

**ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES**

***The Incentive Effect of Foreign Aid
Under Alternative Political Regimes***

***BY
TIGLUN MANAYE***

***JULY 2006
ADDIS ABABA***

The Incentive Effect of Foreign Aid Under Alternative Political Regimes

By: Tiglun Manaye
Advisor: Dr. Alemayehu Geda (Assoc. Prof)

A THESIS PRESENTED TO THE SCHOOL OF GRADUATE STUDIES

ADDIS ABABA UNIVERSITY

**IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE DEGREE OF
MASTER OF SCIENCE IN ECONOMICS (INTERNATIONAL ECONOMICS)**

Acknowledgment

I would like to say thank you to my advisor for the insightful comments and helpful understanding I received through out the completion of this project. I was really lucky to be accepted by such great and good educator when I was at my worst. I only wish I could be worthy of such trust. I also like to thank my colleagues at Debu University; Berhanu Girmissu, Motuma Tura, & Nebiyu Getahun, my friend Mengistu Bessire for their generous help and Kiflu Gedefe for helping me with the econometrics package. Thanks

Table of Contents

INTRODUCTION	1
1.1 Background to the study	1
1.2 Problem Statement	2
1.3 Objectives of the study.....	3
1.4 Hypothesis to be tested.	3
1.5 Significance of the study.....	4
1.6. Data sources and definitions	4
1.7 Limitations of the study	5
Literature Review.....	6
2.1 The Effectiveness of Foreign Aid	6
2.2 The Motive for Giving Aid	14
The move towards selectivity	21
2.3 The Incentive Effect of Foreign Aid.....	25
Methodology	32
3.1 The theoretical - qualitative impact of foreign aid.....	32
3.2 Aid, institutions and political regimes	34
3.3The empirical approach and the Model	36
The Empirical Findings.....	41
4.1 Aid Allocation.....	41
4.2. The Effect of aid on institutions.....	44
CONCLUSION.....	48
References.....	49
Appendix.....	54

Acronyms

CAC	Central American Countries
CPIA	Country policy and Institutional Assessment
EOp	Equal opportunity Model
GDP	Gross Domestic Product
GNI	Gross National income
GNP	Gross National Product
ICRG	International Country Risk Guidance
IDA	International Development Assistance
IV	Instrumental Variable
KKZ	Kaufmann, Kraay and Zoidon –Lobaton Aggregate Governance indicators
LDCs	Less Developed Countries
MDGs	The Millennium Development Goals
ODA	Official Development Assistance
OECD	Organization for Economic Cooperation and Development
OLS	Ordinary Least Square
SSA	Sub-Saharan Africa
USAID	United States Agency for International Development

Abstract

Inspired by a new stream of research that shows the significant role institutions play in determining economic performance, aid effectiveness and aid allocation, this study explores the relationship between aid, institutions and democracy. Using cross-country data for 91 developing countries it examines the determinants of aid and institutional quality and finds that selectivity is present and strong since the end of the cold war in aid allocation by donors. However it finds no significant positive incentive effects of this approach yet, but the pattern in the data shows democracies are relatively weak in responding to the incentive effect the new rule of aid allocation has on institutional reforms.

I

INTRODUCTION

1.1 Background to the study

Foreign aid is one important source of external finance for much of the world's poor countries, especial for the poorest of them for which foreign aid finance a large part of public sector expenditure. The amount of aid money that flows to these countries has seen a large increase recently. The World Bank's 2005 *Global Development Finance* report shows, in 2003, Official Development Assistance (ODA) increased by \$10 billion to reach 69 billion, following a \$6 billion increase in 2002. The report also predicted an average 9 percent increase in real terms over the period 2004-2006.

This flow of grants and concessional loans is supposed to help poor countries in “filling the development gap” by augmenting domestic saving and financing imports and human capital formation essential to development. The significance of foreign aid to the development process in the recipient countries is, however, far more controversial than this straightforward leverage assumption indicates. In fact the effectiveness of aid in achieving its two stated goals -promoting growth and reducing poverty in recipient countries- is one of the most enduring controversies in economics literature. For decades since foreign aid is institutionalized country level researches found different and contrary results while the conclusion from cross-country studies was predominantly pessimistic. And since the late 1990 a new stream of empirical studies that found aid could work under certain institutional, structural and political contingencies has since then brought a fundamental shift in the literature. Following the recent literature the donor community has come to attach significant role to institutional quality in the recipient countries.

The diagnosis of why aid has been so far ineffective to promote development in the recipient countries on the other hand primarily focus on the incentive effect of aid. Official assistance is intermediated by governments whose politicians and civil servants face

incentives that are not necessarily benevolent. A large flow of aid may encourage rent-seeking behavior and discourage the promotion of growth - enhancing policies and institutions. In principle donors could avoid this negative incentive effect by writing aid contract, that is, by conditionality. However both theory and real world evidence proved conditionality lacks credibility and is difficult to implement and enforce. Together with the empirical evidence that aid works in a good institutional environment, this problem with conditionality gave rise to the 'selectivity' approach in aid allocation that has become a dominant paradigm in the literature as well as in international aid policy and practice.

It is difficult to say, a priori, about the incentive effect the new approach produces. And to the knowledge of this researcher there is not yet an empirical study that explicitly has dealt with the incentive effect of the selectivity approach. Nevertheless it is quite intuitive to argue that if donors start to reward institutional quality in the recipient countries, there should be a positive incentive effect.

1.2 Problem Statement

Western donors' overseas development assistance programs in the past have not been primarily motivated by humanitarian or development concerns. Various researches have found donor strategic and other foreign policy interests affect aid allocation by western donors more than the development motive explains. Recent researches on the other hand have shown this practice is being changing since the end of the cold war and western donors are now more poverty focused. These researches also found a greater tendency towards 'selectivity'- allocating more development assistance to poor countries with good institutions and sound policies.

This new trend is a radical change that breaks away from past practice in an important way. If aid program stops being a foreign policy instrument and if there is a conscious change in the rule of aid allocation to focus on poverty and to reward better institutions, the past understanding of the aid activity should be revised by new insights. The whole aid apparatus need to be rethought again.

One particular area that needs to be re investigated is the incentive effect of aid. In the past aid has been allocated to strategic allies regardless of institutional quality. If aid allocation rule changes to favor countries with a relatively better institutions, what kind of incentive effect this have on institutional reform in the recipient country?

This study first attempt to measure how much aid flows to countries with different institutional quality. It then investigate the effect aid flow under the new rule will have on institutional quality and whether this effect varies across countries with different political regimes.

1.3 Objectives of the study

In light of the above statement then this study has the broad objective to determine empirically the significance of institutions in the allocation of foreign aid by donors and the incentive this rule of aid allocation produce on institutional reforms in the recipient countries. Specifically, this study examines.

How much development assistance flows to countries with differing institutional quality?

Whether the availability of foreign aid made institutional reforms in the recipient countries more successful and sustainable, and

Whether the incentive effect foreign aid has to institutional reform is different under alternative political regimes.

1.4 Hypothesis to be tested.

This study is inspired by a new stream of research that has found aid works in a better institutional environment, and that institutions matter in the allocation of aid. It argues if donors start to reward institutional quality in the recipient countries then the incentive effect this has to institutional reform in the recipient country will be different from the past and across the type of political regimes in these countries. Specifically the two main hypotheses to be empirically rested are:

Aid allocation rule since the end of the cold war favors countries with a better institutional quality indicators, and

If aid is systematically allocated to favor countries with a better institutional quality indicator, then the more responsive political regime to this incentive will be less democratic regime.

The intuition behind and the theoretical and historical evidence to these hypotheses will be discussed in part III.

1.5 Significance of the study

In the 2000 millennium declaration world leaders vowed to exert efforts towards alleviating the poor in developing countries from extreme hunger and poverty. They resolved, “to grant more generous development assistance to especially countries making efforts to apply their resources to poverty reduction”. Following this declaration, the millennium development goals (MDGs) explicitly stated to reduce global poverty by half mainly through large sum of grant to help poor countries.

The issue of whether the transfer of large financial aid, even for those countries with good policy & sound institutional environment, is the best practical way to achieve these worthy goals is far from being settled. On the other hand economists, coming both from the left and the right found aid in the past has not had systematic positive incentive effect on the institutions of the recipient countries. However as Burnside & Dollar (2004) argue “the past evidence tells us little about what may happen in the future” if aid allocation rule has changed to reward institutional quality in the recipient countries.

This study, by explicitly dealing with the incentive effect of allocating aid to poor countries with relatively better governance institutions, will contribute to the ongoing understanding of the impact of foreign aid.

1.6. Data sources and definitions

The secondary data to be used in this study can be obtained from the Organization for Economic Cooperation and Development (OECD) database, from the various World Bank publications and from the Freedom House database.

The data on foreign aid and other development indicators is from OECD database. The foreign aid a country receives is the net total Official Development Assistance (ODA) that includes grants & concessional. To measure institutional quality this study uses the new aggregate governance indicators by Kaufmann, Kraay and Zoido-Lobaton (2004) that standardize and aggregate different institutional variables. The level of democratic rights defines political regimes. And to measure democratic rights this study uses the Freedom House civil liberties index. The Freedom House democracy index measures freedom according to two broad categories: political rights and civil liberties. The political right index measures the freedom to participate in the political process; the rights to vote, to compete for public office & to elect representatives. The civil liberty index on the other hand measures such basic freedoms of expression, of belief and organizational rights.

1.7 Limitations of the study

To explore the present rule in aid allocation and the possible incentive effect aid has to institutional reform this study

This finding uses a cross-country data for 91 developing countries for the period 1990 – 2004. It thus has all the limitations of cross sectional data, and given the period under consideration where a new world order and a new international economy is being recommended the result showed be interpreted cautiously at best as short term impacts.

II

Literature Review

2.1 The Effectiveness of Foreign Aid

Early theoretical discussions on the role and significance of foreign aid to the development process in less developed countries (LDCs) basically assumes that foreign resource inflows would augment domestic savings and investment, often treating official development assistance (ODA) and other forms of resource inflows as though they were synonymous. This assumption, together with a fairly fixed capital - output ratio in LDCs and a Harrod-Domar like growth model, made it straightforward to point out the positive effect of foreign aid and total resource inflows on saving, investment, and growth.

Among the early literature, Rosenstein-Rodan (1961) has shown how each dollar of foreign resources inflow could augment domestic saving in a Harrod-Domar growth model and lead to an increase of one dollar in investment. Chenery and Strout's (1966) Two-Gap growth model has done some sophistications to the model through determining growth not only by investment constraint but also by foreign exchange constrain, and allowing the capital-output ratio to change with investment. But they still retained the assumption about the relationship between foreign resource inflows and savings, and have shown that aid promote development by adding to domestic savings as well as foreign exchange availability, thus helping to close both the saving-investment gap and the export-import gap.

However this assumption about total resource inflows in general or ODA in particular augmenting domestic savings or domestically financed imports misses two important factors that determine the effectiveness of resource inflow. First, the additional resources are used only in part to augment investment. Some part of the ODA that passes to the government treasury can be used to increase public sector consumption for developmental or non-developmental recurrent public expenditure that don't lead to physical capital accumulation. This is particularly true if foreign aid is fungible, that is, if foreign aid inflow gives the recipient government the opportunity to reshuffle its spending Programme, and if donors don't have the ability to prevail over the recipient government

preferences. This fiscal adaptation to foreign aid inflow will ultimately exert influence on the rest of the macro-economy and other government policies. Thus fiscal adaptations that follow foreign aid inflows could adversely affect such growth parameters as saving and capital-output ratio.

Several studies challenged the basic assumption of the early literature by concluding that a large share of foreign assistance is used to increase consumption. Griffin (1970), Griffin & Enos (1970) and Weisskopf (1972) argue only part of foreign aid is used for investment, and hence the effect of an additional foreign resource on investment is less than one. And given the accounting identity that domestic saving is the difference between investment and foreign inflow, the effect of foreign inflow on saving rate will then appear to be negative, while at the same time, foreign inflow increases the capital-output ratio. If giving aid to LDCs depresses saving rate and raises the capital-output ratio to a sufficient extent, then it is possible that aid may 'immiserise' the recipient than promoting its development process.

Griffin and Enos (1970) wrote

...foreign assistance has neither accelerated growth nor helped to foster democratic political regimes. If anything, aid may have retarded development by leading to lower domestic savings, by distorting the composition of investment, and thereby raising the capital-output ratio, by frustrating the emergence of indigenous entrepreneurial class, and inhibiting institutional reforms. (Griffin and Enos, page 321)

The critics also present statistical evidence that suggests that foreign inflow's impact on investment is less than one and causes a reduction in domestic savings. Weisskopf (1972) argues the numerical results he estimated in fact "support the hypothesis that the impact of foreign capital inflows on ex ante domestic savings is particularly negative".

Papanek (1972, 1973) however criticized the theoretical derivation of this negative relationship between saving and foreign capital inflows, and the numerical evidence to support it for misspecification of a complex relationship. Papanek (1972) has pointed out

the two saving functions implicit in the critics' argument that alone or in combination could prove this negative relationship between domestic saving and foreign capital inflow. If saving is a function of government effort and if that government requires a given investment to achieve a fixed growth rate or if saving is a function of investment opportunities; then it is plausible that foreign inflow may reduce government effort to increase saving or pre-empt investment opportunities, leading to a decrease in domestic savings. However, Papanek argues, there are other equally plausible set of saving functions for LDCs that would lead to an increase in domestic saving as a result of foreign capital inflows. Suppose investment is a function of foreign exchange available to import capital goods and inputs or saving function is substantially affected by industrialists and exporters, foreign capital inflow then will positively affect the domestic saving.

Papanek (1972) wrote

In short, there are plausible saving functions which could result in one dollar of foreign inflows producing either a positive or a negative effect on savings and anything from no increase in investment to more one dollar additional investment. But all of the critical analyses agree that the average impact has been to increase investment by only \$0.11 or \$0.77 for every dollar of inflow. (Papanek 1972:82 page938)

Papanek then become skeptical about the quantitative results of the critics. He argues that the measure of saving reflects an accounting convention rather than a behavioral relationship. As the statistical bases of the critics' conclusion are the deficit on the current account, Statistical problems could tip the conclusion to the negative side. Moreover he found their measurement involve only correlation, not a demonstrated causality. In fact Papanek has shown from a time series analysis for a number countries exogenous variable like war and weather causes both high inflows and low savings. However this doesn't rule out the causal relationship between inflows and savings for some countries. It simply suggests that only careful analysis of individual countries can shed light on the impact of foreign aid on savings.

Nevertheless, Papanek argue that aid can influence both investment and growth in a positive way if a model allow for the interrelations between aid, savings, investment and growth. In fact Papanek (1973) has shown aid had a significant positive influence on growth, even more than saving and other forms of resource inflows in the 1960s.

The criticism on the qualitative effect of foreign aid inflow is not confined to its negative relationship with domestic savings. Some critics of foreign aid pointed to the tendency of foreign assistance to "crowd-out" enterprises and investments in the private sector of LDCs. Griffin (1970) argue aid will frustrate the development of the entrepreneurial class as the availability of foreign capital and its effect in pre-empting investment opportunities reduces the incentive to save of domestic investors. This negative impact of foreign aid on private investment in the recipient country is also the main proposition of Bauer, arguably the most vocal critic of the aid institution. Bauer (1965) state this position as follow:

Almost all recipients of foreign aid restrict the inflow and development of private foreign capital. During the last decade or so these restrictions have increasingly developed in to expropriation of foreign capital, often accompanied by the expulsion of the owners and their employees. As a result, the inflow of foreign aid is matched by an out flow of both domestic and foreign private capital. (Bauer, 1965,page 45-46)

The empirical tests on aid effectiveness on the other hand show ambiguous and quite contrasting results. Papanek (1973), mentioned above, has shown aid has been effective in promoting growth in LDCS in the 1960s, even more effective than savings and other forms of inflows. However a number of widely cited empirical literatures have shown the opposite. Mosley et al (1987) found that aid has not been effective in promoting growth in the recipient countries in the 1960s and 1970s. They contrast this finding with that of Papanek and place the source of discrepancy on the uses of different definition of aid, lag structure and set of independent variables along side aid inflows in estimating growth

equation. Yet even adopting the Papanek specification Mosley et al found the aid variable in the growth equation is still insignificant.

Mosley *et al* (1987) attribute this poor performance of aid during the period to the possible leakage into non productive expenditure in the public sector and the transmission of negative price effects on the private sector (both mechanisms will be discussed under the incentive effect of foreign aid latter). The rates of return on private as well as public capital have declined through the period, confirming some of the theoretical criticism of aid discussed above. However the coefficient of the measure of the extents to which aid 'crowd-out' private sector investment, which should have the expected sign of negative effect on growth if the proposition forwarded by griffin and Bauer holds, is significantly positive for four out of eight countries in the sample of cross-section data. Mosley et al (1987) interpret this finding confirming the proposition of their theoretical model which predicts not the absolute distortion but the relative amount of distortion that matters for the effect of aid on private investment (more will be said on this latter).

Boone (1995) empirically tested the impact of aid on public sector consumption, investment and human development indicators (infant mortality), and found aid neither increase investment and growth, nor benefit the poor as measured by the human development indicators. However the impact of aid on the size of public sector consumption is significant and positive. This result that aid is not used to finance investment but to public sector consumption is also interpreted as a test of the importance of capital shortage in restricting profitable investment in LDCs. As more aid is used not for investment but for consumption the capital shortage proposition loses its appeal.

Boone's comprehensive test is thus consistent with the hypothesis that low saving in LDCs is due to lack of investment opportunities and that politicians use aid for transfer payments. However this transfer payment or the increase in public sector consumption doesn't means that aid is wasted. If the transfer payment benefits the poor by reducing poverty or improving human development indicators, aid is then not a total waste. However whether transfer payments benefit the poor or the rich political elite depends on the kind of political regime in the recipient country (more will be said latter on this).

These widely cited negative findings on the empirical effectiveness of aid have for decades dominated the aid literature. This coupled with what has come to be known in the aid literature as the 'micro macro paradox of aid', that project aid is more effective in attaining their outcome (Mosley, 1986), has significantly influenced aid policies by providing a case for conditionality and project aid.

However by the late 1990s there appear to be a fundamental paradigm shift towards a more optimistic view of aid with the publication of the seminal research paper of Burnside and Dollar (1997). The Burnside-Dollar empirical research found "foreign aid has positive effect on growth in a good policy [institutional] environment." They found this finding consistent with previous findings discussed above as it indicate "...the estimated impact of foreign aid for an observation of average policy is zero". The main innovation of this seminal paper is to interact aid with policy to explain why aid effectiveness' varies across countries. The intuition behind this innovation seems to be quite straight forward: corrupt and incompetent government can't render aid effective and donors can't prevail on recipient government preference.

This acceptance that policy matter to the effectiveness of foreign official assistance is, in fact, have theoretical reasoning. The argument that policy or institutions matter for aid effectiveness mirrors the growing consensus in development economics literature that progress in poverty reduction and sustainable growth depends primarily up on institutional changes in low income countries and that bad policies are more of the result of bad institutions and hence the existence of sound basic institutions are primary importance [(Acemoglu et al (2000), Collier (2000), Rodrik et al, (2002)]. Rodrik et al (2002), for example, have shown the institutional quality indicators are by large the most significant variable in a cross-country growth regression, dwarfing other traditional variable such as openness and geography. Acemoglu et al (2000) on the other hand found estimates that explain, "...that differences in institutions explain approximately three-quarters of the income in per capita differences". The only theoretical disagreement here could only come from the implicit assumption of the theoretical model used by the study that takes imperfect capital markets.

The empirical finding that foreign aid has strong positive impact on growth in a good institutional environment has far reaching implications to how the aid apparatus should be rethought again. If aid works better in a better institutional regime then aid is not a total waste of resource as many previous studies would like to argue. Aid works, if only it is allocated in such a way to favour sound institutional regimes. This suggests for a selectivity approach. In fact this approach of giving preference to recipients that can use aid more effectively has become a dominant paradigm in aid literature and policy (the selectivity approach will be thoroughly discussed latter).

Since the publication of the Burnside-Dollar findings there has been increasingly large number of empirical studies to test the importance of policy to the effectiveness of aid. These include critics both from the side that found aid has had positive impact in all kinds of institutional regimes and from the opposite side that found aid has had no positive impact in any kind of institutional regimes. McGillivray (2006) identified 35 aid-growth studies that have been conducted since then, which include original empirical results, extension of the Burnside-Dollar data set and studies that employ different empirical methods and econometric specifications. Among these studies, 33 found evidence that aid works while the remaining two could not find evidence on aid effectiveness in the context of the Burnside-Dollar analysis, but don't reject the proposition. And Clemens et al (2004) cites additional eleven studies not included in the McGillivray survey, of which seven found positive relationship between aid and growth, one found no relation at all and three found negative relation. The critical studies include Easterly (2003), Easterly et al (2003), Hansen and Tarp (2000), Hudson and Mosley (2001) and Rajan and Subramanian (2005).

Hansen and Tarp (2000) and Hudson and Mosley (2001) disputed the result by conducting useful changes in the specification of the model. Rajan and Subramanian (2005), in a comprehensive test of the validity of the aid-growth relationship across time horizons, periods, sources of aid, timing of the impact of aid, changes in specifications and samples, found "...virtually no evidence that aid works better in a better policy or institutional or geographical environments, or that certain kinds of aid work better than others". Easterly et al (2003) found the Burnside-Dollar finding not robust by reconstructing the entire database and extending the data through time, while not deviating

from the original specification. And Easterly (2003) used sample of data that shows increased aid flow and, at broadly the same time, decreased growth rates to support the claim that aid and growth shows negative relationship (primarily when negative return prevails as a result of absorption capacity constraint).

Without a clear guidance from a theory it is understandable that there could be much possible specification either in terms estimation techniques or in terms of which control variable to include in regressing growth rate on aid flows. These infinite econometric specifications coupled with finite number of observations in a cross-country test then make it always possible for the coefficient of interest to loose significance under some specifications. In fact the Burnside-Dollar study itself found specifications for which there is no significant relation, not only between aid interacted with institution and growth, but also between institutions and growth-which run against a widely established consensus. Partly because of the above econometric difficulty even many of the critics who don't found evidence that aid increases growth in the context of the Burnside-Dollar analysis didn't reject the proposition. Furthermore Burnside and Dollar (2004) extend the data to the 1990s and cover more samples and found this doesn't alter the relationship they found earlier.

The majority of the evidence that emerge from the new stream of studies since the late 1997 gave rise to more optimism to the effectiveness of aid that has been missing from the aid literature for a long time. Yet the empirical evidence is far from conclusive as it is always possible to find specifications that could not establish any link between aid and growth. Nevertheless the widely accepted proportion that institutions matter to aid effectiveness has led to the demises of the micro-macro paradox and the proposition that aid 'immiserize' recipients. It is of course possible to observe cross-country data that shows negative correlation between aid inflow and growth rates as Easterly (2003) has shown. But this correlation can't be used to support the immiserizing effect of aid. As McGillivray (2006) argues "...the real issue is not whether growth has declined, but whether these declines would have been lower in the absence of aid".

McGillivray acknowledges aid delivery problems that might lead to aid not to work better. However this is not the equivalent to “aid not having worked at all”. In surveying the post Burnside-Dollar stream of research on aid effectiveness McGillivray (2006) conclude;

...The sheer weight of evidence emerging from the literature is such that one can clearly reject the hypothesis that aid, on aggregate, has no beneficial impact on or is harmful for growth. The only context in which this one should not reject this hypothesis is if aid inflows are of such a large magnitude that negative returns prevail, to such an extent that they outweigh the positive impact. This would appear to be a case for improving recipient country absorptive capacities and/or reducing aid to manageable levels, not eliminating it entirely. (McGillivray, 2006, page, 17)

2.2 The Motive for Giving Aid

How aid is allocated across recipient countries and how it should be allocated so that aid resource can effectively promote economic development in LDCs is another important topic in the aid literature. In fact the effectiveness of aid is often contingent on the underlying principle of aid allocation. The type of aid and its relevance to the particular country; and the term and condition of aid and its link with trade and other financial inflows do affect the capacity of aid resources to address the development problem of the recipient. It is often common to see in the aid literature that "aid effectiveness" and "aid allocation" addressed side by side.

In the early decades of development economics the underlying assumption of aid literature has been that aid is given by rich country donors to promote development in the third world countries. Whereas at the same time the official aid reports of donors didn't conceal the fact that they take in to account national interest in disbursing aid money along with the development motive (Maizels and Nissanke, 1984).

Most of the existing literature attempts to determine the motivation of aid giving through a cross-country test of these two broad categories of motive without much of a theoretical explanation. Some of the theoretical literature that attempt to understand the demand and supply behavior of aid giving on the other hand treat foreign aid as an international public good.

One of the most widely cited choice-theoretic model by Mosley (1985) treat foreign aid as a public good for which there is imperfect market -imperfect mainly because of ignorance of those who demand aid expenditure by their government (the tax payers) about the nature of the commodity they are buying with tax price. Donor country public demand for aid expenditure by their government can't be modeled in the standard decreasing function of tax price of aid because of public ignorance (about the total quantity of aid expenditure and hence its tax price to them and about the out put of aid), and altruistic bases of public demand for aid. Rather than the tax price the donor country public demand for overseas aid expenditure is assumed to be influenced by the public perceptions weather the country could afford it or not and the quality of the aid process. Mosley (1985) corroborates this hypothesis by a survey of British public opinion that confirms the quantity ignorant, quality conscious and altruistic public demand.

Thus tax price is absent in the demand function for aid. Instead the relative national income of the donor country (to measure the affordability constraint on public demand for aid expenditure) and an Index of aid quality indicators are the variables used to explain the desired public demand for aid expenditure. However this altruistic and humanitarian public demand for aid expenditure doesn't necessarily lead to an increase in the flow of a more "poverty focused" aid to developing countries. The major hypothesis of the model is that given the proposition the voting public is more humanitarian than their government in aid giving,

...If a donor government is willing to come half way to meet the public (demand) by altering its aid program in a more "poverty focused" direction (as happened in a number of countries in 1973-75), then the public demand

for aid, at a given level of relative national income will increase, (Mosley, 1985,page 376)

But whether the donor government will come half way, that is, how far the government's supply of aid expenditure adjusts to the desired demand by the voting public is crucial to the hypothesis. The actual consumption of overseas aid (in fact the consumption of all publicly supplied services) can't be adjusted to desired level by market mechanism, that is, by varying the amount of consumption. This is simply to say that the actual supply function is exogenously fixed (vertical). The voting public can influence to adjust the actual to the desired through political action (by politically pressuring the government to push the supply curve in the desired direction).

The actual aid supply function (donor government aid budget) in a particular time is assumed to be predetermined -influenced by the previous time expenditure- for the good reason that aid money is committed money that can't be easily changed in any given time. At any given time then the donor government is suppose to have only a marginal influence, which is to be affected by the state of the domestic economy, international norms (the aid program of a given donor need to keep-up with the decisions of others in the donor community) and the effectiveness of the public pressure to adjust actual supply to desired demand. It is this effectiveness of the public pressure that will determine whether the government will come the half way to meet the humanitarian public demand for oversea aid expenditure and lead to a more quantity and quality of aid.

It is clear then that the high quality and quantity in public demand for aid would not necessarily lead to a more inflow of development assistance and a more poverty focused distribution of aid. The public may not be effective in politically pressurizing its government to adjust the actual to the desired. In fact, aided by the public ignorance, the donor government can even influence its public to adjust its desire to the actual quantity and quality of aid expenditure.

In general this choice-theoretic model of aid allocation by Mosley (1985) determines the type and quantity of aid disbursement at a particular time by domestic factors that shape

demand and supply. On the supply side, aid disbursement of a donor is influenced by past disbursement, disbursement by other countries and the present state of the economy. It is then to be expected that the aid disbursement of a donor at any particular time is positively related with past disbursement and other donors' disbursement and negatively related with the present level of unemployment and budget deficit in the donor country. The preliminary empirical test by Mosley (1985) confirms this, but found only past disbursement and the disbursement of other donors are significant for most of the donors. On the demand side aid disbursement of a donor is influenced by the relative income of the donor and aid quality. The coefficient for both relative income and aid quality are the response of public demand for these variables as well as the response of the government to public demand - both are unobservable responses.

The empirical literature to determine the aid relation on the other hand broadly conclude that both humanitarian motive and national interest are present in the aid allocation of the western donors, the latter motive dominating aid disbursement for a long period. Davenport (1970) regressed aid from OECD countries to 34 developing countries, on the level of per capita income, inflow of private capital (as percentage of GNP), foreign reserve assets (as percentage of imports) and on population size; and found that the inflow of private capital and foreign reserve assets are significant and positive, whereas the level of per capita income is significant and negative. The positive sign of the coefficient of private capital inflow, which is used as a proxy variable to the absorptive capacity of the recipient country, shows aid and private capital inflow are complementary to each other. This could be interpreted as suggesting stability (at least financial stability that helps to attract foreign portfolio investment) and western disposition go together. The negative relationship between aid inflow and the level of per capita income shows aid is allocated to poor countries, proving the existence of the development motif in the allocation of aid from OECD countries. Henderson (1971) on the other hand found only population size has a significant and negative relationship with aid inflow for the period between 1961-67, suggesting the tendency aid inflows to diminish with the size of the recipient.

It is the more sophisticated study by Mckinlay (1977), and Mckinlay and Little (1978a, 1978b, 1979) that has innovated the "recipient need" and "donor interest" models

to analyze the underlying principle of aid allocation by the four major bilateral donors- Germany, the United States, France and Britain. The "recipient need" model assumes the underlying principle of aid allocation is the economic and welfare (or generally humanitarian) need of the recipient whereas the alternative "donor interest" model assumes foreign policy interests of the donor as the underlying principle.

The recipient economic and humanitarian need is defined by the relative domestic resource and foreign exchange availability short falls. The level of Per capita GDP and its growth rate primarily measure the domestic resource shortfall in real terms. To compensate for the crudeness of per capita GDP quality of life indicators such as the physical quality of life index (PQLI) is often used to measure the relative domestic resource shortfall to address poverty in recipient countries. The relative foreign exchange availability short fall, which represents the balance of payment constraint faced by the recipient, is measured in the Mckinlay-Little studies by the size of the national liquidity holdings as a percentage of imports.

To identify the various foreign policy interests western donors pursue through foreign aid commitment, the Mckinlay-Little studies consider two main propositions. (1) By establishing commitment and dependency a state can realize certain foreign policy utilities; (2) aid can be used to establish commitment and dependency. The various foreign policy interests derived from these propositions that cover both internal and external aspects then are grouped in to five broad categories, viz;

1. Development interests focuses on economic development and performance capabilities of low income countries
2. Overseas economic interests focus on the variety of domestic and foreign benefits that can accrue to high-income country through trade and investment ties with low-income countries.
3. Security interests focuses on the security issues raised by the perceived threat of communist expansion.
4. Power political interests focuses on the power capabilities of low-income countries.
5. Political stability and democracy focuses on the political structure and ideology of low-income countries.

These are not mutually exclusive categories but are simply the different possible interests a donor may pursue in a recipient country.

The variables used to operationalize these interests include the level and growth rate of per capita GDP, the ratio of export and import to GDP, the existence and number of defense treaties, gross military expenditure, international liquidity holdings and bans on parties other than the communist party.

Mckinlay and Little applied their innovative model to data for each year between 1960 and 1970, and found, for all the major donors, the application of the recipient need model produce no statistically significant results. The donor interest model, on the other hand, provides a good explanation of aid allocation during the period, while the dominant category of interest varies substantially across the major donors.

The Mckinlay-Little studies used absolute commitment - the absolute amount of aid or aid inflow per GDP - as the dependent variable to explain the motivation behind bilateral aid allocation. These studies then left the underlying principle of multilateral aid allocation unexplained. Beside, absolute commitment by a donor is substantially influenced by the size of the recipient measured by its total population. A high population size is a good indicator for the potential economic, political and military power of the recipient thus making population size a donor interest variable. However population size can as well be taken as a recipient need variable for a more populated developing country is suppose to require more aid inflow to address domestic resource short fall. This creates confusion in interpreting the coefficient of the total population in the aid allocation equation, which many cross-country studies found the most significant independent variable.

Maizels and Nissanke (1984) extend the Mckinlay-little studies by fitting the two alternative models to both bilateral and multilateral aid inflows. They also come across the population problem by taking relative aid commitment - the value of aid per head of the population size - as the dependent variable. In a cross-country regression of both bilateral and multilateral aid per capita inflows to 80 developing countries, Maizels and Nissanke found the recipient need model provide a reasonable explanation of multilateral aid

allocation in 1969-70 and 1978-80. Among the recipient need elements they found the balance of payments constraint the most significant element for multilateral aid allocations. In fact they also found the balance of payment constraint highly significant to bilateral aid allocation, contrary to the Mckinlay-little studies. This contrast between the two is primarily due to the different variables used to measure the balance of payment constraint. Maizels and Nissanke(1984) used the current account deficit relative to GDP to measure relative shortfall in foreign exchange availability. The significantly negative coefficient of the current account deficit could be interpreted, as foreign exchange constraint on economic growth is an important element in both bilateral and multilateral aid allocation. However it could be because of the OLS estimation technique they used do not take in to account the simultaneous causation between aid flows and economic performance of the recipient country. Thus the significant coefficient of current account deficit could also be interpreted as aid inflow encourages expansion of recipient import.

To test the donor interest model, Maizels and Nissanke (1984) took only the external linkage of donor-recipient relationship, and include only political and security interests (operationalized by arms transfer) and donor investment and trade interests in the recipient country. Nevertheless their test, like the Mckinlay-Little test, found donor interest model provide a good explanation of bilateral aid flows, while at the same time acknowledging difference in the weight of the different donor interest elements across the major bilateral donors.

In a stepwise regression by using the independent variables from both models in to a single equation, Maizels and Nissanke test for the change in the balance between recipient need and donor interest over the decade. They found a shift from donor interest to recipient need aid inflows over the 1970s, reflecting a shift from bilateral to multilateral channels and the decline in bilateral aid during the period.

However this shift towards recipient need aid inflow has not been sustained for long. Recent empirical studies has shown the donor interest model still provide a good explanation of total aid inflow to developing countries. Boone (1995) found political factors operationalized by political dummies largely determine aid per GNP inflows for the

period 1971 to 1990. He also found that once per capita GNP is controlled aid per GNP inflow is not directed to countries with poor human development indicators and that most of the inflow is to small countries, indicating recipient humanitarian need had not been the primary motive of aid giving during the period. Burnside and Dollar (1997) also found political dummies that capture donor strategic interest have large positive coefficient for the period 1970-1993. Again these donor strategic elements are found to be more important in bilateral aid inflows than the multilateral aid allocation.

The move towards selectivity

The seminal research paper by Burnside and Dollar and the new stream of empirical studies on the effectiveness of aid that it helps to trigger have also led to new thinking about how aid should be allocated. The early approach to how aid should be allocated to promote the development process in developing countries was based on the general notion of equity or efficiency or a combination of both. As reasonable as this notion appears to sound, this approach didn't enjoy support from empirical findings (McGillivray, 2006). The strong evidence of the new stream which links aid effectiveness to governance institutions and other contingencies has given rise to clear implication as to how aid should be allocated.

The Burnside-Dollar finding that the effectiveness of aid to promote growth and reduce poverty is contingent on institutional regimes of the recipient country has led to the selectivity approach of Collier and Dollar (1999), which has now become a dominant paradigm in the aid allocation literature.

The Collier-Dollar selectivity model sees more aid inflow to countries that use it more effectively by taking poverty efficient aid allocation as a benchmark. A poverty minimizing optimal allocation is one in which an extra dollar of aid in any given country decreases the number of people living below the income poverty line by an identical amount as in any other country.

The two important features the selectivity approach are; (1) aid allocated to each country is an increasing function of its poverty line and country policy and institutional assessment (CPIA) score, and a decreasing function of its national per capita GDP.

Countries with inferior institutional regimes indicated by a low CPIA score are thought to reduce the impact of aid on poverty reduction and should receive less aid than their level of per capita GDP or their level of poverty predicts. (2) The Collier-Dollar selectivity model doesn't seek to minimize poverty in each individual country. Its main feature is rather to minimize aggregate global poverty.

Acknowledging the valid non-developmental criteria donors could actually use in their disbursement of aid money, Collier and Dollar accepts that actual aid allocation will always deviate from this poverty efficient benchmark. Nevertheless the bench mark is very useful whenever donors lack the information about the likely impact of aid on poverty reduction in the recipient country and whenever donors lack the ability to prevail over recipient government preference.

The empirical studies to test for selectivity shows donors have increasingly been showing a tendency towards rewarding good policy or institutions, particularly for the period since the end of the cold war. In their original work Burnside and Dollar (1997) found the policy index in the aid allocation equation has a significant positive coefficient even for the period between 1990-1993, when political strategy interests of the donor was the most significant. This shows that during the period donors in general did reward good policy, after controlling for the level of income, population size and strategic interests. However they also found, after controlling for the level of income and population size, the partial correlation of aid and policy for bilateral aid is essentially zero, indicating countries with the same population size and level of income but different policy regimes have received the same level of assistance on average. However multilateral aid during the same period was more selectivity base. Furthermore Burnside and Dollar (2004) has shown a gradual change in aid allocations towards selectivity in the 1990s. The regressions for the 1990s found that both total official development assistance and aid inflow from the international development assistance (IDA) are positively correlated with aggregate governance institution index of the recipient.

The more recent tests of selectivity further confirm that the selectivity approach is currently becoming more popular among the major donors. Dollar and Levin (2004) in a comprehensive analysis of panel data covering 41 donor agencies found selectivity is

present for the period 1984 to 2002, and that it emerged strong since the mid 1995. They also found poverty focus of aid increased through the period. McGillivray (2006) found selectivity has become increasing important for the majority of donors since early 1990s. Isopi and Mavrotas (2006) found a restriction of the time dimension to 1999-2003 shows a shift of policy towards selectivity.

The empirical tests for selectivity go further than economic governance indicators to include political governance indicators to see if donors do also reward respect for political and civil rights. Svensson (2000) found for the period between 1970-1994 respects for political and civil rights has a positive impact on whether a country receives any aid at all from the larger donors-Canada, Japan and the United States. But a higher level of political and civil rights lead to higher aid flows from Canada, Denmark, Norway, Sweden - the so called like minded countries that traditionally put emphasis on democracy and human rights in their development assistance - and UK. The correlation between the level of civil and political rights and the flow of aid is rather absent for the big donors, for whom political and strategic goals render the rewarding democratic regimes less important. Alesina and Dollar (2000) confirm Svensson's finding with respect to the like-minded countries but come to more positive conclusions about the big donors, whereas Isopi and Mavrotas (2006) found that the United States still gives more aid to undemocratic regimes.

This move in practice towards selectivity with donors concentrating on fewer good performers over penalizes those countries that score poorly in policy and institutional assessments, especially the poorest ones that need foreign assistance most. It takes only policy and institutional quality into account while many aid-growth studies provide empirical evidence that additional structural and political contingencies do also affect aid effectiveness in poor countries significantly. Recent empirical findings have shown structural vulnerability, the presence of trade shocks, the extent of post conflict scenario, the extent of democracy and political stability are important both by themselves and by affecting institutions especially in the poorest countries (McGillivray, 2006). Moreover the benefit of aid shouldn't be exclusively promoting growth. The prevention of instability and conflict in individual countries as well as its spill over to neighboring countries; and

avoiding deterioration in human right and human development indicator are also among the objectives of development assistance.

McGillivray (2006) has noted the move towards selectivity has been accompanied by an increasing concern for aid allocation to fragile states. These are LDCs with either critically poor policies and/or poorly performing institutions. The donor community adopted the bottom two quintile of the world bank CPIA score a criterion of fragile state. McGillivray (2006) has shown fragile states are collectively 'under-aided', receiving low aid per capita than their level of poverty, population size and CPIA scores would justify. And with in the fragile states the 'aid-orphans' receiving far less aid and the 'aid-darlings' receiving far more.

Two alternative approaches to the selectivity model that augment the additional contingencies to aid effectiveness, and hence might see more aid inflows to countries with poor CPIA scores have appeared recently. These are the millennium development goal (MDG) strategy and the Cogneau -Naudet equal opportunity (EOp) model (McGillivray, 2006).

The millennium development goal strategy implicitly adopt aid allocation rule that minimize the shortfall of MDG variable from their stated target values in the millennium project report in each country. Thus the implicit poverty efficient allocation is the one that equalize shortfalls from the goal across countries. The greater these shortfalls the greater will be the amount of aid a country is expected to receive. McGillivray (2006) criticizes the MDG strategy for not taking in to account cross-country difference in the marginal effectiveness of aid. This disregard to cross country difference in effectiveness violates the principle of equity and ignores the possible disincentive effect of increased aid. If more aid money is allocated to a relatively poorly performing country, the poor in this country would receive more aid per head than the ones in better performing countries, and this may robe weak states the incentive for improving their performances.

The Cogneau-Naudet Equal Opportunity (EOp) model on the other hand allocate aid to equalize differences in poverty risk by a chosen point in time between countries

facing different disadvantages but making the same degree of effort. This means countries with lower poverty decline than projected by their effort, which should lower poverty decline than projected by their effort, which should then be accounted by external risk, will get more aid for any given effort. Thus the EOp model recognize CPIA score of effort indicator can be influenced by structural disadvantages over which a country has little or no control, and for which it shouldn't be penalized. (McGillivray, 2006)

2.3 The Incentive Effect of Foreign Aid

Studies on the incentive effect of foreign aid address what incentives the availability of foreign aid, or even the mere anticipation of it, create in the recipient countries. Does the availability of foreign aid, or the mere expectation of it, helps to promote good institution regime in the recipient country; either by giving donors the leverage to prevail over recipient government preferences or through increasing the probability that reforms become successful and politically sustainable. Or, to the contrary, does foreign aid reduce the incentive for self help and divert efforts in to rent-seeking behavior. In general, the incentive effect of foreign aid dealt with the micro and macro responses of recipient economy to the availability foreign development assistance.

Again the literature on the incentive effect of foreign aid is intertwined with the 'Aid effectiveness' literature. The early critics of foreign aid discussed above [Griffin (1970), Griffin and Enos (1970), Weisskopf (1972), Bauer (1965)] attributed aid ineffectiveness to the disincentive aid inflow create to domestic saving and private investments. Papanek (1972) criticized the saving functions implicit in this disincentive effect, pointing to other plausible saving functions that could possibly increase the incentive to save when foreign aid is available.

Mosley et al (1987) discuss the theoretical effect of foreign aid at three separate levels, via;

1. The direct effect traced directly to the project aid money is nominally allocated.

2. The indirect effect on the spending pattern of the public sector in the recipient country; and
3. The price effect the transfer of aid money has on the private sector through the price system.

The indirect effect on government fiscal policy assumes development assistance directly flow to recipient government treasury and that aid is fungible -the recipient government can reshuffle spending away from projects financed by the foreign aid to other capital projects, and to 'productive' or 'non productive' recurrent expenditures. Such fiscal response to foreign aid inflows by the recipient government will in turn ultimately affect the rest of the macro economy through exchange rate and interest rates. The incentive problem arises when foreign aid undermines fiscal austerity, and when this ultimately lead to the deterioration of other macro policies. The incentive problem thus depends on the share of aid allocated to recurrent budget. (Mosley et al,1987)

It is not that aid allocated to recurrent budget is a problem by its own right. The recurrent expenditure could even be for 'productive' purposes like developmental recurrent expenditures on education, health and social services that could augment income in the future. It is rather what lies behind the decision by the recipient government concerning the proportion of aid allocated to recurrent budget that indicate the possible disincentive effect of foreign aid. The share of aid allocated to recurrent budget indicate the availability of foreign aid create the incentive to prefer low level of taxation than what would be possible other wise. According to Mosley et al (1987),

...Behind the share of aid allocated to the recurrent budget lies a decision by the government concerning the proportion of recurrent expenditures which can't be financed from taxation [and from domestic borrowing]. Frequently this decision is made at the last minute, and reflects factors which are not under its control, such as the extent to which a particular tax base has or has not responded to a change in taxation. However the choice of tax rates is the governments, as is also the choice of tax based, eg. whether or not to impose a tax on land or other forms of wealth. We therefore suggest that those

developing countries which finance recurrent expenditures out of aid are, in many, cases exercising a conscious and deliberate preference for lower levels of taxation than those which would be feasible in the absence of aid. (Mosley et al, 1987:page 625)

The price effect of foreign aid on the private sector investment works by raising the prices of those goods and services the aid project augment their demand (which are mainly "not tradable goods" like construction inputs and unskilled labor) and by depressing the prices of those goods and services supplied by the aid project (which are mostly 'tradable goods' like capital goods and professional services). The net price effect then depends on, according to Mosley et al(1987),

1. The size of the decline in the prices of "tradable goods" relative to the rise in the prices of 'none tradable goods'.
2. The relative impact of the change in the two prices on the economy, which in turn depends on how far the relative price change spread through the economy and whether the goods and services in question are production in puts or used for final consumption.

The price incentive foreign aid produces, that is, the extent to which foreign aid 'crowd-out' private investment, then depends not on absolute amount of distortion but on the relative amount of distortions aid create, viz; the relative price change, the relative extent these price changes spread and their overall impact on input costs.(Mosley et al,1987).This suggests aid inflow do also have beneficial influence on the private sector as well as negative effects. If aid inflow is not accompanied by restriction on the private sector economic activity, and if the probability of expropriation diminishes, the "crowd-out" effect on the private investment need not necessary follow foreign aid inflow as suggested by the early critics. what this means to aid policy is that large project aids to remote areas and disbursing aid money at a spread which lead to the creation if inflationary pressure should be avoided for the beneficial effect of aid to be realized by the private sector.

The Mosley et al (1987) empirical result is based on OLS estimate of parameters from structural equations derived from solving fist order conditions of governments' welfare maximization problem. Their approach assumes governments in the recipient

countries maximize a welfare function of additive intermediate targets- the gap between actual and desired level of public sector expenditure and revenues- subject to budget constraints that include aid. Alemayehu (2002) found this approach not a particularly plausible one to model decision making framework in developing countries. He points to the inconsistency of the framework in its assumptions of additive utility function and a binding balanced budget constraint. These assumptions can't hold if the intermediate target are interdependent and if the government is not committed to a balanced budget.

Beside this internal inconsistency, Alemayehu (2002) argues different frameworks are available for decision making in developing countries that reflect actual decision better in these countries. He used an alternative decision making framework that allows for a "recursive" approach to public finance to determine empirically the impact of aid on recipient government effort to levy and collect taxes. According to this approach governments can finance targeted expenditures through different alternatives with different implicit & explicit costs. Governments can finance expenditures through foreign aid (subject to policy constraint attached by conditionality), from domestic revenues (subject to institutional and political constraints) or the government can opt for deficit financing and/or expenditure reduction (subject to inflationary costs & consideration of public response). Which alternative will be used depends on the availability of aid and the costs attached to each alternative.

The empirical implication of this framework is that the high the availability of an exogenous inflow of aid, the lower will be the incentive to use the other two alternatives for the implicit cost of foreign aid finance represents least cost-financing alternative. This is akin to a soft budget constraint, which could potentially reduce the effort to levy & collect taxes and might lead to an increase in government expenditure. Estimating behavioral equations for direct & indirect taxes and government expenditure derived from this approach, Alemayehu (2002) found the overall effect of foreign aid (grants and multilateral loans) on the effort of government tax collection is insignificant.

The incentive effect of foreign aid become more complicated when one deviate from the assumption of a benevolent social planner that disburse aid consistent with the social optimum; and analyze the incentives recipient country politicians face. Studies that

analyzed the importance of the political economy of developing countries for the effect of foreign aid on public choice has shown the availability of aid increases rent-seeking behavior.

Boone's (1995) model of public choice differentiate alternative political regimes in developing countries by the interest group they represent in to; viz:

1. Elitist regimes maximize the welfare of a fixed ruling coalition
2. Egalitarian regimes maximize the welfare of a fixed group of citizens with relatively low endowments
3. Laissez faire regimes - maximize the welfare of a minimum (and substantial) fraction of the population.

The model predicts the optimal public policy in both elitist and egalitarian government is to the transfer of foreign aid to their interest groups with out having any effect on distortionary taxes, whereas the optimal policy for Laissez-faire regimes is to lower distortionary taxes. However as the transfer payment in the egalitarian regimes is to the poor it is supposed to reduce poverty. It is thus only elitist regimes that waste foreign aid on the consumption of the political elite with out showing any improvement in the welfare of the poor. The empirical test using the reduced form equation of this model shows the marginal propensity to consume from aid for 97 developing countries was insignificantly different from one for the period between 1970-1990, suggesting elitist regimes best predict the impact of aid.

Svensson (1995, 1996) has shown in a game-theoretic model of public choice in LDCS and when the donor-recipient relationship is modeled as a non-cooperative game moral hazard problem can lead to aid increasing rent dissipation and fiscal imbalances without much impact on the provision of public goods and poverty reduction.

Svensson (1996) modeling public choice in developing countries as an out come of strategic interaction between interest groups has shown;

-----The level of spending on public goods doesn't need to increase with higher government revenue, thus providing a political economy rationale for why large windfall gain in revenue, or large inflows of foreign aid, don't necessarily results in increased provision of public goods.... [And] that expectation of aid in the future may suffice to increase rent dissipation and reduce the number of periods in which efficient policies can be sustained."
(Svensson, 1996, page 26)

In this game-theoretic abstraction of public policy choice, a 'recipient need' aid inflow undermines a limited collusive equilibrium that enforce control over rent dissipation (rent seeking outlay by interest groups) by making the expected punishment for deviation from the limited collusion equilibrium less harsh, and hence increasing competition and rent dissipation. This widely observed moral hazard effect of foreign aid could be mitigated if donors could commit and write a contract with the recipient country (which then attaches conditionality to aid). However, this could see less aid inflow to those poor countries that need it most. Thus suggesting a trade off between optimal incentive and recipient need aid.

Furthermore Svensson's (1995) macro model of foreign aid allocation has shown such aid contract is not time consistent: "...ex post it is optimal for an altruistic donor to no longer withhold aid to those in most need. The anticipation that this will happen will in turn affect the recipient's choice ex ante". The empirical prediction of this model is that "over time, and across countries there ought to be a positive correlation, ceteris paribus, between fiscal imbalances, that is budget deficit, and aid flows".

There are two reasons why aid should induce weak fiscal discipline and that increased deficit then should lead to a high foreign aid inflow in Svensson's macro model; (1) it is optimal for an altruistic donor to give more aid to countries with fiscal imbalances in order to maintain a desirable level of humanitarian spending in these countries (2) If the recipient government correctly anticipate that aid inflows will increase when the country faces fiscal difficulties, it may lack the incentive to avoid these deficit ex ante which will make deficit ex post. Under such non-cooperate interaction between aid recipient and altruistic donor, Svensson argue aid policy (conditionality) is not credible. In a preliminary test of this

prediction Svensson (1995), from a simultaneous equation estimation of the budget balance and aid allocation, found that aid has had significant negative impact on budget balance, and deteriorated budget balance significantly explain aid flow for a sample of developing countries.

Collier (2000) further argues there is little incentive to maintain reforms once the aid has been delivered, unless the government wants the reform in the first place. But then, if it does want the reform, it doesn't need the aid to reform. In principle conditional aid could provide incentive to policy changes. This incentive argument for conditionality is in fact an established economic logic: the offer of aid conditional on policy reform should induce supply response. However this ignores some offsetting effects to this incentive effect that the availability or the anticipation of aid creates. Collier argues that there is an income effect of aid offsetting the substitution effect. When bad policy trigger crisis and if aid is forthcoming to alleviate the crisis, then there is little urgency for the recipient government to reform policy.

Most empirical studies on the other hand found there was no over all beneficiary effect of aid on public policy in the past. Boone (1995) has found the impact of aid on basic policy indicators is insignificant, and there is no impact of aid on distortionary income taxes. Aid only has increased the size of the government. Alemayehu (2000), cited above, further disaggregating taxes in to direct and indirect taxes and has found grants have no significant impact on both taxes (particularly when compared to other types of capital inflows). Burnside and Dollar (1997) also found the effect of aid on macro policies is insignificantly different from zero while government consumption has strong positive association with bilateral aid.

III

Methodology

This chapter discusses the approach to measuring the significance of institutions in the allocation of aid by donors and the potential impact of aid on institutional reform in the recipient countries. Section 3.1 presents the theoretical discussion on the qualitative impact of aid. Section 3.2 provides the intuitions behind and the theoretical and historical support for the major hypotheses of the paper, that is, the interaction between aid institutions and political regimes. Finally, section 3.3 outlines the empirical approach to measuring aid allocation rule and its interaction with institution and political regimes in the recipient countries.

3.1 The theoretical - qualitative impact of foreign aid

What should one expect from theory about the aggregate impact of aid? One simple way of discussing the qualitative impact of aid is by experimenting on the standard neoclassical growth model so as to show up the aid variable in the capital accumulation equation. Some recent literatures on the effectiveness of foreign aid form their intuitions for the relationship between aid and economic performance on such experimenting [Burnside and Dollar (1997, 2004). Rajan and Subramanian (2005)] In Rajan and Subramanian (2005), for example, assuming a fraction of foreign aid, B , is the only source of public sector investment on physical capital, the capital accumulation equation is given as,

$$K = \beta \text{aid} + I_p - \delta K$$

Where K is physical capital, I_p is private sector investment on physical capital and is δ the depreciation rate. In per capita form, the capital accumulation equation is re-written as

$$k = \beta \frac{\text{aid}}{L} + \frac{I_p}{L} - (n + \delta)k$$

Where n is the natural rate. Given the standard Cobb-Douglass production function

$y = Ak^\alpha$, the growth rate of per capita output

$$g = \frac{\dot{y}}{y} = \alpha \left[\frac{\dot{k}}{k} + \frac{\dot{A}}{A} \right]$$

Where g is the growth rate of per capita output, y is per capita output and A is the technology parameter. Substituting for the rate of change in per capita capital (k) from the per capita capital accumulation equation, the growth rate of per capita output is then,

$$g = \alpha \left[\frac{\beta \text{aid}}{kL} + \frac{I_p}{kL} \right] - \alpha (n + \delta) + \frac{\dot{A}}{A}$$

To state growth rate of per capita output in terms of Aid -to-GDP ration, this last equation can be re- written as,

$$g = \frac{\beta \text{aid}}{Y} \frac{Y}{K} + \alpha \frac{I_p}{kL} - \alpha (n + \delta) + \alpha \frac{\dot{A}}{A}$$

Where Y is GDP. Differentiating growth rate with respect to Aid-to-GDP ration gives.

$$\alpha \frac{\beta Y}{K}$$

The impact of aid on growth rate then depends on the share of capital in the national income (α), the fraction of aid used for physical capital (β) and the output- capital ratio. It is clear then that even in the most optimistic assumption that all aid is allocated for productive investment and that an increase in Aid don't adversely affect the output-capital ratio is unlikely to raise the growth rate of the recipient by the equivalent amount.

These assumptions, in fact the whole modeling of the impact of aid as a straight forward leverage on growth by augmenting domestic investment, rather over simplify the more complex impact of aid on the recipient economy. Such a model implicitly assumes a benevolent social planner. Official aid, intermediated by the recipient governments may lead to a negative incentive (a moral hazard problem). Moreover, the impact of aid on growth should not only be through investment in physical capital. Foreign Aid, by financing recurrent expenditure on schooling and human capital formation, and through a potential positive incentive effect on policy, could also lead to growth in total factor productivity. Nevertheless, this approach with its simplistic assumptions point out that aid couldn't produce an equivalent qualitative impact on economic performance.

3.2 Aid, institutions and political regimes

The significance of institutions on the allocations of aid by donors has a strong empirical support as well as a theoretical reasoning as shown in the review. Institutions are, broadly speaking, the social infrastructures that determine the economic environment. The literature reviewed has broadly concluded that institutions matter, and are fundamental causes of the difference in economic performance across countries. It is then quite intuitive to assert that the impact of aid on economic performance is conditional on these same institutions. The empirical evidence on the move towards selectivity with standing, however, it is not yet clear why donors has come to attach more weight to good institutions in the recipient countries in the 1990s. This paper will not speculate on why this move towards selectivity has come about. It is concerned only with measuring the amount of foreign aid allocated to countries with differing institutional quality, after controlling for the traditional recipient need and donor interest variables.

The other major hypothesis of this paper about the incentive effect of foreign aid argues this move towards selectivity will have incentives that vary across the type of political regime in the recipient countries. Specifically, allocating aid to poor countries will make reforms more politically sustainable and hence more successful in a dictatorial regimes than in a democratic one.

The literatures reviewed have broadly concluded that in the past aid has not had systematic positive effect on institutions and policies. But this may rather has to do with the way aid used to be allocated than unresponsiveness of the political economy of the recipients. If aid is allocated indiscriminately than selectively with regard to institutions, as it used to be practice in the past, there is rather little incentive to reform institutions and policies. This move in the past fifteen years towards selectivity then should increase the positive incentive effect of aid. It is crucial for the second hypothesis of the paper that the first hypothesis should hold true: the more significant institutions become in the aid allocation the more significant should be the positive incentive effect.

In revisiting the evidence on the connection between Aid, Policies and Growth, Burnside and Dollar (2004) speculate, "allocating aid to relatively good governments would have positive incentive effect", even when they do not found any such empirical evidence in their original paper.

The more controversial part of the hypothesis is that this positive incentive effect should be stronger in dictatorial regimes that have less respect for the freedom of their subjects than in democratic regimes where political rights and civil liberties are respected. The main reason for this position is that institutional reforms in poor countries are costly and politically unpopular among the different interest groups and political constituencies that affect public choice in developing countries.

The literature reviewed above underline poor countries remains poor mainly because of poor or extractive institutions unfavorable for economic development. It is also thought that once bad institutions are set up they show a strong tendency to persist for a long time. Acemoglu et al (2000), for example, have shown the extractive colonial state and institutions, which were in the first place influenced by the unfavorable conditions for the European colonizers to settle and set up their institutions, persisted after independence to the present. Acemoglu et al (2000) suggested the following three plausible economic mechanisms that explain why these extractive institutions persist for such a long time,

1. Setting up functioning institutions involves sunk costs, thus robbing the ruling elite the incentive to reform institutions.
2. The smaller the size of the ruling elite (which is often the legacy of colonization), the larger the share from the extracted rent, then the greater will be the incentive to protect the extractive institutions.
3. The irreversible investments complementary to particular institutions increase the willingness to support them.

Easterly and Levin (1997) on the other hand found that ethno linguistic fractionalization, the hall mark of most poor countries, significantly explain poor institutions and the tragic performance of African economies.

The argument of this paper is then if donors start to reward good institutions, the benefit of institutional reform for recipient government out weigh the costs if the political regime in the recipient country is not susceptible to the pressures of interest groups fragmented along ethnic lines. In light of the political economy of most developing countries, where public policy is the outcome of the interaction these interest groups, this is tantamount to saying the regime should have something close to monopoly political power.

3.3 The empirical approach and the Model

To determine empirically the relationships among aid, institutions and political regimes, this study uses cross-sectional dataset for 90 aid recipients for the past fifteen years since the end of the cold war. Since the two main propositions of this paper; that institutions causes aid, and if so, aid in turn causes institutional reform suggests a two way causation between aid and institutions, this study explicitly deals with the problems of endogeneity and reverse causation.

To test whether donors do reward institutional quality in the recipient countries, the study specify the aid allocation equation along with the models of donor behavior discussed in the literature reviewed. The traditional variables in the aid literature are classified as donor interest versus recipient need, and economic versus political. Acknowledging the role of institutions in aid allocation recent empirical studies add in the aid allocation equation various forms of institutional quality indicators.

The base specification of the aid equation in this study mimics the approaches of previous studies. From the recipient need model it takes population, per capita GDP and average life expectancy variables that are found to be more significant in various studies. Political dummy variables for sub Saharan Africa (SSA), France zone and Central American and Egypt; to which most of European, France and United States bilateral aid

programs and support for multilateral aid programs is directed for strategic reasons will be used to capture donors' strategic interest. Various studies used different institutional quality indicator, like the international country risk guidance (ICRG) expropriation and rule of law indices [Acemoglu et al (2000), Burnside and Dollar (2004)] and freedom house political right index [Burnside and Dollar (2004), Rodrik et al (2002)].

In light of the recent development in the aggregation of all of the institutional variables available this paper uses the updated rule of law component of the Kaufmann, Kraay and Zoidon –Lobaton- here after the KKZ aggregate governance indicators. The KKZ, in the context of a broad definition of governance as “the traditions and institutions by which authority in a country is exercised” aggregated governance indicators in to three groups, Viz.

1. The process, by which governments are selected, monitored and replaced.
2. The capacity of the government to effectively formulate and implement sound policies.
3. The respect of the citizens and the states for the institutions that govern economic and social interactions.

There are six distinct components of aggregate governance indicators, two for each group, viz.

1. Voice and accountability
2. Political stability and absence of violence
3. Government effectiveness
4. Regulatory quality
5. Rule of law
6. Control of corruption

The rule of law component measures the extent to which agents have confidence and abide by the rules of the society. By capturing the protection of property right as well as the strength of the legal infrastructure this component is seen as important indicator of growth-enhancing institution. Rodrik et al (2002), for example, have shown the rule of law component is by large the most significant variable in a cross-country growth regression,

dwarfing other traditional variable such as openness and geography. It is for this reason, plus by the assumption that donors focus more on the protection of property right and the strength of the law than the other components that this study adopts the rule of law component.

The objective of this study is not to estimate a full-fledged donor behavior but to test whether aid flow varies with institutional quality after controlling for the more important traditional determinants of the aid allocation. To this end the specification of the aid equation is not to be a full-fledged allocation model.

Mathematically, the aid allocation equation is,

$$\text{Aid} = \mathbf{x}' \beta_{ax} + \text{Rule} \beta_{ar} + \varepsilon^a$$

Where aid is the logarithm of the annual average total net ODA for the period 1990-2004 from all donors, \mathbf{x}' is vector of predetermined variables, Rule is the rule of law component of the KKZ aggregate indicators for 1996.

The base specification of the vector of exogenous variables, \mathbf{x}' , includes the traditional recipient need variables and the political dummies discussed above. To minimize problems of reverse causation from these variables, they are measured at the start of the period, 1990. The rule of law indicator is also measured at 1996, the earliest available, to minimize reverse causation from institutions to aid in the preliminary regression. If donors reward institutional quality in the recipient countries, the coefficient of rule of law should be positive and significant.

The other hypothesis this paper is set to test empirically is the incentive effect aid-whether aid flow to developing countries affect institutional quality. Again the objective of the study is not to test for the general determinants of institutions in developing countries but to look at how different amount of foreign aid going to countries affect institutions there. The specification of the institution equation uses the more important determinants of institutions that are found to fundamentally explain differences across countries.

Acemoglu et al (2000) have shown “differences in mortality rate faced by European settlers at a time of colonization” are the most important exogenous variation in institutions across countries. The reason is “colonization strategy is influenced by the feasibility of settlements”. Accordingly when high mortality rate from disease discourage settlement the colonizers are more likely to set up extractive institutions that persist to the present by the economic mechanisms discussed above. KKZ (2005) found the imputed settler mortality from Acemoglu et al (2000) significantly explains differences in the KKZ aggregate governance indicators across countries. Easterly and Levine (1997) on the other hand found the index of ethno linguistic fractionalization they constructed also explain cross- country variation in institutional quality.

Mathematically the institutional quality equation is

$$\text{Rule} = \mathbf{y}' \beta_{ry} + \text{aid}; \beta_{ra} + D_i \beta_{rd} + \text{aid}_i^* D \beta_{rad} + \varepsilon^a;$$

Where rule is the annual average rule of law components of the KKZ aggregate governance indicator for the period 1996-2004, \mathbf{y} is vector of predetermined imputed settlers mortality rate and ethno linguistic fractionalization index, aid is the annual average ODA for the period 1990-2004, D is a democracy index for 1990 and aid* D is the interaction term between aid and democracy index. To measure democracy the study uses the Freedom House civil liberty index that measure freedom of expression and belief, associational and organizational rights, rule of law and personal autonomy without interference from the state. Again to avoid reverse causation only the 1990 value is taken.

As discussed in the literature theoretically the coefficient on aid could go either way. Due to moral hazard problem a large flow of aid could reduce institutional quality. But also, if donors reward institutional quality in the recipient country aid could create positive incentive to promote institutional reform there. This paper argues that for the last fifteen years institutions matter significantly for international aid allocation and hence expects the coefficient for aid should be positive. Since it mainly argues the positive incentive effect would be more pronounced in less democratic regimes the sign of the interaction term is expected to be positive.

The major empirical problem in estimating the institutional quality equation is the fundamental identification problem. Does aid cause institutional quality or does institution quality cause aid? Since the two major hypotheses say both there is a need to separate the empirical effect of institutions on aid from the effect of aid on institutions. The identifying strategy to institutional quality equation is to use population directly as an instrument for aid. This identification is valid as long as the predetermined value of the population variable is uncorrelated with the residual in the institutional quality equation, and if it explain the aid allocation significantly in the first place. Based on the findings of previous studies this study expects population will be a good instrumental variable to explain exogenous variation in aid.

IV

The Empirical Findings

4.1 Aid Allocation

The OLS regression of the aid allocation equation in table 1 is broadly consistent with the findings of the empirical literature reviewed. The four regressions in general show the relationship between aid and rule of law is significant and positive during the period. Columns 1 and 2 presents the regression result for aid allocation for the Less -Developed countries with and without the political dummies used to capture donor strategic interests. In both regressions the rule of law is the most significant variable next to population in explaining how much aid flows to these countries. The inclusion of the political dummies reduces the significance of the rule of law in the aid allocation equation. Yet it still remains the second most important variable in explaining aid allocation.

The rule of law component of the KKZ aggregate governance indicator has values between -2.5 to 2.5 with a mean of zero and a standard deviation of one. Therefore the interpretation of the size of the estimate of this equation is that, after controlling for population and the level of per capita income a point-one better rule of law corresponds to a 27 percent raise in total ODA (column 2). This is a very significance raise but again these are the Less-Developed countries whose rule of law values is dominantly negative and a point-one better rule of law means an impressive improvement. Relaxing the sample size in table 4 to include other developing countries (low in come and lower middle income aid recipients) reduces the significance of a point-one better rule of law to the amount of aid a country receives.

In another regression to determine the allocation of the World Bank's IDA facility, funds from the OECD donors, the rule of low is still significant at 5% level (column 3). A point-one better rule of law increase IDA funds by 26 percent. This is also an interesting outcome give the fact that the OECD donors reached agreement in 1990 to allocate these

Table 1-OLS Regressions the Aid Allocation Equation

	(1)	(2)	(3)	(4)
rlaw	.248 (1.96)*	.278 (2.36)**	.263 (2.03)**	99.20 (1.72)*
log pop	.721 (2.24)**	.758 (2.36)***	.685 (2.08)**	186.48 (9.05)***
log pop squared	-.006 (-0.35)	-.008 (-0.40)	-.003 (-0.16)	-
Log per capita GNI	-2.146 (-0.90)	-3.222 (-1.43)	-.3540 (-1.56)	-177.48 (-4.06)***
log per capita GNI squared	.179 (0.89)	.271 (1.42)	.297 (1.55)	-
life	.002 (0.17)	-.001 (-0.06)	.003 (0.28)	-
SSA	-.219 (1.25)	-	.179 (0.01)	-0.947
Franc	-.241 (-1.59)	-	-	14.44 (0.14)
CAC	-	-	-	290.97 (2.51)***
constant	6.301 (0.90)	9.491 (1.43)	10.330 (1.54)	-79.50 (-0.20)
observations	38	38	38	91
R- Squared	0.92	0.91	0.92	0.59
adjusted R-Squared	0.91	0.90	0.90	0.57
F test	46.01	57.77	49.71	20.96
Prob>F	0.000	0.000	0.000	0.000

Notes: -Robust t-statistics in parentheses

*Significant at 10% **significant at 5 % ***significant at 1 %

funds to 42 low- income counties with sound institutions & policies. The regression further proves that the allocation of these funds is in fact strongly poverty focused.

The coefficients of the exogenous variables in the aid allocation equation are also as expect. The coefficient for population is positive and the most significant in all of the regressions. Since the independent variable is total aid, rather than per capita aid or aid-to-Gap ratio, the interpretation of this coefficient is some how ambiguous. The size of the recipient may matter to the donor both for strategic reason as well as the recipient need point of view as a populated developing country needs relatively more development assistance. This most significant coefficient of population could then mean donors' primary motive of aid giving is both self- interested as well as altruistic. Which of this is more significant is difficult to say just by looking at the coefficient of the population .Per capita GNI also appears with the right negative sign in all the regression showing poor countries with low per capita GNI receives more aid. This strong negative relationship between total ODA and per capita GNI shows donors are highly poverty focused during the time. The life expectancy variable, used here to capture whether donors, beside aggregate income, also take in to account human development indicators is with the expected negative sign but don't have strong impact on aid flow in all of the regressions.

Among the political dummies used here to capture donor strategic interest the only significant one is the one used for Central American countries and Egypt, to which most of the USAID program flows. The dummy for Sub-Saharan Africa and Franc zone is not significant in any of the regressions, even appears with negative signs in some of the regressions.

Thus the four regressions of the aid allocation equation confirm that selectivity is present and strong during the period, and that, donors after controlling for the level of income and the size of the population, reward institutional quality in the recipient country. This selectivity on the other hand is much stronger among the poorest recipients. As pointed above this is not full-fledged test of donor behavior. The attempt is to look for the presence of selectivity in aid allocation and the positive findings in this study are also broadly consistent with recent empirical studies that found selectivity has become a dominant paradigm in aid allocation practice.

4.2. The Effect of aid on institutions

In this section the basic hypothesis to be explored is the effect of aid on institutions. That is, this section presents the test whether the flow of aid to relatively better institutional environment further improves institutional quality there. As discussed above the empirical literature has broadly concluded that in the past aid has not had a positive incentive effect for institutional or policy reform. The major innovation of this study is to see whether the incentive effect varies with the level of democracy across the recipient countries. To determine empirically the effect of aid on institutional quality indicators across different political regimes this study interacts a measure of the level of democracy with total aid flow. The measure of democracy adopted here is the Freedom House Civil Liberties Index that measures the basic freedoms of expressions, beliefs, associations and organizational rights. The total number of points awarded to this index determines the civil liberties rating of countries. Each point total corresponds to a rating of one through seven, with one representing the highest and seven the lowest level of freedom.

Since institutional quality causes aid flows OLS estimation of the effect of aid on institutional quality will be inconsistent due to the reverse causation problem. This problem will be addressed later by instrumenting for aid, but it is useful to start with OLS regression to understand the pattern in the relationship between the variables in the institutional quality equation. Table 5 presents the result of OLS regression of the annual average of the rule of law. Among the predetermined variables used here to explain an exogenous variation in cross-country institutional quality, the imputed settler mortality rate is significant and with the expected negative sign indirectly confirming that the extractive institution from colonization still persists. The ethnic fractionalization on the other hand appeared with positive sign and is insignificant.

This OLS regression result in table 2 column 1 also shows total ODA as well as its interaction with the civil right index is not significant. This result is somewhat surprising. Since the previous section has found a strong relationship between total ODA and rule of law there should be reverse causation from total ODA to rule of law in this OLS regression. This lack of reverse causation means the use of the annual average rule of law value here

Table 2-Regressions of the institutional quality equation

	OLS			IV	
	(1)	(2)	(3)	(4)	(5)
annual average aid/aid-to-gni ratio	.001 (0.52)	-.042 (-1.44)	-.097 (-2.15)**	-0.000 (-0.11)	-.07 (-0.41)
Freedom	-.248 (-4.46)***	-.281 (-3.74)***	-0.305 (-4.54)***	-0.241 (-2.02)**	-0.335 (-1.01)
ODA* free	.005 (0.15)	.0112 (1.79)*	0.209 (2.00)**	.000 (0.03)	0.017 (0.46)
Imputed settler mortality	-.001 (-1.86)**	-.001 (-2.10)**	-.001 (-2.13)**	-.001 (-1.14)	-.001 (-1.81)*
Ethnic	.195 (0.79)	.290 (1.23)	.236 (0.99)	.217 (0.84)	.334 (0.94)
GNI	-	.000 (1.38)	-	-	.000 (0.46)
constant	.583 (2.98)**	.504 (1.37)	.858 (3.66)**	.598 (2.46)***	.735 (0.51)
Observation	58	57	57	58	57
R-squared	0.45	0.52	0.49	0.45	0.51
Adjusted R-squared	0.40	0.46	0.44	0.39	0.45
F Test	8.78	9.20	10.07	8.62	8.53
Prob>F	0.000	0.000	0.000	0.000	0.000

Notes: -Robust t-statistics in parentheses

*Significant at 10% **significant at 5 % ***significant at 1 %

partly has partly dealt with the endogeneity problem. However this does not mean that there is no endogeneity problem at all. The interesting result from this regression is that while the coefficient of the civil liberties index is negative and significant, the sign of the interaction term on the other hand is positive. The negative sign of the coefficient of the civil liberties index is to be expected. This index, to measure the level of freedom, also measures the strength of the law. Therefore a higher value of the index, which means a lower level of freedom in country, also means the lower the strength of the law. The more interesting result is that the interaction term should be positive. This says the higher the aid flow to less democratic regimes with a higher value of the civil liberties index, the stronger is its effect on aid, even if this interaction is not yet significant. To check the sensitivity of this result to different specification aid-to-GNI ratio is used instead of total ODA in column 2. The result is the same except that the interaction term now becomes significant and the coefficient of the Aid-to-GDP ratio becomes negative. The other OLS regression in column 3, this time using the IDA facility funds as the explanatory aid variable also gives the same result, showing again the interaction term is positive and significant while both aid per GNI and the civil liberties index are negative.

However the use of Aid-to-GDP ratio will not solve for the reverse causation problem entirely and hence there is still a need to instrument for aid. Since population is the major explanatory variable to total ODA it also the most important instrument of this variable. There is also a need to instrument for the interaction term. To instrument for this term, the population variable used to instrument for total ODA will be interacted with an exogenous variable correlated with the civil liberties index. A good variable for this is the freedom house political right index that measure political right and is not strongly related with the rule of law. The interaction of this variable with population then can effectively instrument for the aid interacted with civil liberties. The IV regression using these instruments in column 4 shows ODA interacted with freedoms is still positive but not significant. Using Aid-to-GDP ratio and instrumenting for the interaction term only in column 5 as an alternative specification don't change both the magnitude and the sign of the interaction term.

The more important result for this study is not whether or not there is a significant incentive effect but the direction of the incentive across different level of democracy. The pattern in the data shows that when aid is interacted with low level of democracy there is a positive incentive effect to improve the quality of institutions.

CONCLUSION

This paper investigated the relationship between aid, institutions and political regimes with a particular emphasis on the incentive effect of aid. Inspired by recent stream of literature that shows a significant role of institutions in determining aid effectiveness and aid allocation, this study explored the selectivity approach and look at t whether a more flow of aid to poor countries with a relatively better institutional quality have a positive incentive effect.

Consistent with the recent stream of literature this study found that selectivity is present and is strong in aid allocation in the past fifteen years. It also found this tendency towards selectivity is more pronounced when the sample of developing countries is restricted to the Less- Developed countries.

Cornering the effect of aid on institutional reform and policy change other authors found that aid in the past has had no significant positive effect on intuitions & policies. However this study attempted to address the incentive issue in light of the recent tendency towards selectivity and in connection with democracy. If donors reward institutional quality and if reforming institutions is difficult in more democratic, at least in the short run, this paper assumed from the beginning that the incentive effect of aid in the past 15 years should be more pronounced in less democratic countries. The empirical finding from the cross-country regression shows there is still no strong positive incentive effect of aid. Nevertheless the pattern in the data shows, even if there is no significant impact of aid on intuitional quality, it is more likely for relatively less democratic regimes to respond to the incentive effect of aid than democratic regimes.

References

Acemoglu, D., S. Johnson, and J. Robinson, 'The colonial origins of comparative development', NBER working papers 7771, National Bureau of Economic Research, Inc: Cambridge, MA

Alemayehu, G. (2002). *Finance and trade in Africa: Macroeconomic Response in the World Economy Context*. London/New York: Palgrave/Macmillan.

Alesina, A. and D. Dollar (2000), 'Who gives foreign aid to whom and why?', *Journal of Economic Growth* 5(1):33-63

Bauer, P.T. (1965), 'Two views on aid to developing countries', Institute of Economic Affairs occasional paper 9

Boone, P. (1995), 'Politics and the effectiveness of foreign aid', NBER working papers 5308, National Bureau of Economic Research, Inc: Cambridge, MA

Burnside, C. and D. Dollar (1997), 'Aid, policies, and Growth', World Bank policy research working papers 1777, World Bank: Washington DC.

_____ (2004), 'Aid, policies and Growth Revisiting the evidence? World Bank policy research working papers 5308, World Bank: Washington DC.

Clemens, M, S. Radelet, and R. Bhavnani (2004), 'Counting chickens when they hatch: The short term effect of aid on growth', Center for Global Development working papers 44, Center for Global Development: Washington DC.

Collier, P. (2000), 'Consensus building, knowledge and conditionality', World Bank mimeo, World Bank: Washington DC.

Collier, P. and D. Dollar (1999), 'Aid Allocation and Poverty Reduction', World Bank policy research working papers 2041, World Bank: Washington DC.

Chenery, H .B. and A. Strout (1966), 'Foreign assistance and economic development', *American economic review* 56(4): 679-73

Davenport, M. (1970), 'The allocation of foreign aid: A cross section study, with special reference to the Pearson commission report', *Bulletin of Economic and social research* 22(1):26-41

Dollar, D. and V.Levin (2004), 'The increasing selectivity of foreign aid, 1984-2002', World Bank policy research working papers 3299, World Bank: Washington DC.

Easterly, W. (2003), 'Can Foreign Aid Buy growth', *Journal of Economic perspective* 17(3): 23-48

Easterly, W., R. Levin and D. Roodman (2003), 'New data, new doubts: A comment on Burnside & Dollar's 'Aid, policies & growth'', NBER working papers 9846, National Bureau of Economic Research, Inc: Cambridge, MA

Easterly, W. and R. Levin, ' Africa's growth tragedy: A retrospective' World Bank policy research working papers 1503, World Bank: Washington DC.

Griffin, K.B. (1970), 'Foreign capital, domestic savings and economic development', *Oxford Bulletin of Economics and statistics*, 32, 99-112

Griffin, K.B and J.L. Enos (1970) 'Foreign assistance: objective & consequence', *Economic development and cultural change* 18(3):313-27

Hansen, H. and F. Tarp (2000), 'Aid Effectiveness disputed', *Journal of international Development* 12(3): 375-98

Henderson, P. (1971), 'The distribution of official development assistance commitments by recipient countries and by sources', *Oxford Bulletin of Economics and Statistics* 33(1):1-17

Hudson, J. and P. Mosley (2001), 'Aid, policies and growth: In search of the Holy Grail', *Journal of international development* 13(7):1023-38

Isopi, A. and G. Mavrotas (2006), 'Aid Allocation and Aid Effectiveness', WIDER Discussion papers DP 2006/07, UNU-WIDER: Helsinki.

Kaufmann, D., A. Kraay and P. Zoido-Lobaton (2002), 'Governance Matters II Updated Indicators for 2000-01', World Bank policy research working papers, 2772 World Bank: Washington DC.

Kaufmann, D., A. Kraay and M. Mastruzzi (2005), 'Governance Matters IV: Governance Indicators for 1996-2004', World Bank policy research working papers, World Bank: Washington DC.

Maizels, A. and M.K. Nissanke (1984), 'Motivations for Aid to Developing Countries', *World Development* 12(9):879-900

McGillivray, M. (2006), 'Aid allocation and fragile states', WIDER Discussion papers DP 2006/01, UNU-WIDER: Helsinki.

McKinlay, R. and R. Little (1977), 'A foreign policy model of the US bilateral aid allocation', *World politics* 30(1): 58-86

_____ (1978 a), 'The French aid relationship: A foreign policy model of the distribution of French bilateral aid, 1964-1970', *Development and change* 9:459-78

_____ (1978 b), 'A foreign policy model of the distribution of British bilateral aid, 1960-1970', *British journal of political science* 8(3):313-31

Mosley, P.(1985), 'The political economy of foreign aid: A model of the market for a public good', *Economic Development and Cultural Change* 33(2):373-393

_____ (1986), 'Aid Effectiveness: The micro- macro paradox', *Institute of Development studies Bulletin* 17: 214 – 25

Mosley, P. J. Hudson and S. Horrell (1987), 'Aid, the public sector and the market in less Developed countries', *Economic journal* 97 (387): 616-41

Papanek, G. (1972), 'The effect of aid and other resource transfers on saving and growth in less developed countries', *Economic journal* 82 (327): 934-50.

_____ (1973), 'Aid, foreign private investment, savings and growth in less developed countries' *Journal of political economy* 81(1): 120-30

Rajan, R. and A. Subramanian (2005), 'Aid and Growth: What does the cross-country evidence really show?', NBER working papers 11513, National Bureau of Economic Research, Inc: Cambridge, MA

Rodrik,D, A. Subramanian and F.Trebbi(2005), 'Institutions rule: The primacy of institution over geography and integration in economic development', NBER working papers 9305, National Bureau of Economic Research, Inc: Cambridge, MA

Rosenstein – Rodan, P. (1961), International aid for underdeveloped countries', *Review of economics & Statistics* 43(2):107-38

Svensson, J. (1995), 'When is foreign aid policy credible? Aid dependence and conditionality', IIES, Stockholm University, seminar paper 600, Institute of International Economics Studies: Stockholm

_____ (1996), 'Collusion among interest groups: Foreign aid and rent dissipation', IIES Stockholm University, seminar paper 610, Institute of International Economics Studies: Stockholm

_____ (2000), 'why conditional Aid does not work and what can be done about it?', *Journal of Development Economics*, 70 (2) 381 – 402

Weisskopf, T. (1972), 'The Impact of foreign capital inflow on domestic savings in under developed countries', *journal of International Economics* 2(1):25-38

Appendix

A 1

**OLS regression showing the determinants of aid to Less - Developed countries:
Dependent variable is annual average of net total ODA, 1990-2004**

Source	SS	df	MS			
Model	44.2751528	8	5.5343941	Number of obs =	38	
Residual	3.48809724	29	.120279215	F(8, 29) =	46.01	
-----				Prob > F =	0.0000	
-----				R-squared =	0.9270	
-----				Adj R-squared =	0.9068	
Total	47.76325	37	1.29089865	Root MSE =	.34681	

lnodat	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
rlaw	.2481753	.1266899	1.96	0.060	-.0109347	.5072853
lnpop	.721394	.3218659	2.24	0.033	.0631043	1.379684
lnpop2	-.0069273	.020004	-0.35	0.732	-.0478401	.0339855
lngni	-2.146214	2.386008	-0.90	0.376	-7.026147	2.73372
lngni2	.1793656	.2017968	0.89	0.381	-.2333552	.5920864
life	.0023837	.014013	0.17	0.866	-.026276	.0310434
ssa	.2191749	.1749089	1.25	0.220	-.1385541	.5769038
franc	-.2415839	.1521548	-1.59	0.123	-.5527755	.0696077
cac	(dropped)					
_cons	6.301497	7.018838	0.90	0.377	-8.053639	20.65663

A 2

**OLS Regression showing the determinants of aid to Less - Developed countries without the
political dummies: Dependent variable is annual average of net total ODA,1990-2004**

Source	SS	df	MS			
Model	43.8421377	6	7.30702296	Number of obs =	38	
Residual	3.92111227	31	.126487493	F(6, 31) =	57.77	
-----				Prob > F =	0.0000	
-----				R-squared =	0.9179	
-----				Adj R-squared =	0.9020	
Total	47.76325	37	1.29089865	Root MSE =	.35565	

lnodat	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
rlaw	.2784269	.1286925	2.16	0.038	.0159569	.540897
lnpop	.7585455	.321224	2.36	0.025	.1034048	1.413686
lnpop2	-.008031	.0198558	-0.40	0.689	-.0485271	.0324651
lngni	-3.222466	2.253188	-1.43	0.163	-7.817874	1.372941
lngni2	.2712906	.1906814	1.42	0.165	-.1176067	.6601878
life	-.0007958	.0135279	-0.06	0.953	-.0283861	.0267944
_cons	9.491348	6.65957	1.43	0.164	-4.090934	23.07363

A 3

OLS Regression showing the determinants of aid: Dependent variable is annual average of net total IDA,1990-2004

Source	SS	df	MS			
Model	43.9719347	7	6.28170495	Number of obs =	38	
Residual	3.79131534	30	.126377178	F(7, 30) =	49.71	
Total	47.76325	37	1.29089865	Prob > F =	0.0000	
				R-squared =	0.9206	
				Adj R-squared =	0.9021	
				Root MSE =	.3555	

lnidat	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
rlaw	.2633827	.1294901	2.03	0.051	-.0010713	.5278367
lnpop	.6853666	.3291032	2.08	0.046	.0132482	1.357485
lnpop2	-.0033606	.0203751	-0.16	0.870	-.0449721	.038251
lngni	-3.540783	2.274002	-1.56	0.130	-8.184914	1.103349
lngni2	.2973219	.1923212	1.55	0.133	-.0954505	.6900942
life	.0039993	.0143259	0.28	0.782	-.0252581	.0332566
ssa	.1798683	.177483	1.01	0.319	-.1826004	.5423371
_cons	10.33035	6.707948	1.54	0.134	-3.369107	24.02981

A 4

OLS Regression showing the determinants of aid to developing countries: Dependent variable is annual average of net total ODA,1990-2004

Source	SS	df	MS			
Model	10915437	6	1819239.5	Number of obs =	91	
Residual	7292025.85	84	86809.8316	F(6, 84) =	20.96	
Total	18207462.9	90	202305.143	Prob > F =	0.0000	
				R-squared =	0.5995	
				Adj R-squared =	0.5709	
				Root MSE =	294.64	

odat	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
rlaw	99.20207	57.69858	1.72	0.089	-15.53788	213.942
lnpop	186.4856	20.59741	9.05	0.000	145.5254	227.4459
lngni	-177.4811	43.69981	-4.06	0.000	-264.383	-90.57926
ssa	-.9479166	80.25898	-0.01	0.991	-160.5517	158.6559
franc	14.44913	101.2966	0.14	0.887	-186.9902	215.8885
cac	290.9759	116.1305	2.51	0.014	60.03762	521.9142
cons	-79.50622	399.7648	-0.20	0.843	-874.4823	715.4699

A 5

OLS Regression showing the determinants of Institutional Quality: Dependent variable is average rule of law, 1996-2004

Source	SS	df	MS	Number of obs =	58
Model	9.88176628	5	1.97635326	F(5, 52) =	8.78
Residual	11.7029606	52	.225056935	Prob > F =	0.0000
				R-squared =	0.4578
				Adj R-squared =	0.4057
Total	21.5847269	57	.37867942	Root MSE =	.4744

rlaw	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
odat	.0001074	.000205	0.52	0.603	-.000304 .0005187
odat*free	.0005306	.0035862	0.15	0.883	-.0066656 .0077269
free	-.2483921	.0556881	-4.46	0.000	-.3601385 -.1366457
impmor	-.0010001	.0005385	-1.86	0.069	-.0020806 .0000804
eth	.1955756	.2490569	0.79	0.436	-.3041936 .6953448
_cons	.5838577	.1961385	2.98	0.004	.1902771 .9774384

A6

OLS Regression showing the determinants of Institutional Quality: Dependent variable is average rule of law, 1996-2004

Source	SS	df	MS	Number of obs =	57
Model	10.9256134	6	1.82093556	F(6, 50) =	9.20
Residual	9.89855071	50	.197971014	Prob > F =	0.0000
				R-squared =	0.5247
				Adj R-squared =	0.4676
Total	20.8241641	56	.371860073	Root MSE =	.44494

rlaw	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
eth	.2905399	.2357128	1.23	0.223	-.1829031 .7639829
impmor	-.0010244	.0004879	-2.10	0.041	-.0020043 -.0000445
odagini	-.0427851	.0297773	-1.44	0.157	-.1025945 .0170244
odagini*free	.011249	.0062841	1.79	0.079	-.001373 .0238709
gni	.0001357	.0000982	1.38	0.173	-.0000615 .000333
free	-.2812644	.0752757	-3.74	0.000	-.43246 -.1300688
_cons	.5040749	.3667407	1.37	0.175	-.2325454 1.240695

A7

OLS Regression showing the determinants of Institutional Quality: Dependent variable is average rule of law, 1996-2004

Source	SS	df	MS			
Model	10.3472853	5	2.06945705	Number of obs =	57	
Residual	10.4768788	51	.205428997	F(5, 51) =	10.07	
-----				Prob > F =	0.0000	
-----				R-squared =	0.4969	
-----				Adj R-squared =	0.4476	
Total	20.8241641	56	.371860073	Root MSE =	.45324	

rlaw	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
Idagni	-.0975064	.045346	-2.15	0.036	-.1885423	-.0064704
odacgni*free	.0209546	.010503	2.00	0.051	-.0001311	.0420404
free	-.3052802	.0672815	-4.54	0.000	-.4403535	-.1702069
impmor	-.0010953	.0005131	-2.13	0.038	-.0021255	-.0000651
eth	.236502	.2383552	0.99	0.326	-.2420161	.7150201
_cons	.8586039	.2346217	3.66	0.001	.3875812	1.329627

A8

IV Regression of Institutional Quality: Dependent variable is average rule of law, 1996-2004

Source	SS	df	MS			
Model	9.73046399	5	1.9460928	Number of obs =	58	
Residual	11.8542629	52	.227966595	F(5, 52) =	8.62	
-----				Prob > F =	0.0000	
-----				R-squared =	0.4508	
-----				Adj R-squared =	0.3980	
Total	21.5847269	57	.37867942	Root MSE =	.47746	

rlaw	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
odat	-.0000604	.0005703	-0.11	0.916	-.0012049	.001084
odat*free	.0004033	.013138	0.03	0.976	-.0259601	.0267666
free	-.2411163	.1192756	-2.02	0.048	-.4804604	-.0017722
impmor	-.0010379	.0009117	-1.14	0.260	-.0028674	.0007915
eth	.2171035	.2572005	0.84	0.402	-.299007	.733214
_cons	.5988344	.243234	2.46	0.017	.1107497	1.086919

Instrumented: odat odat*free
 Instruments: free impmor eth lnpop pop*pr

A 9

IV Regression of Institutional Quality: Dependent variable is average rule of law, 1996-2004

Source	SS	df	MS			
-----				Number of obs =	57	
Model	10.7270419	6	1.78784032	F(6, 50) =	8.53	
Residual	10.0971222	50	.201942444	Prob > F =	0.0000	
-----				R-squared =	0.5151	
-----				Adj R-squared =	0.4569	
Total	20.8241641	56	.371860073	Root MSE =	.44938	

rlaw	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	

odagini*free	.0175426	.0382003	0.46	0.648	-.0591849	.0942701
eth	.3346605	.3555438	0.94	0.351	-.3794702	1.048791
impmor	-.0010812	.0005987	-1.81	0.077	-.0022836	.0001213
odagini	-.0709527	.1712539	-0.41	0.680	-.4149263	.2730209
gni	.0001025	.0002224	0.46	0.647	-.0003443	.0005492
free	-.3352146	.3317386	-1.01	0.317	-1.001531	.3311021
_cons	.7355025	1.433839	0.51	0.610	-2.144447	3.615453

Instrumented: odagini*free						
Instruments: eth impmor odagini gni free pop*free						

A10

Variable names, Descriptions and Data Sources

Variable Name*	Description	Source
cac	Dummy[= 1 if country is central American and Egypt]	
eth	Ethno linguistic fragmentation index	Easterly & Levin(1997)
franc	Dummy[= 1 if country is in franc zone]	
free	Freedom house civil liberty index	Freedom house evaluation. Democracy index. available at: www.freedomhouse.org
gni	Gross national income	OECD's International Development Statistics(IDS) online available at www.oecd.org/dac/stats/idsonline
idat	Official development assistance from IDA facility, total net	OECD's International Development Statistics(IDS) online available at

		www.oecd.org/dac/stats/idsonline
impmor	Imputed settler mortality rate	Acemoglu et al(2000)
life	Average life expectancy	OECD's International Development Statistics(IDS) online available at www.oecd.org/dac/stats/idsonline
odac	Official development assistance from DAC countries	OECD's International Development Statistics(IDS) online available at www.oecd.org/dac/stats/idsonline
odac*free	interaction of "odac" and "free"	
odagni	oda- to – gni ratio	OECD's International Development Statistics(IDS) online available at www.oecd.org/dac/stats/idsonline
odagni * free	interaction of "odagni" and "free"	
odat	oda total,net from all donors	OECD's International Development Statistics(IDS) online available at www.oecd.org/dac/stats/idsonline
odat * free	interaction of "odat" and "free"	
pop	population	OECD's International Development Statistics(IDS) online available at www.oecd.org/dac/stats/idsonline
pr	Freedom house political rights index	Freedom house evaluation. Democracy index. available at: www.freedomhouse.org
rlaw	Rule of law component of KKZ aggregate governance indicators	Kaufmann, D., A. Kraay and M. Mastruzzi(2005)
ssa	Dummy [= 1 if country is in sub Saharan Africa]	

*ln of variable is the logarithm of that variable

