

11-16-2011

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Kevin Michael Richardson

University of Missouri-St. Louis, kmrwy6@mail.umsl.edu

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The Specialization of Foreign Assistance in Sub-Saharan Africa

Kevin M. Richardson

M.A., Political Science, University of Missouri – St. Louis, 2011

B.S., Political Science, Truman State University, 2009

A Thesis Submitted to The Graduate School at the University of Missouri – St. Louis in
partial fulfillment of the requirements for the degree
Master of Arts in Political Science with an emphasis in Public Policy

November 2011

Advisory Committee

David Kimball, Ph.D.

Chairperson

Kenneth Thomas, Ph.D.

Martin Rochester, Ph.D.

Ruth Iyob, Ph.D.

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Abstract

This study uses time-series cross-sectional logistic and OLS regressions to analyze data on foreign assistance and governance in Sub-Saharan Africa to determine the impact of different methods of foreign aid on democracy and democratic characteristics in Sub-Saharan Africa. Even though all foreign assistance has the end goal of promoting democratic growth, different aid targeted sectors have varying effects on democracy. The research has found that aid targeting social infrastructure, specifically health and government sectors, in Sub-Saharan Africa has a substantial, positive effect on democracy and democratic characteristics while economic infrastructure aid has no effect. This analysis could have an impact on future aid allocation by promoting aid specialization for social infrastructure.

Introduction

Economic aid has played a critical role in Sub-Saharan Africa since the end of colonialism. During the Cold War economic aid was tied to political and geographic factors. For Western nations aid was given to those countries which opposed communism and were strategically located near a communist state, many times at the expense of the citizens. Instead of foreign assistance being used for improving societal conditions it was typically used to increase the ruling party's power through the military and personal wealth. During the Cold War instilling capitalistic and democratic ideals within the recipient nations was almost of no concern, as Western nations openly supported harsh dictators exemplified by the U.S.'s lengthy support of Mobutu in Zaire. Economic aid to Africa changed greatly after the Cold War though as the spread of communism was no longer a threat, forcing Western states to reconsider foreign aid policy. Since the Cold War aid has now become tied to democratic and liberal advancements within recipient states. Western countries, especially the United States, France, and Great Britain, have invested large amounts in Sub-Saharan Africa with little hope that any of that will ever be paid back. These nations though do have other advantages though such as the rich natural resources of some African nations and the hope that economic development will create a more favorable environment for international business. These nations along with the World Bank and IMF have tied aid to difficult to measure goals so they can have some measure of how successful their investment is. The research question arises then how successful is economic aid in fostering democratic changes within Sub-Saharan Africa.

The ability of economic aid to foster political changes is greatly contested. Some believe that the aid does help by providing states the resources to enhance infrastructure, education, and other necessary improvements. Others though find that the economic aid ends up falling into the hands of corrupt leaders who use it for personal gains or cause strife over who is in charge of dispersing the funds. Most research was initially concerned with how the aid effected economic conditions within the recipient nations but more recently the push has been to understand the effects on governance. Understanding the effect on governance provides a more useful indicator for the success of foreign aid by measuring the more significant and long term effect it can have on recipient states.

One of the biggest arguments about foreign aid concerns what methods of aid disbursement result in the greatest benefit to recipients. The debate centers on a similar debate over the characteristics that work most effectively to instill democratic governance. Some contend that assistance benefiting business and market institutions provides the greatest catalyst for democracy while others counter that assistance for social programs such as education or health achieve this best. Currently foreign assistance tends to be granted in large quantities for multiple functions with the goal of development and easing the burdens of poverty. The conversation then revolves around whether wide ranging or specialized aid results in the greatest recipient benefit. Then if specialization is the best method the focus shifts back to the debate over economic or social program assistance.

The purpose of the specialization is to pinpoint the conditions that allow for an

increase in government expenditures for integral functions such as basic education, sanitation, infrastructure, and health services. The development of these functions should lead to a basic quality of life improvement through higher life expectancy, higher literacy rate, and eventually a more educated public. Over time the advancements allow for an increase in information exchange, political participation, and other essential components of democratic states. In determining which method of specialization best benefits democratization, donors can optimize their assistance so that they are reaching the greatest number of beneficiaries in the most desirable sectors.

The analysis of foreign aid in Sub-Saharan Africa must account for a multitude of factors identified through previous research. This paper seeks to further the research by addressing the important arguments and mistakes of previous studies. First, the analysis will account for time since to truly analyze foreign aid it needs to be determined how it affects governance over a significant time frame. Yearly changes in both foreign aid and governance typically are small but compounded over time the results hopefully are substantial. Next aid will be distinguished between social and economic infrastructure to determine whether assistance for one sector has a greater influence on democracy in Sub-Saharan Africa. Identifying the differences between these forms of assistance will assist donors in adjusting their funds to the most beneficial sectors. Finally social infrastructure assistance will be broken into its components to understand whether aiding certain facets of society are building democratic governance in Sub-Saharan Africa.

Democracy

Democracy has long been considered the most ideal government system for many reasons

such as promoting the most free and open society and best supporting economic growth and stability. In being the most touted government structure, democracy is promoted around the world as the system to strive for in order to produce the best state. As a developing region, Sub-Saharan Africa has been at the forefront of the conversation on instilling democratic regimes. The Sub-Saharan states, not without trying, have struggled to introduce and maintain democracy since the end of colonialism except for a few nations such as Botswana. In order to fully analyze democratization in Sub-Saharan Africa, an understanding is needed of the basic conditions considered ideal for supporting a democratic society.

First according to Schmitter and Karl (1991), “modern political democracy is a system of governance in which rulers are held accountable for their actions in the public realm by citizens, acting indirectly through the competition and cooperation of their elected representatives.”¹ This is the most basic definition of democracy but many also include aspects such as civil liberties, fair and free elections, and freedom of speech. Democratization constitutes one of the most important aspects of international relations for several reasons. Democracy is considered the most stable form of government and most conducive to capitalism. Another major consequence of democracy is the democratic peace theory, which holds that no democratic regimes have entered war against one another and thus never will.

Certain characteristics of democracies are integral to their ability to maintain a stable government system and promote freedom and growth. One aspect is a high degree of transparency which allows “interested citizens to observe policy choices, grand strategies, and major regime discontinuities in a timely way, as well as to see the sources

¹Schmitter, P., & Karl, T. (1991). What Democracy Is . . . and Is Not. *Journal of Democracy*, 2(3), 75.

and intensity of support and opposition to specific commitments.”² In modern democracies transparency is a necessary part of the system due to the right of the public to know the government's policies and intentions and the freedom of the press. Politicians within democracies openly voice their policies to the public leaving themselves open to the scrutiny of other politicians, the public and the media. The openness of democracies is important because it gives the public the ability to make informed decisions and allows the market and businesses to adequately adjust to changes in policy.

Another important facet of democracies is stable succession of leadership and continuity of governance. In democratic regimes the selection of senior officials is based on clear rules ensuring orderly succession permitting policies to develop within a sound domestic framework.³ Orderly changes in leadership limit instability and violence within a state because there is no question of legitimacy; leadership with questionable legitimacy is often met with strong public protest and sometimes force. Political stability is also supported by a strong continuity of governance. In enduring democracies a change of leadership does not result in complete overhaul of policies, services, and society. Instead policy changes are fairly small with many longstanding policies typically weathering any regime change, even one that appears to be dramatically different from previous leadership. The public knows that services provided in one regime will still be provided in the next and this knowledge of government continuance lowers legitimacy questions and promotes societal peace.

The next attribute of a democracy, public voice and government accountability, is

²Charles Lipson. Reliable partners: how democracies have made a separate peace. (Princeton, N.J.: Princeton University Press, 2003) p. 14.

³ Ibid. p. 8.

probably the most important insurance for a free and open society. The public voice manifests itself in multiple forms: citizens freely expressing opinions through forums, protests, the media, and countless other methods; citizens electing representatives; and petitioning and voting for law changes. The freedom of the people also promotes accountability as there are visible electoral incentives for leaders to keep their promises and consequences, what Lipson calls audience costs, for breaking promises to the electorate.⁴ Democratic leaders are constrained by the public because to get elected they must appeal to large constituencies preventing singular radical ideals from penetrating the government. Once in power leaders must retain the public's confidence and will be punished for ineffective policies and abandoning election promises. Voice and accountability along with the other key aspects of democracies are all necessary because without one the others cannot exist.

The key characteristics of democracies make it so appealing to citizens, business, and the international community as a whole. As noted earlier democracies tend to best promote strong, annual economic growth. This occurs through the establishment of conditions that support innovation, entrepreneurship, and again stability. Citizens value democracy because it provides the best option for voicing their opinions, reducing violence, and offering social services that improve the quality of life. Finally the international community supports democracy across the globe because of the economic and social benefits of the state but also because democratic governments interact peacefully with one another.⁵

If democracy with all of its argued benefits really is the end goal for states, which

4 Lipson. p. 9.

5 Ibid. p. 1.

this paper assumes it is, then it is important to understand the conditions for democratic governance. The conditions can loosely be divided between social and economic which sets up the majority of the debate over what constitutes the ideal setting for democracy. This section focuses on the ideal conditions for democracy with some consideration given to the argument over the best situation for fostering democracy. One common theme among democracy scholars is that a large, strong middle class is important for developing and maintaining democracy because it reduces “the proportion of the population that is susceptible to anti-democratic parties and ideologies and by increasing the proportion of the population that supports moderate pro-democratic parties.”⁶ The middle class is a moderately wealthy and educated group within a society which positions them perfectly to support democratic ideals. The debate then is over whether economic developments or social developments provide the best mechanisms for promoting a middle class.

Proponents of economic conditions make the case that promoting a strong market economy has the greatest effect on democratization. The argument is “capitalist economic development...produces a shift in the labor force from agriculture to industry and services [and] this shift increases the size of the urban middle class and the size of the urban working class which fosters the inauguration of democracy.”⁷ The emergence of a strong middle and working class leads to a demand for more social and political freedoms as well as welfare services. Muller also brings up urbanization which is another condition for democratic changes as citizens living in urban areas have more interest in political institutions and have the greatest access to communication.

The problem with arguing for the economic conditions is that it misses the inherent

6 Muller, E. (1995). Economic Determinants of Democracy. *American Sociological Review*, 60(6), 967.
7 Ibid. 969.

social causes of economic development. Before a strong middle class can even emerge there must be in place some education system for people to move into the higher skilled professions. At the most basic level is the need for a literate public which, Lipset contends, is one of the first prerequisites for democracy.⁸ Literacy is the most basic societal characteristic that is necessary for any government based on citizen participation because a citizen needs to at least be able to read ballots. Also a literate citizen typically has some minimal informal education or at least the ability to comprehend basic governmental policies and functions. For these reasons, a literate electorate is necessary for the beginnings of democratization. Literacy also serves as a good measure of the social condition within a state as the higher the literacy rate the more likely the higher the development.

A high literacy rate may serve as an entrance fee for adopting democratic governance but the development of a more educated populace improves the stability and progression of society. Lipset puts the need for education best, that it “presumably broadens men's outlooks, enables them to understand the need for norms of tolerance, restrains them from adhering to extremist and monistic doctrines, and increases their capacity to make rational electoral choices.”⁹ Studying the influence of education though is tricky as different levels equate to varying levels of social, economic, and political development. Public primary education serves as one of the best methods for promoting democracy within a society for a few reasons. First, a population with high rates of primary education completion positively and directly relates to higher literacy rates making it one of the best methods for guaranteeing a literate public. Also primary

8 Lipset, S. (1959). Some Social Requisites of Democracy: Economic Development and Political Legitimacy. *The American Political Science Review*, 53(1), 69-105.

9 Ibid. 79.

education provides the perfect opportunity for civic education which furthers the ability of the public to more fully make informed political decisions.

As the population of a state moves to higher education levels the thought is that the country becomes more developed, economically, politically, and socially. Edward Glaeser et. al. (2004) argues that not only do differences in schooling explain differences in democracy but even more generally in political institutions.¹⁰ Political institutions rely on highly educated individuals to operate effectively so it makes complete sense then that as these institutions are able to develop so too does democracy within the state. Initial institutions in developing democracies must start off small because there is not the human capital present to manage a large political infrastructure, but as the population becomes more educated the institutions can evolve to fit the growing capabilities of the public. So while primary education may be a perfect entrance into democracy higher levels of education allow democracy to advance as well as the economic and social conditions of the state.

Some studies suggest that education does not play an important role in fostering democracy and that it is the unknown fixed effects that are impacting both education and democracy. The argument centers around the fact the relationship between democracy and education has used cross-sectional regression and this type of regression does not included fixed effects and within country variation. Proponents of this argument suggest “the relationship between education and democracy is driven by omitted factors influencing both education and democracy rather than a causal relationship.”¹¹ The argument suggests that using a fixed effects model is the best method of regression to

10 Glaeser, E., Porta, R. L., Lopez-de-Silanes, F., & Shleifer, A. (2004). Do Institutions Cause Growth? . *Journal of Economic Growth*, 9(3), 271-303.

11 Acemoglu, D., Johnson, S., Robinson, J., & Yared, P. (2005). From Education to Democracy?. *The American Economic Review*, 95(2), 48.

ensure a robust model that takes into account the omitted within country variables. The omitted within country variables cover various socioeconomic characteristics such as religion, language, social class, and ethnicity.

After education, the next important social condition is an overall healthy population. The pursuit of health constitutes the most basic human need, a necessity for survival which trumps all other needs and desires. In the least developed states much of the population suffers from malnutrition, deadly infectious diseases, and lack of basic medicines among numerous other health deficits. A population that struggles to meet their most basic needs can never achieve significant development or democracy because before individuals can pursue existential needs, such as rights and freedoms, they must first not worry about survival.¹² While education may contribute more to fostering development and democratic ideas, an individual must attain a lifestyle no longer fully encompassed by basic survival before even contemplating educational attainment. Once health is no longer a concern of the general population, the public can begin to demand greater freedoms, rights, and accountability from the government.

The final societal aspect to be explored here is the access to modern sanitation and water systems, which are essential to ensuring a healthy population. A sanitation system is one of the best methods for lowering the spread of diseases by removing free standing waste that produces and harbors bacteria. Basic running water is also important because in underdeveloped states the procurement of clean drinking water can be arduous and time consuming. In a society where accessing clean water can be the longest daily task, individuals will never have the capacity to pursue great opportunities.

12 Kosack, S., & Tobin, J. (2006). Funding Self-Sustaining Development: The Role of Aid, FDI and Government in Economic Success. *International Organization*, 60(1), 205-243.

In international relations, democracy has long been considered the desired end goal for all states due to the vast array of benefits produced through it. Domestically democracy provides the greatest level of individual freedoms and political participation while at the same time fostering a conducive environment for economic growth and stability. The domestic positives also play a role on the international and regional level by lowering barriers to outside investment and trade and lowering the risk of interstate disputes. The field of international relations is so concerned with democracy because of its considerable positives domestically which in turn lead to a more peaceful global political arena, a democratic peace. Democratization has been occurring throughout the world in stages as regions develop the capacity to build a democratic system.

World democratization has been divided into waves. Currently we are in the third or fourth wave depending on who is writing, and each has affected different regions of the world. The current wave followed the fall of the Soviet Union and resulted in 28 countries abandoning communism but some formed democracies while others dictatorships.¹³ One of the major issues concerning the current world situation is not only the transition to democracy but the difficulty of maintaining a stable democracy. Many nations have been able to institute some democratic reforms, such as elections, but in Latin America and especially Sub-Saharan Africa they have either not lasted or continue the same authoritarian regime thinly veiled as a democracy.

Democratization in Sub-Saharan Africa

Attempts at democratization have been an integral part of Sub-Saharan Africa post-colonization but the region contains almost no stable, lasting democracies. Scholars have

13 McFaul, M. (2003). The Fourth Wave of Democracy and Dictatorship: Noncooperative Transitions in the Postcommunist World. *World Politics*, 54(2), 212-244.

pointed to multiple factors, both social and economic, contributing to Sub-Saharan Africa's lack of democratic progress. One is the limited size of the public with a stake in democracy due to widespread poverty, small middle class, and a disproportionately young and rural population.¹⁴ Another common factor is the high ethnolinguistic fractionalization and common division of society into numerically and/or politically dominant versus minor social groups.¹⁵ Some examples of ethnolinguistic fractionalization and societal divisions are Rwanda (Hutu and Tutsi) and the Democratic Republic of the Congo, which consists of over 100 different ethnic groups. Sub-Saharan Africa has one of the most difficult societies for instituting and promoting democracy. What makes democratization in the region even more difficult is that the region does not fit any conventional development theories.

One major problem within Sub-Saharan African states is low education completion and even participation at all levels. In order for a society to democratize there needs to be a literate public with some education but also a highly educated group to operate the administration. During colonialism Africans made up only around 10-15% of public officials but following independence that number increased to almost completely for Africanized public administrations within a few years.¹⁶ This can clearly be seen as a positive since the public administration now consists of individuals vested in the interests of the state and devoted to its growth. The problem though is the administrations following independence are comprised of only 10-15% with previous experience and

14 Mattes, R., & Bratton, M. (2007). Learning about democracy in Africa: awareness, performance, and experience. *American Journal of Political Science*, 51(1), 192-217.

15 Easterly, W., & Levine, R. (1997). Africa's Growth Tragedy: Policies and Ethnic Divisions. *The Quarterly Journal of Economics*, 112(4), 1203-1250.

16 Mutahaba, Gelase. "Ecology and Public Administration in Africa: A Review of Their Relationships Since Independence." In *The Ecology of public administration & management in Africa*. New Delhi: Vikas Pub. House, 1986. 1-17.

about the same percent with a university education. These early administrations lacked the necessary intellectual resources to operate effectively and provide the important activities for development. The administrations have developed some since the end of colonialism but the administrations are still severely limited by patrimonialism. The administrations were and some still today based on patrimonialism, the selecting of individuals who pay allegiance to the political leaders and represent the leaders' ethnic and tribal background.¹⁷ Patrimonialism constitutes one of the most severe forms of corruption that kept the administrations loyal to the leadership and not the people.

Proponents of economic development for promoting democracy stress a strong free market where private industry can grow and create jobs. The problem though is western economies function well with unintrusive administrative action but a developing state cannot sustain itself or function freely without state intervention. There are several reasons why the African state requires a high degree of intervention in the economy. One major issue is limited market competition. The major state production was agriculture which did not contribute much to the state's prosperity as most was for individual/community consumption, providing no taxable source. Also many of the profit rich sectors of the state, namely the mining sector, are controlled by foreign entities which export almost all the goods and send the majority of the profits abroad.

Another developing region, Asia and especially China, was able to utilize its large entrepreneurial class and Latin American benefited from Catholic church activities to perform a variety of developmental functions. The ability to tap into voluntary and nongovernmental organizations limited the financial and organizational burdens on the

17 Alence, Rod. "Political Institutions and Developmental Governance in Sub-Saharan Africa." *The Journal of Modern African Studies* 42, no. 2 (2004). p. 165.

state. Africa though was not able to utilize such an important sector of the state. For one African states lacked a substantial entrepreneurial class and there is little indigenous church-supported activities along with a distrust for the private sector and preference for state interventions.¹⁸

The next major economic issue is that there is little industrial production in Sub-Saharan Africa. When western states went through the most rapid stages of growth the administration was graced with the substantial industrial productivity. Western states had unparalleled industrial growth that enabled the state to begin to play a larger role in society, through regulation and social programs, due to the substantial increase in revenue. The issue with decolonial African states is there is almost no industrial production, the vast majority of the economy is comprised of agriculture, meaning there is a shortage of employment and state revenue.

The last major issue is that the majority of the African states' GDPs come from foreign aid. African states are not self-sustainable and must rely on this outside assistance to produce even basic services, which in many countries are still lacking. During the early 1980s it was discovered that the Sub-Saharan states that were already receiving copious amounts of aid would be faced with an even dire situation down the road as projections found that over 90% of all capital goods required for development would have to be imported, as well as the majority of food.¹⁹ The problem with this is that aid should be used less for running the state and more for creating state sponsored growth projects such as improving infrastructure and building societal establishments

18 Umeh, Ogwo J., and Gregory Andranovich. *Culture, development, and public administration in Africa*. Bloomfield, Ct: Kumarian Press, 2005. 91.

19 Adedeji, Adebayo. "Administrative Adjustments and Responses to Changes in the Economic Environment." In *The Ecology of public administration & management in Africa*. New Delhi: Vikas Pub. House, 1986. 106.

such as hospitals and schools. The issue though was these states had considerable strides to make such as a 300% increase in meat production, an average annual growth rate of 9.3% in energy production, and a more than triple increase in cereals production.²⁰

ODA and Economic Growth

Studies regarding economic growth have focused on the effect aid has on the recipient state's GDP. In most cases aid has had a positive effect on GDP but only under certain conditions. Official Development Assistance (ODA) produces a positive effect on economic growth and human development in less developed countries.²¹ This is possible because ODA enters directly as government revenue which can be spent immediately on human development projects such as education. The initial increase in human development spending causes an increase in human capital, and a more educated workforce or better transportation systems, which directly stimulates economic growth.

HUMAN DEVELOPMENT contributes to ECONOMIC GROWTH by increasing the capacity of the workforce, which in turn alters the organization and adaptability of production and the range and complexity of economic output. This contributes to increasing national income through, among other things, social capital and the policy environment.²²

ODA may go straight to government revenues but that does not ensure that government spending will foster human development. To be successful the government must put emphasis on human development policies because low priority will cause no human development and in some cases aid may be used against human development.²³ The aid can end up in the hand of the elites which can boost initial economic growth but

20 *Adedeji*. 107.

21 Kosack, S., & Tobin, J. (2006). Funding Self-Sustaining Development: The Role of Aid, FDI and Government in Economic Success. *International Organization*, 60(1), 205-243.

22 Kosack, S., & Tobin, J. 205-243.

23 *Ibid*.

will not be sustained. Along with high priority for human development governments must also have positive fiscal, monetary, and trade policies to properly utilize the aid.²⁴

Burnside and Dollar also found that in the place of poor policies aid had no effect on economic growth.

Along with economic growth there are other economic effects foreign aid has on recipient nations. Almost all of the literature agrees that foreign aid increases government spending but there are disagreements on whether it spurs economic growth. While government spending increases with foreign aid, government revenues tend to decrease because of lowering taxes or cutting other forms of government funding; undercutting the actual development of the recipient country.²⁵ The literature on how foreign aid effects economic growth is quite extensive but there is serious debate as to what effect aid has on democratization.

ODA and Democracy

There is much literature that concludes that foreign aid has a positive effect on democratization.²⁶ None of the studies, however, found that democratization happens in all cases of foreign aid. Wright (2009) uses two variables to determine the effect aid has on democratization, size of the dictator's coalition (chance of being elected in democratic election) and economic growth.²⁷ If aid is to be withheld if a country chooses not to

24 Burnside, Craig, David Dollar. 2000. "Aid, Policies, and Growth." *American Economic Review* 90: 847-68.

25 Remmer, Karen. 2004. "Does Foreign Aid Promote the Expansion of Government." *American Journal of Political Science* 48(1): 77-92.

26 Goldsmith, Arthur. 2001. "Foreign Aid and Statehood in Africa." *International Organization* 55: 123-48.

Wright, J. (2009). How Foreign Aid Can Foster Democratization in Authoritarian Regimes. *American Journal of Political Science*, 53(3), 552-571.

DeWaal, A. (1997). Democratizing the aid encounter in africa. *International Affairs*, 73(4), 623-639.

27 Wright, J. (2009). How Foreign Aid Can Foster Democratization in Authoritarian Regimes. *American Journal of Political Science*, 53(3), 552-571.

democratize the ruler has to make the decision of what to do. Dictators that have a high chance of winning an election will choose to democratize because it will not change their status while dictators with small coalitions will choose to give up aid to maintain power.²⁸ Dictators choose aid because it is fungible and they can use it to pay off opponents, fund electoral campaigns, or simply pocket the money.²⁹

Other supporters of foreign aid argue that the current system is ineffective and instead aid needs to be funneled as government revenues. In removing aid from the direct control of the recipient the donor state is determining where it will be spent which undermines the legitimacy of the recipient government.³⁰ So aid needs to be democratized by allowing the recipient governments to handle the dispersion of funds which will increase accountability. Increasing the accountability of the recipient governments pushes them to adopt democratic principles so as to continue receiving aid and possibly receive more aid with more democratization.³¹ De Waal's conclusion is very important because it addresses the issue of whether the donor or the donor's conditions have any effect on the recipient ability to democratize.

While no opponents suggest that there are no positive effects of foreign aid, they do argue that aid is associated with a decrease in institutional quality and democratization or little to no effect, known as the perversity thesis. The perversity thesis holds that foreign aid actually degrades the recipient's institutions by eliminating their self sustainability because of their reliance on foreign aid. The World Bank argued that the problem for Africa is poor governance, no accountability, corruption, and poor quality institutions

28 Ibid.

29 Feyzioglu, Tarhan, Vinaya Swaroop, Min Zhu. 1998. "A Panel Data Analysis of the Fungibility of Foreign Aid." *World Bank Economic Review* 12(1): 29–58.

30 DeWaal, A. (1997). Democratizing the aid encounter in africa. *International Affairs*, 73(4), 623-639.

31 Ibid.

which are the prime reason for why aid diminishes democratic ideals. They find that higher aid is associated with “larger declines in the quality of governance” in two ways.³² The first is that aid can cause a weakening of institutions because of high transaction costs and time consuming projects. Foreign aid is generally associated with human development projects such as education or infrastructure and the institutions in the recipient nations lack the ability to carry out the projects efficiently. The second is that aid makes it difficult to overcome the collective action problems which hinder the capability of the state. States receiving high amounts of foreign aid will begin to become dependent on the aid and the citizens will become accustomed to services without a personal cost making it especially difficult for the government to become self-reliant on internal sources of revenue such as taxes. Brautigam (2000) also concludes that foreign aid can increase the power of the president in democracies which will degrade the democracy.³³ Another negative effect on democratization is

[a] large amount of aid can reduce the incentives for democratic accountability. When revenues do not depend on the taxes raised from citizens and business, there is less incentive for accountability [and] at the same time corrupt government officials will try to perpetuate their rent-seeking activities by reducing the likelihood of losing power.³⁴

Goldsmith (2001) found evidence contrary to the perversity thesis that showed a minor net plus in the ability for recipient states to govern.³⁵ As noted there are some who find that foreign aid actual degrades the governance of a country but there is still much more evidence that movement towards democracy results from aid.

32 Brautigam, Deborah, Stephen Knack. 2004. "Foreign Aid, Institutions, and Governance in Sub-Saharan Africa." *Economic Development and Cultural Change* 52: 255–85.

33 Brautigam, Deborah. 2000. *Aid Dependence and Governance*. Stockholm : Almqvist & Wiksell International.

34 Djankov, Simeon, Jose G. Montalvo, Marta Reynal-Querol. 2008. "The Curse of Aid." *Journal of Economic Growth* 13(3): 169–94.

35 Goldsmith, Arthur. 2001. "Foreign Aid and Statehood in Africa." *International Organization* 55: 123–48.

Another factor contributing to the type and amount of aid provided deals with the various donors. Not only is the size of aid important but also who is giving it matters because donors may have different agendas and conditions. One condition found is that multilateral donors have a preference for providing aid to less populous countries. Where a divergence occurs is what indicator aid is based on, economic need or human development. Regional development banks base aid on economic need while UN agencies base it on economic need as well as human needs.³⁶ While some have concluded that corruption or low political freedoms will cause a donor to limit aid in general that does not hold true. When taken all together there is no statistically significant difference between aid given to corrupt and non-corrupt governments.³⁷ Another major factor in donor aid is how it will affect companies working on aid funded projects in the recipient nations. Recipient nations know that the company will put pressure on the donor to sustain aid allowing the recipient to undermine the conditionality tied to the aid.³⁸ Multinational companies have strong influence on the donors, since sometimes they are based in the donor country, but have a different motive. The competing motives are a significant roadblock to establishing aid conditionality. Other factors influencing aid are geopolitical reasons dealing with establishing military bases and higher aid given to former colonial states.³⁹

Defining best practices for development assistance suffers from the same problems

36 Neumayer, E. (2003). The Determinants of Aid Allocation by Regional Multilateral Development Banks and United Nations Agencies. *International Studies Quarterly*, 47(1), 101-122.

37 Ibid.

Alesina, A., & Weder, B. (2002). Do Corrupt Governments receive less foreign aid?. *The American Economic Review*, 92(4), 1126-1137.

38 Villanger, E. (2004). Company Influence on Foreign Aid Disbursement: Is Conditionality Credible When Donors Have Mixed Motives?. *Southern Economic Journal*, 71(2), 334-351.

39 Neumayer, E. (2003). The Determinants of Aid Allocation by Regional Multilateral Development Banks and United Nations Agencies. *International Studies Quarterly*, 47(1), 101-122.

as the debate over the most important aspects for successful democratization. There are countless issues affecting aid and those issues are made up of countless other issues. Assistance comes in many forms, sizes, and channels and identifying those serves the important purpose of understanding some of the current limitations and successes. The first issue is the specialization of the assistance, which is tied to the scope, goals, and donors. Aid agencies tend to work in contrast to typical government agencies, as they “split their assistance between too many donors, too many countries, and too many sectors for each donor.”⁴⁰ The agencies and recipients experience considerable disadvantages from a cluttered aid environment through high overhead costs for both donors and recipients, duplication, excessive time on the part of government ministers, and forfeit the ability to scale up successes. The United States constitutes a perfect example of the specialization problem; there are two official agencies dedicated to foreign assistance but also more than 50 other government units providing assistance even though it is not their main purpose.⁴¹ All of these agencies have overlapping responsibilities with varying objectives that may or may not compete against one another.

One of the biggest problems of foreign assistance is defining objectives and desired outcomes. Most donors, whether nations or development NGOs, have the broad objective of ending poverty or, in even foggier language achieving development. The dilemma though is “poverty and underdevelopment typically comprise a cluster of problems, and it is often not clear which particular problems of the intended beneficiaries

40 Easterly, W., & Pfitze, T. (2008). Where Does the Money Go? Best and Worst Practices in Foreign Aid. *The Journal of Economic Perspectives*, 22(2), 38.

41 Brainard, Lael. 2007. "Organizing U.S. Foreign Assistance to Meet Twenty-First Century Challenges." In *Security by Other Means: Foreign Assistance, Global Poverty, and American Leadership*, ed. Lael Brainard, chap. 2. Washington, DC: Brookings Institution Press.

an aid agency should address.”⁴² Agencies attempt to accomplish their goals through a variety of methods aimed at improving the conditions of the recipients but often these methods fail to meet the demands of the recipients. Sub-Saharan African states suffer from many public administration deficits and lack of public voice which significantly limits the beneficiaries' feedback to the aid agencies.⁴³ The absence of useful feedback coupled with the underlying donor objectives, noted earlier, causes aid agencies to declare broad goals of development instead of fixing on the demands of the recipient.

The lack of recipient feedback serves as the biggest contributor to many of the current issues with foreign assistance. First giving up on the goal of development can lead to aid specialization that focuses on the demands of the beneficiary's society. When freed from the development goal, foreign aid can be provided for those tasks with high demand: “to reduce malaria deaths, to provide more clean water, to build and maintain roads, to provide scholarships to talented but poor students, and so on.”⁴⁴ In working to answer the demands of the recipients, the donors are still working towards overall development but in gradual steps instead of trying to correct every issue all at the same time. The broad development goal suffers so much because it ignores the connections between the underlying issues of poverty and underdevelopment in Sub-Saharan Africa which reinforces the inability to provide feedback. Sub-Saharan Africa lacks most of the beginning steps for development such as some education, a healthy population, and basic infrastructure so an aid agency trying to implement democratic or market institutions is going to fail. Development and democratization occurs in a bottom up order not from “a

42 Easterly, W., & Pfitze, T. (2008). Where Does the Money Go? Best and Worst Practices in Foreign Aid. *The Journal of Economic Perspectives*, 22(2), 32.

43 Easterly, W., & Pfitze, T. (2008). 32.

44 Easterly, W. (2007). Was Development Assistance a Mistake?. *The American Economic Review*, 97(2), 331.

strategic vision offered by a few experts”⁴⁵ so focusing on the beneficiary's demands will allow for the recipient nation to progress naturally and through the will of its own actors.

Currently aid agencies suffer from a lack of specialization causing them to stretch their objectives and lose sight of the issues facing recipient states which are the most important to achieving democracy. Developing the beneficiary's social infrastructure is the most essential first step towards democracy since as the population's quality of life rises so too does the will and need of the people. Assistance needs to be geared towards increasing the opportunities of the recipient population and less about transforming the recipient because forced change only causes more problems.

The debate over democratization and foreign assistance produces more questions than answers as there is evidence supporting opposing arguments. The two have strong connections, not just in foreign aid's ability to foster democracy, but also the perspective on democracy, whether driven by economic or social forces, carries over into the decision on the best methods of ODA. This paper hopes to add to the discussion by analyzing foreign assistance in Sub-Saharan Africa to determine not only its overall relationship with democracy but also discover any differences between social and economic infrastructure aid on governance and society. The paper assumes the position that social conditions are most necessary for democratization so foreign assistance for social programs engenders democratic growth more so than economic infrastructure aid. The following sections establish the framework of the analysis, statistical tests of the relationships, and interpretation of the results.

45 Ibid.

Hypotheses

H_a = The larger the sum of ODA per capita to Sub-Saharan African states the greater the probability of the state being democratic.

H_{0a} = ODA per capita to Sub-Saharan African states has no effect on the probability of a state being democratic.

H_{b1} = The larger the sum of social infrastructure aid per capita to Sub-Saharan African states the greater the probability of the state being democratic.

H_{0b1} = Social infrastructure aid per capita to Sub-Saharan African states has no effect on the probability of a state being democratic.

H_{b2} = Social infrastructure aid per capita to Sub-Saharan Africa has a greater positive effect on a state being democratic than economic infrastructure aid per capita due to its greater ability to improve the social standing of citizens.

H_{0b2} = There is no measured difference between social and economic infrastructure aid per capita in the degree of the effect on democracy in Sub-Saharan Africa.

H_{c1} = An increase in social infrastructure aid per capita in a Sub-Saharan African state produces a direct increase in percentage of voice and accountability in the state.

H_{0c1} = Social infrastructure aid per capita to Sub-Saharan African states has no measurable relationship with the percentage of voice and accountability in the state.

H_{c2} = Social infrastructure aid per capita has a larger positive effect on the percentage of voice and accountability in Sub-Saharan African states than economic infrastructure aid per capita.

H_{0c2} = There is no measured difference between social and economic infrastructure aid per capita in the magnitude of the effect on the percentage of voice and accountability in

Sub-Saharan African states.

Hd₁ = An increase in social infrastructure aid per capita in a Sub-Saharan African state produces a direct increase in percentage of political stability and the absence of violence in the state.

H_{od1} = Social infrastructure aid per capita to Sub-Saharan African states has no measurable relationship with the percentage of political stability and the absence of violence in the state.

Hd₂ = Social infrastructure aid per capita has a larger positive effect on the percentage of political stability and the absence of violence in Sub-Saharan African states than economic infrastructure aid per capita.

H_{od2} = There is no measured difference between social and economic infrastructure aid per capita in the magnitude of the effect on the percentage of political stability and the absence of violence in Sub-Saharan African states.

Operationalization and Conceptualization

Time Frame

Two different time frames are used for the analysis, 1970 to 2008 and 2002 to 2009.

The varying time frames allow for multiple analyses of the effects of ODA in Sub-Saharan Africa.

Unit of Analysis

The unit of analysis for this study is the state, more specifically 42 Sub-Saharan African states.

Data

Date for the analysis is provided by the Polity IV project and the World Bank's African Development Indicators.⁴⁶⁴⁷

Dependent Variable: Polity and Governance Indicators

The binomial dependent variable for democracy in the recipient nations will be determined from the Polity IV Project. The Polity IV Project is made up of a 21 point scale with values ranging from -10 to +10 (democracy= +6 to +10, anocracy= -5 to +5, autocracy= -6 to -10). The Polity IV score is found by subtracting the democracy (0-10) score by the autocracy score (0-10). The scores are composed of multiple factors that make up a state's polity. First is the presence of institutions and processes where citizens can express effective preference for policies and leaders. Second is the existence of institutionalized constraints on executive power. Third is the guarantee of civil liberties to all citizens. The score is specifically determined by the combination of four measures: competitiveness of political participation (PARCOMP), the openness and competitiveness of executive recruitment (XRCOMP and XROPEN), and constraints on executive power (XCONST). In order to simplify the model the Polity IV score was used to create a binomial variable to indicate whether the regime was a democracy by coding all Polity IV scores of +6 or greater as 1 to indicate the state was a democracy. It is possible to run an OLS regression with the Polity IV score, an ordinal variable, but for this analysis simply identifying the statistical significance and direction of the relationship between foreign assistance and democracy is sufficient.

Democracy 02-09	Count	Percent
Non-Democratic	229	65.06

46 Marshall, Monty G. and Keith Jaggers. 2010. *Polity IV Project: Political Regime Characteristics and Transitions, 1800-2010*. Version p4v2010e [Computer File]. College Park, MD: Center for International Development and Conflict Management, University of Maryland.

47 World Bank. *World Bank Africa Database 2010* [Online]. Washington, DC: World Bank [Producer and Distributor], 2011.

Democratic	123	34.94
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The Polity IV score is useful for the initial analyses of overall foreign aid, the social and economic aid aggregates, and the breakdown of social aid because it allows for a simple method for representing the polity of a state and its change over time. There are considerably more non-democratic states than democratic states from 2002 to 2009, on page 62-64 you can find a table of each democratic country by year. It does have limitations though, the binomial dependent variable prevents an OLS regression which would provide a much deeper analysis. The biggest loss is the inability to quantify the effect each independent variable has on democracy. While an interval or ratio measurement would have been ideal, the Polity IV score serves as the only accessible indicator for democracy during the extended time frame.

The OLS regressions will use governance indicators provided by the World Bank for the dependent variable instead of the Polity IV score. The World Bank provides a percentage for voice and accountability, political stability/absence of violence, government effectiveness, rule of law, and control of corruption starting in 1996. Voice and accountability and political stability/absence of violence are used in separate analyses to determine the effect various types of ODA have in Sub-Saharan Africa. Voice and accountability measures “the extent to which a country’s citizens are able to participate in selecting their government and to enjoy freedom of expression, freedom of association, and a free media.”⁴⁸ Political stability and the absence of violence is measured by the World Bank according the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means.⁴⁹ The use of percentages provides the

48 World Bank. *World Bank Africa Database 2010* [Online]. Washington, DC: World Bank [Producer and Distributor], 2011.

49 Ibid.

ability to use a time-series cross-sectional OLS regression, which as noted earlier is the ideal method. The rankings though do not provide the same measurement as the Polity IV since they do not directly indicate whether a state is a democracy. The rankings do serve as a proxy for democracy as these are both components of a stable democracy with a higher ranking expressing a more democratic or free state.

Variable	Mean	Standard Deviation	Minimum	Maximum
Voice and Accountability	31.19	20.05	0.95	77.4
Variable	Mean	Standard Deviation	Minimum	Maximum
Political Stability/Nonviolence	32.99	22.36	0	89

The ability to directly represent the polity of a state is not the most important aspect of the study to demonstrate the ability of various types of aid to foster democracy. The measured effect on the chosen rankings measures the capability of aid in cultivating the characteristics integral to fostering democracy. Voice and accountability measures the public's ability to freely participate in their national government and the degree to which the government represents the will of the people. Political stability and the absence of violence is the other important dependent variable because it captures the broader picture of the government and state. Maintaining political stability is key for any emerging democracy but especially important in Sub-Saharan Africa where there exist substantial societal divisions. A continued political stability ensures smooth government transitions, limited corruption, and overall proper government functioning.

Independent Variable 1: ODA per Capita

The data for ODA per capita is provided from the World Bank database and is measured in current U.S. dollars. ODA per capita is preferable to net ODA as it indicates the amount of aid per person accounting for population differences.

Independent Variable 2: Aggregate Indicators for Social Infrastructure and Economic Infrastructure Aid per Capita

Variable	Mean	Standard Deviation	Minimum	Maximum
Social per Capita	23.11	17.55	1.55	143.78
Variable	Mean	Standard Deviation	Minimum	Maximum
Economic per Capita	7.95	28.95	0	507.49

The amount of aid provided for social infrastructure and services is generated by taking the World Bank's measurement for gross ODA disbursement for social infrastructure and services over the population. The indicator accounts for all aid provided for education, health, population programs, water supply and sanitation, and government and civil society from DAC donors in current U.S. dollars. The amount of aid for economic infrastructure is generated the same way but is the aggregate of aid provided for transport and storage, communications, energy, banking and financial services, and business and other services. These aggregates capture the ability of aid provided for different sectors to improve prospects for democracy. The aggregates were chosen because they represent the continued debate between whether economic or social characteristics more greatly cultivate democracy.

Independent Variable 3: Micro Indicators of Social Infrastructure Aid per Capita

Along with meta indicator for social infrastructure aid, a set of micro indicators are used to break down the components of the meta variable. The micro indicators are ODA

Table 1	
Variable Name	Description
Education	This is the aggregate total for education level unspecified.
Government and Civil Society	This is described as economic and development policy/planning; public sector financial management; legal and judicial development; general administration; strengthening civil society; elections; human rights; free flow of information and women's equality organisations and institutions.
Health	This is the aggregate total for general health and basic health.
Population Programs and Reproductive Health	This is described as population policy and administrative management; reproductive health care; family planning; STD control including HIV/AIDS and personnel development for population and reproductive health.
Water Supply and Sanitation	This is described as water resources policy and administrative management; water resources protection; water supply and sanitation - large systems; basic drinking water supply and basic sanitation; river development; waste management/disposal and education and training in water supply and sanitation.

distributed for various sectors within society (variables and descriptions can be found in Table 1 below). The micro variables make up the aggregate Social Infrastructure Aid variable and will be used to determine if there are differing relationships among sector specific social aid and the dependent variables. The analysis of the micro variables effects provides reasoning behind sector specialization of aid to those areas where it causes the largest positive gains.

Variable	Mean	Standard Deviation	Minimum	Maximum
Education Aid per Capita	5.86	5.95	0.1	44.24
Variable	Mean	Standard Deviation	Minimum	Maximum
Government Aid per Capita	5.12	7.87	0.26	131.27
Variable	Mean	Standard Deviation	Minimum	Maximum
Health Aid per Capita	3.74	2.88	0	19.1
Variable	Mean	Standard Deviation	Minimum	Maximum
Water/Sanitation Aid per Capita	2.14	2.36	0	13.88
Variable	Mean	Standard Deviation	Minimum	Maximum
Population Assistance per Capita	4.54	10.35	0	120.9

Control: GDP per Capita

GDP per capita serves as a major economic control for the analysis. It will control for whether or not it is a country's own economic capacity fueling governance. GDP per capita is provided in current U.S. dollars from the World Bank.

Variable	Mean	Standard Deviation	Minimum	Maximum
GDP per Capita	1453.42	2767.28	85.54	28102.53

Control: Urbanization X Population Density

The combination of urbanization and population density accounts for the proximity citizens have to one another which, affects multiple factors in society such as communication and ability to demonstrate. In the least developed countries, urbanization is typically seen as a factor for democratization because urban populations have greater access to information, political participation, and mobilization. Many of these states

began as highly rural but over time urbanized and this change needs to be controlled for in the analysis. Population density is combined because it adds the extra dimension of overall closeness of the population. The two variables cannot be used independently either because of multicollinearity issues.

Variable	Mean	Standard Deviation	Minimum	Maximum
Population Density X Urbanization	2750.4	4212.93	77.34	26725.33

Control: Employment to Population Ratio

The final control measures the percentage of the population employed. The data are provided from the World Bank database and identifies the percentage of the population 18 and older employed within the state. Employment to population ratio controls for the effect employment has on governance as the higher employment is the less prevalence of instability and the greater the ability of citizens to participate in government.

Variable	Mean	Standard Deviation	Minimum	Maximum
Employment to Population	65.79	11.55	36.5	84.8

Variable/Data Limitations

As discussed in the literature review there are many societal conditions that affect governance both universally and specific to Sub-Saharan Africa. In analyzing the effect of foreign assistance on democracy, these societal conditions need to be adequately controlled for to ensure the most robust models. Some of the most important variables are controlled for in the regression: GDP per capita, Urbanization and Population density, and employment to population ratio; but there are also many unaccounted for societal variations as well. The most apparent are: literacy rate, average amount of education, the

health of the population, measure of ethnolinguistic fractionalization, accessibility to running water and sewage systems, telephone access, access to information sources (radio, newspapers, television), access to paved roads, access to electricity, and countless other variables. While it would be ideal to include an indicator for all of these variables, the reality is measures for these indicators do not exist or are severely limited for Sub-Saharan Africa. For example data on literacy rates are only available for some Sub-Saharan states and even then normally only for one year. The lack of quality societal level data out of Sub-Saharan Africa is not surprising though as there is little structure in place to quantify the measures. The forceful exclusion of known controls is cumbersome but also piques the interest as the presence of so many unknowns ensures the analysis can always evolve. The fixed effects of each model helps account for these unmeasured effects by assuming there are unchanging effects within a state that may change between states.

Methodology

In analyzing the effect of ODA on governance in Sub-Saharan Africa, three models will be used to account for multiple factors. All models will use a time-series cross-sectional multivariate fixed effects regression. Models 1, 2, and 5 will use a logistic regression while models 3, 4, and 6 will use OLS regression. While differing in a few ways, each model will most importantly be assessing ODA's effect on governance/democracy while controlling for various state characteristics such as GDP per capita and population density. The table below provides all of the necessary information for each model.

Table 2: Model Specifications	Model 1	Model 2	Model 3	Model 4	Model 5
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Type of Analysis	Time-Series Cross-Sectional Logistic Regression FE	Time-Series Cross-Sectional OLS Regression FE	Time-Series Cross-Sectional OLS Regression FE	Time-Series Cross-Sectional OLS Regression FE	Time-Series Cross-Sectional OLS Regression FE
Panel	State	State	State	State	State
Time	1970-2008	2002-2009	2002-2009	2002-2009	2002-2009
Dependent Variable	Binomial Democracy Variable	Voice and Accountability Ranking	Political Stability and No Violence Ranking	Voice and Accountability Ranking	Political Stability and No Violence Ranking
Main Independent Variables	ODA per Capita	Aid for Social Infrastructure per Capita, Aid for Economic Infrastructure per capita	Aid for Social Infrastructure per Capita, Aid for Economic Infrastructure per capita	Micro Level Aid Indicators	Micro Level Aid Indicators
Controls	GDP per Capita, Urbanization X Population Density	GDP per Capita, Urbanization X Population Density, Employment to Population Ratio	GDP per Capita, Urbanization X Population Density, Employment to Population Ratio	GDP per Capita, Urbanization X Population Density, Employment to Population Ratio	GDP per Capita, Urbanization X Population Density, Employment to Population Ratio

The first model answers the introductory question of whether ODA even has an effect on democracy. The reason for using the longer time frame is to increase the number of observations as much as possible to improve the quality of the analysis. The rest of the models will answer the deeper question of what types of aid are actually contributing to improvements in Sub-Saharan Africa and possibly whether some forms of aid degrading democracy. All tests for the quality of the data and regressions have been conducted to ensure all regression assumptions are met.

Data Analysis

Model 1: Analysis of ODA per Capita on Democracy, 1970-2008

The first model serves as a preliminary analysis of official development assistance on democracy from 1970 to 2008. A time-series cross-sectional logistic regression was

used to assess whether ODA has had any effect on democracy over an extended time period using the binomial democracy variable. The results show that ODA per capita does have a statistically significant effect on democracy in Sub-Saharan Africa when all other variables are held constant. GDP per capita is also statistically significant at the 99% level when all other variables are held constant while the combined variable measuring Urbanization and Population Density is not statistically significant.

Table 3: Multivariate Logistic Regression on Democracy in Sub-Saharan States, 1970-2008	
Independent Variables	Coefficient (Standard Error)
ODA per Capita	.024** (.004)
GDP per Capita	.005** (.001)
Urbanization X Population Density	-.000 (.000)
Observations	717
Groups	39
LR Chi-Squared	103.92**
Log-Likelihood	-271.37

**p<.01 (two tailed)

*p<.05 (two tailed)

Both ODA per capita and GDP per capita have a statistically significant positive effect on democracy in the analysis, which matches previous research. The logistic regression does not provide a quantity for the measured effect the independent variables have on democracy but the coefficients can be compared for degree of effect as each is measured on the same scale of dollars per capita. In this regression ODA per capita has almost 5 times the effect on democracy than GDP per capita (.024 to .005 respectively). ODA's greater effect on democracy demonstrates how not only ODA does have a positive

influence but also provides the strongest change on governance among the measured variables. While the results align with previous research it is important to first show the relationship because the rest of the analysis is worthless if the relationship does not exist.

Model 2: Analysis of Social and Economic Infrastructure Aid on Democracy, 2002-2009

Model 2 measures the effect Social and Economic Infrastructure Aid has on democracy in Sub-Saharan Africa. The analysis uses the same binomial democracy variable as model 1 so while the results indicate statistically significant relationships, they do not provide as substantive an interpretation as the OLS regressions. As the table below shows Social Infrastructure Aid has a positive, statistically significant relationship with democracy in Sub-Saharan African states when all other variables are held constant. Economic Infrastructure Aid does not have a statistically significant effect on democracy, which supports the hypothesis that Social Aid has a positive effect on democracy in Sub-Saharan Africa and a greater effect than Economic Aid.

Both Urbanization/Population Density and Employment to Population Ratio are statistically significant as well. Employment to Population does have a rather large effect but is in the negative direction which indicates that the more employed the population is the less likely a country is to be democratic in Sub-Saharan Africa. The results of the first two models have so far supported the hypotheses and warrant additional analysis to determine what facets of a democratic society the aid is effecting to cause the relationship.

Table 4: Multivariate Logistic Regression on Democracy in Sub-Saharan States, 2002-2009	
Independent Variables	Coefficient (Standard Error)
Social Infrastructure Aid per Capita	.439** (.103)

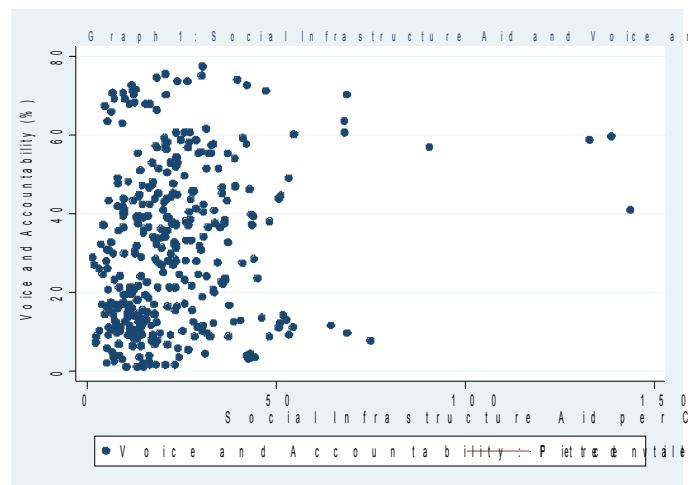
Economic Infrastructure Aid per Capita	.213 (.140)
GDP per Capita	-.000 (.001)
Urbanization X Population Density	.001* (.000)
Employment to Population	-.313** (.083)
Constant	2.48 (5.88)
Observations	292
Groups	42
Chi-Squared	57.78**
Log-Likelihood	-59.78

**p<.01 (two tailed)

*p<.05 (two tailed)

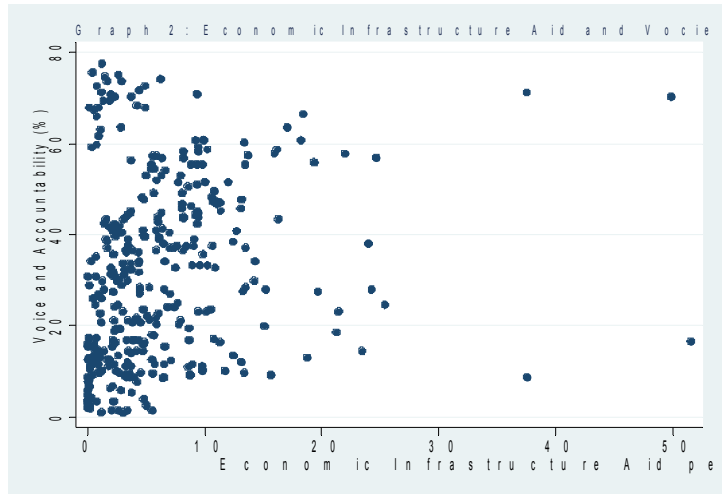
Model 3: Analysis of Social and Economic Infrastructure Aid on Voice and Accountability, 2002-2009

The scatter plots on this page and the next present the relationship between Social and Economic Infrastructure Aid and Voice and Accountability. As the graph to the left shows, there is clearly a visible relationship between social aid and the voice and



accountability ranking. As graph 2 shows there is not quite as tight of a relationship between economic aid and voice and accountability. The data points are not clustered in a way that would indicate a significant relationship between the two especially with there being clusters that fall outside of the main grouping.

Model 3 is weighted by population size to correct for heteroskedasticity since there was higher error variance at lower population sizes (see Appendix pg.) and the results from the regression can be seen



on the next page. The results support the hypothesis that there is a positive, statistically significant relationship between Social Infrastructure Aid and Voice and Accountability in Sub-Saharan Africa when all other variables are held constant. The model indicates for every \$1 per capita increase in Social Infrastructure Aid the Voice and Accountability ranking increases by .1 percentage point when all other variables are held constant. While an increase of .1 percentage points may seem insignificant, but a \$10 per capita increase in Social Infrastructure Aid would yield a 1 percentage point increase. Also the interpretation needs to take into account the effect over time as a onetime \$10 per capita increase in aid would lead to a 10 percentage point increase over a decade. An increase of 10 percentage points from just Social Infrastructure Aid is quite considerable and when coupled with other variables increasing Voice and Accountability a Sub-Saharan state can move closer to a free, democratic society rapidly over time.

Table 5: Multivariate OLS Regression on Voice and Accountability in Sub-Saharan States, 2002-2009	
Independent Variables	Coefficient (Standard Error)
Social Infrastructure Aid per Capita	.103** (.034)
Economic Infrastructure Aid per Capita	.172

GDP per Capita	.000
	(.1)
	(.000)
Urbanization X Population Density	-.000
	(.000)
Employment to Population	-.426*
	(.182)
Constant	57.47**
	(11.7)
Observations	299
Groups	42
Adj. R-squared	.97
Root MSE	3.14

**p<.01 (two tailed)

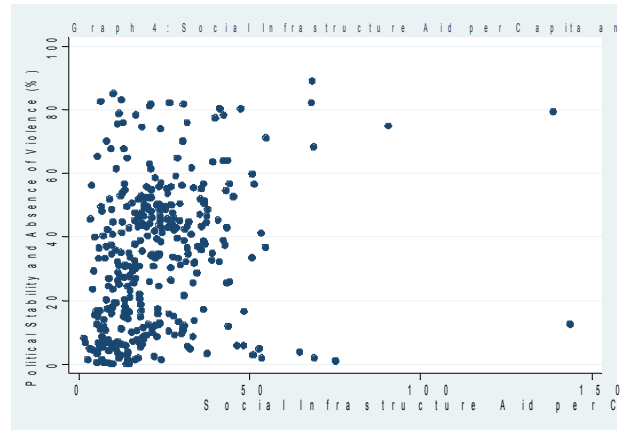
*p<.05 (two tailed)

The only other statistically significant variable is the Employment to Population Ratio (-.426), the negative coefficient goes against the expected outcome though. The other main independent variable, Economic Infrastructure Aid, is not statistically significant which supports the second part of model that Social Infrastructure Aid has a greater effect on Voice and Accountability than Economic Infrastructure Aid. A final interesting observation is that GDP per capita is not significant in Model 2 but was in the longer time frame Model 1.

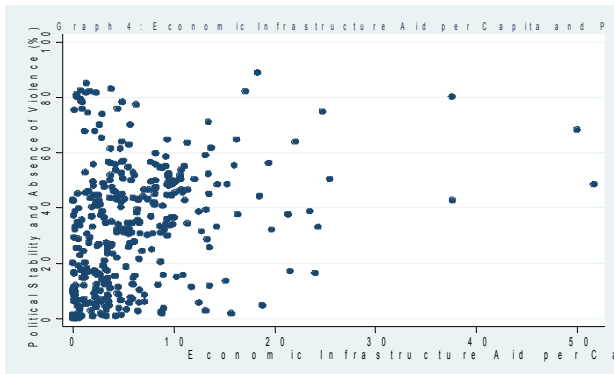
Model 3 is also a strong predictor of the change in Voice and Accountability which provides even more strength to the estimates. The model is explaining 97% of the variance in Voice and Accountability in Sub-Saharan Africa, which is very high but not unexpected. The fixed effects model automatically accounts for invariant measures within each country such as ethnicity.

Model 4: Analysis of Social and Economic Infrastructure Aid on Political Stability and Non-Violence, 2002-2009

Model 4 is very similar to Model 3 except the dependent variable is now Political Stability and the Absence of Violence. This model though is not weighted by population as there was no heteroskedasticity to correct. The two graphs visualize the relationship between



the main independent variables and Political Stability and the Absence of violence. As can be seen both indicate a possible positive relationship. The graph for Social



Infrastructure aid indicates a possibly stronger relationship than Economic Infrastructure aid. The only way to fully know the relationship though is from the regression results.

As the results show none of the independent variables had statistically significant effect on the percentage ranking for Political Stability and the Absence of Violence. Not only did none of the variables have a statistically significant effect but the model as a whole did not meet the 95% threshold. Social Infrastructure Aid is in the positive direction which was hypothesized, also while it did not meet the 95% probability cut off it did fall within the 90% confidence interval.

Table 6: Multivariate OLS Regression on Political Stability and Non-Violence in Sub-Saharan States, 2002-2009	
Independent Variables	Coefficient (Standard Error)
Social Infrastructure Aid per Capita	.067 (.036)
Economic Infrastructure Aid per Capita	-.042

GDP per Capita	(.111) .000 (.000)
Urbanization X Population Density	-.000 (.000)
Employment to Population	.274 (.247)
Constant	14.45 (16.24)
Observations	299
Groups	42
Adj. R-squared	.91
Root MSE	6.75

**p<.01 (two tailed)

*p<.05 (two tailed)

Model 4 clearly is not as strong as Model 3 but it does still offer some insights when comparing the results of all previous models. One important take-away is Social Infrastructure Aid does have a statistically significant positive effect on democracy in Sub-Saharan African states as shown in Model 2. Also Economic Infrastructure Aid does not have a statistically significant relationship to democracy and even if it did Social Aid still has a greater effect. Model 3 demonstrated Social Infrastructure Aid has quite a profound effect on the Voice and Accountability of Sub-Saharan African states while Model 4 provides evidence that Social Infrastructure Aid has little to no effect on the Political Stability and Absence of Violence in the same states. The next section will break out the Social Infrastructure aggregate to determine if certain facets of social aid are driving the positive relationship with democracy and Voice and Accountability.

Model 5: Analysis of Components of Social Infrastructure Aid on Democracy, 2002-2009

The first analysis on the facets of Social Infrastructure Aid focuses on the effect each aid component has on the binomial democracy variable. The hope is to more fully

understand the relationship between social aid and democracy by determining whether different aspects have different effects. The results of the analysis, in the table on the next page, indicate that only aid provided for population programs and reproductive health has a statistically significant relationship with democracy in Sub-Saharan African countries when all other variables are held constant. The results are fairly unexpected as the assumption was that aid provided for education, government, or health would be contributing the most to the positive relationship between social infrastructure aid and democracy.

Employment to population ratio is the only other statistically significant variable and again the relationship is negative with democracy (-.347) when all other variables are held constant. The rest of the results closely mimic those from model 2 with the most significant being the economic infrastructure aid still does not have a statistically significant relationship with democracy in Sub-Saharan Africa. Finally the model as a whole is robust with a statistical significance at the 99% confidence level.

Table 7: Multivariate Logistic Regression on Democracy in Sub-Saharan States, 2002-2009	
Independent Variables	Coefficient (Standard Error)
Education Aid	.179 (.237)
Government and Civil Society Aid	.461 (.305)
Health Aid	.419 (.318)
Water and Sanitation Aid	.144 (.739)
Population Programs Aid	.786** (.298)
Economic Infrastructure Aid per Capita	.217 (.164)
GDP per Capita	-.000 (.001)
Urbanization X Population Density	.001* (.000)
Employment to Population	-.347** (.103)
Constant	7.29 (6.59)
Observations	290
Groups	42
Chi-Squared	39.87**
Log-Likelihood	-58.53

**p<.01 (two tailed)

*p<.05 (two tailed)

Model 6: Analysis of Components of Social Infrastructure Aid on Voice and Accountability, 2002-2009

The final model provides another level of understanding of Social Infrastructure Aid by analyzing the sector specific aid effects on voice and accountability. The hope is to determine at an even more granular level how different types of Aid affect voice and accountability in Sub-Saharan Africa. Model 6 tests the relationship between voice and accountability and aid provided for education, government and civil society, health,

population programs, and water/sanitation. The aggregate Economic Infrastructure Aid will continue to be measured for its effect on voice and accountability. The analysis resembles model 3 except Social Infrastructure Aid is substituted for its five parts and again is weighted by population size to correct for heteroskedasticity.

The results shown in the table on the next page provide some very interesting and unexpected relationships. The most striking is the statistically significant, negative relationship between education aid and voice and accountability (-.646) when all other variables are held constant. The coefficient indicates that for every \$1 per capita increase in aid for education the voice and accountability ranking drops by .646 percentage points so taken over 10 years the \$1 per capita increase would drop the voice and accountability in a Sub-Saharan African state by 6.5 percentage points. It was expected education aid would have the greatest positive effect on voice and accountability among all of the aspects of social aid so this result is quite striking, deserving future research.

Aid for government and civil society in Sub-Saharan Africa is also statistically significant but in the positive direction, indicating a positive relationship between the aid and voice and accountability when all other variables are held constant. Substantively a \$1 per capita increase in aid provided for government and civil society yields an .161 percentage point increase the voice and accountability ranking when all other variables are held constant. Aid provided for the health sector has the greatest statistically significant effect on voice and accountability out of all aspects of social aid. When aid provided for the health sector increases by \$1 per capita, voice and accountability rises by .829 percentage points when all other variables are held constant. So again expanding that increase to either \$10 per capita or \$1 per capita over 10 years would yield an 8.3

percentage point increase in the voice and accountability of a Sub-Saharan African state when all other variables are held constant.

Table 8: Multivariate OLS Regression on Voice and Accountability in Sub-Saharan States, 2002-2009	
Independent Variables	Coefficient (Standard Error)
Education Aid	-.646** (.198)
Government and Civil Society Aid	.161** (.058)
Health Aid	.829** (.203)
Water and Sanitation Aid	.326 (.302)
Population Programs Aid	-.003 (.074)
Economic Infrastructure Aid per Capita	.157 (.098)
GDP per Capita	.000 (.000)
Urbanization X Population Density	-.000 (.000)
Employment to Population	-.238 (.181)
Constant	47.21** (11.85)
Observations	290
Groups	42
Adj. R-squared	.96**
Root MSE	3.07

**p<.01 (two tailed)

*p<.05 (two tailed)

The model as a whole is statistically significant from zero and very robust. The adjusted R-square indicates the model explains 96% of the variance in voice and accountability. Clearly aid provided for the health sector is having a dramatic positive impact on the voice and accountability of Sub-Saharan African states with government and civil society having a more minimal positive effect. The negative relationship between education aid and voice and accountability is disconcerting though since improving the education of a state was thought to be a good method for promoting

democratic ideals.

Interpretation of Results

The results of the analysis on foreign assistance and democracy in Sub-Saharan Africa lead to some interesting conclusions. The results of the first model came as little surprise, as it was expected, based on countless previous studies, the hypothesis that larger amounts of ODA per capita in Sub-Saharan Africa positively correlates to democratic governance. As shown in previous literature, ODA has consistently stood up to statistical tests on its ability to affect government systems in Sub-Saharan Africa and globally. While the model just upheld previously supported theories, it was still essential for providing the beginning framework for the argument. Also the results did produce one interesting insight, both ODA per capita and GDP per capita have a statistically significant positive relationship with democracy in Sub-Saharan Africa meaning each works together to increase democracy. The difference in magnitudes indicates that Sub-Saharan African states do not currently possess national economic conditions to independently improve their status. Sub-Saharan African states rely on ODA to compensate for the limited government revenues from within the state and without these monetary infusions the government would most likely be incapable of providing services. If anything else this model further demonstrates the inability of most Sub-Saharan African states to operate autonomously from foreign assistance to the point that ending assistance would incur a complete collapse of the state.

Where model 1 provides little new insights, model 2 is a whole different story. The relationship between democracy and different forms of aid has received considerably less

attention, mostly due to the lack of data until recently. The regression results supported the hypotheses that social infrastructure aid has a positive relationship with democracy as well as that social infrastructure aid has a greater effect on democracy than economic infrastructure aid. The results could not have better reinforced the proposition that assistance for social programs is the best method for cultivating democracy in Sub-Saharan African states. The fact social infrastructure aid has the greatest positive effect on democracy should not be surprising since this paper accepts the notion that social conditions play the biggest role in democratization. The complete absence of a relationship between economic infrastructure aid and democracy is somewhat surprising though as it was expected to have some effect just less than social infrastructure aid.

Not only does social infrastructure aid have a statistically significant positive effect on democracy but also on the voice and accountability percentage ranking. This positive relationship with voice and accountability provides a possible explanation for social infrastructure aid's ability to increase democracy in Sub-Saharan Africa. Voice and accountability is an important characteristic of democracies as well as being necessary for the public to demand government and societal reforms. Through increasing voice and accountability, social infrastructure aid builds an integral component in Sub-Saharan African societies for improving their personal rights and freedoms. Improving voice and accountability appears to be social infrastructure aid's main contribution to democracy in Sub-Saharan Africa as it has no effect on political stability and the absence of violence. The lack of a relationship with political stability and the absence of violence demonstrate that while social infrastructure aid can improve citizens' capacity to express interests to the government, it cannot improve alter the societal and political divisions hindering

stability and fostering violence.

Social infrastructure aid's ability to improve the voice and accountability and in turn democracy in Sub-Saharan Africa can be attributed to certain sector aid specialization. The analysis of the different social sector aids on the binomial democracy variable does not provide much insight and taken by itself it appears none of the social sector specific aids leads the influence. Instead it is the combination of all sectors causing the relationship. The deeper analysis of social infrastructure aid's segments on voice and accountability yields much richer and surprising conclusions into the ability to affect governance in Sub-Saharan Africa. The most surprising result is the negative influence of education sector assistance on voice and accountability, which goes against the expected positive relationship. As noted earlier education is considered vital to crafting democratic governance in states so education assistance's adverse effect on voice and accountability must be attributed to some other aspects in Sub-Saharan African society.

While social infrastructure aid's positive relationship is not tied to education assistance, the investigation into the other social sector aids does provide explanations into the relationship through conclusions about Sub-Saharan African society. The most striking results are the high magnitude positive relationship between health program assistance and voice and accountability in Sub-Saharan Africa which more than compensates for the negative effects from education assistance. Initially the result was surprising until it was applied to the larger context of Sub-Saharan African society and democratization. As mentioned in the literature review a healthy population is highly important for a developing state because basic health needs must be overcome before a population can progress to more metaphysical needs. Sub-Saharan Africa suffers from

the worst health issues in the world such as multiple deadly epidemics and limited if not nonexistent access to basic healthcare and medication. In a society afflicted by such severe health concerns it comes as no surprise health assistance currently contributes most to Sub-Saharan development as it addresses the most pressing demands.

The whole purpose of foreign assistance is to drive recipient's development by targeting the most urgent and lowest stage development impediments and then move onto the higher stages. Right now foreign assistance has gotten ahead of itself by focusing on multiple development stages, most important here is education, while the recipient's society is still stuck at the beginning stages. Health sector assistance provides the biggest boost to voice and accountability in Sub-Saharan Africa since it addresses the current level of development in the recipients. Foreign aid for health programs serves to rid the population of constant struggles for survival thus allowing citizens to start demanding greater rights and freedoms such as education and a political voice. The only other positive aspect of social infrastructure assistance, government and civil society, on voice and accountability is to be expected since an increase in funding for the administration should lead to an increase in government capabilities.

The ability of social infrastructure aid to target the public's pressing needs explains both its positive relationship with democracy and voice and accountability as well as the inability of economic infrastructure aid. Development assistance succeeds by creating opportunities for the recipient, and in Sub-Saharan Africa's current funding the trade and banking sector does little to provide opportunities for such an underdeveloped population. It would be wrong to say economic infrastructure aid does nothing to foster development but most of Sub-Saharan Africa is not at the stage where the general population benefits.

As Sub-Saharan African states progress, economic sector assistance will begin to become more important as larger proportions of the population are directly affected by commercial markets.

Recommendations

The conclusions from the data analysis offer compelling recommendations on how foreign assistance should be administered to Sub-Saharan Africa addressing aid specialization and recipient feedback. Current ODA distribution to Sub-Saharan Africa provides sweeping assistance that seeks to alter all aspects of development which is the wrong method. Part of the conversation on foreign aid should focus on the need for sector and program specialization so that aid pinpoints the important needs and prevents donors from stretching themselves. The data results support foreign aid specialization specifically for social infrastructure and only certain social sectors. Foreign donors need to focus their resources on improving the health of the population through direct intervention and increasing the recipient's health care capabilities. Concentration on health assistance allows ODA works to meet the current level of development in Sub-Saharan Africa ensuring a larger amount of funding for the sectors with the greatest benefits.

Foreign assistance needs to be specialized to address the most pressing recipient needs which can only be known through effective recipient feedback. The recipient population knows the most important considerations in their state and without this knowledge donors just throw money at what they perceive to be most pressing. Not only does feedback provide guidance as to the initial assistance but also can notify donors of effective programs that deserve increased funding and those ineffective programs that

should be terminated. Finally recipient feedback is vital to the evolution of the assistance as the state develops. ODA should currently address health concerns in Sub-Saharan Africa but once this stage has been achieved the feedback guides the direction into the next development stages.

Further Research

The results of the analysis provided some key interpretations and recommendations for foreign assistance to Sub-Saharan Africa but also raise some questions that need to be addressed. First current data from Sub-Saharan Africa is very limited and in the future as data becomes available important variables can be added to the equation to increase the robustness of the results. Ideally literacy rates, education levels, ethnolinguistic fractionalization, and a host of other socioeconomic indicators would be included in the analysis which would ensure all societal aspects are controlled. Along with adding controls, future research should expand the number of assistance programs analyzed to determine if there are any other forms of assistance contributing to democracy in Sub-Saharan Africa. Increasing the number of independent variables and controls permits further research to explore foreign assistance at a more granular level.

The final area of further research is to analyze the relationship between foreign assistance programs and their specific sectors, which is only accessible through additional data. Even though it was shown health assistance increased the voice and accountability in Sub-Saharan Africa it is not known what effect the assistance actually had on the health of the population. Also there is the possibility the results show no relationship between health assistance and the health of the population which raises even more questions as to what is causing the aid to increase democracy. A final part of the analysis

involves analyzing the relationship between the different sectors and democracy to determine which sectors contribute most to development. The combination of the analysis of assistance on each sector and each sector on democracy would provide the most exhaustive conclusions about the foreign assistance and democracy.

Concluding Remarks

Foreign assistance to Sub-Saharan Africa offers one of the most intriguing studies in international relations. The region is one of the most volatile in the world, with ever changing political institutions, constant civil strife, and rampant poverty. The region lags behind all other developing regions even though continuous attempts are made to democratize and instill progressive reforms. Western nations and development agencies have since the end of colonialism sought to provide the region with economic assistance with the intent to spur social and economic development with the end goal of a democratic region. The hope is that as the region's states become more democratic, they will provide additional opportunities for the international, regional, and national markets as well as increased stability.

Studies have long desired to determine the effects of foreign assistance in Sub-Saharan Africa in order to understand its effectiveness. Understanding the relationship between ODA and democracy and development is important to identify the areas of positive democratic and development growth due to aid and where it may actually diminish opportunities. Over time the research has progressed from basic analyses of ODA and economic growth to ODA and democracy and now needs to become more granular into the various forms of ODA and different societal and economic

characteristics. Researchers have been able to begin approaching the more detailed analyses as data from Sub-Saharan Africa becomes more available and reliable and as the availability of the data grows so too does the research.

This paper's focus is limited in order to capture specific aspects of foreign assistance and governance in Sub-Saharan Africa, in order to further understand methods of assistance. The results provide insights into where foreign assistance currently succeeds and fails, giving guidance for the specialization of future ODA. The paper makes the argument for assistance geared towards social aspects of society as the best method for promoting democracy and development. The results of the analysis back up the argument, making the case for drastic changes in foreign assistance allocation in order to maximize the benefits while limiting the costs. Not only do donors need to target specific social challenges but also scale back overall assistance as to not stretch themselves to the point where they cannot properly assess their actions. The analysis captures just one snapshot of foreign assistance and still fairly high level and only though additional measures of socioeconomic characteristics will the research be capable of truly understanding the granular relationships between ODA, democracy, and society.

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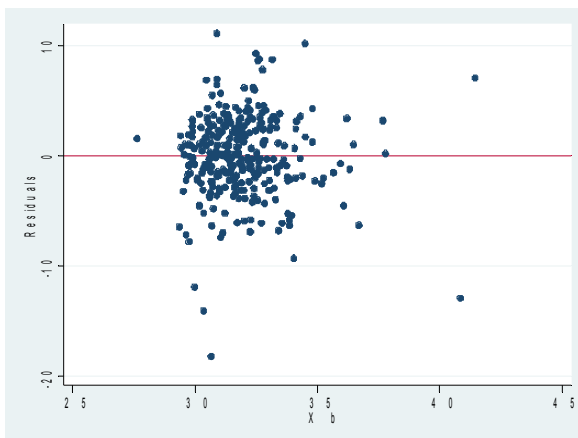
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Appendix

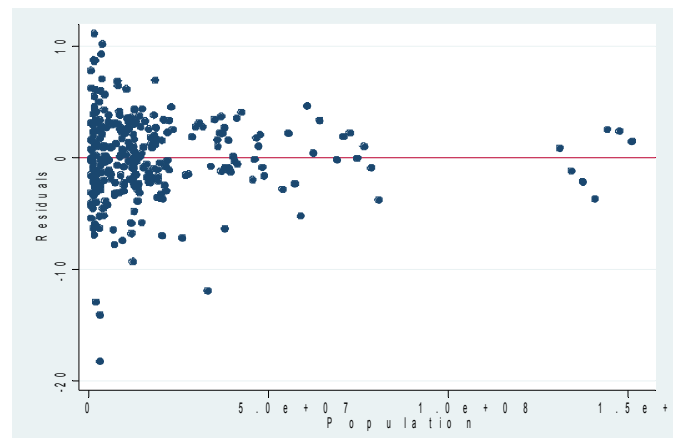
Model 3: Assumption Tests

Heteroskedasticity

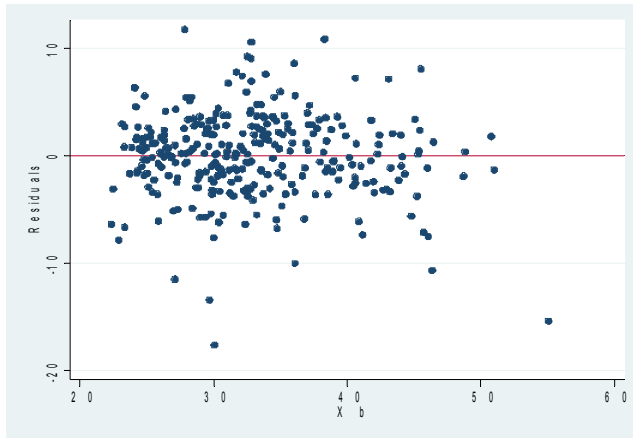
Original Heteroskedasticity



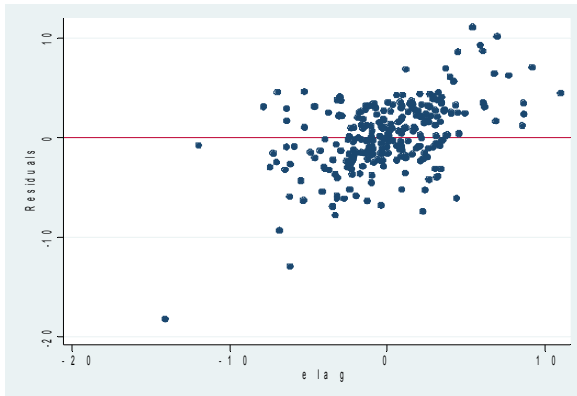
Residuals by Population Size



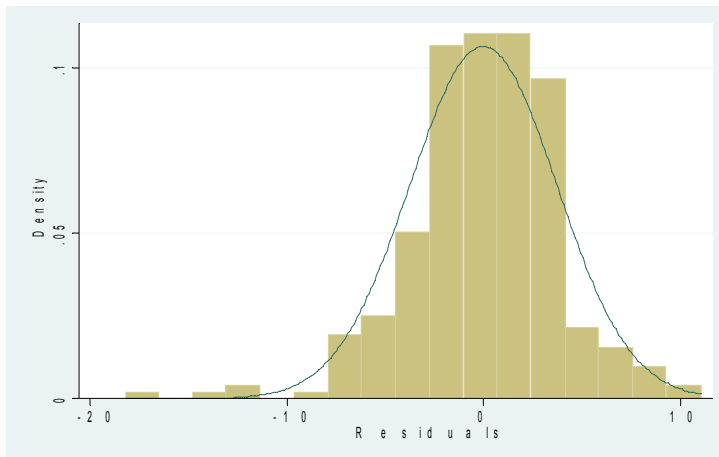
Corrected Heteroskedasticity after Weighting by Population



Autocorrelation



Non-Normal Errors

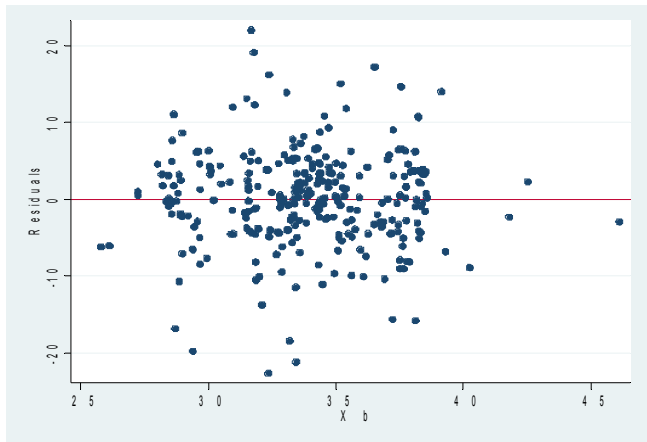


Multicollinearity

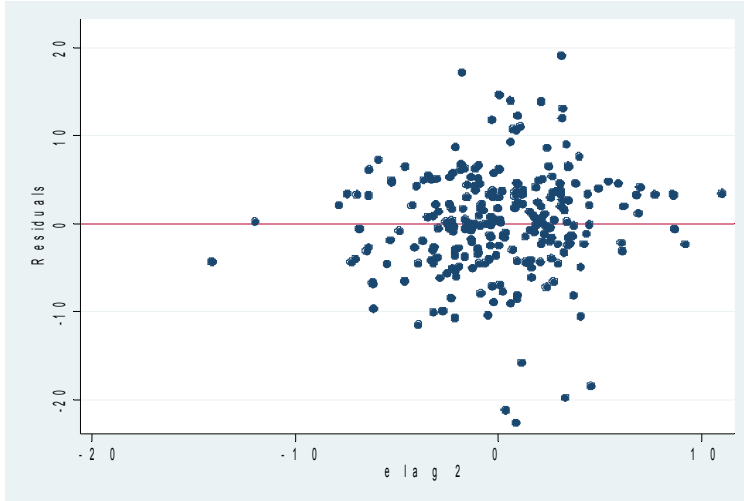
Table : Model 3 Multicollinearity		
Independent Variable	VIF	1/VIF
Social Infrastructure Aid	3.68	0.27
Employment to Population	3.06	0.33
Economic Infrastructure Aid	2.31	0.43
Urbanization X Population Density	1.44	0.69
GDP per Capita	1.41	0.71

Model 4 Assumption Tests

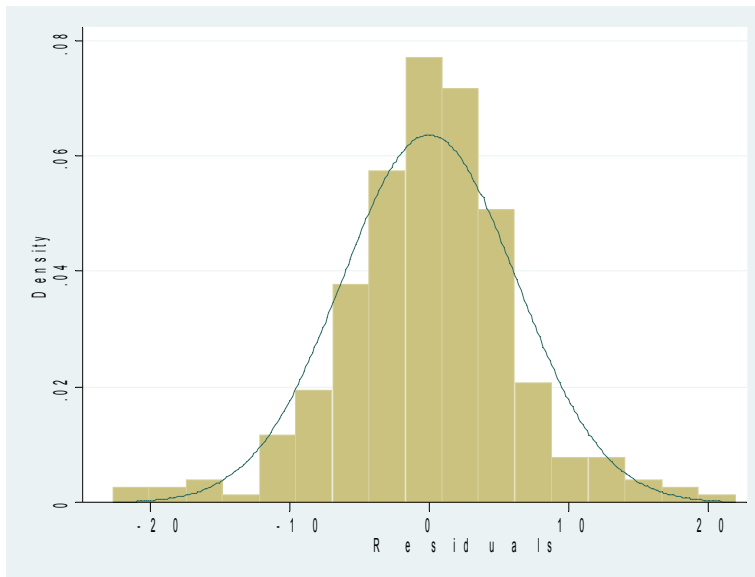
Heteroskedasticity



Autocorrelation



Non-Normal Errors



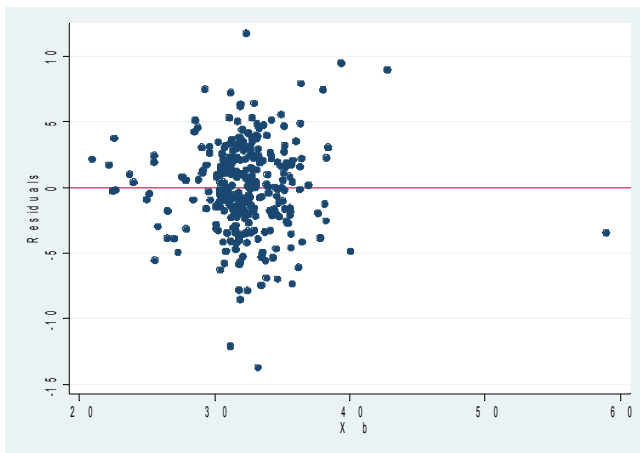
Multicollinearity

Table : Model 4 Multicollinearity		
Independent Variable	VIF	1/VIF
Social Infrastructure Aid	3.68	0.27
Employment to Population	3.09	0.32
Economic Infrastructure Aid	2.32	0.43
Urbanization X Population Density	1.44	0.69
GDP per Capita	1.41	0.71

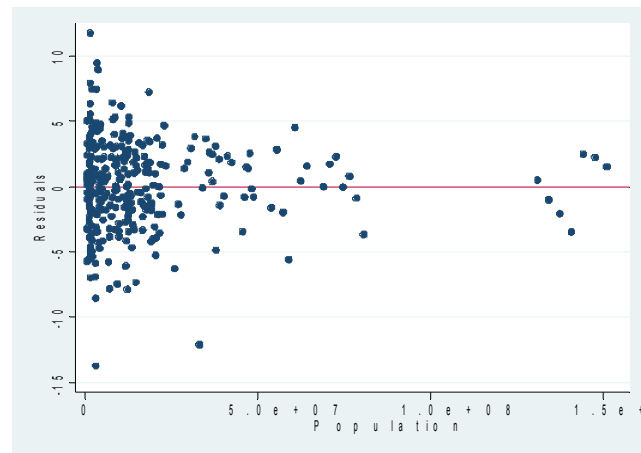
Model 6 Assumption Tests

Heteroskedasticity

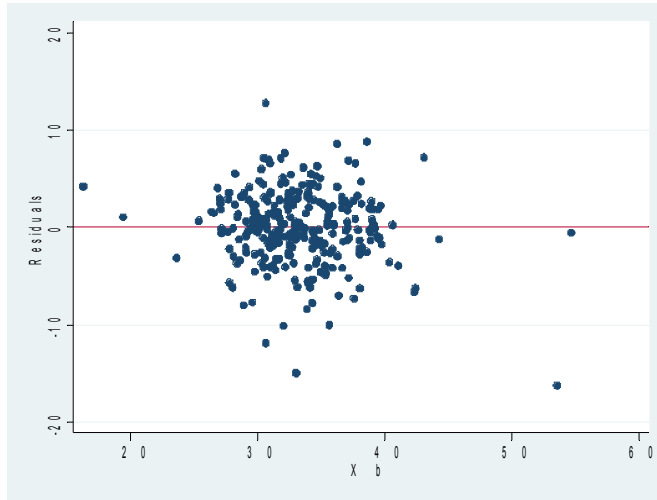
Original Heteroskedasticity



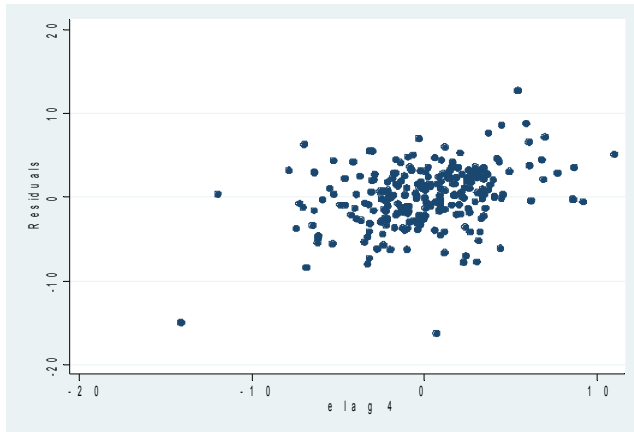
Residuals by Population Size



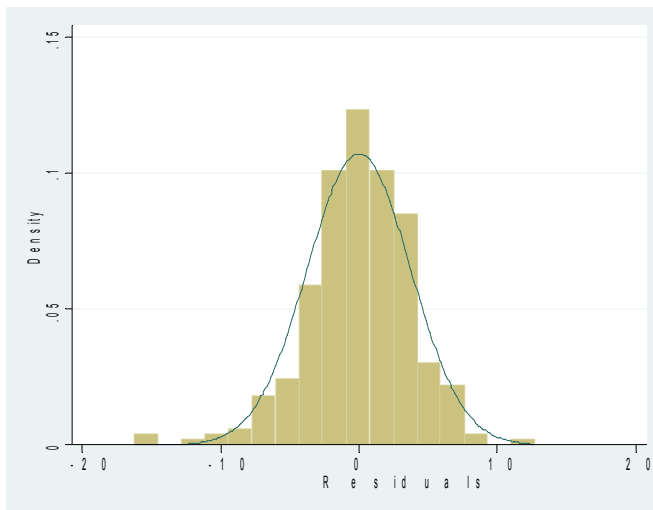
Corrected Heteroskedasticity



Autocorrelation



Non-Normal Errors



Multicollinearity

Independent Variable	VIF	1/VIF
Health Aid	4.5	0.14
Education Aid	4.8	0.2
Employment to Population Ratio	4.7	0.21
Economic Infrastructure Aid	4.6	0.22
Water and Sanitation Aid	4.4	0.23
Population Aid	1.96	0.51
Government Aid	1.85	0.54
Population Density X Urbanization	1.77	0.57
GDP per Capita	1.53	0.66

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