THREE ESSAYS ON FOREIGN AID AND ETHNIC LEADERSHIP IN AFRICA

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One major reason for the ineffectiveness of foreign aid in promoting development is recipient leaders and governments' deviation from donors' aid plans. In this research, I provide a theoretical explanation of leaders' deviation from aid agreements in Africa. I argue that only by staying in power can leaders pursue other political goals. African societies share the characteristic that the national leaders stay in power by providing private goods to a small group of key supporters. These key supporters are commonly found in Africa to be those who share the leaders' ethnicity. A leader with imminent threat to political survival would allocate all resources available to key supporters to consolidate political support, which would be reflected by higher level of ethnic favoritism in aid allocation in African countries. On the contrary, a leader with low risk of losing power could be motivated to invest in the long-term economic development of the country. With three empirical essays, I provide evidences consistent with this explanation. Essay One shows that subnational aid allocation commonly favor regions where a majority of the population share the leaders' ethnicity. I find in Essay Two that such ethnic favoritism in aid allocation is more significant when a leader has higher risk of losing political power. As leaders increase allocation of aid to co-ethnic population for political survival, people from disadvantaged ethnic groups experience higher level of infant mortalities. Essay Three shows that high level of aid volatility threatens recipient leaders' political survival and makes aid allocation more inefficient. My essays support my theoretical

explanation that leaders are rationally motivated to influence subnational aid allocations. While under certain domestic constraints they may strategically choose to deviate from aid plans, in other scenarios they may actually share donors' goals for long-term development. In conclusion, I call for donors to stabilize aid flow to increase aid effectiveness. I also suggest extra care to be taken by donors when determining whether some deviations from aid plans should be penalized.

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PREFACE

The completion of this dissertation is thanks in large part to the special people who have challenged, supported, and stuck with me along the way. The dissertation is about how to make the world a better place, and all these people have strengthened my faith in achieving that.

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1.0 INTRODUCTION

The debate about the effectiveness of foreign aid in achieving development in Africa has lasted for over a decade. The optimists believe that substantial increase in foreign aid would be sufficient to solve the world poverty problem (Sachs et al., 2004). The pessimists, with evidence mostly from Africa, argue that aid is not only ineffective but actually deteriorates the societies of countries that donors aim to help. Historical records suggest that foreign aid has been associated with economic dependency, widespread corruption, currency overvaluation and inherent economic laziness (William Easterly, 2014; Moyo, 2009). Yet through the years the practitioners of foreign aid programs have neither substantially increased aid to the level suggested by the optimists nor withdrawn aid completely for unsatisfactory outcomes. Donors seem to have followed a vast literature finding conditional effects linking aid and economic development. By comparing the relatively more successful cases with the failed ones, these researches look at specific factors that could make aid more effective.

In other words, countries in need of foreign assistance often have inherent problems that have long trapped them in economic poverty. It should not be surprising that these problems were also frequently found to make aid ineffective. The logic follows that to make aid effective in promoting development and alleviating poverty, correcting the problems is almost as equally important as delivering aid. For instance, if aid to countries with low inflation and low budget deficits turns out to be more effective, donors should support applying these specific good policies to those countries with less satisfying development records (Burnside & Dollar, 2000). Recipients with less corruption and higher capacity in governance also benefit more from development aid. Additionally, based on various economic analyses, donors would hope to target the allocation of aid resources to maximize the effect on development. It is generally believed that these policies and allocation practices could and should be adopted by all aid recipient countries.

Both economic theories and experiences from aid projects have extensively shown the benefits and great importance of these good policies and practices on increasing the effectiveness of aid (Booth, 2011; Burnside & Dollar, 2000). Donors have made a variety of efforts to incentivize recipient governments to follow such suggestions, including rewarding compliance, penalizing violations, and, in some cases, directly participating in aid projects or circumventing recipient governments as much as possible. However, in the decades since donors tried to enforce the good policies and practices with aid conditionality, a large number of recipient countries still lack both economic development and good policies. Despite donors' strong belief in improving aid effectiveness through enforcing good policies and practices, recipient governments—and especially the political leaders—are constantly trying to steer aid in other directions. Both donors and researchers have started questioning the soundness of these guidelines. Are these suggested policies and practices inherently incompatible with some recipient countries? Or if these suggestions from donors are indeed beneficial to all recipient countries, why do the political leaders in recipient countries resist them? And lastly, what can donors do to improve recipients' acceptance of these suggestions?

To answer these questions, perhaps the best point to start is to understand what the leaders in aid recipient countries want and what they would do to achieve their goals. Considering leaders in aid recipient countries as rational actors, I establish in this research their preferences and strategies regarding foreign aid. The policies and practices of recipient governments regarding foreign aid are strategic choices made by their leaders to achieve their goals. Conditional on specific political and social constraints, leaders may or may not opt to comply with donors' suggested policies and practices. Since these conditional constraints may also change over time, it should not be surprising for some leaders to agree with donors' guidelines but then to negate them. In some cases, these negations can be short-term response to certain constraints and leaders may return to collaboration with donors. If leaders' compliance is crucial to aid effectiveness, donors should focus on providing incentives that are compatible with leaders' preferences. To prevent leaders from negating compliance, donors may also try to consider leaders' incentives instead of solely increasing penalties against negation.

I find that donors' suggested policies and practices are not incorrect solutions to the problems in recipient countries, but they are commonly misaligned. Both donors and recipients would prefer economic development in the long term, but short-term constraints from both sides can also result in practices that are inconsistent with this goal. While donors prescribe policies and practices trying to address the problem of lack of economic development, leaders in recipient countries can be constrained or distracted by more important issues such as their political survival, hence forgoing the good policies. Specifically, I find that leaders in African countries rely heavily on allocating aid to co-ethnic supporters in order to stay in power, causing distortive favoritism in the subnational allocation of aid. While these distortions may devastate the effectiveness of aid in promoting development, the extent of such distortion depends on the political risk leaders have to respond to. A leader less worried about political survival may become more interested in economic development and more likely to comply with donors' policies and aid allocation practices. While aid conditions and penalties for negations do provide incentives for leaders to comply with aid commitment, there is risk of further distortion in aid allocation from donors, if the penalties force them to forgo long-term goals and focus on short-term survival.

1.1 THE MISALIGNED PROBLEMS AND SOLUTIONS

By contrasting cases where aid has boosted development with those unsuccessful ones, donors find some political and economic characteristics to be critical for aid effectiveness. Strategies adopted to address these problems in recipient countries include structural adjustments to enforce better economic policies, aid conditionality to encourage social political reforms, increased aid selectivity to reward recipients with better policies, and project aid trying to constrain corrupted governments' influence in aid allocation. One common assumption supporting these strategies is that recipient countries can and should be brought in line with donors' suggestions with rewards or penalties. Recipient governments, conversely, should unilaterally accept the suggested policies provided by donors (Temple, 2010). A major problem with this approach is that recipient governments are not always committed. Even if they do comply with donors' requirements to receive aid, the following policies can be reversed, or government expenditures can be adjusted to minimize the impacts of aid (Ohler, Nunnenkamp, & Dreher, 2012; White & Morrissey, 1997b). The 2005 Paris Declaration on Aid Effectiveness, reaffirmed in Busan in 2011, grew out of a consensus on the importance of "country ownership" for the success of development efforts. In its simplest form, ownership is identified as a key determinant of the degree of commitment to a chosen policy direction (Booth, 2012). The new strategy improved on the previous approach by focusing more on the incentive compatibility between aid donors and recipients, but the ultimate solution is still the "good policies" that are considered important to development. With updated packaging and implementation, donors' prescription is actually the same combination of aid resources and the "good policies" to foster economic development. Recipient governments may choose a certain policy direction that is also preferred by donors, but it still is difficult to evaluate how much a recipient is committed.

Some of the conditional factors causing aid ineffectiveness are found to be very region specific. A few earlier studies on foreign aid and economic growth find the dummy variable for Africa to be highly significant (Calderisi, 2006; Dollar & Easterly, 1999). Some argue that the historical colonial rule and the slave trade have left African countries with characteristics that are considered catalysts for their underdevelopment (Nunn, 2007). Others focus on specific characteristics that have impeded African development for decades, including the level of corruption, the extent of ethnic fragmentation, the level of political violence, and the quality of government services (Englebert, 2000; N. van de Walle, 2002a, p. II). On the surface these factors seem to be deep-rooted in African societies, making the records of aid effectiveness for African countries look particularly dismal, and invited constant efforts from donors trying to address these problems. Compared with other regions, African countries have seen the least progress in development, and by many other development measurements they have actually fared worse through the past 20 years. For the widely anticipated Millennium Development Goals (MDGs) for Africa, some estimated that 42 out 47 African countries miss on half of the targets (Clemens, Kenny, & Moss, 2007; Sahn & Stifel, 2003). Without much reflection on the failure to meet the MDGs, leaders of the world now eye 2030 for a new Agenda for Sustainable Development. Meanwhile in 2012, 13 of the 20 most aid- dependent economies around the world are in Africa, on average receiving aid at about 18 percent of their GNPs (OECD, 2015).

Being disappointed that good policy and allocation practices have not been followed by recipient countries, donors and some researchers started questioning whether these prescriptions have been the right solutions. There appears to be a fundamental misalignment between donors' solutions to underdevelopment and the inherent characteristics that made aid in Africa ineffective. The combination of money, advice, and conditions is based on the experience of successful cases but largely ignores the inherent needs of recipients (William Easterly, 2007). Recipient governments may, as well, want economic development and find both aid and donors' policy prescription attractive. However, embracing aid and the good policies does not completely eliminate the problems they have experienced with decades of underdevelopment. Some of these problems are rooted in hundreds of years of history, and the established social structures can be very resistant to changes. In various occasions, recipient countries working with donors may find them in troubles that undermine the previous efforts in searching for development. For instance, none of the aid policies is an effective cure for endured violent conflicts; lack of collective action ability due to ethnic fragmentation is not going to change because of foreign aid projects. We have seen African governments being strategic in negotiating aid policies to prioritize their political needs. During the same negotiation process, some funnel aid resources to leaders' hometowns when negotiating aid with donors (Lindsey Whitfield, 2009). Aid conditionality is considered unnecessary when governments are willing to undertake the reforms and may even be damaging when they conflict with other interests of the recipients (Svensson, 2003; White & Morrissey, 1997a). Increased selectivity and scrutiny are not particularly effective in constraining recipient governments to repurpose aid resources for their other political priorities through aid fungibility (Feyzioglu, Swaroop, & Zhu, 1998; D. van de Walle & Mu, 2007).

One potential explanation for the ineffectiveness of aid and good policies is misaligned focuses between donors and recipient governments. A recipient leader may "own" a universal education project and commit to providing basic education for all, but such commitment became much less important compared to winning an election centered around ethnic cleavages. Such weak ownership does not necessarily produce better development outcome when the owners (essentially the leaders in recipient countries) do not really prioritize these development goals. As Wright and Winters pointed out, "political leaders (and even nongovernmental organizations) who receive aid are located in different types of institutional settings that place different sets of constraints on their behavior. Understanding how aid is likely to be used in these different types of institutional settings will offer insight into whether and how aid promotes growth and development" (2010, p. 62). Before trying to negotiate the conditions for recipient leaders to own the aid projects and policies, it is crucial for donors to understand the recipients' inherent preferences and interests.

1.2 A LEADERSHIP-CENTRIC EXPLANATION OF FOREIGN AID TO AFRICA

Nicolas van de Walle (2002a) carefully analyzed the partial implementation of aid-related policy reforms between 1979 and 1999 in African countries to review the decision makers' preferences and biases. African leaders seemed to only partially embrace donors' prescribed policies to protect the interests of a narrow stratum of elites and have arguably been willing to inflict austerity on the population. Following decolonization, "state elites quickly came to rely on patronage and the distribution of economic rents in order to ensure political stability. African political systems became neopatrimonial, combining an external façade of modern rational-legal administration with an internal patrimonial logic of dyadic exchange, prebendalism, and the private appropriation of public resources by state elites" (2002a, p. 16). Not only have donors' policy prescriptions been ineffective in altering the development factors, these political characteristics rooted in historical colonial rule and slave trade have persisted through the democratization process in many African countries. The movement to multiparty politics has not changed neopatrimonial politics because of the relatively quick emergence of a dominant party system and the continued executive dominance of the political system (2002a, pp. 262–265).

While donors see the combination of foreign aid and good policies as the solution to Africa's underdevelopment, the meaning to African governments and leaders can be fundamentally different. In a neopatrimonial society, a social hierarchy is established where patrons use state resources to secure the loyalty of clients in the general population. Political office of power is used for personal uses and gains, as opposed to a strict division of the private and public spheres (Erdmann & Engel, 2006). Where donors aim to use aid and policies to promote economic development and alleviate poverty, the actual use of aid and reception of the donor-prescribed policies depends on how they align with the interests of neopatrimonialist leaders. While leaders are not inherently against development, they are more likely to work with donors when their interests are protected, and they choose to forgo economic development when their core interests call for a change of strategy.

The key to understand the puzzle of aid ineffectiveness in Africa is to see aid from the perspective of the neopatrimonialist African leaders. I accept and build on the commonly accepted assumption that political leaders are, firstly, office seekers and prefer to stay in power. The political survival literature theorizes leaders' strategy to stay in office amid political competition. Depending on the institutional characteristics, a leader may have a large winning coalition and survive by providing public goods, or a small winning coalition and stay in power by providing private goods to gain support from a small group of key supporters. Leaders with a small winning coalition are more likely to make policy concessions to donors. Additionally, because leaders always face competition from potential challengers, they consider political survival to be leaders' priority at all times (de Mesquita & Smith, 2009; Licht, 2010). Social cleavages in neopatrimonial societies become major obstacles for establishing broad political support in the population and rewards direct patronage over the provision of public goods. Neopatrimonialist leaders in Africa hence are found to have small winning coalitions and should prioritize providing resources to their core supporters. Because of historical social conflicts and lack of other established social networks, ethnic identity becomes the most important bond to build political loyalty between political leaders and their supporters. Arguably the most important factor in African politics, ethnic favoritism becomes almost an "axiom" dictating that the leaders provide private goods to co-ethnic supporters in exchange for political support (De Luca, Hodler, Raschky, & Valsecchi, 2016).

The theory of political survival is essentially about the allocation of financial resources among a country's citizens. It builds on the fact that all leaders have to stay in power to achieve any other goals they might have, and the political arena is always competitive. Challengers to a country's highest political office can potentially congregate their own winning coalition by promising the supporters a resource allocation strategy that makes them better off than under the incumbent leader's rule. Hence, challengers and the incumbent leader are promising the future allocation of the same pool of resources, and an optimal allocation strategy is available to both of them. Under this theoretical framework, once the incumbent leader choose such an optimal strategy, political survival is guaranteed since no challengers can do better (De Mesquita & Smith, 2010). However, there are major flaws in this theory. First, it confuses priority goal as the only goal for leaders. All political leaders may prefer political survival, but they also aspire to achieve other goals with their political power. Resource allocation can achieve political survival for leaders, but leaders may also change their allocation strategies for other goals such as using resources to boost the economy for their political reputation and legacy. Second, the threat from challengers actually varies. In all political arenas, some fights are between almost equally powerful parties and become highly competitive, while in others the leaders possess disproportional advantage. A less threatening challenger may not require the incumbent leader to choose the optimal strategy to win the fight.

Departing from the political survival theory, I argue that in addition to political survival, leaders pursue other goals that could be consistent with economic development. Although political survival is the precondition for all other goals, the risk of losing office varies over time for every leader. It is unreasonable to assume a leader who has ruled stably over a country for over 30 years, such as Museveni of Uganda, has always been using all resources just to survive politically. Specifically, for ethnic leaders with small "winning coalitions" facing imminent political threat, all resources should be allocated to the core supporters to consolidate political support. However, leaders with firm control over political power would be able to divert some resources for other goals, such investing in the economy for additional revenue in the long term. Following this argument, if the legacy of neopatrimonialism is to distort aid allocation with mechanisms such as ethnic favoritism and damaging aid effectiveness, the distortion would vary based on leaders' risk of losing office. The extent of ethnic favoritism in providing private goods to co-ethnic supporters should correlate positively with the risk for an incumbent leader to lose political power. Such ethnic favoritism should be particularly salient when there is imminent political threat, such as open election, violent conflicts, or economic shocks.

The risk of losing political power brings foreign aid to the minds of foreign leaders. On one hand, foreign aid has long been found to consolidate both authoritarian and democratic regimes (Morrison, 2009). Citizens in all countries tend to view incumbent leaders more positively when they receive additional resources such as foreign aid, despite the fact that the leaders may not have actively contributed to bringing the resources into the country. While additional aid can consolidate political support for the leaders, negative aid shocks then become potential political threats. Foreign aid flow has been found to be more volatile than almost all other government revenues. For countries with a long-term and high level of aid dependency, a substantial decrease in aid would cause citizens economic welfare loss and inflict their political dissatisfaction toward incumbent ethnic leaders. Foreign aid is, hence, a potential source of political risk.

On the other hand, foreign aid has been a crucial pile of resources that leaders can provide to co-ethnic supporters as private goods to fortify political support. Because a large majority of foreign aid is allocated through government using a higher level of fungibility compared with other resources, ethnic leaders have strong incentives and are capable of strategically biasing the allocation of aid when more political support is needed. One direct use of aid to reward core supporters is to target aid at locations where leaders' co-ethnic supporters reside. A few researchers have found that in specific projects aid allocations strongly favor the leaders' co-ethnic base (Briggs, 2012; Axel Dreher et al., 2014). Incumbent leaders can also hire more co-ethnic citizens for aid-related positions. As a result of this ethnic favoritism, leaders' co-ethnic supporters should enjoy a higher level of economic development, which can be reflected in indicators such as lower infant mortality rate.

This explanation places foreign aid on both ends of leaders' political survival continuum. While high aid volatility can destabilize the incumbent leaders' political rule, the increased ethnic favoritism as a survival strategy further distorts aid allocation. It follows that when political risk is lower, African leaders are more likely to collaborate with donors to allocate aid for development and make progressive policy changes. Increased political risk forces the ethnic leaders to prioritize political survival by distorting aid allocation to favor co-ethnic supporters and forgo development policies that can only benefit them in the long term. To reduce bias and distortion in aid allocation, and promote progressive policy changes, donors should first collaborate to reduce aid volatility. Aid can be made more effective in promoting development if additional aid can be provided when there is increased political threat to incumbent leaders.

1.3 THREE ESSAYS ON FOREIGN AID AND ETHNIC LEADERSHIP IN AFRICA

In Chapter 2 through Chapter 4 I present three essays providing empirical evidence supporting my explanation. The common goal of these essays is to understand how political leaders in African aid recipient countries rationally and strategically use aid to achieve their political goals, hence not always complying with the donors' preferred policies and practices regarding foreign aid. To make aid more effective and less biased, I try to first understand the common bias in African countries regarding aid, what factors condition the bias, and what can be done to reduce the bias. By clarifying these mechanisms about bias in African aid recipient countries, donors may finally be able to work out strategies that are preferred by both donors and recipient leaders. Donors should not only incentivize recipient governments to accept the "good" policies and strategies to start the aid projects but also try to prevent recipients from negating by helping leaders focus on the agreed-on approach to aid.

Chapter 2 focuses on ethnic favoritism, which is the most observed bias in resource allocation in African aid recipient countries. While donors commonly target project aid at locations where it would most boost development, leaders could and would affect the design and the actual aid allocation for their interests. In this essay, I engage the ethnic favoritism literature and test the universal rule of ethnic favoritism in the allocation of foreign aid resources. Ethnic favoritism has long been considered the most important factor in distributive politics in Africa. With very few exceptions, researchers find people who share a national leaders' ethnicity receive more economic benefit than other ethnic groups. Several case studies focusing on specific aid projects suggest that foreign aid allocation also follows this pattern. I go beyond the scope of specific projects and test for ethnic favoritism in all aid received by Kenya, Malawi, Nigeria, and Uganda. Cross-country statistical analysis confirms the common pattern of ethnic favoritism in these countries. Specifically, in Kenya, Malawi, and Nigeria—regions where most incumbent leaders' co-ethnic supporters reside—receive substantially higher per capita aid than other regions. Leadership changes in these countries provide great opportunities to observe how privileged ethnic groups change with national leaders. In all three countries, once a new leader from a different ethnic group took political power, the advantage of previous leaders' ethnic groups almost immediately disappeared. However, I did not find the same pattern of ethnic favoritism in allocating aid for Uganda. While Uganda's Museveni has been in office for over 30 years, his co-ethnic regions have always received aid allocation at a much lower rate than the national average. The special case of Uganda contradicts the universal rule of ethnic favoritism and suggests a more complex relationship between national leaders and their co-ethnic kinsmen.

Chapter 3 explores the relationship between leaders' political survival, time horizon, and ethnic favoritism. While in Chapter 2 I find ethnic favoritism in Africa to be common but not absolute, Chapter 3 explores one factor conditioning leaders' strategy: the risk of losing political power. Existing literature has established that there are strategies that leaders can deploy to best consolidate political power, but very few examine the impact of such strategies on different ethnic groups. Ethnic favoritism has been a practical strategy for leaders to build political loyalty in Africa. Leaders' gain political support by allocating resources, including foreign aid, to co-ethnic supporters. At certain moments, such as general elections and economic shocks, when leaders face higher political risk and have to focus on imminent threats to their political survival. Increased political risk shortens the leaders' time horizon. As a result, their policy strategy is more biased towards co-ethnic supporters and becomes less likely to support long-term development. The characteristic of ethnic politics in Africa also suggests that increasing resource allocation to other ethnic groups will not bring additional political support to the leaders. I test this hypothesis by constructing a dataset on the infant mortality rate among 660 ethnic groups in 14 African countries from individual-level survey data. There appears to be a quadratic effect between a leader's political risk and the extent of favoritism. Infant mortality rates for incumbent leaders' ethnic groups drop dramatically as leaders face a higher risk of losing office, which can only be achieved by allocating enormous amounts of resources to this specific ethnic group. The result also confirms that when leaders' risk of losing office is low, their co-ethnic groups seem to have no economic advantage over other citizens. This evidence suggests that a leader's ethnic bias can be mediated by stabilizing their political power.

Chapter 4 continues investigating the relationship between foreign aid and leaders' need and strategy for political survival. This chapter identifies aid volatility as a source of political risk and shows that higher aid volatility increases ethnic favoritism by threatening the ethnic leaders' political survival. Existing research on aid and regime stability mostly consider aid as additional resources provided to the recipient country. As a result, their evidence suggests that aid consolidates all kinds of regimes by enriching the leaders, and aid resources can be used to smooth out the impact of negative shocks in other revenues. However, this view of aid ignores the fact that most aid recipient countries have been dependent on aid for decades. Aid has been taken into account in government spending and citizens' economic planning. I argue that once aid has been "internalized" and fully integrated into the recipient country's economy, it should no longer be considered additional revenue. Like a financial crisis will deteriorate citizen's quality of life, aid shocks will also make citizens fare worse economically and prompt them to hold grudges against incumbent leaders. In this regard, internalized aid becomes a source of political economic risk. Because of the high volatility of aid, it can become the most severe threat to leaders' political survival in some cases (Steinwand, 2015). I built a logistic regression model based on Wright's (2008) model of a leader's political risk. The statistical results suggest that decreases in aid would significantly threaten a leader's political survival. Along with my findings in Chapter 3, that higher political risk leads to more ethnic favoritism, I hypothesize that a decrease in aid will also increase the bias in aid allocation, benefiting leaders' co-ethnic supporters. With subnational aid allocation data, I find that as the total amount of aid decreases, the higher share of aid was allocated towards leaders' co-ethnic regions. The combined result of aid decrease and ethnic favoritism in aid allocation leaves the leaders' co-ethnic regions protected from economic loss while the other regions will suffer both from the total aid loss and the higher extent of ethnic disadvantage.

I conclude with Chapter 5 revaluating the current foreign aid framework focusing on interests and strategies of recipient countries. Donors and researchers have concluded that financial assistance itself is not sufficient in pushing up the least developed countries out of poverty. Along with resources, foreign aid projects are constantly found to be combined with economic policy requirements or social political agendas. While my empirical evidences from previous chapters are mostly about aid allocation and leaders' political survival, they exemplify how leaders are constrained by the inherent social political structure to adopt various strategies to work around donors' aid plans. I argue that recipient leaders play crucial roles in determining aid effectiveness. As rational actors, their interests can align with donors in promoting development, although in some occasions they are constrained by other factors and have to break aid agreement to pursue other political goals, such as consolidating political support to stay in office. Theoretically donors can either penalize noncompliance actions of leaders or rewarding cooperation to motivate leaders to work together with donors on improving aid effectiveness. My research has shown that leaders distort aid allocation to keep political survival, and penalties from donors by suspending aid can only force leaders to do worse with aid allocation, making aid much more ineffective. On the other hand, donors can gain leaders' collaboration by supporting leaders by easing up their survival risk, including reducing the shocks caused by aid volatility. Such paradox requires donors to use extra care when implement the penalties against donors' negations, as punishing the leaders may cause aid to be less effective. My research suggests that to make aid more effective, aid programs design needs to be compatible with leaders' interests. Enforcing aid conditions and applying penalties need to be implemented with extra care. Under certain circumstances, collaborating with leaders instead of penalizing them may lead to less deviation in implementing the aid plans.

2.0 ETHNIC FAVORITISM IN FOREIGN AID ALLOCATION

While our knowledge about which donor would give aid to which specific recipient country have developed considerably, we still know very little about how aid is allocated subrationally. Various motivations have been investigated to understand why donors give aid to a country; such purposes include political and economic needs of donors and also altruist support for development in recipient countries (Alberto Alesina & Dollar, 2000; de Mesquita et al., 2009). For donors using foreign aid as financial resources in exchange for political concessions, such as to buy votes at the United Nations (UN) (Kuziemko & Werker, 2006), political leaders of recipient countries are targeted, and aid allocation within the recipient countries is not among their major concerns.

However, foreign financial assistance does not necessarily positively impact the economic development of recipient countries. On the contrary, evidence suggests that in addition to the potential developmental outcome, foreign aid can deepen various problems in recipient countries (Boone, 1996; Svensson, 2000). Rajan and Subramanian (2005) found that aid inflows have systematic adverse effects on a country's competitiveness, as reflected in a decline in the share of labor-intensive and tradable industries in the manufacturing sector. Their evidence suggests that these adverse effects are at least partly due to the involvement of recipient government and the countries' elites, as private transfers (such as remittances) do not seem to cause similar problems. The effectiveness of foreign aid in reducing poverty, promoting education, or countering terrorism depends on appropriate project design and implementation—the key is who actually receives aid. Individuals within the aid recipient countries have their own interests and preferences for the use of their financial resources. Aid embezzled by government officials is not likely to benefit to the whole economy; rich elites may use additional money to buy more foreign luxury goods and reduce domestic purchases.

Hence, it is crucial to evaluate the patterns of aid allocation within recipient countries and what actually determines these patterns. On one side, the donors may plan an aid project to target specific recipient groups in collaboration with recipient governments. We can expect a development-oriented donor to plan aid allocation to best improve the economic performance of the recipient countries or reach the poor that need financial support the most (Kenny, 2008), such as aid for poverty relief shall target regions with the highest proportion of people under the poverty line. On the other hand, donors from outside of the country are only part of the equation in determining aid allocation. Donors depend on a recipient government heavily for both the design and execution of aid projects, giving political leaders in these countries access and potentially enormous influence over aid allocation. Recipient governments hence have both the intention and ability to influence aid allocation.

Despite the importance of subnational aid allocation to development outcome, I am not aware of any empirical research that has comprehensively evaluated whether donor targeting has effectively delivered aid to the neediest in recipient countries. A few researchers, however, have shown cases and projects where recipient leaders extensively interfere with aid allocation to advance their own political goals. While these cases suggest biases in subnational aid allocation, especially ethnic favoritism in African countries, they cannot rule out other factors that may lead to biases in the allocation in specific aid projects. This paper contributes to the literature by statistically showing the ethnic bias in multiple African countries with geo-referenced aid data that covers the absolute majority of all aid projects in these countries. By tracking aid allocation to different ethnic regions, I show that in three African countries leaders have systematically funneled aid to co-ethnic supporters. More importantly, in all three cases when new leaders from a different ethnic group came into office, the previously advantaged ethnic groups lost their privileges. This discontinuity in the pattern of aid allocation strongly confirms the proliferate ethnic favoritism in aid allocation influenced by the nations' top political leaders. At the end of the paper, I also point out an African country (Uganda) that has almost completely defied this pattern. This research provides significant evidence showing African leaders do influence aid to advance their own political agendas despite donor scrutiny. However, such political influence does not constitute a universal pattern of ethnic favoritism, as some leaders may pursue other political strategies in allocating aid.

2.1 UNDERSTANDING FOREIGN AID ALLOCATION FROM THE RECIPIENT SIDE

Considering the weak records of economic development in most aid recipient countries, and the fact that most of the aid-dependent countries have corrupted or weak government, donors do not always trust recipient government to distribute aid independently. Trying to maintain control of aid allocation and increase its effectiveness, a large share of aid is now delivered through specific projects targeting pre-designated regions. It was hoped that the project-based approach to aid would reduce corruption and deliver a larger share of aid to those who need it but are too politically weak to receive allocation. Donors' effort in controlling aid allocation certainly can more or less constrain recipient governments' influence over aid allocation. Through project design and monitoring, it is hoped that project aid is less likely to be biased by a political leader's political or personal interests. For this reason, Collier (2006) referred to project aid as “scrutinized revenue,” different from “unscrutinized revenues” such as oil.

However, how much does donors’ scrutiny matters still depends largely on recipient governments and is subject to the strategies of recipient leaders. Due to the high human cost and recipient countries’ unwillingness to accept foreign interference, the majority of foreign aid is distributed with the deep participation of recipient government. Dietrich (2013) find that even with donors intentionally trying to bypass some corrupted or ineffective government, over 70 percent of aid from OECD countries are still delivered through recipient governments. Meanwhile, those projects bypassing recipient government still operate under the influence of local political power. Series of research have investigated cases where leaders influenced aid allocation despite donor scrutiny and for personal benefit.

Contrary to focusing on donors’ intentions and project-targeting practices, I consider the recipient leaders sitting on the other side of the table to be as least as important in determining aid allocation and its effectiveness. Foreign aid is only accepted if recipient leaders expect to benefit from it. A recipient leader may share some of the donors’ aspirations in poverty reduction or education for all, but he must also care about his political survival, his own and his supporters’ economic well-being. Some would argue further that the leader would care about development only for political survival and the benefit of political supporters. With a recipient leader’s political power, I expect him to influence subnational aid allocation with his political power during all stages of a foreign aid project. From negotiating terms in project design to embezzling aid resources in financial management and affecting who gets employed or subsidizing certain individuals in aid allocation, leaders have deep and direct control over aid allocation that donors can hardly compete with.

To evaluate recipient leader's influence in aid allocation despite donor scrutiny, I analyze subnational aid allocation in 4 African countries where geo-referenced aid-allocation data has been made available. Assuming all aid projects are more or less scrutinized, I find that leaders still manage to divert aid resources based on political preference and interest. Specifically, I focus on a leader's bias in allocating aid to people sharing his ethnicity because of the importance of ethnicity in African politics. In each case, I first identify if a subnational region is the national leader (president)'s ethnic base and test if having more population sharing the leader's ethnicity increases the amount of aid received by this region. I find strong support that a national leader's ethnic base constantly receives more aid than other regions in three countries, but not Uganda. With each leader favoring his own ethnic group, regime changes also set up new regions to become winners in aid allocation.

2.1.1 Leader and Aid Fungibility

While being scrutinized by donors, a recipient leader may still exert his influence on aid allocation. "Fungibility occurs when aid is not used for the purpose that is intended by donors" (McGillivray & Morrissey, 2001). In practice, aid fungibility can be very complex due to the widespread coverage of aid and the deep integration of aid into the recipient governments' expenditures. Specifically, targeted aid becomes fungible if it is transformed into a pure revenue- or income-augmenting resource that can be spent in any manner a recipient government chooses (Khilji & Zampelli, 1994). Donors may target aid to a specific sector or region at a specific time; fungibility can happen where the actual aid allocation differs from the original plan. Such modification of aid allocation can be achieved across sectors or regions. Pack & Pack (1993) provided a theoretical perspective for understanding fungibility of foreign aid. Specifically, they stated that, instead of conforming to donors' intentions, recipient governments allocate aid based on their own preferences. Sectoral fungibility would happen if resources from health aid was used on education, or if the leader was utilizing the national health budget on other sectors, undermining the original purpose of the health aid. Such modification happening across regions causes spatial fungibility. Because of the nature of government expenditure and the heavy dependency of African countries on foreign aid, essentially all government financial maneuvers can be involved to make adjustments in reaction to aid. The foreign aid fungibility we are discussing is quite different from the common meaning of fungibility, as adjustments can be made far beyond aid funding itself and through various mechanisms.

Until now, empirical studies have intended to answer the questions of whether and why foreign aid is fungible; their results have provided a better understanding of foreign aid and related issues. Although these empirical studies were based on different sample data using different models, most of the studies have come to a similar conclusion: during the past decades foreign aid is fungible at different levels (Feyzioglu et al., 1998; Martínez Álvarez, Borghi, Acharya, & Vassall, 2016; Morrissey, 2015). In addition, it should be noted that conclusions made by these studies are dependent on various factors, such as characteristics of the aid (e.g., whether it is project-based and program-based), sectors that the aid intends to support (e.g. whether it targets education or health), and characteristics of aid recipient countries (e.g. the level of GDP and expenditure pattern). Among all these empirical studies, some utilized data across different countries, sectors and time. For example, by using a sample of 14 developing countries from 1971–1990, Feyzioglu et al. (1998) found out that foreign aid was not fungible at the aggregate level, while increasing the number of countries made aid fungible. When analyzed for different sectors, results showed that aid was fungible in 3 out of 5 sectors based on the examination of the whole sample. Significantly, aid fungibility was found to be different across different intended sectors. Interestingly, results from the study showed that recipient countries receiving earmarked aid for the sectors, such as agriculture, education and energy, reduced their own investment (i.e. resources and money) going to the sectors and used the funds for other purposes. However, aid for the development of transportation and communication sectors were all spent in accordance with donors' intentions.

Some others focused on one country or region across different time. Wagstaff (2011) explored the fungibility of foreign aid for Vietnam. Results of the study showed that aid was not apparently fungible among sectors in Vietnam, but it was fungible across Vietnam's provinces in the health sector. Similarly, a recent study from Martínez Álvarez et al. (2016) aimed to investigate whether development assistance for health (DAH) funds in Tanzania are fungible by using a sample of 28140 projects undertaken between 2000 and 2010. Results of the study showed evidence of substitution of government funds at the health sector and sub-sectors through the allocation process of resource and macroeconomic levels. These cases are examples of a variety of approaches that recipient governments can adopt to funnel aid to other projects they care about. These manipulations can make aid fungible across sectors, regions, age groups, and potentially ethnic lines if it became practical to do so.

In addition, some researchers believed that the exploration of aid fungibility should be considered with the characteristics of aid projects/ programs. For example, Khieu (2013) discussed aid fungibility from the perspective of tied aid and untied aid. For the former one, aid is given in the form assistance that is tied to the goods and services of the donor countries. With the latter, recipient countries are not obligated to buy the goods from the donors nor are they compelled to conform to the donors' priorities of public expenditure. Khieu believed that the presence of foreign aid was partially due to the large proportion of aid being tied to specify projects or expenditures that might not accord with the present needs of the recipient countries. However, results of the cross-country analysis also showed that fungibility was relatively high even in untied projects. Similarly, from the aid-characteristic perspective, Lahiri & Raimondos-Møller (2004) believed that donors can affect the degree of fungibility by choosing the aid size as well as the decision timing.

In general, the real beneficiaries of foreign aid around the world are commonly subject to a recipient leader's political power and preferences. In African countries where aid delivery heavily depends on the administrative network and the government, it is safe to say the leaders always have some influence over who gets aid. Donors may embed the subnational allocation strategy within the aid projects, leaders still have multiple ways to work around it or violate it. As shown above, these actions can be done by directly interfering with the aid allocation or by compensating aid allocation with reducing government spending. Despite donors' intention to target certain groups, leaders are still very influential especially in countries where the administrative branch of the government is more powerful than a modern and mature democracy.

2.1.2 Ethnic Favoritism in African Countries

I focus on African countries because of their heavy dependency on aid and the weak record of aid effectiveness. It is common to see an African country receiving foreign aid at a level more than 20 percent of its annual budget. A 2009 World Bank study showed only 61 percent of projects in Africa had satisfactory outcomes, compared to 75 percent of projects worldwide between 1995 and 2008; health sector projects in Africa have performed particularly poorly, with only one-quarter achieving satisfactory results over the past decade, compared to 70 percent among low-income countries in other regions (Roberts & Dionne, 2013). Scholars have also noted the importance of ethnic identity for African peoples, inherited from both historical social construction and decades of colonial rule. Van de Walle (N. van de Walle, 2002b) summarized that the crucial role of ethnicity in African countries and historical heritage have trapped most African countries in a "neopatrimonial" society, creating a perpetual crisis of ethnic conflicts and underdevelopment.

In understanding a leader's preference, scholars found ethnicity to be the most important factor in the study of the distributive politics in Africa. As stated by Golden and Min (2013), "in less-developed settings, socially constructed identities such as ethnic or religious groups (rather than organized economic interest groups) are typically the focus of studies of favoritism in distributive allocations." In these less-developed societies, especially African countries, ethnic identities are most salient because they reflect the traditional loyalty to kin, while economic and political identities are much weaker. In the "neopatrimonial" African societies followed by centuries of conflict, ethnic identity is the key to separate one's own allies from enemies and the trust is built into bloodlines as well as encompassed in shared cultures and languages. People with the same ethnic identity commonly reside together. In many African countries, subnational political boundaries are set according to the borderlines of historical ethnic territories. Within each ethnic territory, it was long established that the social and economic welfare of all citizens is bound together. The ethnic bounds are further consolidated as ethnic conflicts deepen and continue, proceeding until today, when modern governments and institutions are established. It is hence not surprising that van de Walle found only two African countries (Botswana and Mauritius) have overcome the "neopatrimonial" social traditions.

A "functional" model of distributive politics argues for the quid pro quo of ethnic favoritism. In a competitive political arena, ethnicity serves as "a useful tool for mobilizing people, policing boundaries, and building coalitions that can be deployed in the struggle for power and scarce resources" (Eifert, Miguel, & Posner, 2010). Because of this functional mechanism, they find ethnic politics to play a more important role when political competition is at a higher level. An ethnicity tool is useful in less-developed societies because it provides clear and less costly information about a leader's identity and policy preferences. Citizens would find it more difficult to determine the credibility of a non-co-ethnic leader. Support for a co-ethnic leader would send a clear signal to the leader, along with a clear expectation for national-level resource allocation. A common belief in countries with salient ethnic identities holds that a leader should and would provide benefits to his co-ethnic kin, while his co-ethnics should and would support co-ethnic leaders in return (Posner, 2005).

One key feature of ethnicity sets it apart from other potential identities in distributive politics. Unlike other political identities, one's ethnicity almost never changes. Once ethnicity has been commonly recognized as the focus for favoritism in distribution, vote buying become very costly, and leaders should always follow ethnic-favoritism strategies. Carlson (2010) find that leaders only gain support from co-ethnic kin if they follow the ethnic favoritism rule; and allocating resources to non-co-ethnics does not generate similar political support for leaders. Winning political support from other ethnic groups is extremely difficult, if even possible. Meanwhile, leaders are strongly expected to act according to their ethnic identity to take care of "their own." As a result, "we should see a self-enforcing equilibrium of ethnic favoritism, in which voters mainly target co-ethnic politicians for favors, and politicians mainly target co-ethnic voters for votes" (Chandra, 2006, p. 64). Modern democratic institutions may be designed to reduce such favoritism for the government to represent the majority of the population; these institutions in most African countries still do not exist or are weak because the political parties are still formed by ethnic boundaries. Democratization does not seem to have altered the pattern of ethnic politics in African neopatrimonial societies (N. van de Walle, 2002b, p. 19).

Ethnicity provides the identification needed for a leader to discriminate between core supporters and potential voters. Under this circumstance, a leader's co-ethnic kin become the privileged groups who tend to receive more distribution of aid resources compared to other underprivileged people, leading to a wider intra-ethnic income gap. Existing research has exposed us to a general pattern of ethnic favoritism in African countries. Franck and Rainer (2012) find that groups sharing the same ethnicity with the president have lower infant mortality and higher access to primary education across 18 Sub-Saharan African countries, though the effects are not equally significant in each country. Soumahoro (2015a) finds a strong and positive relationship between the ethnic affiliation of African leaders and satellite night-time luminosity in the historical homelands of ethnic groups. Similarly, Hodler and Raschky (2015) find the birth regions of leaders in Africa have a higher level of night-time luminosity. What remains unclear is how and when the ethnic affiliation of national leaders affects the economic development at sub-national levels.

2.1.3 Ethnic Favoritism and Spatial Aid Allocation

Cross-national studies generally support the notion that aid is crucial for stabilizing regimes and supporting a leader's political survival (Licht, 2010; Morrison, 2009). One aspect of the explanation is that a leader with more aid can simply provide more resources to keep all citizens satisfied and hence consolidate his political power (Morrison, 2007). This mechanism may get less helpful in African countries where large amount of aid becomes normal. People do not need to keep any particular leader in office if all leaders would receive the same amount of aid and distribute similarly. Contrarily, some argue that aid keeps political leader in office because said leader can strategically shift aid resources toward more politically useful targets. Given the relative fungibility of foreign aid and importance to African countries, it will not be surprising to find African leaders targeting aid favoring their own ethnic groups. Allocating aid to the leader's core supporting group who also share his ethnicity serves the 'functional' needs of both the leader and supporters.

Data unavailability has long constrained researchers from fully examining how leaders target certain groups, and for what reasons. Different aid projects from different donors usually operate separately, and the information can be difficult to aggregate. Each recipient country normally receives aid from multiple donors, including other governments and other aid agencies such as the World Bank. Leaders may more easily divert resources from some projects than from others, hence the full picture cannot be reviewed without aggregating data from all these individual projects. Meanwhile, subnational aid allocation has not always been tracked. Each project can affect people with various socioeconomic needs from a few regions. It is essentially impossible to obtain an exact profile of aid recipients and the amount of aid they received.

Despite the unavailability of data tracking subnational aid allocation, two groups of research still tried to explore who actually gets aid within aid recipient countries. There are case studies focusing on single project or a small number of aid projects within a specific country and trying to establish the bias in aid allocation. Clay et al. (1999b) tracked food aid allocation in Ethiopia to determine if aid was allocated by needs. With a nationally representative survey, they find no significant association between household food insecurity (vulnerability) and food aid receipts. Meanwhile a disproportionate concentration of food aid was distributed to the region of Tigray, which reflects the strong favoritism of political leaders because food aid allocation in Ethiopia was conducted by the government. Hence, they argue for donors to deliver aid directly to households based on their different needs. Briggs (2012)studies World Bank electrification projects in Ghana and finds significant patterns of ethnic favoritism in selecting the beneficiaries. The electrification projects became a crucial resource for political leaders to allocate across the country. The incumbent president was able to funnel World Bank resources towards regions with high concentrations of his co-ethnic supporters.

Jablonski (2014) goes beyond individual projects and aggregates all aid projects to Kenya from 1992 to 2010. Aid data was aggregated on the district level to reflect how much aid was delivered to each voting district. While any single aid project does not necessarily constitute systemic political favoritism, this aggregated geographical aid allocation approach definitely provides a more complete picture. He finds the regional aid allocation in Kenya depends highly on each region's voting pattern in the national election. Districts with higher support for the incumbent candidate receive significantly more aid compared with those supporting other candidates. Left unexplained is why some districts supported the incumbent president while others did not. If a leader is directly rewarding political support and all districts have the equal opportunity to earn this reward, it would be puzzling that only a few districts adopted this strategy.

Dreher et al. (2014) track Chinese foreign aid to Africa from 2001 to 2011 and find that a leader's birth region has some substantial advantage in getting Chinese aid projects. Allocating aid towards a leader's birth region is clearly a common practice in most African countries, which they consider as evidence of extensive ethnic favoritism in Africa. Their research goes beyond a single recipient country but is still limited because all aid is from a single, quite-unique donor. As they noted, China turns to be less concerned with a recipient country's governance characteristics and Chinese aid is less scrutinized than aid from Western countries. Since it has been argued that China is different from traditional donors (Axel Dreher & Fuchs, 2011), we do not know if a leader can still favor his ethnic kin with aid from all other donors.

While these researchers certainly helped discover the political mechanism of aid allocation in different countries with different aid projects more explicitly, their research is limited in scope for generalizability. Each country has a unique political structure that allows political power to influence the targeting of aid. However, a leader may target aid for different reasons such as winning an election or rewarding co-ethnic kin. We still need to go beyond case-specific explanations to understand who gets aid and under what conditions.

2.1.4 Tracking Ethnicity and Spatial Aid Allocation: Method

If ethnic favoritism is prevailing in aid allocation and as extensively as noted by Dreher et al. (2014), it should be expected that subnational aid allocation in Africa almost always follow the ethnicity of national leaders. In this research, I explore and test the ethnic-favoritism hypothesis in foreign aid allocation, which is that a leader's co-ethnic citizens consistently receive more aid than other ethnic groups. Alternatively, if donors' subnational targeting for development has been more important, we should see leaders' co-ethnic supporters receiving no more aid than other groups. To achieve this, we first need to be able track subnational aid allocation to each country, covering at least a majority of all aid received. Otherwise, we are still trapped by potential bias of the uniqueness of each single project; biases in certain projects may be compensated by others.

An ideal comparison of ethnic favoritism in aid allocation would be evaluating how ethnic identity affects the exact amount of aid received by each individual. However, there are substantial difficulties of tracking aid allocation in detail, and politicians do have reasons to keep such information vague and unavailable (Kolstad & Wiig, 2009). I follow a common approach adopted in existing literature by using geographical aid allocation to represent ethnic based aid allocation. In practice, if a leader is to provide additional aid to co-ethnic supporters, the regions where these supporters reside should receive more aid projects. The fact that in Africa people of same ethnic background usually live at the same region makes tracking ethnic advantage with geographical aid allocation a reasonable approach.

Another issue to consider is what kind of aid projects should be tracked. Donors design aid projects to have different purposes, such as providing resources for better education, poverty relief, or access to healthcare, clean water, and food. Aid projects also provide military assistance, technical support, or direct budget support to recipient governments. From the perspective of donors, all these projects should target a different population to achieve their individual goals. It is also reasonable for donors to have different level of scrutiny for different type of projects. One might expect food aid to be allocated more towards poor regions and education aid for more populated areas. A fair share of existing research chose to focus on certain type of aid for this reason, and it has found aid for different purposes do not fair the same both in terms of donor expectation and allocation process (Saidon, Yusop, Ismail, & Hook, 2013; Van de Sijpe, 2013). It would be both interesting and important to compare the fungibility of aid to different sectors as it could substantially enhance our understanding of the aid-allocation mechanism.

However, due to political leaders' heavy influence over both aid allocation and government expenditure, aid to a specific sector is not likely to consistently reflect the leaders' preferences and biases. A leader might use either food aid or medical aid to signal to his supporters that they are getting rewarded for their political loyalty. Existing research commonly find aid to be fungible across all sectors studied (Pettersson, 2007; Van de Sijpe, 2013). Additionally, since aid from either sector could achieve the signaled purpose, a leader should select the aid project based on the resource availability and the easiness of reallocation. Finding education aid more fungible than food aid in Kenya could reflect more of Kenyan leader's easier access to education aid rather than lack of intention to use aid to reward supporters. To focus on evaluating a leader's biases in aid allocation instead of sectoral differences, it would be more appropriate in this paper to track development aid to all sectors. Specifically, I follow Jablonski's approach of examining subnational aid allocation in African countries by aggregating all aid projects each country receives to show that aid targeting is prevalent within all aid projects.

Variation in per capita aid received in different subnational regions hence represent the outcome of a leader's strategic aid allocation. Subnational aid-allocation data has been made available in a few countries recently because of development in referencing aid projects with geographical information. Foreign aid is commonly allocated through projects and towards specific regions or groups of citizens. Researchers from the AidData project (Tierney et al. 2011) have been coding information for geographic locations of aid projects from both donors' databases and some recipient governments' aid platforms. Another part of the ethnic favoritism in spatial aid allocation is to connect a national leader's ethnic identity to subnational regions. I first begin by identifying each national leader's ethnicity. Kasara (2007) and Francois et al. (2015) have independently collected information on African leaders' ethnicities, though these leaders have been commonly reluctant to expose their ethnic identity. For this research, I relied on leader ethnicity data for 18 sub-Saharan African countries from Francois et al. (2015) and expanded the data to the year 2015.

I then proceed with finding ethnic identity for each subnational region. If a leader was to target aid at people sharing his ethnicity, it is only logical to allocate more aid to a region where his ethnic group is dominant. Dreher et al. (2014) adopted a eader's birth location or hometown to represent the leader's ethnic ties to subnational regions. While a leader's birth region almost certainly has ethnic families that the leader would like to subsidize with aid, other regions populated by the leader's ethnic group would also support the leader for shared ethnic identity and expect to be rewarded with more aid. National census data is the ideal source for measuring ethnic composition in each subnational region, but this data is mostly not open to researchers. Geo-Referencing of Ethnic Groups (GREG) (Weidmann, Rød, & Cederman, 2010) provides geographic mapping of ethnic groups around the world, but the data is not refined enough to reflect subnational ethnic differences in most countries. For instance, there are only 3 ethnic paragons in Kenya and only 2 in Malawi. It is practical to believe national leaders rely on more refined regional ethnic mapping when strategically allocating aid resources.

Another approach to resolve this problem is to resort to other national representative surveys which collect samples consistent with the original composition of the whole population. The Demographic and Health Surveys (DHS) is one of the most comprehensive survey covering almost all African countries over the past 40 years (Boyle, King, & Sobek, 2016). The sample is usually based on a stratified two-stage cluster design, generally representative at the residence level (urban-rural) and the regional level (departments, states). The DHS survey asks respondents about their ethnicity and religion among hundreds of other socio-economic questions and records the geographical locations of respondents. By aggregating individual-level DHS survey data, a population profile for each subnational region can be constructed to reflect ethnic composition.

I compiled data for four African aid recipient countries (Kenya, Malawi, Uganda, and Nigeria) with both ethnic demographic information and geographical aid allocation at the subnational level for further comparative analysis. I use province/state level as the unit of analysis, except for Kenya. I use Jablonski's (2014) Kenya aid-allocation data, which is at the electoral district (county) level. The key variables of interest are annual aid per capita received by each province/state (***aid_per_capita***$_{i,\,t}$), ethnicity of the citizens in each region, ethnicity of the national leader, and aid per capita received by the whole country (***aid_per_capita***$_t$). Specifically, regions in which the largest ethnic group has the same ethnicity as the national leader are considered as co-ethnic regions. Individual-level data was later aggregated to a time-series-cross-section dataset at the ethnicity-year level.

Four of my cases can fall into two groups by their political similarities. Kenya, Nigeria and Malawi all have competitive elections engaging competing ethnic candidates and had leadership changes. These are perfect cases to examine how ethnic/geographical aid allocation changes as a result of leadership change. All three countries are representative of ethnic segmentation in Africa and are expected to follow the same rules of ethnic politics. On the other hand, these countries represent a different extent of aid dependency, with Malawi being one of the most aid- dependent countries in the world, and Nigeria receiving the lowest amount of aid compared to its GDP because of its high oil revenue. Findings consistent across these three countries should be representative for most of the aid recipient countries in Africa with similar political regimes.

One caveat, however, is that all three countries are former colonies of the United Kingdom and still receive substantial amount of aid from the UK. Admittedly, different colonizers have different social and political legacies that could shape their national leaders' political strategies differently. It would also be interesting to empirically test if different colonial heritages lead to variations in aid allocation. However, I still believe the evidences from these three countries should be representative and applicable to most other African countries. The lack of development and deep-rooted ethnic politics have been found to be common in almost all African countries. They all share a long ethnic-based social and political heritage before the colonial era which still provides the foundation for their modern political economy (Michalopoulos & Papaioannou, 2013). In another study of colonial heritage and economic development in African countries, Acemoglu et al. (2001) find that no matter which colonizer a country had, the extractive institution leads to lower income. Together, these studies suggest that the combination of pre-colonial heritage and colonial institution to be the leading cause for lack of development in Africa—colonies from different masters alike. Additionally, in the donor and recipient relationships, the former colonizers are not always the most important actors in providing foreign assistance. Despite all being former British colonies, Malawi receives the most aid from the UK but Nigeria and Kenya's most generous donor has long been the United States.

My fourth case, Uganda, is quite unique because, for the time of my analysis, Yoweri Museveni has been the only president for decades. For a dictator who had solid control over the nation's political power for 30 years, his need to fend off competitors and court co-ethnic supporters may differ a lot from other countries. Uganda hence provides a chance to study the variation of ethnic favoritism of aid allocation over time and may help in understanding ethnic favoritism where political survival has not been at risk.

2.2 "OUR TURN TO EAT": LEADERSHIP CHANGE AND AID ALLOCATION

2.2.1 Kenya

As this paper is being written, Kenya just concluded its 2017 general election after a rerun on October 30. Before the rerun, at least 37 people, including three children, were killed in the protests that followed the announcement of the elections on October 9. Both the original and rerun results claimed incumbent President Yuhu Kenyatta's victory over current Vice President Raila Odinga. Additionally, Yuhu Kenyatta's father the first president of Kenya, from the Kikuyu tribe and Raila Odinga is the son of Kenya's first vice president, of the Luo tribe. The violent conflict over election raised another round of serious discussion about how Kenya has been trapped in ethnic conflicts since before its independence. It certainly reminds those who have been following Kenya politics about the 2007–2008 humanitarian crisis after the 2007 general elections that left about 1,400 people dead.

Kenya has a diverse population that includes over 40 ethnoracial and linguistic groups. According to the Kenya National Bureau of Statistics (KNBS), in 2011 the five largest ethnic groups were the Kikuyu (22 percent of the population), the Luhya (14 percent), the Luo (13 percent), the Kalenjin (12 percent), and the Kamba (11 percent). These largest groups compose over half of the country's population sine its independence in 1964. Geographically, though these ethnic groups are spread throughout the country, each group tends to concentrate in certain provinces. Of the country's eight provinces, "the Kikuyu are associated with Central Province, the Luo with Nyanza Province, and Luhya with Western Province" (Morrison, 2011).

Politically, until 2012 there have been three leaders: Jomo Kenyatta (until 1978) of the Kikuyu, Daniel arap Moi (until 2002) of the Kalenjin, and Mwai Kibaki (until 2012) of the Kikuyu. The current president of Kenya is Yuhu Kenyatta, the son of Jomo Kenyatta, who took office in 2013. Like previous elections, all major political parties in the 2017 election have been established clearly by the tribe lines and have a clear geographical base. For example, the Forum for the Restoration of Democracy (FORD-Kenya) was associated with the Luhya tribe, the Democratic Party (DP) with the Kikuyu, and the Labour Democratic Party (LDP) with the Luo, while the

Kalenjin tribe supported then ruling party KANU. Presently, voting in Kenya—whether parliamentary, civic, or presidential—is almost entirely along tribal lines.

Foreign aid in Kenya represents a significant portion of economic resources. In the late 1990s, foreign aid commonly amounted over 10 percent of Kenya's national GNI (Mwega, 2009). Though it has dropped to about 4 percent in the 2000s, foreign aid to Kenya was still about 28 percent of government expenditure in 2009. Wrong (2009) has extensively documented a number of cases showing how in Kenya a political alliance has been built on the quid pro quo. Voters always support their co-ethnic candidates and in return will get subsidies from public expenditure, including, specifically, many aid projects. Whichever ethnic leader took office, his ethnic group will have a bigger share in aid and other public resources. Briggs (2014) found that during the late 1980s and early 1990s, project aid was biased towards the areas of President Moi's ethnic and political base. Moi's Kalenjin regions received more road-building projects though they are not the biggest or the poorest in need of more roads than states. Even in the 2017 general election, one of President Yuhu Kenyatta's major claimed achievements is Standard Gauge Rail (SGR), a project funded and built by the Chinese.[1]

To consistently show that aid allocation, in addition to evidence that Moi's co-ethnic groups received more aid when he was in office, it is important to note that such privileges disappeared after regime change in 2002. Jablonski (2014) collected and coded a novel data set and used existing data on the subnational distribution of World Bank and African Development Bank projects in Kenya from 1992 to 2010. These data allow precise estimates of the amount of aid going to each of Kenya's 210 electoral constituencies. By averaging per capita aid received by

[1]https://www.capitalfm.co.ke/news/2017/06/president-kenyatta-enumerates-jubilee-achievements-madaraka-day-fete/

districts with the same ethnic characteristics, I can estimate on average a Kalenjin or a Kikuyu can benefit from aid allocation. I then divide this variable with aid per capita for the whole country. The result is weighted wid, which is aid per capita by each ethnic group weighted by national mean. It becomes straightforward to see that the group benefited more than others will have weighted aid higher than 1.

The following graph shows the weighted aid over time for President Moi's Kalenjin group and his successor President Kibaki's Kikuyu group. Moi stepped down in 2002 after ruling the country for 24 years. Before the regime change, Moi's Kalenjin group consistently received more aid than national average. In 1997, which was an election year, a Kalenjin would receive closer to five times the national average amount of aid, which certainly would have boosted President Moi's political support. Meanwhile, people from the Kikuyu tribe for most of the time under Moi's rule received less than the national average. However, this situation changed significantly after the 2002 election when these two ethnic groups exchanged their political position. Aid allocation changed correspondingly. Kalenjin would rarely receive more aid than the national average, and Kikuyu has been rewarded with foreign aid.

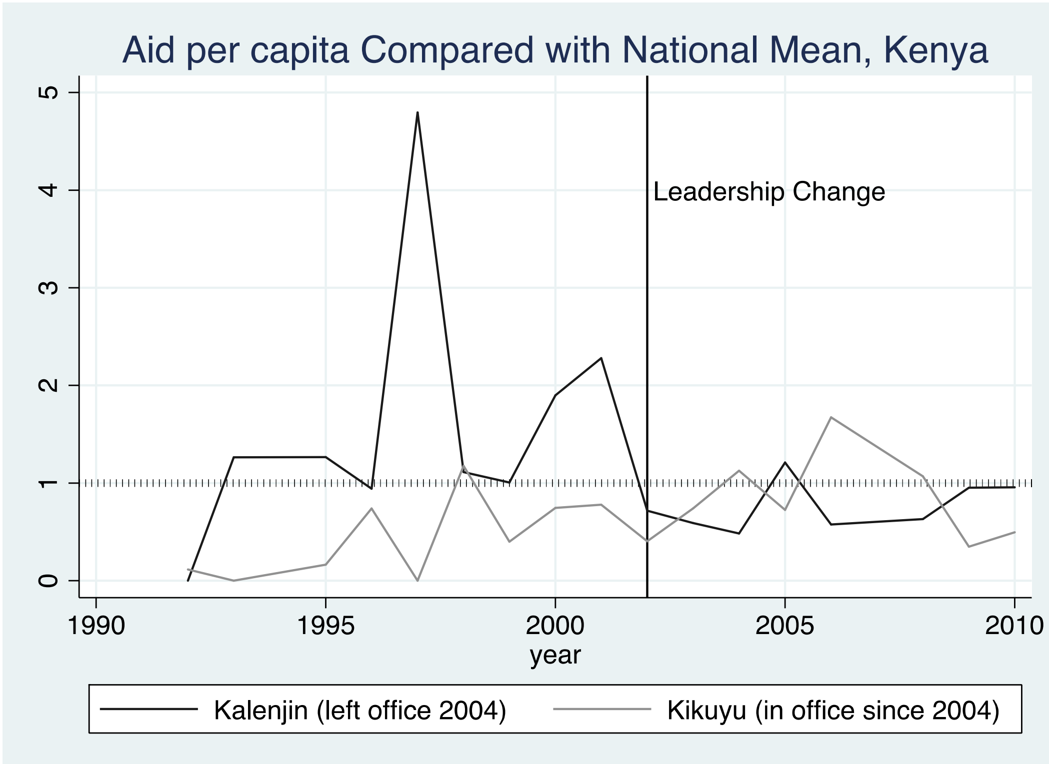

Figure 1. Aid per capita Compared with National Mean, Kenya

After 2002 election, the Kikuyu also receives more aid than they used to under the Moi regime, and in about half the years more aid than the national average.

2.2.2 Nigeria

Nigeria and Kenya share a few important characteristics in understanding their ethnic politics and aid allocation. Similar to Kenya, since Nigeria achieved political independence in 1960, there has been struggle among various ethnic groups. Ethnic conflicts in Nigeria led to the civil war from 1967 to 1970, which left a large number of deaths and casualties. After the military regime and a short transitioning period, Olusegun Obasanjo of the Fulani tribe took office in 1999 until he was succeeded by Umaru Musa Yar'Adua from the same Fulani group in May 2007. Goodluck Jonathan from the Ijaw group came to power in 2010; he would end his own term in 2015.

Nigeria has over 500 ethnic groups, although the four largest are the Hausa and Fulani (29 percent of the population), Yoruba (21 percent), Igbo (18 percent), and Ijaw (10 percent) (CIA, 2017). Also, similar to Kenya, each ethnic group tends to concentrate in certain states, creating the ethnic geography needed for ethnic targeting of aid. With ethnic geographical data aggregated from the DHS survey, I identified the geographical concentration for each group. Most importantly, the Fulani and Ijaw groups each have their own stronghold and tend to not mix. The Muslim Hausa and the Fulani are the predominant ethnic groups in Nigeria's northern region. The Ijaw traditionally hold lands in the Niger River Delta, the most oil-rich part of the country. Specifically, I aggregated DHS survey data to find that Fulani people are over 40 percent of the population in the states of Gombe and Bauchi, and over 20 percent in Adamawa and Jigawa. Over 53 percent of Fulani people reside in these four states. Ijaw people have even higher concentration as 90 percent of the population in Bayelsa, and over 42 percent of Rivers residents are Ijaw. Almost all Ijaw people live in these two states.

Nigerian politics has also been predominantly about ethnics. Ishiyama (2012) used the Herfindahl Hirschman Index of Concentration on partisan preference data from the Afrobarometer to identify the concentration of ethnic votes and ethnic parties in Africa. Only 5 political parties are identified as ethnic parties, meaning each party has over 85 percent of supporters from a single ethnic group. Two of these ethnic parties are the All Nigeria People's Party (ANPP) supported by the Hausa-Fulani group, and the All Progressive Grand Alliance (AGPA) supported by the Igbo group. Another Nigeria political party, the Action Group (AG) is identified as a potential ethnic party because over two-thirds of its supporters are from the Yoruba people. These ethnic parties dominating Nigerian politics are found on the quid pro quo base, which requires leaders to reward their co-ethnic citizens for political support.

Geographical allocation of foreign aid projects at the state level is provided by the AidData project (AidData, 2016), which tracks all 595 projects from Nigeria's Development Assistance Database (DAD) across 1843 locations between 1988 and 2014, although most recorded projects happened after 2002. I applied the same method as the Kenya case to Nigeria, calculating per capita aid received by states dominated by the Ijaw people and the Fulani people, respectively. From 1999 to 2010, Nigeria had two presidents, both from the Fulani ethnic group. Aid allocation to Fulani states was higher than the national average for most of the years where geo-coded aid data is available.

Two spikes in 2003 and 2008 are especially high and worth noticing, where Fulani states received 2 to 4 times more aid than the national average. These spikes coincide exactly with the national elections, the most important years in aid allocation for presidents. In 2003, the country held its first general election in fifteen years. President Olusegun Obasanjo hung up his uniform and assembled his supporters and resources to win the election. Widespread manipulation was reported, and all opposing parties refused to accept the results when they came. In terms of using foreign aid for political support, he allocated more than 4 times the national average amount of aid to his Fulani-dominated states. The 2007 election of Umaru Yar'Adua was similarly controversial. CNN even cited election observers from the European Union describing the elections as "the worst they had ever seen anywhere in the world," with "rampant vote rigging, violence, theft of ballot boxes and intimidation."[2] This election ended with another Fulani president and left over 200 dead[3]. This time, the president's kinsman received more than 2.5 times the national average in aid.

[2] http://edition.cnn.com/2011/WORLD/africa/04/03/nigeria.election/index.html?eref=ft
[3] http://www.economist.com/node/9070922

The Fulani seem to continue receiving more aid than the national average after the regime change, but such advantage has largely reduced since 2010.

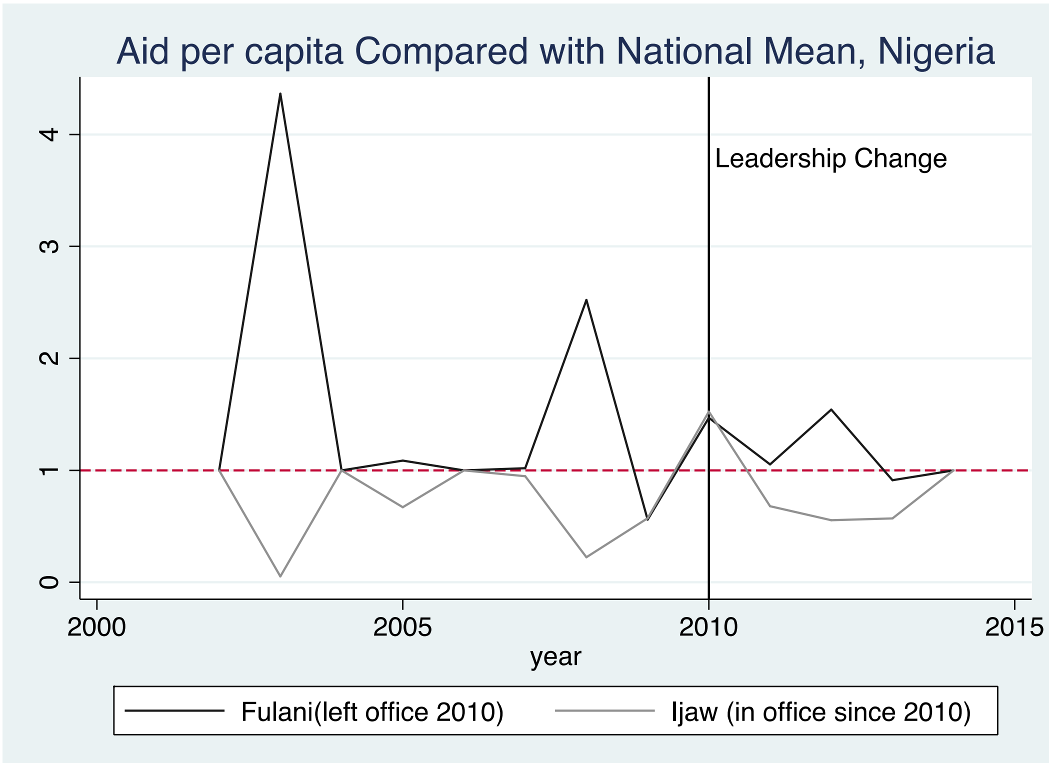

Figure 2. Aid per capita Compared with National Mean, Nigeria

Goodluck Jonathan stepped into Nigeria's presidential office in 2010 after his predecessor disappeared from the public for months due to illness. In terms of subnational aid allocation, this also became the only year that president Jonathan's Ijaw regions received more aid than the national average. Ijaw regions did not continue to receive the privilege in aid allocation in the following years of his rule, which actually defied the rule of ethnic favoritism. His unorthodox action certainly made him very unwelcome with his Ijaw people. Governor Seriake Dickson of Bayelsa, the state in which president Jonathan was born and raised, accused him of wasting the greatest opportunity for the Ijaw people when he was in office. Without strong support from his co-ethnic kinsman, Jonathan lost the election in 2015.[4]

2.2.3 Malawi

Malawi is heavily dependent on foreign aid and hence can potentially experience two opposite implications. According to the World Bank, Malawi received foreign aid worth over 41 percent of its national GNI, which was the highest in Malawi history. Malawi's aid dependence has slowly decreased over the years, however, it still received about 16 percent of its GNI from foreign donors[5]. There are two potential implications for Malawi leaders. Due to the large amount of aid, it becomes almost the single biggest pie that the leader can potentially allocate among different ethnic groups, if he can control it. Conversely, the high dependence on aid gives foreign donors the power to enforce higher scrutiny over aid allocation, as their threat of withdrawing aid can become any leader's death notice. By simply following the aid flow to the leaders' co-ethnic districts, it seems that ethnic favoritism in aid allocation in Malawi has decreased as well.

Malawi has relative high concentrations in the ethnic composition of its population. The largest three ethnic groups make up about two-thirds of Malawi's people. These groups are, respectively, the Chewa, with 35.1 percent of the nation's population, the Lomwe, with 18.9 percent, and the Yao, with 13.1 percent (CIA, 2017). Ethnicity also plays important roles in Malawi politics. The Malawi Congress Party (MCP) has over 2two-thirds of supporters from the Chewa group (Ishiyama, 2012). The existence of ethnic parties represents and also consolidates the quid

[4]https://www.naija.ng/1105102-how-goodluck-jonathan-wasted-6-years-president-bayelsa-governor-dickson.html#1105102

[5]https://data.worldbank.org/indicator/DT.ODA.ODAT.GN.ZS?locations=MW

pro quo exchange in political support and reward. Ethnic parties provide the channel for leaders to signal their campaign promises to co-ethnic supporters, and the institution to constrain them from defying.

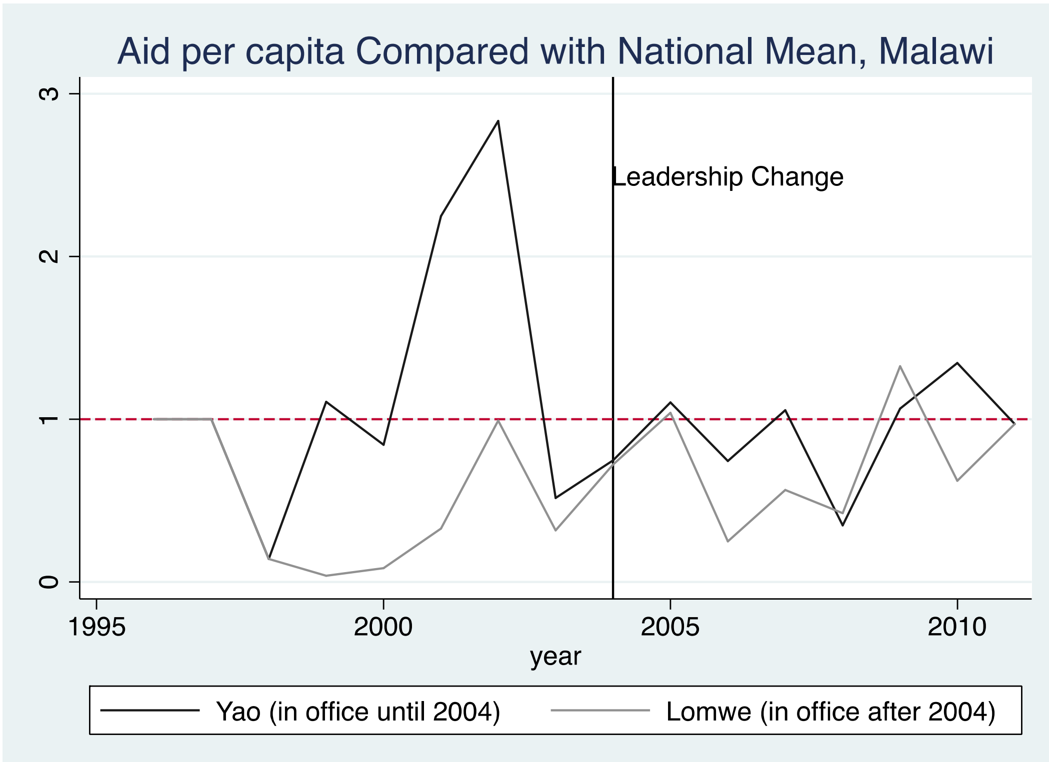

Figure 3. Aid per capita Compared with National Mean, Malawi

President Bakili Muluzi of the Yao ethnic group was in office from 1994 to 2004. His successor, Bingu wa Mutharika of the Lomwe group, stayed in office until 2012. Using subnational ethnic composition data from Amanda Robinson (2016), I was able to find which districts are most important if a leader wanted to target his co-ethnic people. Similarly dividing the per capita aid that the co-ethnic districts received by the national average amount of aid, I was able to measure how much the leader is rewarding or punishing certain districts in aid allocation. Regions where the Yao group concentrates enjoyed up to almost 3 times the national average amount of aid during Muluzi's tenure, indicating a strong bias towards the the Machinga district and the Mangochi district, which have the largest Yao population in the country. However, after the presidential election in 2004, the Yao districts’ privilege in aid allocation almost completely disappeared.

It is interesting to notice that after 2004, foreign aid to the Lomwe districts (specifically, Thyolo and Mulanje) did not increase as President Mutharika took office, although they still fare slightly better than under the Yao presidency. This might indicate the donors’ improved scrutiny of aid projects, and is worth further investigation in that aspect.

From the cases of Kenya, Nigeria, and Malawi, we can find evidence of ethnic favoritism in aid allocation. However, the extent of favoritism still depends on a specific leader and over time. In all three countries, regime change occurred after 2000 and ended with the disappearance of strong ethnic favoritism aid allocation from previous leadership. The new leaders’ ethnic groups in general did fare better, but these leaders seem to be less devoted to channeling aid projects to their own ethnic basees. Such as in Kenya, the Kikuyu districts did receive more than the national average of aid and what they received under Moi regime, but they haven’t received more than twice what other districts would have.

2.3 UNCOVERING ETHNIC FAVORITISM IN AID ALLOCATION

It has been difficult to empirically show the existence and extent of ethnic favoritism in aid and other resource allocations, mostly because governments control many sources of revenue and resources and ethnic favoritism in any one type of resource allocation do not sufficiently justify the claim. Much research on distributive politics looks at different types of resources and projects, and the findings have varied significantly from research project to research project (Kramon & Posner, 2013). Franck and Rainer (2012) find ethnic favoritism matters differently in education and healthcare. Though ethnicity serves as advantage for resource allocation in many cases, it can be found to be disadvantageous, such as for the farmer's tax in Africa (Kimuli, 2007). These findings challenge the generalizability of case studies demonstrating ethnic favoritism in aid allocation by studying specific projects. States receiving less road building funding than the president's co-ethnic regions might as well be complemented by other kind of rewards or with other aid projects.

In all three countries analyzed above, aid has contributed to more than 10 percent of the nation's GNI, and usually over 25 percent of total government expenditure. It is also broadly believed that aid, despite donor scrutiny, subject more to the leader's allocation preference (Morrison, 2009). Project aid is not integrated into a national budget which leaves it out of the usually tighter governmental approval process. Unlike tax revenues, citizens may also treat aid as resources donated for distribution rather than something owed by the government (Ahmed, 2012). Foreign-aid projects focus mostly on the most needed aspects for people's life, such as food, health, education, and basic infrastructure in development. For these reasons, it becomes crucial for leaders to actively use aid for ethnic-based rewards rather than other resources. If a leader was both able and willing to reward his co-ethnics, the most significant part of such strategy will be uncovered by tracking aid allocations.

National platforms of geo-coded aid-allocation data provide an important improvement over project-based studies of ethnic favoritism in Africa. For countries under analysis in this paper, over 90 percent of all aid projects received over the years have been included and tracked, providing a holistic view of aid distribution and avoiding the bias involved in each specific project. For each country, the data traces back over 15 years, allowing the research to go beyond the potential bias of studying an individual leader. If ethnic favoritism only existed for a certain specific leader, the advantage of his ethnic group should disappear with a regime change. Of the three countries in this study, aid allocation during the office time of eight leaders from different ethnic groups are analyzed to search for their common pattern.

2.3.1 Measuring Favoritism in Aid Allocation

I use *aid per capita* received by each subnational region to measure spatial aid allocation. All projects targeting different economic sectors are aggregated to avoid the potential bias uncovered in the ethnic-favoritism literature conducting a sector- or project-specific study. I aggregated all projects from geo-coded aid data for Nigeria and Malawi and combined them with Jablonski's Kenya data for analysis.

The original data from AidData includes the amount for each project and targeted areas. Many projects targeted more than one state or district without further specifying how much each region would receive. For these cases, AidData divides the total project mount evenly by all targeted regions, assuming all regions have a similar share of the pie. This approach can be very problematic since some regions have much bigger populations than regions included under the same projects. It also creates a bias against regions with large populations by assigning the same amount of aid to all targets. For example, for a project to Malawi that targets both Lilongwe and Likoma, assigning the same amount of total aid to each of them would give each Likoma resident 200 times more aid than someone living in Lilongwe. To remedy this, I divided the amount of aid of each project by the total population it will target, and calculated aid per person for each project. For someone in Likoma, the benefit from aid would be the sum of aid per person from all projects that included Likoma.

Aid per capita to each region can vary dramatically directly due to the volatility of aid. Aid is among the most volatile resources in the world (A Bulir, Hamann, Bulíř, & Hamann, 2008). A dramatic change in aid per capita to a certain region does not necessarily mean it lost favor in subnational aid allocation, but more likely due to a significant decrease in total amount of aid received by this country. I controlled for the volatility of total aid flow to each country by weighting *aid per capita* against the per capita aid received in that country.

Relative aid compares aid flow to each region to average per capita aid received by the whole country. If aid is allocated perfectly equally among all citizens, *relative aid* for all regions should equal 1, indicating all of them have the same amount of aid as nation. Regions with more per capita aid will have *relative aid* higher than 1. Regions receiving less than the national average amount of aid will have a *relative aid* indicator between 0 and 1. *Log(relative aid)* takes the log of this indicator to adjusts for unbalanced tails.

$$\textbf{Log(relative\_aid)}_{i,\,t} = \textbf{log(aid per capita}_{i,\,t}\textbf{/mean(aid per capita}_{t}\textbf{))}$$

Log(relative aid) not only controls from the variance of aid amount due to aid volatility, but also provides an indicator that is cross-nationally applicable. It captures the bias in subnational aid allocation regardless of the different level of aid dependency for each country.

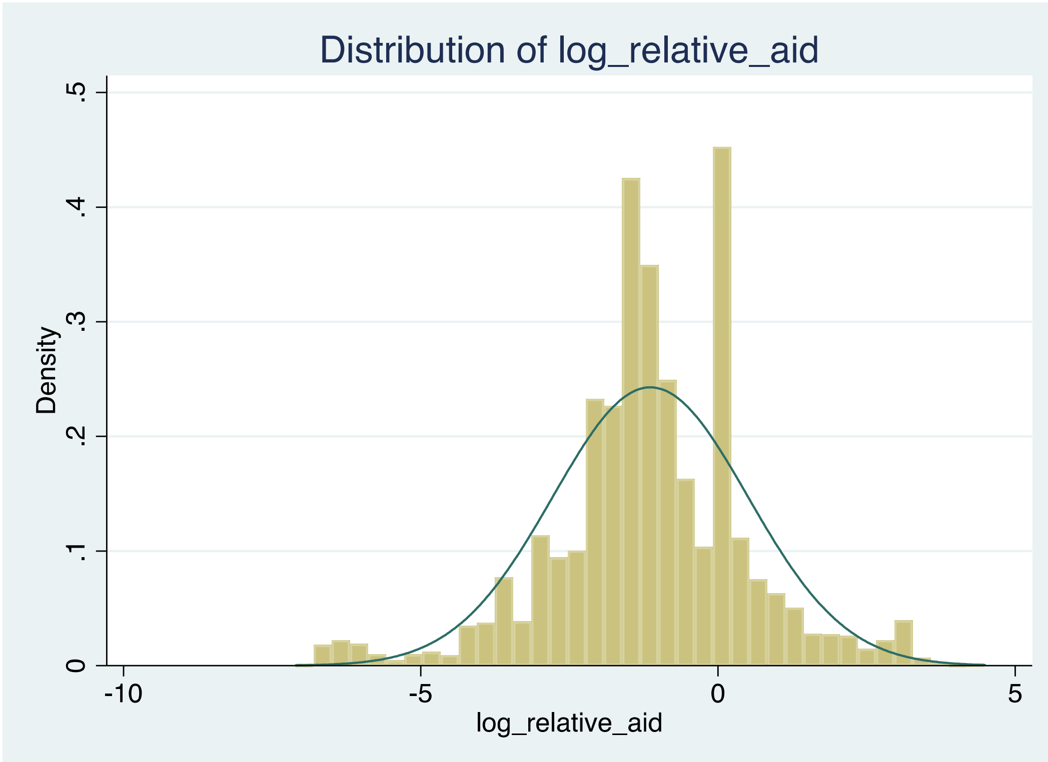

Figure 4. Distribution of log_relative_aid

2.3.2 Testing for Ethnic Favoritism in Aid Allocation

Each subnational region has its unique ethnic population composition, and most commonly it is dominated by one or two major ethnic groups because of the ethnic concentration in African countries. Regional disparities in aid allocation is hence used to indicate ethnic disparities. *Coethnic* indicates if a region can be considered the ethnic base of the national leader.

If an African leader was to reward his co-ethnic kinsman with aid projects, it will be reflected in the subnational aid allocation to that specific region. Specifically, *log(relative aid)* to each ethnic region measures if it is being rewarded with aid, and to what extent. I used leader ethnicity data from Franck & Rainer (2012) and expanded it to cover all years under study. With census data or DHS survey aggregated data, I had the ethnic composition of each subnational region for these countries. The largest subnational regions that are also dominated by a group that shares the incumbent leader's ethnicity will then be coded as a *coethnic* region. A new leader from a different ethnic group will make new regions *coethnic* and potentially more favorable in aid allocation, while moving previous privileged regions to be non-coethnic.

In a country where aid allocation is not subject to ethnic favoritism, *coethnic* should not be a significant determinant for regional *log(relative aid).* Otherwise, I expect coethnic regions to have more aid than the national average.

Hypothesis 1: leader's co-ethnic regions will have higher aid per capita than other regions

$$\boldsymbol{log(relative\_aid)_{i,\,t} = co\text{-}ethnic_{i,t} + Controls} \qquad \textbf{(1)}$$

Other factors may also affect subnational aid allocation. Particularly, if all voters can be similarly motivated by aid, the leader should target regions with large populations to more efficiently motivate the largest number of supporters. As donors push hard for poverty reduction with their aid projects, it should be expected that regions with a higher poverty ratio should also receive more per capita aid.

The following table presents the regression results testing ethnic favoritism in aid allocation. Subnational aid data are constructed as a panel with each region being a state or district as the unit of analysis. Model (1) is a linear regression model pooling all region/year data, indicating a strong positive correlation between co-ethnicity and aid allocation. Model (2) builds a panel regression error clustered at the regional level to generate a robust estimation. Co-ethnic regions still appear to have a strong advantage over other regions. Meanwhile, poorer regions also receive more aid, suggesting the effectiveness of donor scrutiny. Model (3) uses a "clustered sandwich estimator" with error clustered at the country level to avoid overstating the estimator precision and account for country-specific features (Colin Cameron & Miller, 2015). The difference between Model (2) and Model (3) also reflects different theoretical assumptions regarding ethnic favoritism in aid allocation. Error clustered at the region level controls for the regional characteristics that make certain regions more prone to ethnic politics. Some regions have highly unitary ethnic compositions and hence are more likely to be affected by the changing ethnicity of the leaders. Model (3), with error clustered at country level, reflects more of the difference among different countries that within a certain country ethnic politics plays a significantly more important role. Both models are presented here because both mechanisms affect the extent of ethnic favoritism.

Table 1. Co-Ethnicity and Sub-National Aid Allocation

	(1) log_relati~d	(2) log_relati~d	(3) log_relati~d
coethnic	**0.469***** **(4.17)**	**0.423***** **(3.81)**	**0.423**** **(2.62)**
log_popula~n		**-0.00339** **(-0.07)**	**-0.00339** **(-0.02)**
perc_poverty		**0.00930***** **(4.42)**	**0.00930** **(1.09)**
_cons	**-1.106***** **(-20.07)**	**-0.903** **(-1.48)**	**-0.903** **(-0.37)**
N	**7051**	**3399**	**3399**

t statistics in parentheses
* p<0.05, ** p<0.01, *** p<0.001

Notes: *coethnic* indicates whether a subnational region is most resided with the leader's co-ethnic supporters; *log_population* indicates if more aid is allocated to most populated states; *perc_poverty* is the percentage of population under the poverty line for each region, indicating how much aid has been targeted at the poor regions. Model (1) is linear regression with pooled data; Model (2) is longitudinal cross-sectional regression with error clustered at country level; Model (3) is longitudinal cross-sectional regression with error clustered at sub-national level.

All three models confirm the ethnic favoritism in aid allocation. Residing in a region dominated by a leader's co-ethnic people will bring a significant increase in aid. Specifically, a disadvantaged region receiving only 80 percent of the national mean in aid each year will expect 140 percent of the national average amount of aid once a new leader sharing the region's dominant ethnicity landed the presidency. The population size of a region does not seem to affect aid allocation. It may imply that leaders do not specifically invest where most of the population is, but rather where the co-ethnic supporters concentrate. The level of poverty has a significant positive effect in model (2), indicating that to certain degree aid allocation does match donors' efforts to alleviate poverty and target aid at the poorest population.

2.3.3 One Exception: The Unchallenged King and Aid Allocation in Uganda

Previous analysis on Kenya, Malawi, and Nigeria is based on the quid pro quo assumption of ethnic favoritism that leaders and co-ethnic supporters rely on ethnicity to build trust and loyalty in a country with strong ethnic competition. For the leader, such competition determines if he will be able to hold onto power and stay in office, while the supporters get rewarded for their loyalty. However, such mechanism may not function well for a leader who came into power based on support other than ethnic loyalty and had hence consolidated his rule with other institutions and political alliances.

Uganda has a relatively more diverse ethnic composition, with the largest ethnic groups as Baganda (16.5 percent of population), Banyankole (9.6 percent), Basoga (8.8 percent), Bakiga (7.1 percent), and Iteso (7 percent) (CIA, 2017). These five groups compose about half the Uganda population. Similar to most other African countries, people of same ethnicity have a shared culture and a long history, and also tend to live together. In 2005, Uganda increased the number of administrative districts from 49 to 112, which pushed ethnic concentration even higher within each district.

According to the World Bank (2016), Uganda ranked number 164 out of 178 economies in GDP per capita, making it one of the poorest countries in urgent need of development aid. Uganda receives about 10 percent of its total GNI each year from foreign aid, making it also an aid-dependent country. Arguably, the urgent need for aid may give donors some leverage over any agenda they want to pursue. Between 2012 and 2014, several countries suspended over $100 million in foreign aid over anti-gay legislation[6]. It can also allow donors to enforce stronger scrutiny of aid allocation. In 2014, the UK suspended aid to Uganda because of embezzlement.

One crucial difference between Uganda and the other three countries under study is that there has not been any leadership change in Uganda during my period of analysis. Uganda's Yoweri Museveni assumed office in 1986 and has since been ruling this country. Being in the office for over 30 years, Museveni was able to modify the Uganda constitution to remove both the term limit and age limit of a presidency. At the age of 72 in 2016, Museveni won the election and began his seventh term as the nation's ruler, or fifth term as elected president.

Museveni was born into the Bahima (Nyankore) ethnic group, which is not among the largest five. Out of 111 electoral districts in Uganda, 10 constituted the traditional Ankole Kingdom which can be considered as Museveni's ethnic base. The kingdom was abolished by former President Apollo Obote, and re-established them in 1993. Despite having clear ethnic ties to the Ankole people, as leaders in other countries to their ethnic groups, the quid pro quo side of ethnic favoritism does not clearly apply to Uganda and Museveni. The Ankole people are not traditionally or currently powerful in politics. Museveni came to power by winning a guerilla war

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[6]https://www.wsj.com/articles/europeans-stop-uganda-aid-after-antigay-law-1393342688

rebelling against a previous military ruler relying on an alliance clearly established with firm control over the military and government. Museveni’s alliance is largely different from the ‘functional’ ethnic favoritism theory that ethnicity serves as the identity and bridge to establish trust and loyalty where other social establishments are weak.

Lindemann (2011) explains the long holding power of Museveni and the conflicts in Nigeria by focusing on the country's “elite bargain,” defined as the distribution of positions of state power between contending social groups. Unlike countries where ethnic competition has been intense and both leaders and supporters seek ethnic identities for loyalty, Museveni had loyalty built into his elites group based on his early on military ties, later consolidated within the Ugandan government. Even in the 2016 election, Museveni was using the military to control major cities, cutting off Internet and cell services to deter competitors, and keeping his major rival in the election under house detention. Lindemann (2011) also argued that the political, military, and economic power have remained ethnically biased in favor of groups from western and central Uganda, and this in turn has been a major driver of recurrent civil wars. This might explain why the Ankole districts where Museveni came from have not been rewarded in aid allocation.

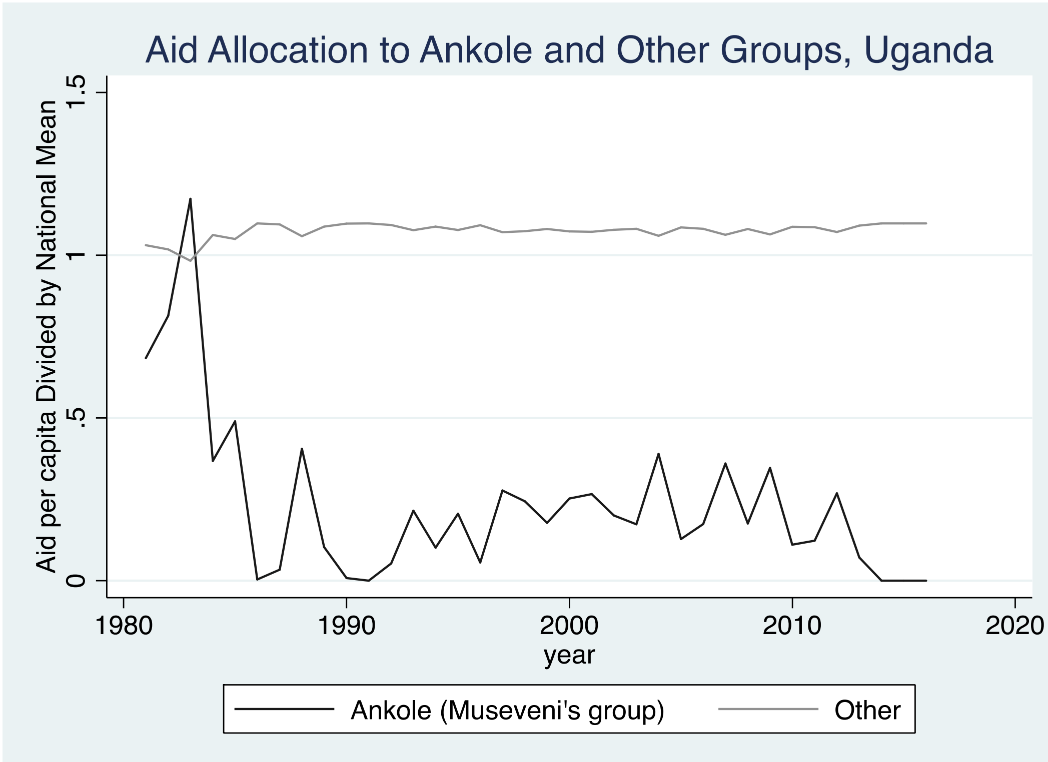

Figure 5. Aid Allocation to Ankole and Other Groups, Uganda

2.4 CONCLUSION

By examining geographical allocation of almost all aid received by Kenya, Malawi, Nigeria and Uganda, I go beyond the scope of specific aid projects and present a more holistic view of ethnic favoritism in aid allocation. Statistical evidence suggests that leaders in Kenya, Malawi, and Nigeria consistently allocate more aid to regions where most co-ethnic citizens reside. By tracking aid to specific ethnic regions over time, I show that these regions' advantage in receiving aid almost completely vanished when the ethnic leaders moved out of office. The changes of ethnic advantages over time excludes the possibility that in these three countries the co-ethnic regions get more aid for reasons other than their co-ethnic leaders in office.

The case of Uganda provides strong evidence against the pattern of ethnic favoritism in Africa. As in the other three countries, ethnic politics are also a crucial part in Uganda, but ethnic competition does not center around Museveni's own ethnic group. Museveni does not appear to favor his ethnic kinsman in aid allocation, and it is clear that he also does not rely on these people as his core supporters. In fact, being in office for over 30 years, Museveni's grip over political power has been very firm, and he does not rely on any single ethnic group's support. In addition to challenging the claim of a universal pattern of ethnic favoritism, the case of Uganda confirms the theory that ethnic favoritism is a practical strategy for motivating political support. For leaders like Museveni, who has sufficient political support from other mechanisms, ethnic favoritism seems to have disappeared. I will further explore how ethnic favoritism in African countries depends on leaders' needs for political support in Chapter 3.

3.0 POLITICAL TIME HORIZON AND ETHNIC FAVORITISM IN AFRICA

Chapter 2 focused on examining whether African leaders allocate more aid to their co-ethnic supporters. While my findings show a common pattern of ethnic favoritism in aid allocation, I did not find strong support for a common pattern of ethnic favoritism in Africa. First, not all African leaders strongly favor co-ethnic people in resource allocation. In Uganda, although conflicts and alliances among major ethnic groups are still the key factor in politics, the national leader's own ethnic group has not been receiving additional benefit. Meanwhile, the president does not rely solely or even heavily on the support of co-ethnic people to stay in power. On the other hand, even for the same leader the extent of ethnic favoritism varies over time. In Kenya, Malawi, and Nigeria, where leaders commonly favor co-ethnic supporters in aid allocation, such favoritism tends to be significantly higher around election years. These cases suggest that rather than altruistically allocating resources to co-ethnics constantly, leaders may strategically decide whether to increase favoritism allocation for their own gains.

I further explore one crucial factor, leaders' political time horizon, that could be crucial for their strategic choices of ethnic favoritism. To better understand the aid-allocation strategies of ethnic leaders, I resort to theories on leaders' motivations and preferences. Considering political leaders as rational actors, they should use aid allocation to serve their other purposes. Depending on what goals they try to achieve and the conditions constraining their moves, leaders are expected to opt for different strategies.

This research makes two major contributions to existing literature. Theoretically, departing from the debates of whether ethnic favoritism is a common pattern determined by the historical heritage in Africa, I argue that as a functional strategy for gaining political support, leaders opt for ethnic favoritism depending on their political constraints. Empirically, moving away from testing whether ethnic favoritism exists in certain cases, I explore a crucial conditional factor (a leader's political time horizon) that can affect the extent of ethnic favoritism in African countries. While existing literature has mostly focused on the variation of ethnic favoritism across country cases, I empirically show that even for a specific leader, the extent of ethnic favoritism changes over time during his political tenure.

3.1 THE PERSISTENT, BUT VARYING RISK OF POLITICAL FAILURE

One of the most accepted assumptions of research on political leadership is that leaders are office seekers. One can almost always safely assume that political leaders consider staying in office, or political survival, as their priority. "As no secondary political goal can be obtained without this prior condition, leaders always have the incentive to decrease their risk of losing office" (Licht, 2010, p. 63). There are plenty of historical examples to show that when left unconstrained or given the opportunities, leaders will most likely stay in power for as long as they live. Emperors have commonly held their power until their last breaths. Motivated by their desire and need for political power, office-seeking leaders of both authoritarian and democratic regimes use almost all resources they can control to keep the political support they need to stay in office.

In all regimes, a leader's political survival largely depends on the resources they can deploy for the purpose of either buying support or suppressing challengers. With the power of influencing the allocation of government resources, leaders can purchase the loyalty they need to stay in office, and leave the non-supporters worse off. Foreign aid, along with oil and other non-tax revenues, are found to be crucial for leader survival in both democracies and authoritarian regimes (de Mesquita & Smith, 2009; Licht, 2010; Morrison, 2009). The bottom line is that non-tax revenue provides additional resources that benefit at least some people in the recipient countries which could transform into political support for leaders. Not all citizens receiving aid would reward the political leaders equally, and leaders do not need the support of all citizens in the country. As a result, it becomes imperative and more effective for leaders to strategically allocate aid to target a subset of the population when possible to increase the positive effect of allocating aid resources on political survival.

African leaders seeking office find themselves in societies where a traditional ethnic bond provides the most reliable foundation for building trust and loyalty between them and the potential supporters (Eifert et al., 2010). Allocating resources toward people sharing the ethnicity of the political leader has a much higher chance to be rewarded than spending money on ethnic rivals. Citizens offer political support to co-ethnic leaders who share the same faith in ethnic bonds and expect the favor to be returned with more resources. In both authoritarian and democratic regimes in Africa, ethnic favoritism has been the key element of political patronage and became arguably an axiom in African politics (Amodio & Chiovelli, 2016; De Luca et al., 2016).

However, the literature on political survival has been made misleading by confusing a leader's priority of survival as his sole pursuit with his political power. It is without doubt that only by surviving in office that a leader's secondary political goals can be made possible. But it is at least equally important to realize that survival is not the sole purpose of political leaders, especially in cases where the struggle for political survival is almost settled. An authoritarian leader foreseeing an almost certain political demise would have more incentive to exploit resources preparing for his future out of office life than wasting resources fighting a war that he might be destined to lose. Similarly, a leader with a firm grip on political power would be able to pursue other goals, such as investing in the society to boast about his political heritage. In democracies, winning more votes can literally be the only goal a leader would focus his resources on before the election; however, once elected his attention and strategy become much less towards office-seeking.

Throughout a leader's tenure, the risk of losing power does persist, but it also varies over time. In the arena of politics, the risk of failure largely depends on the relative power of potential challengers. A leader has to be more alert when a strong challenger appears, and during the occasions of public due between them, such as elections and, potentially, revolts. Specifically, he shall decide how much resources should be spent to win the competition. Conditional on the perceived risk, he shall also make future plans and adopt appropriate strategies based on how long he might stay in power—namely, his political time horizon. A leader with low risk of losing power will be able to invest in some long-term projects and still be confident that he will get the fruit when it finally matured. A leader facing imminent and highly threatening political challenges, either for the risk of coup or losing election, will have to spend all resources he has to secure his power.

In this paper, I explore how the variation in a leader's risk of losing office and his time horizon will affect his resource-allocation strategy along ethnic lines. Ethnic favoritism, being a functional strategy for leaders to more effectively allocate resources in exchange for political support, should be most significant when the additional political support is crucial for a leader's political survival. Despite the fact that a political leader is under persistent risk of being removed from office, not all policy through his tenure is survival motivated. A leader with higher political security will be able to look over the imminent political threats and invest for his future gains as he expects to stay in office for longer terms; the latter may result in less ethnic bias in resource allocation. I expect ethnic favoritism to be less significant for leaders at low risk of losing office. However, once the risk becomes high, the leader's allocation strategy should focus on gaining short-term political support to secure political survival by courting co-ethnic support. With high threats to incumbent rule, leaders' co-ethnic citizens should receive a large amount of allocation, reflecting the larger extent of ethnic bias.

I tested this explanation with infant mortality data for 660 ethnic groups from 14 African countries. As an indicator, very sensitive the availability of all sorts of economic resources, variations in infant mortality among different ethnic groups reflect the economic gap between these groups and how their economic status changed over time. I first find support that, in general, leaders' co-ethnic groups do fare better than other ethnic groups. Statistical results confirm my hypothesis that leaders' risk of failure actually have a significant impact on the welfare of their ethnic kinsman. The extent of ethnic favoritism reflected by infant mortality rates is highest when the leaders face serious political threats. Ethnic groups not related to the national leaders seem to be unaffected.

The findings first confirm the general pattern of ethnic favoritism in African countries. However, I have also shown that ethnic favoritism, as a functional strategy to motivate political support, varies largely depending on how urgently the leaders may need the support. The fact that the welfare of groups other than leaders' ethnic kinsmen are not affected by political instability also provides support to the "core voter" theory instead of the "swing voter" theory in African politics.

3.2 DISTRIBUTIVE POLITICS, QUID PRO QUO, AND ETHNIC FAVORITISM IN AFRICA

I follow the definition of from Golden and Min (2013), considering "distributive policies as those that involve taxes and transfers, and in particular the decisions about allocations of government goods and services to identifiable localities or groups." For countries with government expenditures that depend heavily on foreign assistance, foreign aid is a substantial lot of resources to be distributed. Most of the research on distributive politics focuses on the electoral aspects of taxes and transfers when they seek the connection between distributors and the people who receive them. The distributors holding the political power will influence the distribution of government goods and services for their own interests. Depending on distributors' interests and the audiences they have, some particular distributive strategies are more efficient in bringing back the rewards they need.

One of the major debates of distributive politics is about who receives allocation—namely the core voters vs. the swing voters. Under this theoretical framework, a political leader or candidate will face an audience comprising both those already highly committed to one of the candidates and others that are hesitating among different potential options. In a competitive election, the former are the core voters to candidates and the rests are swing voters. Based on Dixit & Londregan (1996)'s theorization, this line of research shows that in order to win election, it is not always the best strategy to spend money on core voters if the candidate will receive high support even without additional resources allocation. On the contrary, swing voters are more likely to be bought, as their loyalty has not been determined yet. In many studies and elections, spending on swing voters turned to be a very effective strategy. However, for both core voters and swing voters, there is chance of defying the voting promise after receiving allocation. A core voter may opt to punish the candidate if they feel the candidate has exploited their loyalty without additional resource distribution.

Stokes (2005) advances the swing voter vs. core voter analysis to dynamically model the interaction between parties and voters over multiple elections. The longer the expectation for future interaction, the smaller the likelihood of defection as both the candidate and the voters are eyeing long-term gains that could weigh more importantly than a single transaction of distribution for votes. In cases with historically established social cleavages, the cleavage identity serves as a strong indicator for long-term interaction. Morrison (2011) compares Mexico and Kenya, two countries with very similar political regimes and finds their difference in social cleavages led the governments in the countries to use nontax revenues in different ways, with important consequences, in particular, for social spending. The main argument is that social cleavages, while breaking social unity among different groups, reduce defection within the same cleavage and prohibits the establishment of trust across cleavages. Social identities make the expectations of both leader and supporters more identifiable and enforceable. Such social cleavages in Mexico fall along economic class lines, but in Kenya and other African countries are most salient by ethnicity boundaries.

Unlike other political identities, one’s ethnicity almost never changes. Once ethnicity has been commonly recognized as the focus for favoritism in distribution, vote buying become very costly and leaders should always follow ethnic-favoritism strategies. Carlson (2010) find that leaders gain support from co-ethnic kin only if they follow the ethnic-favoritism rule; and allocating resources to non-co-ethnics does not generate similar political support to leaders. In other words, people reward leaders who follow the ethnic-favoritism rule and punish those who do not take care of their co-ethnic people in resource allocation. Because of the high visibility and persistence of ethnic identity, enforcing these rules become very feasible. As a result, “we should see a self-enforcing equilibrium of ethnic favoritism, in which voters mainly target co-ethnic politicians for favors, and politicians mainly target co-ethnic voters for votes” (Chandra, 2007: 64). Current leaders of 9 African countries have been in office for over 20 years, and a majority of African countries do not have regular regime changes. The survival of these leaders is not particularly dependent on purchasing votes from a big population of potential swing voters. The rule of ethnic loyalty has long been established to guide the actions of both leaders and supporters. Instead of handing out resources to non-supporters to swing their positions, it is likely that African leaders would try to build loyal vote blocs among citizens for long-term support. Strong ethnic ties and the popularity of ethnic parties further solidify the bond between leaders and key supporters.

Research on distributive politics in Africa tends to agree with this pattern—that contrary to targeting swing-voter strategy common in other regions, key supporters are commonly the target of resource allocation for elections in Africa. Golden and Min (2013) find that political parties in Africa actually reward voters in areas of the party’s greatest electoral strength. Chandra (2007) systematically establishes the relationship between ethnic resource allocation and ethnic voting, with evidence from national and sub-national elections. The result confirms that the rule of ethnic loyalty expands from the bottom to the top of the political realm that leaders in all political positions are constrained by it. Jablonski (2014) finds that sub-national aid allocation in Kenya has been systematically targeted to the incumbent president’s co-ethnic regions in exchange for votes in election years. Similarly, before the 2010 election in Ghana, the government was receiving over 20 percent less of the expected amount of aid. With the limited resource, the incumbent candidate strategically targeted loyal core supporters for the distribution of aid goods and services. The incumbent National Democratic Congress (NDC) was effective in limiting aid benefit to its key supporters, mostly co-ethnics of the incumbent president, and, as a result, successfully retained power (Briggs, 2012).

Other research finds that similar patterns of favoritism exist in economic cycles, such as participation in the IMF's austerity programs. When the total government budget was reduced in Uganda, key patronages of the leader were able to establish various channels to get compensation from government, while other groups were excluded from protection. Not surprisingly, a majority of the beneficiaries were from President Museveni's Banyankole (Bahima) ethnic group (Mwenda and Tangri, 2005). This research from different countries in Africa and on different distributive goods surely corroborate the ethnic-favoritism argument and seem to have presented very convincing evidence for an "axiom of ethnic favoritism" (De Luca, Hodler, Raschky, & Valsecchi, 2015).

This literature of ethnic favoritism has been very successful in explaining the distributive politics in Africa, especially in the cases where elections are involved. However, the theoretical framework is static in terms of the strategies for both the leaders and the supporters. In reality, both the supply of government resources and the demand for political support changes over time. While loyal support is needed in elections and during other times leaders face challenges, the distribution of government resources can happen any time during the tenure of the leaders. Do leaders reward supporters all the same through their tenures, or do they increase distribution to supporters only for the time of elections? By focusing on elections, and with data only for specific cases, existing research failed to explore the variation of ethnic favoritism over the time of leaders' tenures. In the next section, by examining the leaders' political preferences and strategies, I establish that leaders tend to favor their co-ethnic supporters the most when they have a short time horizon.

3.2.1 Political Time Horizon and Variation of Policy Strategy

The essence of distributive politics is the interaction between a leader with political power and government resources to reward or punish certain people, and the citizens who can collectively support or revolt against certain leaders. In this regard, a leader’s political survival rests on the effective use of resources to round up enough political support to stay in office. The target of such allocation is definitely crucial, as some people’s support for leadership is more likely to be motivated by government resources. Additionally, the timing of the resource allocation is also a crucial factor. Financial assistance to someone in urgent need will elicit more gratitude than at other times. For leaders, additional political support also tends to be more important in some special occasions, such as when there exists a strong challenger.

On the targeting of resources, de Mesquita et. al (2003) model leaders’ distributive strategy for political survival. Depending on different political institutions and the environment under which a leader makes his political endeavor, he needs different groups of supporters to hold power. The supporting group, named “winning coalition” in the selectorate theory, is a group of supporters whose loyalty is necessary and sufficient for the leader to stay in office. The winning coalition is usually much bigger in a democracy and can be very small in authoritarian regimes. The leader will use the resources he can access to distribute to some people in order to form this group of loyal supporters. People within the winning coalition receive more resources than those out of it, and to continue receiving these benefits they should loyally support the incumbent leader. Theoretically, there exists an optimal distribution strategy for the leader to keep sufficient support to fend off challengers. One interesting implication from the selectorate theory is that once established, the regime will always survive. If the optimal strategy is followed, no challenger can make a better offer to potential supporters than the incumbent leader. Additionally, even if the challenger made the same optimal distributive offer, the incumbent leader can still win because his commitment is more convincing than the challengers'. Because authoritarian regimes rely on a smaller winning coalition, they are, in general, more stable than democratic regimes and their leader more secure in office.

However, even if these regimes and political leadership can become highly stable, the leaders can still be trapped in this game of political survival. Their reasoning is that in any regime, the incumbent leader will always have rivals. They consider the distribution of resources to maintain political support as not just the priority, but almost the only issue a leader should consider. When loyalty is high, leaders may safely reserve more of the resources for future occasions "if they find themselves at risk of being deposed" (2003, p. 93). Other research on distributive politics may differ from the selectorate theory, but still focus almost solely on a leader's competition from challengers to win support. It seems ironic for leaders in the selectorate model to stay in power to only be able to continue competing with challengers, especially in situations where challengers are not quite expected. For instance, a leader who just won an election and start, the years in office may not be focusing solely on winning the same battle next time.

Quite contrary to the argument that survival is always the priority for political leaders from the selectorate theory, the only reason that political survival matters is that leaders wanted to achieve other goals. In fact, leaders have various goals, especially economic goals, to achieve other than political survival itself. Economic models of political institutions consider political power only as the tool to establish rules that will help secure economic gains (Daron Acemoglu & Robinson, 2005). Although leaders may have an inherent preference for purely staying in office, the more benefit for them lie with what they want to and can do with the political power. Olson (1993) models a dictator with low political security as "roving bandit" who has very strong incentive to adopt predatory and distortionary economic policy as he anticipates staying in power only for a very short time. However, a “stationary bandit” with firm control over political power would limit taxation and provide public goods to the society because he will likely benefit from this investment. When political survival is highly secured, other secondary goals can become the leaders’ policy priorities. From an economic perspective, effective strategies for gaining political support do not always constitute the optimal strategy for other goals. For a “stationary bandit,” it becomes rational for authoritarian leaders to make long-term investment broadly in the economy if they expect to stay in power and benefit from future economic growth.

Empirical research seems to corroborate the explanation that leaders change their policy strategy depending on the level of risk of being removed from office. Leaders with higher political security keep a longer time horizon when making their policies. Dionne (2011) finds that African leaders with long time horizons have better policy reducing the spread of AIDS, for example, because they expect to stay in power and benefit from the control over AIDS. Similarly, Chang and Golden (2010) find that governments with long time horizon have less corruption. On the one hand, leaders with a shorter time horizon are more likely to have irresponsible policies that will have a negative impact in the long term, such as a high deficit and even wars with other countries (Horowitz, McDermott, & Stam, 2005; Roubini & Sachs, 1989). Leaders with a short time horizon are constrained by the imminent threat of survival which requires a majority of, if not all of, their political resources. Only those with longer time horizons can invest in long-term projects such as prevention of AIDS and still expect to benefit from it.

These studies highlight the fact that leaders change their policy strategies throughout their political tenure. While leaders who constantly prioritize political survival may be only able to focus on distributing goods and services to supporters, a leader with a long time horizon may prioritize other goals, such as investing in the society to bring about higher tax revenue in the future, or boosting his personal political image by improving citizens' life quality. Many long-term investment projects bring heavy short-term costs, and benefits are only generated for the future. For instance, investment in education have many nonproduction benefits such as lower crime, better health for the whole society (Lochner, 2011), but in the short term, spending resources on key supporters' food consumption may work better for getting votes.

As a result, leaders with long time horizons do make better economic outcome that they were able to benefit from. As pointed out by Joseph Wright (J. Wright, 2008, p. 977), almost all dictators have high economic growth at the early stage of their political tenure. Even one of the worst regimes, Mobutu of Zaire, spend heavily on social services with the expectation to stay in power and enjoy the future fruit. When approaching the end of his tenure, Mobutu changed to spend mostly on personal goods.

3.2.2 Political Time Horizon and Ethnic Favoritism in Africa

The belief of a common pattern of ethnic favoritism in African politics rests on the logic that ethnic bonds provide a superior bridge for building trust and political loyalty between leaders and supporters. An incumbent leader needs to ward off potential threats all the time as there are always challengers waiting for a chance to take over power. The higher the risk from imminent threat, the more attention and resource have to be invested into gaining political support with distributive goods favoring the key supporters. Eifert et al (2010) provide evidence from the citizen side, showing that distribution to co-ethnics are expected during election times. Leaders who fail to deliver the expected resources for their supporters will be punished. Political competition significantly strengthens ethnic identities in African countries, and the expectation for ethnic favoritism gets stronger during elections that are closely fought.

Throughout a leader's political tenure, the importance and urgency of survival rise and fall. For a democratic leader, the beginning of a new term means a very high probability of political survival until the end of the term. The risk of being removed from electoral competition increases as a new election season gets closer. Similarly, political scandals, economic downturns, international sanctions, or ethnic conflicts may create challenges to the incumbent leader and increase his risk of losing power. Authoritarian leaders' risk of losing power changes over time as well. Some pseudo-elections are still risky for authoritarian leaders as challengers could take these chances to publicly challenge their positions. There are also always potential coups and revolutions that may suddenly erupt. Other than these special moments, authoritarian leaders are not always in a highly competitive arena to hold their power. Nine of the current African leaders have been in office for twenty years and their grip on power has been relatively solid for most of the time.

Therefore, the variation of potential challenges to the leader should be considered a crucial aspect of the ethnic politics in Africa. The colonial heritage and neopatrimonialism characteristics in African societies make ethnicity the most important identifier on which to build political loyalty. In this regard, there does seem to exist a universal rule of ethnic favoritism that in almost all African countries, leaders shall provide additional benefits to co-ethnic supporters to stay in power. However, not all leaders follow this rule equally, and even for the same leader the extent of favoring co-ethnic supporters can change a lot. If the mechanism of ethnic favoritism is built only on the foundation of leaders' demands for political support to stay in power, the most powerful leaders will have less motivation to distribute resources to earn political loyalty. Similarly, despite strong evidence of ethnic favoritism around election time, we do not know if such bias in resource allocation actually persists over time for all leaders. Does a leader with high political safety allocate aid and other resources more equally because of diminished needs for ethnic-based political support? Or does he allocate resources to pursue goals other than mere political survival?

Political survival is certainly not the only goal a leader tries to achieve during his tenure. While these goals vary from leader to leader, they are not always centered around the co-ethnic citizens of the leader. Other than allocating resources to supporters, African leaders are commonly found embezzling government resources to accumulate personal wealth. Other so-called benevolent dictators may, as well, invest in the society in general without fundamental ethnic bias. It is not surprising that most research on distributive politics focuses on allocation and electoral votes. Moments of high political risk, such as before an election and after other conflicts, forces leaders to adopt a quid pro quo strategy and motivate the co-ethnic base to consolidate their power. The same logic indicates that ethnic favoritism should be less salient when the leader faces lower risk of losing power and can shift his focus from winning short-term support to investing for future gains. It is, hence, not surprising that research focusing on policy that is not short-term or election focused, finds evidence contradictory to ethnic favoritism. Kasara (2007) found that on the issue of farmer's tax, the leaders' co-ethnic people are taxed higher. One of the potential explanations of the difference between Kasara's findings and other evidence on African ethnic favoritism is that tax is a long-term policy different from distributing goods among citizens for the short term.

The relationship between the risk of political failure and ethnic-favoritism strategy should not be linear. Allocating resources for short-term gain in political support and investing in the long-term economic gains require very different policies to be executed by the leaders. Once resources have been deployed to serve one of the purposes, it also becomes very difficult to alter the usage. Specifically, long-term economic investment commonly requires continuous financial and political support, and is prone to failure if the support gets discontinued. For this reason, the choice a leader makes between short-term political support and long-term investment should be thoroughly considered and cannot be altered easily (Hudson, 2008). A political leader makes resource-allocation decisions based on his perception of political risk. Once the leader has consolidated his political power, the normal fluctuation of political risk, as long as it is still not deadly threatening, should not trigger the survival strategy of allocating resources to co-ethnics for political support. However, once the political power is under serious challenge and the strategy of resource allocation for survival is triggered, the leader's focus is fully on survival. A slight increase in risk of political failure may result in losing all the resources the leader controls; hence the ethnic-favoritism allocation will grow exponentially with political risk. For this reason, for a leader with high political risk, I expect the extent of ethnic favoritism to increase exponentially with the rising of political threat.

3.3 RISK OF POLITICAL FAILURE AND ETHNIC INFANT MORTALITY

Tracking a leader's resource-allocation strategy or practice can be difficult because there are all kinds of resources under the control of government. Some existing research focuses on the ethnic bias in resource allocation of a specific project, but it is not sufficient to demonstrate the ethnic favoritism in all resources the government controls (Kramon & Posner, 2016). Another group of research uses socio-economic indicators, such as nighttime luminosity data from satellites, to show the economic gap between leaders' co-ethnic people and other ethnic populations (Roland Hodler & Raschky, 2014; Soumahoro, 2015a). This research provide a more comprehensive comparison of the economic gap between groups than project-specific studies, but there are still a couple of limitations. First, nighttime luminosity captures only the long-term accumulated effect of bias in resource allocation. Nighttime luminosity is the outcome of long-term infrastructure establishment, and, once established, these infrastructures will not quickly disappear. It is much less useful than tracking the changes of ethnic favoritism over time. Also, nighttime luminosity only indirectly measures life quality of different ethnic groups. This method first identifies the ethnic composition of a certain geographical unit, then uses nighttime luminosity of such region to reflect the economic welfare of the main ethnic group living in the region.

To empirically measure the overtime variation of ethnic favoritism, I follow the approach focusing on the socio-economic outcome of resource allocation. Specifically, I use infant mortality rates for different ethnic groups instead of nighttime luminosity to measure the change of economic welfare of each ethnic group. Infant mortality is a better indicator to capture the overtime variance of African people's economic welfare for a few reasons. Infant mortality in Africa is highly sensitive to these financial resources, and infant death is probably the most important issue for citizens (O'Hare, Makuta, Chiwaula, & Bar-Zeev, 2013; Rutstein, 2000). An ordinary African family dependent on financial assistance will mostly likely spend the limited resources they have on their most vulnerable infants. For this reason, the improvement or deterioration of economic welfare will affect the health and life of infants more than other economic activities. Also, the birthrate at the country level usually changes only slightly over time. The variations of infant mortality rates, hence, are due more to infant deaths than to the total number of infants born. Empirically, infant mortality of different ethnic groups has also been found to be an accurate measurement of economic inequality among different ethnic groups (Brockerhoff & Hewett, 2000).

Using infant mortality as an indicator also overcomes the potential mistakes involved in approximating ethnicity with geographical locations. Approximating a population's ethnic identity with their geographical locations suffers from the lack of accuracy in regional population data. A district with over 60 percent of Lomwe population in Malawi may be conclusively categorized as the Lomwe region, but the other 40 percent of the population from different ethnic groups are therefore misrepresented. In comparison, infant mortality data is collected from the aggregating survey or census data at the family level. Infant birth and death are among the most important information recorded in the data collection process. The ethnicity of the infant can also be accurately collected by referring to the parents' ethnicity. As a result, infant mortality at the ethnic level directly reflects the economic welfare of each ethnic group without assuming the geographical location of these people.

Perhaps more importantly, using infant mortality to measure ethnic bias in resource allocation is consistent with the goal leaders want to achieve with ethnic favoritism. When using ethnic favoritism as a strategy to court support from co-ethnic citizens, leaders should focus on the projects that can produce immediate impacts and have high visibility. Some examples of these projects are medical resources, food aid, and road building, which have all been found to be highly biased toward leaders' ethnic groups (Briggs, 2012; Clay, Molla, & Habtewold, 1999a; RAPHAËL Franck & Rainer, 2012; R S Jablonski, 2014). Because food and medical resources would be first spent on infants, the sufficiency or lack of these resources will be reflected in the number of infant deaths.

I expect ethnic favoritism is highest when the incumbent leader is under serious risk of losing office and hence focusing on courting political support using resource allocation that targets co-ethnic supporters. Co-ethnic support becomes important only when the risk of political failure is relatively high, and its importance grows exponentially with the rise of the risk. As the leader wants to have immediate and significant impact on co-ethnic citizens' life quality to consolidate their political support, the resource-allocation bias should be reflected by infant mortality in a short time. I expect the infant mortality of the leader's ethnic group to dramatically decrease within a year following the increase in political risk.

> *Hypothesis:* As leader's risk of losing political power increases, the infant mortality rate of the population sharing the same ethnic identity should decrease in the following year; the relationship between risk of political failure and the ethnic infant mortality rate should be exponential rather than linear.

3.3.1 Method and Data

One major weakness of the ethnic-favoritism literature is the lack of generalizability in the findings due to the reliance on project- or country-specific evidence. Ethnic bias in certain projects or for specific occasions (such as elections) may be compensated for by other sources of resources or from other occasions. Leaders in Africa also differ greatly from each other in terms of ethnic background and can be threatened by completely different kind of challenges. The key to examining leaders' strategy and ethnic favoritism is to have measurements that go beyond leader-specific or country-specific case data, and still be consistent across countries. For the measurement of political risk and time horizon, I use Wright's (Joseph Wright & Escribà-Folch, 2012) estimated risk of political failure, which consistently evaluates leaders' risks of losing power for over 120 countries. Infant mortality rate from survey data is aggregated to have an accurate and consistent measure of economic welfare of ethnic groups from different countries.

3.3.2 Risk of Failure and Time Horizon

Ethnic favoritism is a functional strategy that leaders intentionally adopt to achieve their political goals. The extent of ethnic favoritism–allocation strategy and the subsequent consequences should hence be determined by leader's perception of the risk of losing power. Political and economic cycles, social conflicts, economic sanctions, along with many other factors can all be crucial to the stability of leader's political power. However, these factors can have very different meanings for different leaders at different times. President Museveni has been in office for 7 terms and over 30 years. Though each time the general election still attracts some of his direct attention, it is not true to say he was facing great risks of losing office each time. It would also be mistaken to think his perceived time horizon really change a lot through his term. At least for his first term as a president of a military regime, the fourth year of his term he still had almost complete control over the political power. Not all leaders will have the same perception of risk from election cycles as Mr. Museveni. Some other measurements only use variables that are directly related to the survival of the leader, such as the occurrence of regime change and coups, or the age of the leader (Gandhi & Przeworski, 2006; Joseph Wright & Escribà-Folch, 2012). While they do provide proxies that might imitate the leader's perceived time horizon, these indicators are still very leader-specific and hardly generalizable.

Instead of selecting specific indicators as proxy for leader's risk of failure and time horizon, I follow Wright's (2008) approach of using predicted probability of regime failure to indicate the leader's perception of risk. Wright calculates the probability of a positive outcome from a logit model of regime failure with a series of variables that can potentially contribute to political survival. Threats to stability in his model include Log(GDPpc), Growth, share of population that is Islamic, Civil War, Foreign Occupied, regime-type variables, and Time Splines to control for duration dependency. This model combines the potential explanatory variables for regime change and the historical challenges that actually happened to the regime. The most important advantage of this method is that it overcomes the limitation of some leader-specific variables and can be generalized to almost all other regimes. Without assuming the age or year in term applies similarly to all leaders, Wright's model correctly classifies over 90 percent of regime changes. Additionally, the predicted probability of regime failure may, as well, reflect the similar thought process of a leader's perception of political risk.

The predicted risk of failure (*fail*) ranges from close to zero, to 51.5 percent. Extremely low risk of failure means the leader is very safe in his office and has almost no political threat, allowing him to pursue goals other than political survival. As the risk of failure rises to 20 percent, which is also very rare, a leader would have a serious challenge to his political career and it will be totally rational to allocate more resources to obtain political support.

3.4 MEASURING ETHNIC ECONOMIC WELFARE WITH INFANT MORTALITY

There are hardly any reliable measurements on the economic welfare of different ethnic groups in Africa to evaluate the impact of a leader's ethnic-favoritism strategy. A few studies have used regional favoritism as proxy for an ethnicity-based policy (Ahlerup & Isaksson, 2014; Axel Dreher et al., 2014; R Hodler & Raschky, 2014), because of the geographical concentration of the ethnic population. The assumption is that leaders may target specific ethnic groups by allocating resources to where these groups concentrate. The limitation is that this method only captures resources that can be targeted at certain geographical locations, such as foreign aid projects and regional taxes and subsidies. Allocation by ethnic identity within the geographical location cannot be traced. Also, ethnic favoritism that directly involves individuals, such as government hiring, is not necessarily geographically targeted.

To generate a reliable measurement indicating the economic well-being of different ethnic groups in African countries, I turn to the survey data provided by Demographic Household Surveys (DHS) program conducted by USAID (Boyle et al., 2016). The DHS data is a household-level proportionally balanced survey that has been collected in most African countries since the 1980s. Each country has been surveyed approximately every 5 years. Most of the survey recorded the ethnicity of the respondents. In terms of economic indicators, although the survey does have some direct questions about the property and income of the respondents, the fact that it's only conducted once in 5 years make these direct indicators very limited for tracing the annual changes of economic status.

The survey also has questions asking each woman about any of her children who had died. This provides an opportunity to deduct the infant death for each year before the survey date. Following the same approach of Franck and Rainer (2012), I was able to calculate the infant mortality rate for each ethnic group in each year. For each female respondent between the ages of 15 and 49, additional questions obtained information on all the children she had, including their dates births and deaths. To keep the measurement consistent across countries with a different survey schedule, I record the infant deaths up to 5 years before the survey time. Because of the importance of aid resources to African countries and the sensitivity of infant mortality to the availability of financial resources, infant mortality rates of ethnic groups become an excellent indicator for economic welfare for these groups. With this information, we can backward code the infant birth and death within surveyed households, along with a mother's ethnicity. Individual-level data was later aggregated to a time-series-cross-sectional dataset at ethnicity-year level.

I also need the ethnic identity of each national African leader to identify which groups might be favored by leaders because of their ethnic identity. Kasara (2007) and Francois et al. (2015) have independently collected information on African leaders' ethnicities, though these leaders have been commonly reluctant to expose their ethnic identity. For this research, I relied on leader ethnicity data for 14 sub-Saharan African countries from Francois et al., and expanded the data to 2013.

3.4.1 Leader's Political Risk, Ethnic Identity, and Infant Mortality

My research is to evaluate how the risk of losing office affect leaders' ethnic-favoritism strategy, reflected in ethnic infant mortality. The dataset includes annual infant mortality rates (*logmrate*) for 660 ethnic groups from 14 African countries from the 1970s to 2013. Ethnic groups that match the national leader's ethnicity for each year are coded as co-ethnic groups (*coethnic*). I expect ethnic favoritism to be most significant when the leader's risk of failure (*fail*) is high, and the extent of ethnic favoritism to rise exponentially as leaders face serious political challenges. Other control variables include GDP per capita (*gdppc*), national population (*lgpop*), regime (*polity2*), oil revenue (*oil*), and country dummies to control for country specific baseline of infant mortality.

Table 2. Summary Statistic of Variables

Variable	Obs	Mean	Std. Dev.	Min	Max
logmrate	5,556	-2.260208	.736118	-5.389072	0
fail	4,642	.0365988	.0275815	.0026273	.2222593
coethnic	8,341	.0604244	.2382858	0	1
gdppercap	4,653	863567.2	1089664	121219.3	7640498
lgpop	5,121	8.834805	1.182927	6.473705	11.82668
polity2	5,443	-3.526732	4.597406	-9	8
oil	5,280	.6625995	2.734217	0	45.52365

Notes: *logmrate* is the log of infant mortality rate for each ethnic group; *fail* is the estimated risk of failure; *coethnic* indicates whether the national leader is a member of certain ethnic group; *lgpop* is the log of population; *polity2* and *oil* are national level variables measuring the quality of political institution and the amount of revenue generated from oil.

I first build a Generalized Linear Model to estimate ethnic infant mortality, with errors clustered by ethnic groups. Risk of political failure (*fail*) is lagged by one year as the leader's updated perception of risk and policy strategy would take about a year to cause the change in infant deaths. I used the interaction term of co-ethnicity and risk of failure (*coethnic*fail*) to capture how the risk of failure has different impacts on ethnic level infant mortality. I expect leaders to only significantly favor co-ethnic supporters when the political risk is high and to increase such investment exponentially regarding to increased threats to their political survival. I test for the expected exponential relationship between ethnic favoritism and risk of failure by including quadratic terms of risk of failure and the interactions with co-ethnicity in models (3), (4), and (5). Country dummies are included in the model to control for country-specific fixed effects.

Table 3. GLM Model of Ethnic Infant Mortality

	(1) mortality (all)	(2) mortality (all)	(3) mortality (all)	(4) mortality (co-ethnic)	(5) mortality (other)
coethnic	-0.190***	-0.198***	-0.655***		
	(0.0633)	(0.0730)	(0.135)		
fail		-7.327***	2.307	11.491***	2.584
		(1.637)	(1.917)	(3.994)	(1.928)
fail_squared		37.27***	-12.22	-40.241**	-13.605
		(9.475)	(9.741)	(18.531)	(9.783)
coethnic*fail			12.37***		
			(4.645)		
coethnic*fail_sqared			-43.30*		
			(23.13)		
gdp_per_cap			1.40e-08	8.03e-08	1.26e-09
			(4.79e-08)	(9.83e-08)	(5.12e-08)
log(population)			-0.884***	-0.690**	-0.909***
			(0.118)	(0.301)	(0.120)
polity2			0.00643	-0.000587	0.00728
			(0.00510)	(0.0118)	(0.00560)
oil			0.0184	0.115***	0.00720
			(0.0354)	(0.0272)	(0.0378)
country_dummies	Y	Y	Y	Y	Y
_cons	-1.921***	-1.537***	3.239***	4.222	7.106***
	(0.0579)	(0.0783)	(0.932)	(3.172)	(1.243)
N	5556	3236	2454	221	2233
adj. R-sq	0.107	0.223	0.257	0.498	0.228

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

Model (1) shows the significant correlation between co-ethnic indicators and infant mortality rate, indicating, in general, leaders' co-ethnic groups have significantly fewer infant deaths than others. This is consistent with the existing research showing project-level resources allocated more to co-ethnic groups. Model (2) examines how leaders' risk of political failure affect infant mortality for all populations. The significant positive coefficient on the quadratic term of the risk of political failure shows that when a leader is being challenged politically, the economic welfare of the population dramatically deteriorates and infant deaths increase. Model (3) looks into how the risk of failure affects leaders' co-ethnic groups differently. When adding into the interaction term between ethnic identity and a leader's risk of failure, only the interaction terms are significant. Infant mortality rates for ethnic groups not related to the national leaders do not seem to be affected by leaders' risk of failure anymore. While on the contrary, leaders' co-ethnic groups experience some huge impacts. The coefficient on *coethnic* is much higher and still very significant in model (3), suggesting a higher extent of ethnic favoritism. Additionally, the significant quadratic relationship between *fail* and infant mortality suggests that when a leader's political risk is relatively low, co-ethnic supporters are gradually losing their advantage. However, their infant mortality rates drastically drop when their co-ethnic leaders face serious political challenges.

3.4.2 Co-ethnic Groups versus Others

As shown above, leader's political risk and time horizon seem to affect different ethnic groups very differently. Both *fail* and the quadratic term of risk (*fail_squared*)are significant indicators for co-ethnic groups, they seem to have no effects on others. One important factor to consider for the regression model is that the coefficients on the interaction terms between *coethnic* and *fail* do not only capture the differences between ethnic groups but also the changes in ethnic leadership. Once a president was replaced with a new leader from a different ethnic group, the *coethnic* indicator for both and the previous and the current leader's ethnic group change. The before and after effect is certainly important for estimating the extent of ethnic favoritism, but it also makes the impact of risk of failure more complex. Meanwhile, my explanation does have more implications for co-ethnic groups than others. If an ethnic group changes from co-ethnic to not co-ethnic, the effects of failure are expected to follow different pattern. In this regard, even the same ethnic group should be analyzed separately when its *coethnic* indicator changes.

To remedy this, I build similar regression models specifically for co-ethnic groups and non-co-ethnic groups. I followed the Seemingly Unrelated Estimation approach to estimate two models simultaneously with error terms still clustered by ethnic group (Avery, 1977; Gallant, 1975). This method allows me to estimate the effects on co-ethnic groups and other groups separately, and the coefficients from the two models can be compared with Wald Tests. Model (4) and Model (5) hence specifically focus on how leaders' risk of political failure affects co-ethnic groups and other groups dramatically differently. They are similar GLM models with data only from leaders' co-ethnic groups and other groups. Statistically, the risk of political failure has a significant impact only on the welfare of co-ethnic groups of the leaders. This result strongly corroborates my explanation that leaders do vary their resource allocation to co-ethnic people to gain political support when needed. The economic advantages of leaders' co-ethnic people increase exponentially as the leaders face serious political threats. The estimated infant mortality rates based on these two models are presented as below.

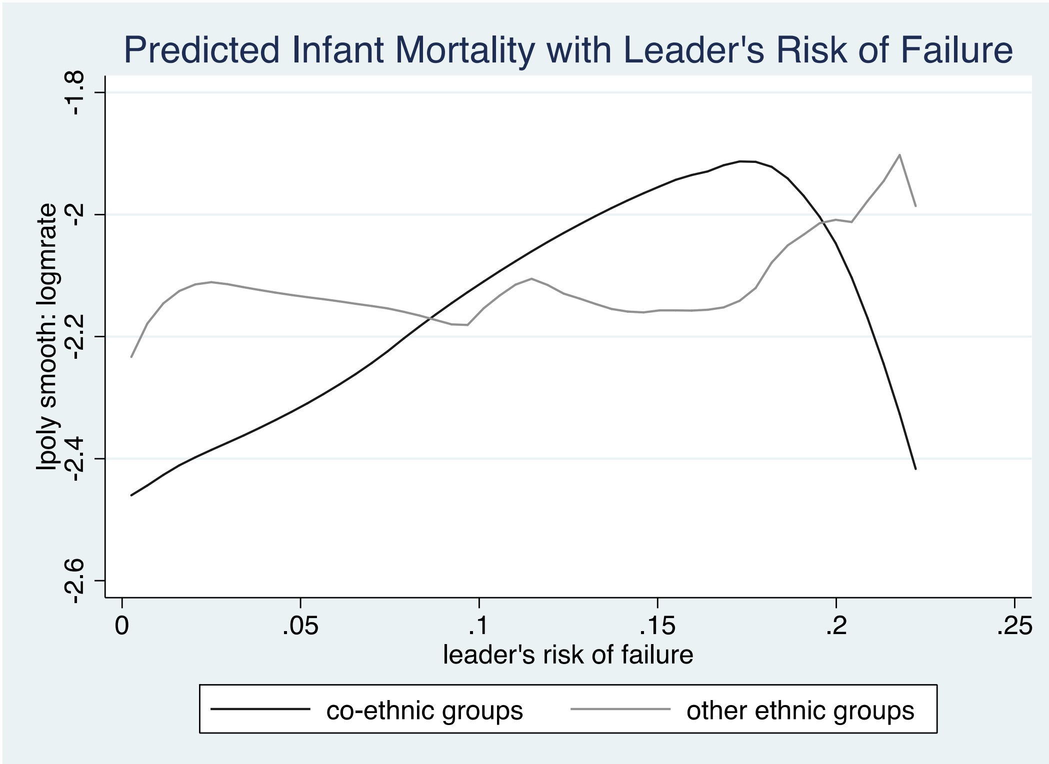

Figure 6. Predicted Infant Mortality with Leader's Risk of Failure

The model on co-ethnic groups indicates that in normal times, infant mortality rates actually increase along with a rising risk of a leader's political failure. However, as a leader's risk of failure approaches above 18 percent[7], co-ethnic groups' infant mortalities start to drastically decrease. The story for other groups, however, is very different. Economic welfare of these groups seems to be rather stable all through all regimes, and infant mortality may actually increase where and when there are severe threats to the ruling leaders. The diverging pattern suggests that the increased ethnic favoritism with a high risk for an incumbent leader may actually come at the cost of all other ethnic groups.

[7]In Wright's (2008) model, the threshold of predicting regime failure is 0.31, indicating risk of failure above 31 percent almost mean the leader is surely to lose his power. Similarly, 18 percent of predicted risk of failure indicates high level of political competition and high chance of leadership change.

3.5 CONCLUSION

Ethnic favoritism has been found to be a crucial factor in African politics. However, rather than claiming it as a universal rule, it is more important to understand why and under what condition ethnic bias would occur. Previous research has shown that leaders rationally and intentionally allocate more resources to co-ethnic groups, especially during election times. I provide an explanation in this paper that African ethnic-favoritism strategy is leaders' functional strategy to motivate political support from co-ethnic kinsmen. Because of the deeply separated ethnic cleavages, leaders and their co-ethnic groups are tied together in political competition. However, as a strategy for the purpose of gaining political support, the extent of ethnic favoritism also varies responding to the risk of leader's political failure. The higher the risk, the more urgently leaders would funnel important resources to co-ethnic supporters.

My empirical analysis provides strong evidence to the argument of ethnic favoritism in Africa, but also disputes the claim of such universal rule. Not only different leaders in different countries use ethnic-favoritism strategy differently, but so does the same leader responding to varying levels of political threats. Lower risk of leadership failure and higher regime stability actually reduce ethnic biases in resource allocation. Considering ethnic favoritism as an inefficient model of resource allocation, my research suggests that political stability should reduce the inefficiency and may lead to economic development.

4.0 AID VOLATILITY AND ETHNIC FAVORITISM IN AID ALLOCATION

Chapter 2 and Chapter 3 showed that leaders distribute aid to advance their own political goals, especially to gain political support to stay in office by favoring co-ethnic supporters. Foreign assistance provides leaders of aid-dependent countries a large potential pool of resources for distribution. As a result, a leader's capability of fending off challengers and dealing with unexpected political threats depends on his access to foreign aid. Despite the dismal effects of aid on economic development in these countries, these leaders should have benefited from aid if they followed the right aid allocation strategies.

Existing literature generally agrees that aid benefits leaders in recipient countries. In practice, foreign aid relates to leaders in recipient countries through two different but correlated mechanisms. On one hand, by strategically allocating aid for their political goals, leaders can follow or undermine donors' plan of aid allocation, which further affects development outcomes. On the other hand, leaders' political success depends on donors' generosity and capability of continuously providing assistance to these aid-dependent countries. Inherently, leaders do have the incentive to follow the donors' plan so that they can have sufficient resources for both personal political success and the economic development of the country. They may also defy the donors' will if they have serious reasons to do so, such as to defeat a powerful challenger by allocating additional resources to primary supporters.

In this essay, I explore how these two correlated mechanisms together affect the sub-national allocation and development outcomes of foreign aid. While leaders can strategically allocate aid for their political benefits, they also become dependent on aid. The more aid leaders have access to, the more resources they can use to purchase political support from a particular group or invest in the economy. As the citizens in aid recipient countries rely heavily on foreign assistance to support their daily activities, they place high expectations on the leaders to secure or better increase such resources from foreign donors. When such expectations cannot be met, leaders' political base weakens as the supporters suffer economic loss and become unsatisfied with the leaders. Constrained by the high expectations of supporters for distributive goods, leaders would further alter the allocation of aid resources to maintain the political loyalty needed for political survival. As a result, the availability of aid to some extent determines leaders' allocation strategy, which further affects the development outcome of foreign aid projects.

While there have been a few studies pointing out the fact that aid has been highly volatile, the effects of aid volatility on development outcomes have rarely been studied. This essay provides both a theoretical explanation and empirical evidence showing that high volatility undermines donors' development plan by threatening leaders' political survival. To consolidate political support of citizens who suffer economic loss during negative aid shocks, leaders have to distribute the limited resources more towards their key supporters. This essay also makes direct contribution to the literature of distributive politics.

4.1 AID AND LEADERS' POLITICAL SURVIVAL: LITERATURE

Each year, a large amount of aid is delivered to the developing world in the hope of promoting development and alleviating poverty. In 2009, net Official Development Assistance (ODA) to Burkina Faso was 102 percent of its total central government expenditure. In the same year, this proportion was 82 percent for Uganda, 105 percent for Sierra Leone, and 33 percent for Ghana (Briggs, 2012). The sheer size of aid makes it one of the most important financial sources for many African countries. This large inflow of resources not only affects these countries' economic growth, but also reshapes the political interactions between leaders and citizens, which is the key for distributive politics in these countries.

Little consensus has been generated from the chronic debate concerning the effectiveness of aid in society—whether aid promotes economic development, reduces poverty, or facilitates democratization. However, scholars do not dispute that leaders are benefiting from aid. Windfall from donors makes leaders financially more powerful and politically more popular by benefiting at least some people in the recipient country without causing much pain. Donors depend heavily on leaders of the recipient countries to actually make aid available to the targeted population (Lindsay Whitfield & Fraser, 2010). They have to consider leaders' interest when designing and negotiating the terms with recipients, and deliver aid through the government system under the leaders' control. Essentially, leaders would accept aid from donors only if they find the aid projects beneficial. In many cases, leaders can even negate the terms, despite pressure from donors (de Mesquita & Smith, 2007a).

It is not surprising that foreign aid consolidates both democratic and authoritarian regimes all over the world (de Mesquita et al., 2009; Morrison, 2009). There should be two aspects of foreign aid's impact on leaders' political survival. As established by Morrison (2009), aid, along with other nontax revenues, provides the governments with large amounts of additional resources that enable them to lower the tax rates needed to support the government. Revenues from tax requires extracting resources from certain citizens before they can be dispersed. While increasing government spending and resource allocation to certain groups of citizens will likely increase political support for the government and leadership, the revenue extraction process with tax may threaten the survival of the regime. Nontax revenue, including foreign aid, differs from tax so that political leaders can have more allocation and less taxation. With nontax revenue, political leaders can increase spending to appease their potential supporters without increasing the tax rate. The more aid a country receives from foreign donors, the more the leaders will benefit from allocation and bear less of the cost of taxation.

Despite that leaders may actually have nothing to do with bringing aid and other resources to the people, they still gained and actively claimed credit for the resources provided by foreign donors. Leaders constantly claim credit for the positive changes in the economy and blame others for the faults. In the case of foreign revenues, political leaders commonly claim to be the main contributor to aid acquisition, but shift the blame to donors when some domestic interests get hurt (Vreeland, 2005). As a result, Ahmed (2012) finds that leaders' political tenures are extended by all kinds of foreign revenues, even remittances sent by citizens working abroad to their domestic relatives. By actively claiming how their excellent leadership made citizens better off economically, leaders improve their political safety with resources unrelated to them (Cruz & Schneider, 2017). In these cases, leaders have lower risk of political failure if some citizens receive resources somewhere and live better lives.

Another aspect of the aid and political survival relationship concerns how leaders can strategically prioritize some citizens in aid allocation and maximize the political support they can gain with aid. While everyone who directly benefits from aid allocated by the government will have an improved economic life, not all of them will be equally grateful to the leaders and loyally support them in elections. Some citizens may dislike the incumbent leader so much that his political support is almost impossible to gain no matter how much aid allocation he receives.

Meanwhile, distributing private goods to another group could significantly expand the leaders' political base if needed. Such variation in the potential reward the leaders can get from aid allocation hence motivates leaders to select the targets of aid strategically. A rational leader will target certain groups with higher marginal political reward to maximize aid's effect on increasing political support and regime stability.

In terms of who should be targeted, de Mesquita's (2003) model of political survival indicates that leaders will stay in power by strategically allocating resources to satisfy their political "winning coalitions." In all countries, political leaders need sufficient political support to stay in office, so that there is not enough people to benefit from a mass revolution or coup against the leaders. Depending on the institution and political processes of each country, there is large variation regarding the size of the winning coalition. Authoritarian regimes will have a very small winning coalition, as only a small number of people can be part of the process of selecting the national leaders. Leaders in democratic countries will have to maintain a much larger winning coalition as more people are involved in the political process. By allocating resources to a specific winning coalition, a leader should have enough support to fend off any potential challengers. While members of a winning coalition determine the political fate of the leaders, resource allocations to citizens out of the coalition are much less beneficial, if rewarding at all. In this game of using resource allocation to gain political support, or "quid pro quo," as extensively explored in the literature, established social cleavages are crucial factors in forming the winning coalition and in leaders' decision of which groups to target.

The resulting pattern of aid allocation follows the cleavages between social classes in Mexico, and ethnic identities in Africa (Morrison, 2011). The essence of this distributive politics is the need of political support to the leaders and the resources they have in hand to allocate. In

African countries, ethnicity serves as the focal point to build political loyalty. The most important social cleavage in African countries divides different ethnic groups and leads to “ethnic favoritism” in aid allocation. Extensive evidence on such favoritism in resource allocation has been found during a time when leaders were in serious need of political support, such as during political campaigns and when other political threats appeared. In Kenya and Ghana, aid projects are directly tied to political support to incumbent leaders (Briggs, 2012, 2014; R S Jablonski, 2014). Targeting aid allocation at citizens from the leader’s own ethnic group will most likely bring about political support, while aid to other ethnic groups won’t have similar effects (Eifert et al., 2010). Additional aid becomes particularly important when people have suffered economic loss. Disgruntled citizens can be compensated and comforted with aid resources so the leaders are less likely to be overturned by citizens suffering economic loss (Savun & Tirone, 2012a).

As a result, foreign aid consolidates both democratic and authoritarian regimes. The availability of aid increases general satisfaction with the government, provides leaders resources to target specific groups of citizens to gain political support and additional resources to deal with increased political risk from challengers and other unexpected shocks. Countries dependent on aid commonly have higher political stability than those with similar political economic conditions but less foreign support. In authoritarian regimes, the availability of foreign aid is found to hinder the process of democratization (Djankov, Montalvo, & Reynal-Querol, 2008; W Easterly & Easterly, 2006).

While this literature has extensively shown how the availability of aid has been benefiting political leaders, little attention has been given to the other side of the story—the inavailability of aid. If leaders can gain power from additional resources, they may also become more vulnerable when the amount of resources decreases. Based on the evidence provided in their research, performance of political leaders is constantly evaluated by the economic benefits they can bring to their supporters. Leaders who routinely use aid to gain political support also become dependent on foreign assistance. Once a leader becomes dependent on the availability and sufficiency of aid resources for gathering loyal supporters, he may as well lose support and his political power when this pile of resources suddenly shrinks. The more foreign aid benefits a country and its leader the bigger the risk created when such revenue has been reduced unexpectedly.

A few questions regarding aid and leaders' political survival beg to be addressed when we take into account the potential shortage of government resources. If the increase of aid can consolidate both democratic and authoritarian regimes, does the decrease of aid destabilize regimes and topple political leadership? If in "quid pro quo" politics key supporters get more aid when there was sufficient aid, do they also lose more benefits when there were shortages of generosity from foreign donors? These questions are particularly important because such significant rises and falls in the amount of foreign aid have been very common through the years. Because African aid recipient countries are in particular highly dependent on aid, their people and leaders become fully exposed to the shocks that may come from the volatility of aid.

4.2 AID DEPENDENCY: THE PEOPLE AND THE LEADERS

The original idea of foreign aid is that some countries are trapped into the constant status of "poverty" and require external assistance to escape to economic development. As Sachs emphasizes, a combination of investments well attuned to local needs and conditions can enable African economies to break out of the poverty trap" (Sachs et al., 2004). Once these countries have been lifted out of poverty, they are expected to undergo long-term development without external assistance. The fact the many aid recipient countries are still struggling with poverty calls this theory into question. However, aid has been and will keep flowing into these countries as the call for a "big push" came back again in the 21st century (William Easterly, 2006). The planned short but big "push" has become a perpetual stream of funding from donors to aid recipient countries. The resulted dependency on aid, "that process by which the continued provision of aid appears to be making no significant contribution to the achievement of self-sustaining development" (Riddell, 1996), has become a crucial characteristic for these countries, their people, and their leaders.

A country and its people become economically dependent on foreign aid when a large share of the economic activities can only be supported by foreign assistance. Generally, a government is "aid dependent" when few of its states can carry on routine and core functions or deliver basic public services without external funding and expertise, such as the maintenance of existing infrastructure or the delivery of basic public services, without foreign aid funding and expertise (Bräutigam, 2000; Brautigam & Knack, 2004). While it would be difficult to have a definite standard to determine if certain countries are dependent on aid, researchers have been using 10 percent of GNP as a reference point. By this standard, many African countries are highly dependent on foreign aid and this aid dependency has persisted for decades. By 1990, 30 out of 46 Sub-Saharan African countries received aid more than 10 percent of their GDP. In 1998, 21 countries continued to receive aid at that level. Almost all of them had been net recipients of aid flows at 10 percent of GDP for 10 years or more. For many reasons, the idea of a "big push" to lift African countries from poverty and let them prosper on their own have not come true despite decades of "push" from donors (Abuzeid, 2009). One of the results from donors' generosity is that foreign assistance has become an almost permanent part of these economies.

The recipient governments depend even more on foreign aid for daily functions. There are many ways government expenditure can be directly or indirectly dependent on foreign assistance. First, loans and budget support has always been one of the major forms of foreign aid (Devarajan, Rajkumar, & Swaroop, 1999), despite some decrease in recent years. Governments receiving loans from the IMF usually have multiple-year agreement and integrate such revenues into their annual budgeting processes. Besides, governments almost always adjust their budget according to donors' aid programs. All aid projects are fungible to some extent (Feyzioglu et al., 1998; Morrissey, 2015). The "fungibility" of aid assures that governments are always among the direct beneficiaries of foreign aid, even if donors do not directly give aid to support government expenditures. Specifically, "in a number of countries such as Malawi, Ghana, and Zambia, aid has funded more than 40 percent of government expenditures, on average, for nearly 20 years" (Deborah A. Bräutigam & Stephen Knack, 2004). Between 1970 and 1999, the flow of donor funds to Kenya averaged about 9 percent of GDP, which also accounted for about 20 percent of the annual government budget and financing slightly over 80 percent of development expenditures (Njeru, 2003). The size of the government also increases as a country receives more foreign aid (Remmer, 2004). The additional employment also makes the government more dependent on foreign aid to pay the salaries to its employees.

Aid dependency make resources from foreign aid an essential part of people's daily lives as well. Once these aid projects were established, they start playing the roles and replacing the indigenous market structures. Food aid, the most common form of foreign aid, can distort local food markets and disincentivize local food production (Ferrière & Suwa-Eisenmann, 2015). In many recipient countries, education and health care are so heavily dependent on foreign funding that donors' generosity directly affects these countries' infant mortality rates (d'Aiglepierre &

Wagner, 2013). Because many aid projects last for multiple years, some of indigenous establishments can be eliminated. Schools and hospitals established by aid projects would have to depend on continuous foreign support unless other revenues can be generated. As pointed out by scholars on the macro level, aid dependency is the troubling fact of perpetual aid inflow without self-sustaining development. The impact on the micro level is a population whose basic life depends heavily on aid. Disruption in aid flow cannot easily be compensated by other factors because the indigenous establishments replaced by aid projects cannot easily be restored. In these aid-dependent countries, aid is no longer just foreign assistance to provide additional economic benefit but a crucial resource people rely on for daily economic functions.

The fact that both peoples' economic welfare and governments' expenditure depend on foreign aid makes political leaders also dependent on foreign assistance for their political survival. On one hand, the leaders' supporters are among the people whose economic life has become dependent on aid. These supporters may directly benefit from aid projects, and indirectly they are part of the economy that is dependent on aid. The availability of aid resources can directly affect the food, heath care, and education they may have access to. Meanwhile, as discussed in previous chapters, leaders rely on government expenditure to provide resources to gain political loyalty from supporters. Leaders have been allocating "unscrutinized revenue" such as foreign aid projects to reward key supporters, who will, in response, keep the leaders in their offices. Leaders can only reward supporters with resources that they have accessed to, or that are under the control of the governments. A government highly dependent on foreign aid for expenditure would also largely constrain the leaders' capacity to reward supporters with distributive goods.

The dependency of both the supporters and the government expenditures on foreign aid make the fate of political leaders very sensitive to the availability and changes of foreign aid.

Sufficiency of aid will boost leaders' political support by enhancing supporters' life quality and providing more government funding for leaders to reward supporters. On the opposite side, supporters will demand more aid when aid decreases, exactly when the leaders have less government expenditure for distribution. The empirical researches on foreign aid and leaders' political survival have found consistent evidence showing that leaders who are endowed with more aid have higher job security (Ahmed, 2012; Morrison, 2009). Leaders can earn political credit for additional aid resources delivered by donors, and more aid allows them more resources to distribute towards supporters.

However, the theoretical explanations of this literature have not fully captured the relationship between aid and leaders' political survival. One common theme in the aid and political survival literature is that aid is considered only as an external factor to the recipient country's domestic political economy. As external resources, aid brings additional benefit to citizens and consolidates the regimes. Aid is also used as a remedy for all sorts of political economic shocks. However, for any country with a long history of high aid dependency, aid is no longer just some additional revenue needing some beneficiaries. If a country commonly receives foreign aid as about 40 percent of its government expenditure, aid becomes a crucial part of everyone's economic welfare. For this country, the availability and allocation of aid become part of the political equilibrium. Both the leaders and the citizens would have taken aid into full account as part of their routine life. The leader should have planned allocation of aid to maintain existing political support and his personal consumption, if there is no further need to distribute. Individuals who received aid previously would also expect the same resource to come the next year. If aid inflow is exactly as expected and does not increase, there would be no improvement in people's lives and no additional credit for leaders to claim. In other words, for countries where aid has been common and constant, the stable inflow of aid should not increase or decrease leaders' chances of political survival.

For these countries, the variation of aid flow should be more important than the absolute amount of aid. The absolute amount of aid captures how dependent these countries are on foreign assistance, but aid dependency itself does not necessarily make a political regime more stable or fragile. When both the people and leaders become dependent on aid and take aid into full account in their spending, they no longer consider aid as additional resources. As a stable source of revenue, the spending of aid resources becomes part of government expenditure that does not differ fundamentally from spending tax revenues. People who regularly receive food aid do not treat the food from donors differently from what they can buy with their own money. Aid dependency makes the government and the people vulnerable to the variations of aid availability. In an aid-dependent country, the leader's political survival is also tied to the availability of aid.

A fallacy with aid and political survival literature is that they have overlooked the impact of aid variation on leaders' political survival. By treating aid only as external resources, their panel regression models find aid to have positive effects on regime stability (Kono & Montinola, 2015; Morrison, 2009). The variation of aid in a panel dataset include two parts. One part is the difference between the mean amount of aid for all countries, which indicates the different levels of aid dependency. The second part is the variation within a country but over time, which can be captured by annual changes of aid within the country. If aid flow to all countries has been stable, their findings would actually suggest that a higher level of aid dependency makes the regimes more stable. On the other hand, if all countries have similar levels of aid dependency, their results would indicate that time-series changes in aid is positively related to the leaders' risks of survival. In other words, positive aid changes increase regime stability, and negative aid changes destabilize political regimes.

These two different effects of aid on leader survival are mixed in the statistical results of the aid and political survival literature. Aid dependency could consolidate regimes for many reasons, such as high aid dependency may indicate policy consensus within the country and political support of foreign donors. Additionally, my explanation also suggests that aid change itself should be a crucial factor for a leader's political survival (de Mesquita & Smith, 2009). Given a country with a stable level of aid dependency, the changes in aid would significantly affect both the life quality of the citizens and the financial capacity of the government. As discussed above, the political support of leaders in aid-dependent countries hence are directly tied to the changes in aid.

4.3 AID VOLATILITY AS A SOURCE OF POLITICAL RISK

By considering aid as an external factor to recipient countries, existing research largely overlooked the risk brought about by aid itself. For a country not dependent on aid, assistance from donors can only bring positive effects on people's lives, and the more resources leaders can distribute. The baseline for these countries is a situation where without aid political economic order will still persist. Leaders will still have sufficient political support without any assistance, and additional resources from aid only work to his advantage. However, in countries that have been dependent on aid for decades, the social economic order cannot sustain without aid. In this situation, the constant inflow of aid does not change the political economic order or the stability of the regime, however, any changes in aid flow will have direct impact on the people, the government, and the leader.

As discussed above, the level of aid should affect leaders' political survival through two different mechanisms, namely aid dependency and over-time aid changes. Existing research focuses on how countries with more aid are better equipped financially to deal with economic shocks (Savun & Tirone, 2012b). However, it becomes a different issue when aid-dependent countries have to deal with shocks caused by aid. Just as aid increase may be a pleasant surprise, aid decrease would cause welfare loss to some people because there are not sufficient resources to support their economic plans. The more a country depends on aid for both people's consumption and government budgeting, the bigger impact they have to cope with when aid is unstable. Aid volatility may be even more difficult to deal with because other government revenues, such as tax revenue, cannot easily be adjusted in response to aid shocks. If, for various reasons, the positive changes in aid can boost the political support for the leaders, aid decrease can also pose a serious threat to the leaders' power. The volatility of aid, especially unexpected aid shocks, can potentially destabilize any political regimes more than the volatility of other government revenues.

Unfortunately, aid flow is perhaps the most unstable and unpredictable among all kinds of revenues. In general, foreign aid revenue can be up to 40 times more volatile than government revenue, or on average 2 to 3 times more volatile than recipient GDP (A Bulir & Hamann, 2003; Ales Bulir & Hamann, 2007). These estimations have considered different measurements of both the amount and the volatility of aid. There are generally two different approaches of measuring aid: the absolute value in per capita US dollars or the share of recipient GDP in US dollars. It is arguably better to measure aid in absolute dollar value if the financial assistance would mostly be used to import goods from international markets (Lane & Bulir, 2002). Otherwise, measuring aid with its absolute dollar value cannot sufficiently control for the inherent economic capacity of the recipient countries. Similar amounts of aid would mean much less to a country where people can make 10 dollars each day than another country where a majority of people live making less than one dollar a day. In fact, African countries do differ very much in their economic level and, even for the same country, the purchasing capacity of foreign assistance varies a lot as a result of the changing exchange rates (McKinnon, 1964; White, 1992).

Measuring aid as percentage of GDP (adi/GDP) suffers less from the currency problem and reflects each country's dependence on aid, although we should be concerned about how the calculation of aid volatility is actually caused by GDP volatility. Figure 1 is from Bulíř & Hamann (2008), who compare the volatility of aid and other government revenues. In the first graph, aid and other revenues are measured by aid/GDP, aid per capita in US dollars, and in PPP US dollars. Despite that GDP itself could be volatile, this graph show that the changes in aid volatility are very consistent using different measurements of aid. While aid measured in absolute dollar values seems to be smaller than measured with aid/GDP, the consistency in change indicates that the volatility of recipient GDP is not a major component in aid volatility. The crucial advantage of measuring aid by aid/GDP is to provide a measurement that can consistently evaluate how aid and its volatility affect the political economy in multiple recipient countries over decades. For this specific reason, aid is measured as the share of recipient GDP in this research.

As shown in their graph (Bulíř & Hamann, 2008), aid volatility measured by the average variance of aid was highest in 1991–1994 and lower in other years. However, aid volatility has been significantly higher than other revenues since the 1970s. A potential explanation is that for aid recipient countries, tax and other domestic revenue should change proportionally with the total GDP unless there is some significant change in the country's economic structure. Foreign aid, however, are given by donors for many reasons which are largely unrelated to the economic performances of recipient countries (Alberto Alesina & Dollar, 2000). Some of the factors determining donors' generosity are economic related, while in other cases donors change aid allocation for reasons such as political alliance, human rights concerns, and domestic policies of recipient countries (Barro & Lee, 2005; A Dreher, Sturm, & Vreeland, 2009).

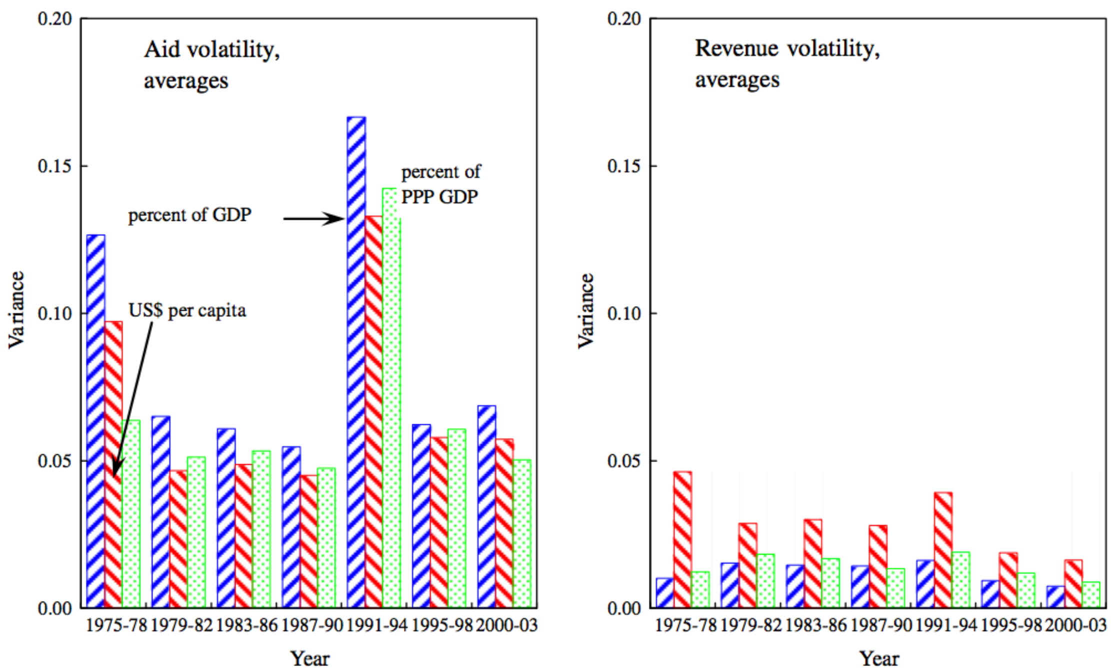

Figure 7. Volatility, Aid vs. GDP, from Bulíř and Hamann (2008)

As indicated by Bulíř & Hamann (2008), despite efforts from donors trying to make aid more effective, aid flow has been volatile for decades and got even worse in the 2000s. To make it worse, they also find that aid volatility follows economic cycles. When a country suffers economic shocks, it will probably receive less aid at the same time, because the donors may have been hit by the economic shocks as well and shift their focus to domestic needs. Dang et al. (2013) estimated that financial crisis in a donor country will cause a 30 percent decrease of its foreign aid. Factors affecting aid volatility are also mostly out of recipients' control, such as economic shocks to donors, or even donors' domestic party's political preference (Greene & Licht, 2017; Jones, 2015; Kim, 2010), constraining the recipient governments from proactively prepare for aid shocks. The large unexpected variation of aid flow makes political and economic planning very difficult. Any development plan eyeing a reasonable term may be disrupted when the promised funds disappear. If high aid volatility is to be expected, reasonable macroeconomic strategy is to increase current consumption and reduce investment, including investment in education, health care and other development goals that donors intend to achieve (Museru, Toerien, & Gossel, 2014). High aid volatility has been found to be associated with economic distortions such as inflation and currency instability (Arellano et al., 2009), decreased economic growth (Hudson, Mosley, & Mosley, 2008), and making countries fall into poverty traps (Agenor & Aizenman, 2010).

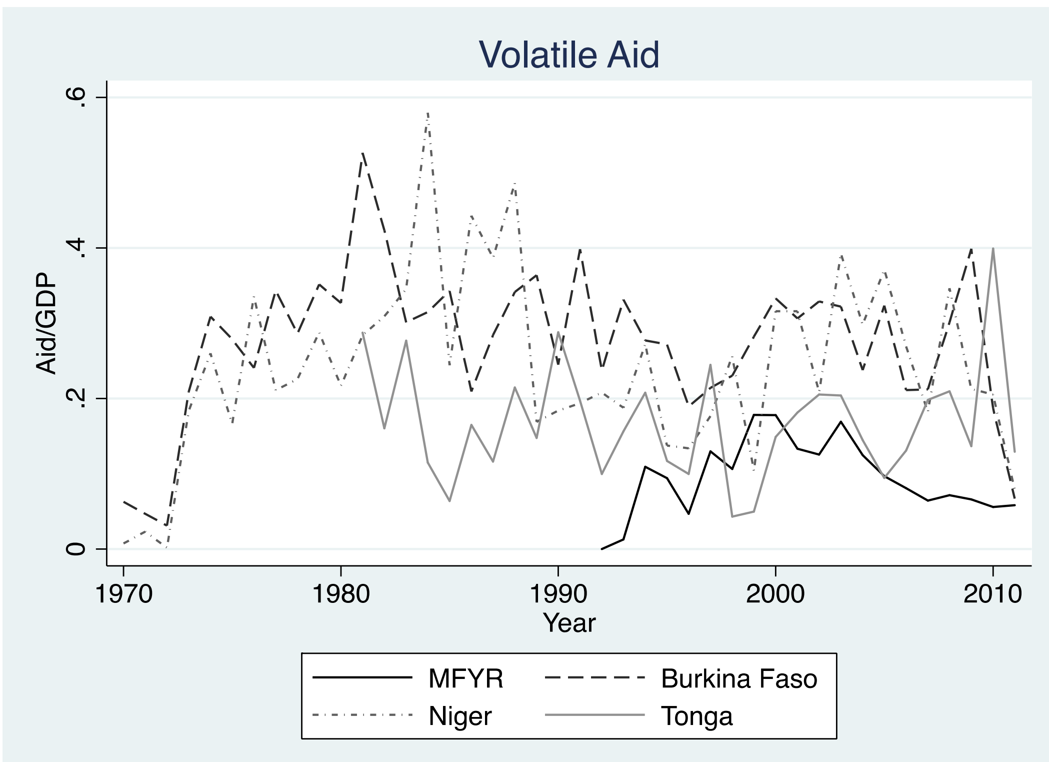

Figure 8. Volatile Aid Flow for Selected Countries

For countries dependent on aid, these impacts from aid volatility may as well make aid a major source of instability. Positive changes in aid availability may as well follow the mechanism established by the aid and political survival literature and consolidate regimes as more resources are available for allocation and consumption. Negative changes in foreign aid, or aid shocks, then inevitably carry about threat to the political survival of incumbent leaders. On one hand, aid shocks lead to significant welfare loss to all the citizens in general and political struggles. The ultimate form of disgruntled public could be a mass demonstration against the governments, which are very common during economic crises and other economic shocks. Additionally, aid shocks constrain leaders' abilities to satisfy members within the winning coalitions. If in regimes with a small winning coalition leaders are less threatened by the public, they become highly dependent on the support of small groups of elites. When a leader fails to keep the allocation promise to the winning coalition, he would be exposed to potential challengers who can make credible commitment and win enough support to replace the incumbent leader (de Mesquita, 2003). Empirically, Gutting and Steinwand (2015) analyzed data on armed conflicts in 106 recipient countries for the years 1970 to 2008 and find aid shocks significantly increase such political struggles. Escriba-Folch and Wright (2010) find that sanctions, most commonly in the form of withholding aid, increase the likelihood of a regular and an irregular change of ruler, such as a coup, in personalist regimes. In single-party and military regimes, however, sanctions have little effect on leadership stability.

4.3.1 Aid Volatility and Leader's Political Survival

To complement existing research on how aid consolidates all kinds of regimes, I then explore the destabilizing effect of aid volatility on political leaders. When aid is considered as external or additional resources, the amount of aid determines how much it can increase the economic welfare of the citizens. The more aid a country receives relative to its domestic production, the more likely aid can compensate those who lose from economic shocks. However, where aid has been internalized into the budget and other kind of spending by the governments, aid becomes part of the domestic revenues. A country with fully internalized aid worth 50 percent of its GDP is not more stable than another country with 80 percent GDP of aid, because aid and other sources of revenues become less distinguishable when they are all part of the same budget. For such economies, the size of aid still matters but perhaps much less than the change in the amount of aid. The unexpected increases or decreases in aid are actually external shocks to an integrated equilibrium of political economy. The changes in aid may disrupt originally planned spending by citizens or by the government. For this reason, I expect the change of aid, rather than its absolute amount, to be a crucial determinant of leaders' political survival in aid recipient countries. For a country with internalized aid, a positive change in the amount of aid should consolidate the regime, while negative aid changes are expected to increase the risk for incumbent leaders to lose office.

Because different countries have different levels of aid dependency, the change in the absolute amount of aid cannot accurately reflect the economic impact of aid volatility. For instance, for a country receiving aid of the size of 20 percent of its GDP, a 10 percent drop in aid would make the citizens and government loss 2 percent of the planned budget. However, for a country depending on aid worth 40 percent of its GDP, a similar 10 percent aid decrease will result in a 4 percent loss in revenue. A consistent measurement of the volatility of aid is the change in aid size weight by recipient GDP (Δaid/GDP). This measurement captures the size of the impact on recipients' financial capacity. For countries with different levels of aid dependency, each parentage change in aid/GDP means a 1 percent decrease in spendable resources to all countries respectively. This measurement is also consistent with the approach of Nielson et al. (2011). I begin by calculating the change in aid (standardized by GDP) for each country-year. Total aid received by each country is provided by AidData project (Tierney et al., 2011), where official development aid (ODA) received by each country from all donors are aggregated. I also average changes over the previous two years to account for the time gap between aid commitments and the time when countries actually receive (or fail to receive) the aid.

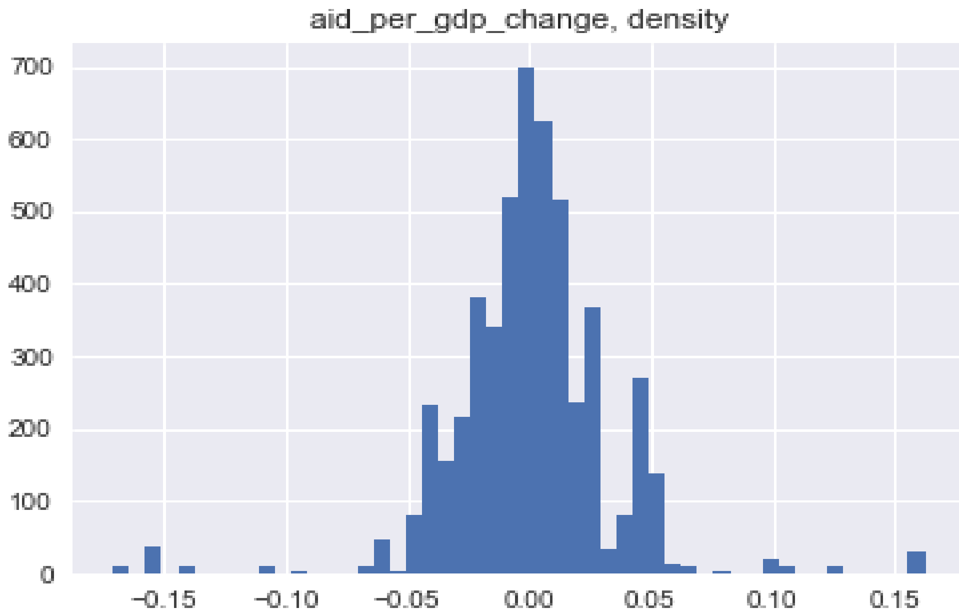

Figure 9. Distribution of Aid/GDP Changes

I then followed Wright's (2008) approach to build a logistic regression model to estimate the effect of aid changes on leaders' political survival. Wright's model of regime failure includes the following explanatory variables: Log(GDPpc), Growth (t-1), Growth (t-2), share of the population that is Islamic, Civil War (t-1), Foreign Occupied, regime-type variables (military, single party, monarchy, single party–military–personalist hybrid, military–personal hybrid, single party–military hybrid, and single party– personal hybrid), and Time Splines to control for duration dependence. I further added the relative size of aid (aid/GDP), Aid Change (t) and the lagged term of Aid Change (t-1) to the logistic regression model. Due to the time gap of Wright's regime data and the AidData, the updated model has a smaller number of observations. However, the updated model largely improves the prediction accuracy of the original model. Wright's original model correctly classified 90.6 percent of regime survival/failure in the dataset, and in comparison, the new model with aid volatility data correctly classified 96.7 percent of the observations.

Table 4. Logistic Model on Regime Failure

Regime Failure	(1) Wright(2008)		(2) Updated with Aid Change	
aid/gdp			2.698	(0.51)
aid/gdp_change			-11.12**	(-2.27)
aid_change_lag			-8.154**	(-2.52)
log(gdp)	-0.393***	(-3.40)	-0.718***	(-3.02)
growth	-0.0561***	(-3.59)	-0.103***	(-4.94)
islam2	0.00299	(0.83)	0.0134**	(2.12)
foreign_maintained	-0.839	(-0.98)	14.54***	(9.73)
civil_war	0.437*	(1.75)	0.715**	(1.97)
_military	0.831**	(2.41)	2.436***	(4.37)
_sparty	-0.897***	(-2.64)	-0.662	(-0.94)
_monarch	-0.415	(-0.64)	-1.783**	(-2.13)
_tthreat	-2.100**	(-2.10)	-2.065***	(-2.64)
_milpersonal	0.205	(0.59)	0.182	(0.31)
_spmilitary	-0.340	(-0.79)	0.338	(0.51)
_sppers	0.284	(0.63)	3.986***	(5.15)
central_europe	0.0843	(0.16)	-14.31***	(-10.62)
middle_east	-2.284*	(-1.74)	0	(.)
north_africa	-1.156	(-1.48)	-1.427	(-1.38)
sub-saharan_africa	-0.767**	(-1.99)	-1.341	(-1.79)
south_america	0.714	(1.74)	0.972	(1.55)
west_europe	0.583	(1.28)	2.673***	(3.78)
east_asia	-0.521	(-1.22)	0.293	(0.41)
central_asia	-1.338**	(-2.12)	-1.645	(-1.22)
spline1	0.0399	(1.30)	0.136***	(3.00)
spline2	-0.0285	(-0.81)	0.0640	(1.19)
spline3	0.116**	(2.44)	0.0737	(1.13)
spline4	-0.295**	(-2.29)	-1.389	(-1.52)
_cons	-0.530	(-0.58)	-1.097	(-0.57)
N	2881		1351	

t statistics in parentheses
* p<0.1, ** p<0.05, *** p<0.01

Notes: *aid/gdp* measures the level of aid received in each country/year; *aid/gdp_change* is the change in *aid/gdp*, calculated by subtracting *aid/gdp* in current year with *aid/gdp* in previous year; *aid_change_lag* is the change in *aid/gdp* lagged by one year. All other variables are inherited from Wright's (2008) original model.

The updated model indicates that aid changes do significantly affect the stability of the regime and the survival of an incumbent leader. Aid changes, instead of the amount of aid, are found to be significant determinants of regime failure. While positive aid changes would consistently reduce the likelihood of regime failure, aid shocks can be a real threat to the political survival of the incumbent leader. The results also suggest that high aid dependency (aid/GDP) does not make a country less stable, but the regime can be destabilized if the aid resources it depends on are very unreliable.

4.3.2 Aid Volatility and Leaders' Strategic Aid Allocation

Considering aid as internalized revenue allows me to understand how the exposure to high aid volatility introduces political risk to aid recipient countries. Previous research on aid and political survival may have exaggerated aid's stabilization effect on political regimes by treating aid as external resources that always enhance the economic welfare of citizens and can be allocated by leaders to compensate losers or purchase political support. However, the mechanism they have established may still exist in countries where aid revenue is largely internalized. Research concerning sub-national aid allocation commonly look at either the long-term differences among different groups (Soumahoro, 2015b) or the short-term process of how leaders allocate aid in specific projects (Briggs, 2012; R S Jablonski, 2014). I am not aware of existing research analyzing how the distribution of aid would change over time, or how aid's effect on regime stability would change. Both de Mesquita's (2003) winning coalition model and Acemoglu and Robinson's (2006) provide a static solution to the problem of subnational resource distribution. Both models would mathematically suggest that as long as the total available resources are properly divided between the key supporter group and other citizens, leaders will gain sufficient political support to stay in power. Because they both assume the challenges to be persistent, they believe leaders' resource allocation strategy should be the same throughout their tenure. However, for all countries the leaders' threats of losing power change over time. When the challenger is less competitive and poses less threat to the incumbent leader, both models would suggest the leader should reduce allocation to key supporters. Empirically, Chapter 2 and Chapter 3 together provide evidence on one side of the time-series changes, supporting my argument that leaders in Africa do change their distributive strategy in response to different levels of political risk. Throughout a leader's tenure, he would change the distributive strategy of aid depending on his perceived political risk.

When the leader of an aid recipient country faces some unexpected political challenge (rising challenger) or the country is hit with economic shocks (including aid shocks), the leader does not have aid as additional resources to allocate for compensating or consolidating support from the "winning coalition." However, this leader may still have strong influence over the allocation of aid. Unless the donors coincidentally increase the supply of aid, the leader can only reallocate aid from its original planned target. Assuming the leader's strategy without additional challenge is to first provide sufficient resources to assure the support of his "winning coalition," then to use the rest of aid for personal consumption or invest in the economy. In reaction to increased political threat, increasing reward to key supporters must mean reducing aid allocation to other purposes. Similarly, to compensate one group's economic loss in economic shocks with aid, some other groups must bear the loss both from economic shocks and the reallocation of aid. In other words, in a polity where aid revenue has been internalized, aid is still the strategic resource the leaders can allocate to ease the risk of losing power, but the strategic reallocation will also create losers whose aid allocation have to be reduced.

The high volatility of foreign aid hence presents aid as both a source and a potential solution for the leaders. A large majority of aid has been distributed through the governments, allowing the leaders to bias aid allocation towards their most important supporters. Aid shocks can negatively affect everyone's economic welfare, but the impacts on different groups also depend on the leaders' strategy of reallocation. Aid shocks increase the risk of political failure for the leaders and force them to funnel as many resources as they can to consolidate the support from key supporters. People who were originally out of the "winning coalition," already disadvantaged in resource allocation, would fare even worse as the aid resources originally planned towards them get reallocated.

In the distributive politics in African countries, the allocation of aid has been falling along ethnic lines as leaders' own ethnic group commonly receives more aid than other groups. The "quid pro quo" mechanism of ethnic favoritism in aid allocation is quite similar to distributive politics in other countries around the world. The leaders and co-ethnic citizens have established political alliances and loyalty so that leaders will earn political support from co-ethnic kinsman and in return allocate more resources, including aid, to where the supporters concentrate. Due to lack of trust and historical cleavages, such relationships do not usually work between a leader and other ethnic citizens (Chandra, 2006; Eifert et al., 2010). Bormann et al. (2016) formally established the theory of "ethnic winning coalition" in Africa based on de Mesquita (2003). According to their theory and evidence, ethnic favoritism in Africa represents regimes with relatively small "winning coalitions" consisting of co-ethnic supporters. The size of the winning coalition allows the leaders to receive aid and spend more on the co-ethnic supporters.

Ethnic favoritism in resource allocation is a rational strategy for African leaders to maintain political support by providing favorable resources to co-ethnic supporters. The extent of ethnic favoritism hence depends on the political risk the leader faces. A leader may have many political goals to achieve in his tenure, but only by staying in office can those goals be possible. The higher the risk of being challenged and defeated, the more likely leaders are forced to focus all efforts and resources into consolidating political support and securing political survival. Existing cases have suggested that such ethnic favoritism is most salient around election time when the leaders needed political support the most (Briggs, 2014; R S Jablonski, 2014). Leaders are also found to be protecting their co-ethnic supporters when they were hit by economic sanctions. By increasing the risk of political failures, aid shocks create quite similar moments where leaders have to focus on securing their political power.

For this reason, I expect the extent of ethnic favoritism in foreign aid allocation to vary depending on the risks of political failure. Specifically, because change in aid availability is an important determinant to political survival, I expect African leaders to allocate more aid to co-ethnic citizens when the total amount of aid decreases. However, positive changes in aid help secure the leaders' political power and lower the needs for additional political support, hence there would be less ethnic favoritism in aid allocation.

4.4 AID VOLATILITY AND ETHNIC FAVORITISM IN AID ALLOCATION

I test this hypothesis with subnational aid allocation data from the AidData project. Over the past few years, researchers have tracked the geographical distribution of aid in a few countries. The bias in subnational aid allocation represents the bias of national leaders in allocating aid resources. Evidence of ethnic favoritism have been found as such bias commonly follows the geographical concentration of ethnic groups. Chinese aid to Africa from 2001 to 2011 concentrate in leaders' birth regions where their co-ethnic kinsmen still resided (Axel Dreher et al., 2014). Food aid allocation in Ethiopia is found to not follow the needs of the people but rather the ethnic preference of the leaders (Clay et al., 1999a).

I follow this approach of tracking geographically aid allocation to examine how ethnic favoritism aid allocation changes along with aid volatility, with geo-referenced aid data on Kenya, Malawi, Nigeria and Uganda. I started by identifying the ethnic population composition of subnational regions with census data and national representative survey data (Boyle et al., 2016). By associating national leaders' ethnic identity with subnational ethnic composition data, I was able to identify regions that are mostly populated by leaders' co-ethnic supporters. I expect leaders to generally favor these regions in aid allocation.

Data on aid received by each region (*aid per capita)* was calculated by aggregating all aid projects from geo-coded aid data for these countries. *Relative aid* captures the regional favoritism in aid allocation by comparing aid flow to each region with average per capita aid received by the whole country. In other words, *relative aid* for a subnational region equals its per capita aid divided by national mean of that year. If aid is allocated perfectly equal among all citizens, *relative aid* for all regions should equal to 1, indicating all of them have the same amount of aid as nation mean. Regions with more per capita aid will have *relative aid* higher than 1. Regions received less than national average amount of aid will have a *relative aid* indicator between 0 and 1. *Log(relative aid)* takes the log of this indicator to adjust for unbalanced tails.

Table 5. Aid Volatility Ethnic Favoritism in Aid Allocation

	(1) log_relati~d (all)	(2) log_relati~d (all)	(3) log_relati~d (co-ethnic)	(4) log_relati~d (others)
coethnic	0.435***	0.405***		
	(2.86)	(4.17)		
aid/gdp_change		-9.535	-14.19**	-8.990
		(-1.10)	(-2.18)	(-1.07)
coethnic*change		-4.614**		
		(-2.33)		
log_population	-0.352*	-0.489*	-0.495***	-0.467*
	(-1.90)	(-1.92)	(-7.23)	(-1.85)
perc_poverty	-0.000709	-0.00114	0.0183**	-0.00290
	(-0.29)	(-0.35)	(2.24)	(-0.85)
country_dummies	Y	Y	Y	Y
_cons	5.079*	7.198*	6.512***	6.981*
	(1.84)	(1.92)	(5.25)	(1.87)
N	3399	2046	246	1800

t statistics in parentheses
* $p<0.10$, ** $p<0.05$, *** $p<0.01$

Notes: The dependent variable *log_relative_aid* is the log of per person aid in each sub-national region divided by per person aid at the country level; *coethnic* indicates if a region is mostly resided by leader's co-ethnic supporters; aid/gdp_change is the change in *aid/gdp*, calculated by subtracting *aid/gdp* in current year with *aid/gdp* in previous year; perc_poverty is the percentage of population under the poverty line for each region; *country-dummies* are dummy variables controlling for country specific characteristics.

By regressing *relative aid* on the co-ethnic indicator, model (1) confirms the argument in existing literature that aid allocation in general has been favoring leaders' co-ethnic regions. As *relative aid* only captures whether or not a region has an advantage over national mean in aid allocation, it shows that without considering aid volatility, co-ethnic regions fare better than other regions. Model (2) tests if this ethnic favoritism in aid allocation changes with aid volatility. The significant and negative coefficients on *coethnic*change* suggests that aid volatility actually changes the extent of ethnic favoritism in aid allocation. When the total amount of aid decreases, the advantage for being the leaders' co-ethnic regions actually increases. It also suggests that for positive aid changes, the co-ethnic advantage decreases. To further test the diverging effects of aid volatility on different regions, I followed the Seemingly Unrelated Estimation approach to estimate two separate models simultaneously with error terms clustered by ethnic group (Avery, 1977; Gallant, 1975). This method allows me to estimate the effects on co-ethnic groups and other groups separately, and the coefficients from the two models can be compared with Wald Tests. Model (4) and model (5) are similar GLM models specifically for leaders' co-ethnic groups and other groups. As the results show, changes in the availability of aid is negatively related to the advantage co-ethnic regions have over other regions.

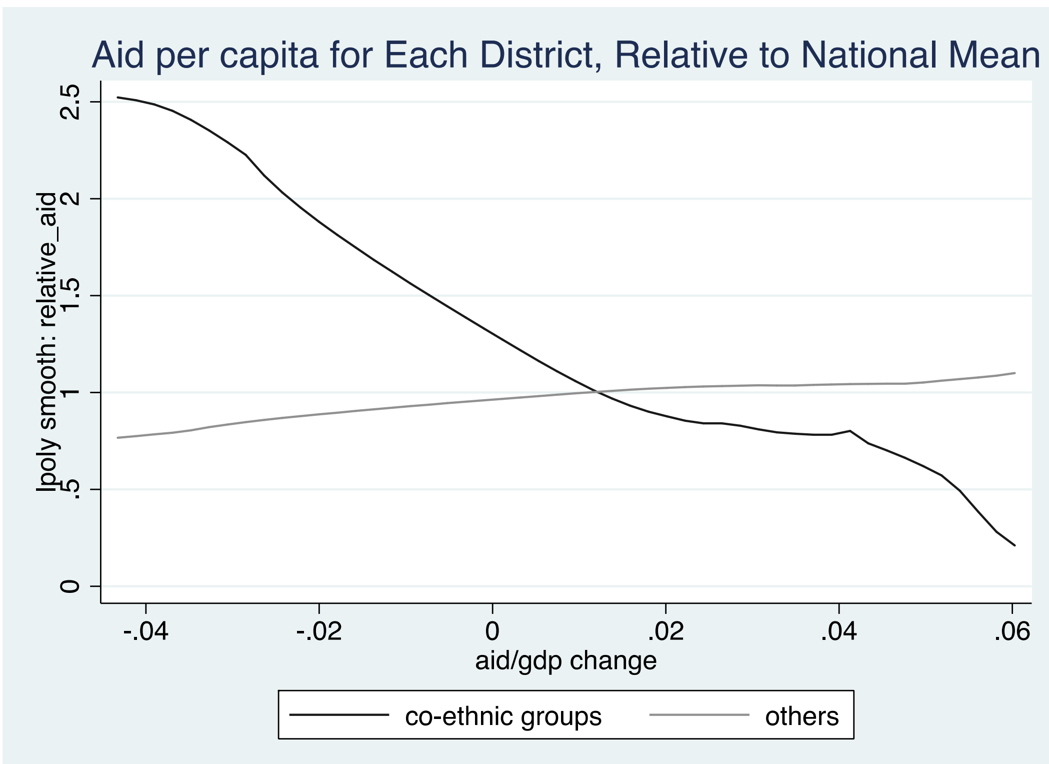

Figure 10. Aid per capita for Each District, Relative to National Mean

I then plotted the estimated *relative aid* received by co-ethnic groups versus others over aid volatility with level 1 local smooth. In extreme cases where an aid recipient country was struck by aid shocks in the amount of 20 percent of its GDP, co-ethnic regions will receive almost twice the aid compared with other regions. Increases in the national aid actually narrows this ethnic gap and benefits other groups more.

4.5 CONCLUSION

While existing literature on aid allocation and political survival generally consider aid as additional resources that leaders can deploy to secure their political power, studies overlooked the risk within aid flow itself. For countries where aid has been long internalized in their spending, aid does not only consolidate regimes but also topples them when there are significant aid decreases. Because of the high volatility of aid and its importance to the recipients' economy, aid shocks force the leaders to sort for their survival strategies. On the other hand, leaders still strategically use aid to consolidate their position in power. Co-ethnic groups are commonly favored in aid allocation, and their advantages further increase with aid shocks.

This research puts aid as a source and a remedy for leaders' political risk. Along with all other negative effects associated with aid volatility presented in existing literature, I show that aid shocks increase ethnic bias in the allocation of aid. The disadvantaged groups endure double loss from aid shocks while the leaders and their key supporters are cushioned by strategic aid allocation.

5.0 CONCLUSION

Development aid is based on the assumption that assistance from foreign donors can help increase economic growth in the least developed countries and lift the people out of poverty. While promoting growth in the field of economics is essentially about how to “expand the pie,” the politics of aid has become more and more salient in both research and aid practices. For over half a century, the economic theory of the poverty trap and the “big push” have led hopeful donors to persistently invest in the future of the world’s poorest countries (P Collier & Dollar, 2001). The achievement of aid has been disappointing for many, forcing the donors and researchers to find the solutions to the puzzle of aid ineffectiveness.

Some economists with strong belief in their models insist that we have achieved some development, though not as much as expected, and for this reason the only solution is to give a bigger push. Ideally, with sufficient funds these countries should be raised to become liberal economies that can prosper within the global economy without additional aid. To ensure the long-term growth and development, economists and donors have established a series of economic policies for aid recipient countries to follow. These good policies include low inflation, low budget deficits, and high trade volume (Burnside & Dollar, 2000). When the formula of aid plus good economic policies did not achieve the ideal outcome, however, more conditions for aid to be effective have been appended to the list. In many countries, the good economic policies have not been properly followed though the governments initially signed the agreement to get aid. By learning from experience, donors realized that there is a bigger set of conditions needed for aid to be effective. These conditions go beyond the scope of economic policies to include strengthening government capacity, reducing corruption, democratization, political transparency, and developing public participation. Most of these policies fall under the umbrella of widely appraised "Washington Consensus" (Babb & Carruthers, 2008). Critics of this "consensus" boast about the successful cases that did not follow this set of policies, such as the rise of some Asian countries. The "Beijing Consensus" became a challenge to the liberal economic consensus and the political dominance of Western countries. These debates will continue, and the list of good policies and practices will continue to expand as donors are still finding aid to be ineffective and still seek magic solutions.

In this long process of searching and debating, very rarely do we hear voices from the recipient countries.[8] To some extent, it is right for researchers and donors to lead or even dominate the practices in foreign aid. Foreign aid exists only because recipient countries have failed to achieve economic development so far. Conversely, donors have been successful in developing their economies and have gained knowledge from their own experience. Transferring such knowledge to poor countries along with foreign aid might eventually help them walk out of poverty. Another reason for donor dominance is the power of money. Developing countries are in the position where they have to surrender to the donors in exchange for financial assistance. With aid, donors can impose all kinds of conditions for recipients to follow. Very seldom do we see recipients rejecting donors' assistance, and even when it happens, it is because the conditions attached are beyond what the leaders in recipient countries can accept (de Mesquita & Smith, 2007b). It is rather common for donors to suspend aid because the recipient failed to fulfill some conditions for aid. William Easterly, being a long-time critic of the optimists of foreign aid, is not

[8]With few exceptions, such as (Lindsey Whitfield, 2009)

really wrong to call the Western donors and researchers the “tyranny of experts” (William Easterly, 2014). In the relationship of foreign aid, the recipients are both wrong for their history of underdevelopment and weak for their need of donors’ assistance.

My research does not seek to engage the debate about what is the right formula for development, nor to argue for an equal partnership between donors and recipients. My three essays together merely point out that the recipients are rational actors with their own preferences and interests. As pointed out by Alesina and Rodrik (1994, p. 465), the economic policies “that maximize growth are optimal only for a government that cares solely about pure ‘capitalists.’” Recipient leaders, who are far from being pure “capitalists,” have other goals they hope to achieve along with economic development. Constrained by their social economic conditions, these rational actors try to adopt the best strategies to achieve their goals. In their relationship with donors, even if they are indeed both wrong for lack of development and weak for the need of money, their rational strategies may distort donors’ aid plan and deem aid projects ineffective.

In particular, the recipient leaders may choose to collaborate with donors when their interests align with donors, but have to break the agreement when their priorities change. Donors can always punish the recipients for noncompliance with aid conditions. Another potential solution is, however, for donors to plan and deliver aid in a way that is consistent with recipients’ interests so that they will voluntarily push for economic development along with the donors.

The scope of my empirical evidence is limited to allocation of aid, aid effectiveness, and ethnic politics in African countries. However, the findings might also be applicable to countries beyond Africa because all recipient countries with their unique backgrounds are made of rational leaders and citizens. If their interests are consistent with economic growth, they have the potential to work together with donors to achieve economic development. If donors are willing to not just invite them to be part of their aid plan, but rather design aid projects that can fit into their priorities, the leaders are more likely to own the projects, even in times they have other priorities to deal with.

5.1 UNDERSTANDING AID FROM THE OTHER SIDE

As the main actors in African aid, recipient countries are constrained by their historically established social economic structure and have their own political economic interests to pursue. The series of papers included in the book *The Politics of Aid: African Strategies for Dealing with Donors* (Lindsey Whitfield, 2009) are among the very few studies that examine how the recipient countries, especially their leaders, use various strategies to use aid to advance their own interests. From the negotiation for the aid projects, to the impletion of the plan and distribution of aid resources, leaders almost constantly use their influence to make aid more beneficial to their own political agenda. Through detailed case analyses of ten African aid recipient countries, they find that recipient leaders' interests are rarely consistent with the donors. While donors may try to enforce aid conditions to ensure the aid plan is followed, recipients can and do rationally choose to break the initial agreement for various reasons. In negotiations, leaders can argue for donors to target aid at their supporters; in allocation, leaders can alter the original plans; regarding policy conditions, leaders do negate from time to time. Despite donors having dominated the relationship in aid, all these cases show the importance of recipient leaders' interests and strategies. A big gap in the literature is the lack of understanding of aid from the recipient side.

My essays aim to establish a framework explaining how the strategic interaction between rational actors in aid recipient nations may affect the development outcomes of aid. Based on existing research on the social and political structure in African countries (N. van de Walle, 2002b, in particular), I take the national leader and the broad citizens as main actors with their different preferences. These actors live in societies with deep-rooted ethnic social cleavages without mature representative governance, namely neopatrimonial societies. Constrained by the social economic conditions, the most important choice for the leader is to determine towards whom he should distribute aid and other resources. The citizens decide whether to support the incumbent leader or a challenger. Unlike donors who consider aid as the "big push" for economic development, leaders largely treat aid as resources they can use to advance their political agendas, of which the most important is their political survival.

My research looks at aid allocation in particular because of its importance for aid effectiveness and the fact that we know so little about it. The allocation of aid is the political process that has direct impact on the economic outcomes of aid projects, which falls right into the politics of aid/growth nexus (Joseph Wright & Winters, 2010). Economically, individuals differ in their relative factor endowments and their use of same resources will differ (A. Alesina & Rodrik, 1994). The same amount of aid received by different individuals will be used in different ways. Aid targeted for investment, such as education and medical infrastructure, will not be invested if the resource was allocated to people who have no interest in such investment. If the recipient used aid resources for consuming foreign imported goods, there would be almost zero positive effect on domestic economic growth. Politically, aid allocation is found to be related to corruption, inequality, and various sorts of social conflicts (Paul Collier & Dollar, 2002; Nielsen et al., 2011). For donors, there exists an economically optimal subnational aid allocation strategy to achieve the best growth outcome. Aid allocation is the main mechanism through which recipient leaders can derail the donors' plan. Suppose the donors have made the aid plan following this optimal allocation strategy; any distortion or systemic bias would directly undermine the development outcome of aid projects and deem aid ineffective.

My first essay (Chapter 2) showed that leaders can and will distort donors' aid allocation plan by allocating aid to key supporters. In African countries, political loyalty commonly falls along the ethnic cleavages, and I show strong evidence for ethnic favoritism in aid allocation. However, ethnic favoritism is not the only strategy for leaders as there are countries that do not follow this pattern all the time. The ethnic favoritism in aid allocation and ethnic voting patterns together corroborate the functional explanation of ethnic favoritism. Behind the pattern of ethnic favoritism aid allocation is a clientelistic political structure built on ethnic identity (Lindberg & Morrison, 2008). The second essay (Chapter 3) engaged the fact that ethnic favoritism is common but not a universal rule. Some leaders have less bias in allocating resources to coethnic supporters. Even for the same leader, throughout his political tenure the extent of ethnic favoritism varies over time. Ethnic favoritism as a strategy to gain political support is important only when the leader's political survival is under serious threat, forcing him to forgo his other long-term goals and concentrate resources on earning political support. The third essay (Chapter 4) continued to uncover the complex relationship between aid and the actors in recipient countries. Rather than considering taking aid as additional resources that brings about pure positive economic impact, aid has been deeply integrated into the political economic life for aid-dependent countries. Instead of "pushing" the recipients out of poverty to let them grow independently, aid has played some essential roles in the recipient economy (Moss, Pettersson Gelander, & Van de Walle, 2006). The constant inflow of aid does not bring about positive changes anymore, but the changes of aid can directly affect the economic welfare of citizens and the financial capacity of governments. For this reason, aid volatility becomes a significant source of threat to the leader's political survival, which further leads to distortive allocation of aid. In other words, unstable aid flow undermines the effectiveness of aid.

Some of the limitations to my research can be complemented by future works. First of all, my three essays each only provides a small piece of evidence on the complex mechanism of how leaders influence aid. Future research with more nuanced data and research design may provide a more comprehensive overview of the political process of foreign aid, such as tracing the detailed financial flow of aid within recipient countries. The more details and higher transparency on aid projects would help establish a more coherent chain of evidence. There are other development outcomes need to be evaluated as well. Secondly, my research has focused mostly on the political interests and influences of the top national leaders, however, in reality a lot more actors are involved in the aid and development puzzle. The national leaders most likely still have the most significant influence on aid, but other individuals and organizations in recipient countries are also have strong impact on the effectiveness of aid. Furthermore, since my research suggests that donors may collaborate with leaders to promote economic development, it is imperative to establish such collaborative framework to be incorporated into the design of aid projects.

To better understand the actors in recipient countries and their strategic interactions, it is also imperative to combine statistical analysis and other approaches of empirical research. The effectiveness of aid is largely determined by how the individuals within the recipient countries actually perceive and use the resources donated by other countries. Researches utilizing methods such as field interviews, surveys or careful process tracing can potentially better establish the causal mechanism linking foreign aid, individuals in recipient countries, and the development outcomes.

5.1.1 Lessons Beyond Aid Allocation

While my essays have a limited scope on aid allocation, infant mortality, and ethnic leadership in Africa, a few findings could transcend my limited scope and might be applicable to all aid recipient countries. A large majority of aid recipient countries have been trapped with underdevelopment for a very long time, and very few have succeeded in escaping poverty. Through the years the social economic structures have been established based on the long-term underdevelopment and continue to prevent these countries' escape (Daron Acemoglu et al., 2001). In African countries, such structure is mainly built around ethnic identity and geographical segregation, while in other countries similar social constructs do exist, such as the cleavages among economic classes in Mexico (Morrison, 2011). The particular constraints do differ in different countries; however, these do share some fundamentally similar characteristics. When donors try to deliver the combination of aid and policy reforms to the recipient countries, they are challenged not only by the lack of well-established economic foundation but also by a consolidated social economic structure that is not necessarily compatible with the donors' good policy prescription for development. These findings seem to be fundamental, except they have been long overlooked by a donor-dominated aid framework.

I. Recipient leaders are not against development.

First, leaders of recipient countries are not inherently against economic development, though they may have other priorities. Leaders can have different goals for their political career if they can stay in office, but keeping the country in poverty is not one of them. As pointed out in Chapter 3, leaders with low risk of losing power and a longer time horizon would rationally invest in the economy as they expect to benefit from long-term economic development. After all, economic growth can bring economic benefit to the leader as well, and history has shown that economic growth can increase political stability and consolidate the power of the leaders (Burke, 2012). Even the most notorious dictators in modern African history have almost all achieved high economic growth at the early stages of their political tenures (J. Wright, 2008). In this regard, a leader with political security actually shares the same goal of economic development with the donors, and would likely actively collaborate with donors.

However, it should not be surprising to see in many occasions leaders have failed to follow through on collaboration with donors. Leaders' political positions are not always secure and when they face imminent threat, it is a rational choice to forgo potential future revenues and use all resources to ensure short-term political survival. To a leader struggling for political survival, the loss in potential future revenue and penalties for breaking the agreement with donors are the costs they have to risk. In Chapter 3 I showed that allocation to key supporters is one of such rational strategies, but leaders only significantly lean on this strategy when their political life is under serious threat. In other words, a leader with a short time-horizon and interests inconsistent with investing for the future could adopt distortive policies and political survival could become a top priority. These distortive policies and allocation strategies do hurt the economy and undermine donors' efforts in promoting economic development (Alberto Alesina, Ozler, Roubini, & Swagel, 1996). Only as the leaders face new constraints—imminent threat to political survival in particular—do their priorities shift to be no longer consistent with donors' interests.

Theoretically, donors can either reward cooperation or punish defection to increase the incentives for recipient leaders to collaborate with donors on promoting development. In history, the classical approach of shifting the strategies of recipient leaders is to increase penalties for breaking an aid agreement, such as suspending aid allocation. Under this framework, donors discourage recipient leaders from defection through incurring loss by suspending aid. As shown in Chapter 3 when political survival is on the table, additional penalties would not really prevent donors from breaking an aid agreement because in a survival model leaders would rationally use all resources available to stay in power. Dijkstra (2002) evaluated cases from eight recipient countries and find this approach to be ineffective most of the time. In many cases the alternatives are bigger threats to the leaders' political survival than breaking the aid agreement as survival needs supersedes all other political goals for leaders (Araral, 2005; Licht, 2010). When punishing by suspending aid becomes ineffective, rewarding cooperation might become a more practical approach to keep the recipient leader on the line. For leaders who distort aid allocation to stay in office, a reward from donors can help them consolidate political support. Once their political survival is more ensured, it becomes possible for leaders to rationally opt for collaboration with donors to promote economic development.

II. Aid is not a short-term big push to recipient countries.

Since the earliest years of foreign aid, donors have been hoping to use short-term aid to push the recipient countries out of poverty trap so that they can develop on their own. The fact is we have seen very few, if any, countries actually take off because of aid (William Easterly, 2006). Most aid recipient countries have been receiving large amount of aid for decades. As pointed out in Chapter 4, these countries have been receiving so much aid for so long that aid has become fully integrated into the economy. In many aid-dependent countries, people's basic life needs, including food, medical services, and education, depend on the continuous inflow of aid. Aid has become a crucial source for some recipient governments that they cannot function without foreign assistance.

Political leaders depend on foreign assistance to stop the country from falling into crisis, and have to rely on aid resources for distribution to supporters. Because of the long- term dependency, aid to recipient countries are no longer additional resources to boost the economy. Aid is part of the economy.

As a deeply integrated part of the economy, aid may still promote development if it reaches the right people and is used for the right purpose. Perhaps more importantly, aid as part of economy also makes the recipient countries vulnerable to aid changes. While donors considering aid as charity to recipient countries still use aid to reward political support in international politics or suspend aid to punish noncompliance of recipient countries, the direct impact on the economic well-being of the recipient citizens has been largely over looked. Aid shocks to aid-dependent countries are not fundamentally different, and the latter has been a source for school dropouts and infant mortality (Ferreira & Schady, 2009). For the increased competition over the scarcer resources, aid shocks can become a cause for violent conflicts (Nielsen et al., 2011). Chapter 4 points out an even darker side of the vulnerability of aid recipient countries. In addition to the direct economic impact to citizens from aid shocks, aid shocks also create a situation where leaders will allocate more government resources to key supporters to ensure political survival. As a result, citizens outside of leaders' supporter group, who are usually also weak economically, would have to endure two rounds of welfare loss. The first is from the direct cut off of aid delivery from donors, and the second round from leaders moving public funds away to compensate key supporters.

Researchers and donors have been cheering about how aid can ease the pain for economic crisis and other type of shocks (Guillaumont, Guillaumont, Jacquet, Chauvet, & Savoye, 2003; Yamano, Alderman, & Christiaensen, 2005). However, the economic impact of aid shocks has largely been ignored. Donors still actively use aid suspension as a strategy to force the recipient government to surrender and cooperate with donors' aid plans. Other sources of aid volatility include the lack of collaboration among donors, the inconsistency in donors' budgeting and implementation of aid projects, and the changes in donors' domestic support for foreign aid (A Bulir et al., 2008; Tingley, 2010). By depending on aid, the recipient countries become dangerously exposed to these external factors, over which they often have no control. Aid volatility directly affect all aspects of people's life in recipient countries, including their food, education, healthcare, and even the mortality of the infants. The sad fact is that aid has been more volatile than other revenue and is therefore capable of causing more economic suffering in aid recipient countries. In addition to using aid as a solution for other economic shocks, perhaps it would be more important for donors to first address the problem of high aid volatility.

III. Aid is a social economic package to recipient countries.

Upon the reflection of aid ineffectiveness and the evolution of aid paradigms, the relationship between aid and development seems to have become an extremely complex model, and many social economic variables have been added into it. It is very common to find in both donors' mission statements and recent research that good aid from donors should include a set of economic policies, political institutions, and social participation. Some believe aid to be a big push, with the component of both money and these non-economic elements (Brautigam & Knack, 2004). Most of elements of the aid package can be put under the umbrella of a rather unclear concept of neoliberal economics. On the recipient side, despite being unsuccessful in achieving economic development, these countries do have their deep-rooted social economic order that can be largely different from the neoliberal economic approach. African countries in my study resemble neopatrimonial societies where leaders and supporters built trust and loyalty based on ethnic identity to exchange their political support and distributive goods. Many other ingredients of the neopatrimonial societies are believed to be responsible for the lack of economic or political development in these countries (N. van de Walle, 2002b).

From the donors' side, there can be plenty of reasons to believe that the recipients are "wrong" in their political economic policy, and in the relationship with donors that they are "weak." It is not surprising to see donors dominating the plan of aid and attaching political economic conditions to ensure that the aid plan is executed as they have designed. In the cases reviewed in Whitfield (2009), African aid recipient countries are in a position to negotiate but only to a very limited extent about the design of aid projects. Strategies and tactics taken by recipients address, more or less, violating donors' conditions while keeping the donors from withdrawing aid. Tanzania is the only case presented where recipient government played more of leadership role in the relationship with donors, also the only case that aid has made significant positive impact. My research reveals how leaders constrained by the neopatrimonial political economic structure strategically distort aid allocation to achieve their own political goals. Despite recipient leaders being in a wrong and weak position, their need for survival and the inherent political economic structure together undermine the ideal aid plan made by donors. In other words, leaders do have right needs to alter the execution of the aid plans, and are strong in doing so.

The nexus of aid and economic development has become a complex package of many other political economic elements, and all the evidences point that aid without support of other good conditions can be ineffective and sometimes detrimental to economic development. However, the inherent social economic structures in recipient countries have been shown to be very resilient to donor supported adjustment. In Africa, the neopatrimonial order in the society is so strong that all sorts of policy changes and even democratization have been proved to be fruitless in reshaping the way leaders interact with their people (N. van de Walle, 2002b). It has been widely accepted that aid ineffectiveness is largely due to the lack of the supportive components including sound economic policies and good governance (Bourguignon & Sundberg, 2007; Mundial, 1989; Joseph Wright & Winters, 2010). While aid fund has been flowing into recipient countries, their inherent political social structures have successfully resisted the other elements that donors tried to package into aid projects.

5.2 IMPROVING AID EFFECTIVENESS BY SEEKING COLLABORATION WITH LEADERS

My research does not challenge the neoliberal economics about aid and development. Backed by the most advanced knowledge about economic development, the combination of aid from donors and the political economic conditions may indeed have great potential to lift people in aid recipient countries from poverty. My research shows that the leaders and the people in recipient countries are still constrained by the inherent social political structure that has kept them in poverty for centuries. Donors have designed the best aid plan they can and have actively tried to invite the recipients onboard by providing aid and technical support and by threatening aid suspension if the agreement was not being met. However, when political survival is on the line, the only rational strategy for leaders constrained by their social political structure is to break the agreement and distort aid allocation to stay in power. Without the support of other elements of the neoliberal economic approach, aid itself is not sufficient to achieve economic development.

I focus on the strategies of political leaders in aid recipient countries not because they are the one preventing aid effectiveness. On the contrary, despite being corrupt or even autocratic, rational leaders in recipient countries have no inherent need to be against development. In fact, many researchers have found both aid and economic development are economically and politically beneficial to leaders. However, leaders are constrained by the social political realm of their country and from time to time they have to shift their priority and give up the long-term economic development. In need of money, leaders tend to accept and follow through with the aid package from the "strong" donors, but they also have to surrender to the even stronger inherent social political order when their political survival is under threat. Leaders do not always have to favor co-ethnics or any other groups by distorting aid allocation, but in the occasions when they have to do in order to stay in power, pressures and penalties from donors will not be enough for them to change their strategies. In this sense, recipient leaders are rational agents in the middle of the development package from donors and the inherent social political order they live in. When domestic pressure from the neopatrimonial heritage become stronger, rational leaders react to their incentives and make strategic choices over aid. There are two theoretical approaches to reshape leaders' incentive and potentially alter their strategies: to increase the cost of distorting aid allocation or decrease the cost of following through on the collaboration with donors.

My research has shown that penalizing leaders for deviating from aid plan will increase their risk of losing office and hence push leaders to use more resources to ensure political survival and risk making aid allocation more inefficient. However, if all deviations are not penalized, aid can also become completely ineffective as some leaders lack the incentives to implement social economic reforms on themselves. The conundrum is for donors to decide what kind of deviations should be penalized, while others might be tolerated. My research actually points out a key factor to distinguish these two types of deviations, which is survival risk when leaders deviate from aid plans. A leader with short-term survival threat may distort aid allocation to retain political survival, but once the challenges become less threatening, he could rationally choose to work with donors on long-term economic development. Tolerance for this short-term deviation would be beneficial to aid effectiveness in this case. Specifically, when there are other political economic shocks that might threaten the imminent political stability of the recipient countries, increasing aid and easing the shock can keep the leaders and the people on the path of following donors' aid plan for long-term development. As shown in Chapter 4 the detrimental impact of aid volatility, donors may have to start with making less shocks to aid by keeping aid flow more stable. On the other hand, for leaders abusing the kind tolerances from leaders and deviate from aid plans even without imminent threat to their political survival, donors should actually impose penalties. In these cases, penalty from donors becomes the major threat to the leader's political survival and their viable strategy is to simply collaborate with donors to eliminate such threat. Penalties against abusive deviation from aid plan thus can provide incentives for leaders to refocus on long-term development.

Furthermore, since the leaders are not inherently against economic development, a potential approach to ensure aid effectiveness is to design aid programs that are consistent with leaders' interests. My research shows that though distortions in aid allocation is common in recipient countries, such deviations from aid plan do vary over time and for different leader. The decrease of such deviations can come from collaborating with recipient leaders when they do have interests in aid effectiveness and economic development. In this regard, the 2005 Paris Declaration on Aid Effectiveness calling for country ownership, reaffirmed in Busan in 2011, is a good start (Booth, 2012). However, I have shown that even if the leaders and the governments do have inherent interests in aid and want to own the projects at the beginning, their priorities may change as other urgent agenda would force them to give up the ownership. To make further progress with “country ownership,” it is hence crucial to have plans designed with recipient leaders’ interests in mind so that they have an invested interest in the development outcomes. This approach is also consistent with donors’ pursuit of good governance in recipient countries (Nanda, 2006). For exploitative leaders who abuse donors’ trust and constantly deviate from aid plans, penalties can incentivize them to adopt better governance strategies to avoid losing aid benefit. On the other hand, for leaders who only temporarily deviate in response to short-term threat to their political survival, penalties by reducing aid can only force them to deviate more from good governance. For this reason, donors’ tolerance for certain short-term deviation can actually help improve the quality of governance in these countries.

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