gambia	Nigeria
Ghana	Senegal
Guinea	Sierra Leone
Guinea-Bissau	Togo

APPENDIX 3. LIST OF COUNTRIES IN EAST AFRICA

Burundi	Mauritius
Comoros	Mozambique
Djibouti	Rwanda
Eritrea	Seychelles
Ethiopia	Tanzania
Kenya	Uganda
Madagascar	Zambia
Malawi	Zimbabwe

APPENDIX 4. LIST OF COUNTRIES IN CENTRAL AFRICA

Angola	Rep. of the Congo
Cameroon	Equitorial Guinea
Central African Rep.	Gabon
Chad	Sao Tome & Principle
Dem. Rep. of the Congo	

APPENDIX 5. LIST OF COUNTRIES IN SOUTHERN AFRICA

Botswana	South Africa
Lesotho	Swaziland
Namibia	

APPENDIX 6. LIST OF OIL PRODUCING COUNTRIES

Angola	Equatorial Guinea
Cameroon	Gabon
Cote d'Ivoire	Nigeria
Democratic Republic of the Congo	South Africa
Republic of the Congo	

APPENDIX 7. LIST OF NON-OIL PRODUCING COUNTRIES

Benin	Guinea	Rwanda
Botswana	Guinea-Bissau	Sao Tome and Principe
Burkina Faso	Kenya	Senegal
Burundi	Lesotho	Seychelles
Cape Verde	Liberia	Sierra Leone
Central African Republic	Madagascar	Sudan
Chad	Malawi	Swaziland
Comoros	Mali	Tanzania
Djibouti	Mauritania	Togo
Eritrea	Mauritius	Uganda
Ethiopia	Mozambique	Zambia
The Gambia	Namibia	Zimbabwe
Ghana	Niger	