THE BENEFITS OF MULTILATERAL AID: HOW AGENCY MOTIVATION, SPECIALIZATION, AND AUTONOMY PROMOTE DEVELOPMENT

A Dissertation

by

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ABSTRACT

The question of how to enhance the effectiveness of foreign aid has plagued researchers for over six decades. Although in some cases scholars have positive support regarding aid's impact on economic growth in recipient countries, others have questioned these findings, and some have even demonstrated that aid has a negative impact on growth. I address this question from a new perspective by analyzing how the organizational characteristics of aid agencies lead to differences in development policies. Specifically, I highlight how the characteristics of an understudied group of agencies, multilateral aid agencies, impact their effectiveness. I demonstrate my argument by collecting original qualitative and quantitative data on three variables related to organizational performance. I then empirically test my expectations through a series of panel analyses of aid and economic growth from 1973-2012. The results support my theoretical expectations that organizational differences matter in terms of the outcomes they produce.

I argue that three specific organizational characteristics enhance multilateral aid effectiveness: motivation, specialization, and autonomy. Agency motivations matter because they impact aid allocation patterns, which are critical for distributing effective aid. Specialization allows the agency to provide more funding to each of their targets, reduce transaction costs, and implement knowledgeable and effective policies. Autonomy determines the ability of the agency to resist attempts to pressure them to distribute politically driven aid. In order to test these arguments, I present original data documenting the motivations, specialization, and autonomy of forty multilateral agencies. I test my arguments using estimation techniques robust to issues of endogeneity and instrumentation that have hampered past research.

My results support my argument. Generally, bilateral aid is found to be less effective than multilateral aid. Furthermore, I demonstrate that differences within multilateral aid agencies exist as well, and show how more autonomous agencies are comparatively more effective. I find little support, however, for my expectation regarding agency specialization, suggesting a fruitful avenue for future research. My results are able to account for past discrepancies within the aid literature, provide strong policy prescriptions for the aid community, and lend support for the salience of international organizations.

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1. INTRODUCTION: THE QUESTION OF FOREIGN AID EFFECTIVENESS

Does foreign aid work? This question has plagued researchers and policymakers since the inception of foreign aid six decades ago. Following World War II, a growing sense of internationalism as well as national commitment to welfare policies spurred the establishment of foreign aid agencies in countries throughout the developing world. These unprecedented programs of foreign assistance were designed to help alleviate poverty and expand economies in the developing world (Lumsdaine, 1993). These programs continued to grow throughout the Cold War, and today constitute one of the largest forms of interactions among states. In 2012 alone, the developed world committed over $183 billion in aid funds, a truly remarkable achievement (OECD, 2015).

Despite the billions of dollars that have been spent, foreign aid's track record remains staunchly debated, as it is associated both with incredibly positive and negative results. In some cases, large commitments of aid were able to help produce positive outcomes. Mozambique, for example, had a GNI of only $410 per person and a mere 1.1% economic growth rate in 2000. Trapped in the most abject levels of poverty, approximately 85,000 children born in Mozambique would die before their fifth birthday (World Bank, 2015). As one of the poorest countries in the world, it was in desperate need of help. Little more than a decade later, and after receiving some of the greatest contributions of foreign aid in Africa, the situation in Mozambique has greatly improved. In 2012, its economy grew by a robust 7.2%, and GNI per person had more than doubled to $980. School enrollment climbed above 86%, and tens of thousands more children are expected to reach their fifth birthday. As Mozambique receives approximately 50% of its annual government spending from external aid

sources, these advancements would not have been possible without foreign aid (UN Mozambique, 2015).

But in other cases, foreign aid has been associated with disastrous failures. A prime example is the Democratic Republic of Congo (DRC), which has received some $58 *billion* in foreign assistance between 1980 and 2013 (OECD, 2015). In spite of this substantial inflow of funding, the Human Development Index (HDI) indicates that the DRC has made virtually no development progress in that same time period. In Uganda, the HIV/AIDS infection rate has once again begun to rise, despite receiving over $1.7 billion from the U.S. alone since 2005 to help fight the epidemic (Kron, 2012).

Issues of corruption are also rampant. In her book, Dambisa Moyo describes how the former presidents of Malawi, Zaire (now the DRC), and Zambia all pilfered from aid funds meant to support projects related to health, education, and infrastructure (Moyo, 2009*a*). A prime example of such corruption is the World Bank's provision of $4.2 billion for the development of a Chad-Cameroon oil pipeline. Instead of being used to build the pipeline, however, the funds were transferred to the country's general budget by President Idris Deby, and are purportedly being used to rig elections and perpetuate his regime. Foreign aid scholar Graham Hancock has even argued that the disappearance of foreign aid to Nicaragua in the 1980s resulted in a drastically improved economic situation, as aid was being used to prop up the Somoza family's dictatorship (Hancock, 1989). Moyo presents a similar argument with regards to aid in Africa, and suggests that aid is hurting economies in the region rather than improving them (Moyo, 2009*a*).

In each of these examples, no conclusive evidence has emerged regarding foreign aid's ultimate impact in the developing world. As a consequence of this and the continued presence of global poverty, the buoyant optimism of the 1950s regarding

aid effectiveness has to large degree been replaced with a cautious and rigorous evaluation of aid practices. In an effort to make the most of aid funds, both policymakers and academics alike continuously examine how and when aid is able to effectively contribute to development, and what can be done to make it more effective in the future. Through a series of conferences and summits, the international aid community has put forth new operating standards for aid organizations, and new goals for the aid community. Agreements such as the Paris Declaration on Aid Effectiveness, the Accra Agenda for Action, as well as the Busan Partnership for Effective Development Cooperation represent such renewed efforts, and aim to improve aid agency policies and evaluation methods, and also help coordinate donor efforts. Meanwhile, aid scholars continue to expand their analyses by studying specific aid projects, the effects of aid in smaller geographic regions, and the effects of aid on a variety of sectoral outcomes, such as education, health, and the environment.

Building on past work, recent aid research has made substantial progress. We now know much more about where aid is going, how it is being distributed, and whether or not it is being effective. However, there is much that remains to be done. According to the World Bank, in 2011 an estimated 2.2 billion people were still living on less than US $2 per day (World Bank, 2015). Creating more effective aid is therefore a complex, yet imperative task, as the global community continues to try to eradicate poverty and achieve the Millennium Development Goals (MDGs). As foreign aid scholar Michael Tierney succinctly states,

> *...aid is neither pure problem nor pure solution; its motivations, distribution, and effects are complex, and shifting. Capturing this complexity requires detailed data, careful thought, and sophisticated methods that allow scholars to make conditional, causal, and descriptive inferences* (Tierney et al., 2011, p. 1893).

Establishing a more complete understanding of what makes aid effective is therefore the most pressing task for future aid research, and the main motivation of this dissertation.

1.1 The Importance of Foreign Aid Types

Foreign aid is one of the most commonly used foreign policy tools in existence. Lumsdaine (1993) defines foreign aid as, "gifts and concessional loans of economic resources, such as finance and technology, employed for economic purposes provided to less developed countries by governments of the developed democracies, directly or through intermediaries such as UN programs and multilateral development banks" (p. 33). When providing foreign aid to developing countries, donor countries have two options. The first option is for them to distribute aid directly to recipient countries through bilateral aid. Most aid donors are members of the OECD's DAC, which currently has 32 members, listed in Table 1.1.[1] The second option is for the donor state to contribute to a multilateral aid agency, which then pools those resources with those from other states, and subsequently determines how, where, and when to allocate those funds. According to the DAC, multilateral aid agencies are defined as:

> *...those international institutions with governmental membership which conduct all or a significant part of their activities in favor of development and aid recipient countries. They include multilateral development banks (e.g. World Bank, regional development banks), United Nations agencies, and regional groupings (e.g. certain European Union and Arab agencies). A contribution by a DAC member to such an agency is deemed to be multilateral if it is pooled with other contributions and disbursed at the discretion of the agency* (OECD Statistics).

[1]The number of non-DAC aid donors is growing, as is the size of their aid contributions (Woods, 2008). While acknowledging this, I focus my discussion on aid from DAC donors due to issues of data availability.

Although not exhaustive, Table 1.2 lists forty of the most prominent multilateral aid agencies operating today.[2]

Table 1.1: OECD DAC Members

Australia	Greece	Poland
Austria	Iceland	Portugal
Belgium	Ireland	Slovak Republic
Canada	Italy	Slovenia
Czech Republic	Japan	Spain
Denmark	Korea	Sweden
European Union	Luxembourg	Switzerland
Finland	The Netherlands	United Kingdom
France	New Zealand	United States
Germany	Norway	

Source: OECD Statistics

Bilateral and multilateral aid organizations each offer different types of benefits. Bilateral aid enables the donor state to maintain control over how aid funds are used. This allows the donor government to pursue their national interests, or ensure that domestic firms are chosen to implement developmental projects. Multilateral aid, on the other hand, takes control away from the donor states and invests it in a third party. Rather than being controlled by a single donor government, a multilateral aid agency is governed by a group of contributing donor governments. Since the preferences of the donor governments are aggregated into a single agency, multilateral

[2]Although Kharas (2007) estimates that there are close to 210 multilateral aid agencies operating today, I focus my analysis on the forty listed in Table 1.2 for two reasons. First, these agencies represent some of the largest and most prominent multilateral aid agencies currently in operation. Second, these agencies are the only ones for which we have consistent and reliable data in terms of their funding and spending patterns. As more data is made available, future research should examine a wider group of multilateral aid agencies as well.

Table 1.2: Multilateral Aid Agencies

Agency	*Abbreviation*
African Development Bank	AfDB
African Development Fund	AfDF
Arab Bank for Economic Development in Africa	BADEA
Arab Fund (Arab Fund for Economic and Social Development)	AFESD
Asian Development Bank	AsDB
Asian Development Bank Special Funds	AsDF Spec. Funds
Caribbean Development Bank	CarDB
Central American Bank for Economic Integration	CABEI
EU Institutions	EU
European Bank for Reconstruction and Development	EBRD
European Commission	EC
European Development Fund	EDF
European Investment Bank	EIB
Global Alliance for Vaccines and Immunizations	GAVI
Global Environment Facility	GEF
Global Fund	Global Fund
Inter-American Development Bank	IDB
Inter-American Development Bank Special Fund	IDB Spec. Funds
International Fund for Agricultural Development	IFAD
International Bank for Reconstruction and Development	IBRD
International Development Association	IDA
International Development Association - Multilateral Debt Relief Initiative	IDA-MDRI
International Finance Corporation	IFC
International Monetary Fund (Concessional Trust Funds)	IMF
Islamic Development Bank	Isl. Dev. Bank
Joint United Nations Programme on HIV/AIDS	UNAIDS
Multilateral Investment Guarantee Agency	MIGA
Nordic Development Fund	Nordic Fund
OPEC Fund for International Development	OFID
Office of the United Nations High Commissioner for Refugees	UNHCR
Organization for Security and Cooperation in Europe	OSCE
United Nations Democratic Republic of Congo Pooled Fund	DRCPF
United Nations Development Program	UNDP
United Nations Economic Commission for Europe	UNECE
United Nations International Children's Emergency Fund	UNICEF
United Nations Peacebuilding Fund	UNPBF
United Nations Population Fund	UNFPA
United Nations Relief and Works Agency for Palestine Refugees in the Near East	UNRWA
World Food Programme	WFP
World Health Organization	WHO

Source: OECD Statistics

aid is able to operate in an environment further removed from the domestic political constraints that are often placed on bilateral aid agencies.

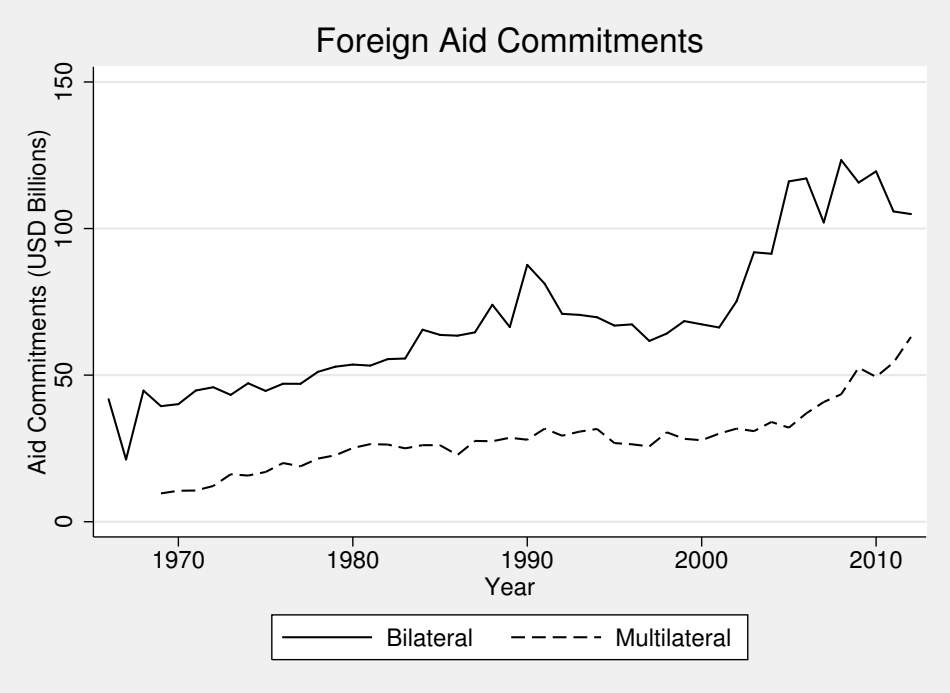


Figure 1.1: OECD ODA Data: Bilateral versus Multilateral Aid Donations

Although both bilateral and multilateral aid have existed since the beginning of the modern era of foreign aid, bilateral aid has typically been more prominent, both in terms of the amount of aid provided, as well as being the primary focus of scholarly research. However, the nature of foreign aid contributions has begun to change, with increasing amounts of aid being channelled through multilateral institutions. Using information from the OECD's dataset on Official Development Assistance (ODA), Figure 1.1 shows the total amount of aid provided to developing countries by DAC countries and multilateral aid agencies. While bilateral aid remains the more dominant type of aid spending, the graph shows that the size of contributions

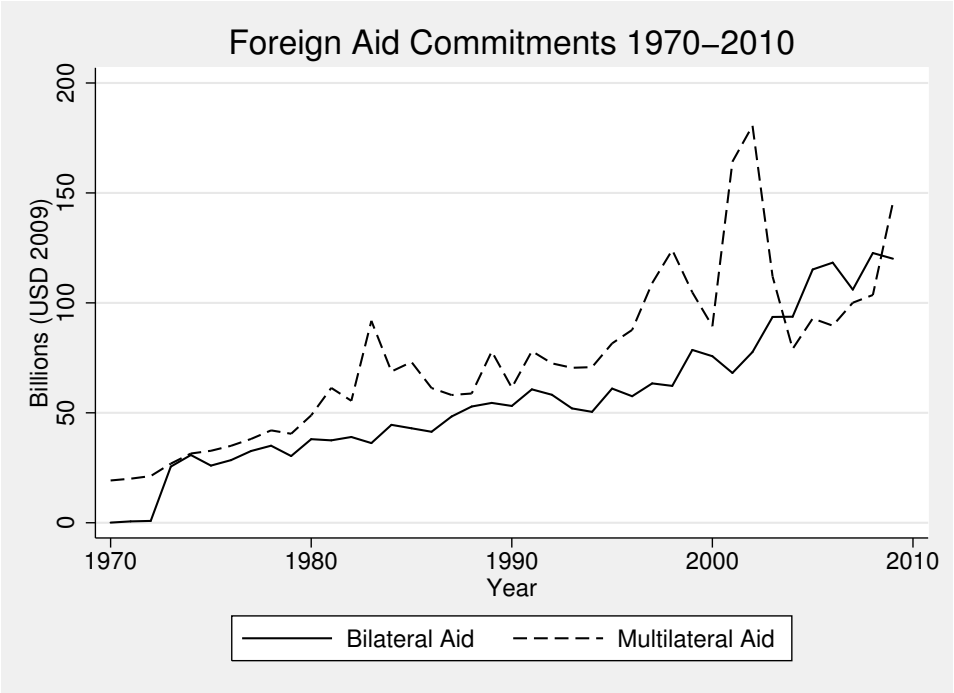


Figure 1.2: AidData: Bilateral versus Multilateral Aid Donations

from multilateral aid agencies has also grown steadily. In fact, in 2011 multilateral aid agencies donated $55 billion USD, encompassing 40% of all ODA (OECD, 2013). According to a new dataset, this estimate of multilateral assistance may actually be low. Figure 1.2 uses information from AidData and shows foreign aid commitments by bilateral and multilateral aid donors over the same time period (Tierney et al., 2011). According to this dataset, which includes more multilateral agencies than the ODA dataset, multilateral aid has actually been a larger source of aid funds in recent years compared to bilateral aid. In addition to the growth of multilateral aid contributions, there has also been a dramatic increase in the number of multilateral aid institutions (Kharas, 2007), topping over 210 separate agencies in 2013 (OECD, 2013). Taken together, both the number of multilateral aid agencies, as well as the size of their contributions to developing countries is on the rise.

As donor countries become more rigorous in evaluating their aid practices and search for the most effective policies available to them, it is essential that all potential avenues of aid delivery are examined. However, in spite of recent trends, few analyses have focused their attention on multilateral aid agencies as a group separate and distinct from bilateral aid agencies. Empirically, the relatively few works that exclusively address multilateral aid usually examine delegation to these agencies. In terms of theory, while there are a multitude of studies addressing how politics and other factors impact aid effectiveness for bilateral donors, there have been few such attempts aimed towards multilateral agencies. Those works that consider the effectiveness of aid primarily focus on bilateral aid, while multilateral aid is included as a side note. The exceptions to this are case studies that have focused on a single multilateral agency, usually the World Bank or the International Monetary Fund (IMF). Studies conducted by Weaver (2008) and Vreeland (2003, 2007), for example, have provided extensive insight as to the internal functioning of these agencies. In general, however, scholarly research has to a large degree overlooked multilateral aid and its ability to enhance aid effectiveness. Considering that the number of multilateral agencies continues to grow, as well as the high level of variation that exists among them, this is an important gap that must be examined. As the aid community continues to look for the most effective donors and agency practices, properly analyzing the full spectrum of aid agencies, including multilateral agencies, is an important piece of the puzzle regarding aid's effectiveness.

1.2 Research Questions

Considering the dearth of studies focusing on multilateral aid agencies, the main contribution I make is to investigate how organizational characteristics inherent in multilateral aid agencies make them effective aid donors. To this end, I address two

specific research questions related to multilateral aid in my dissertation. The first is: *What organizational factors make bilateral or multilateral aid more effective?* Very few scholars have addressed this question, and those that have investigated it have done so in an indirect manner. Rather than relegating the question of bilateral versus multilateral aid effectiveness to an empirical afterthought, I cast it as the one of the focal points of my dissertation.

My second research question examines the relative effectiveness of multilateral aid agencies. Just as bilateral agencies are affected by the priorities and structures of their governments, multilateral aid agencies are likewise affected by variations within their structures and policies. Thus, it is important to recognize how variations within multilateral agencies impact their effectiveness. Therefore, the second research question I address is: *What organizational factors make some multilateral aid agencies more effective than others?* By shedding light on the internal functioning of multilateral aid agencies we can better understand not only what makes aid effective, but what makes an organization effective. As such, although the two research questions I pose here are focused on the issue of multilateral aid, they are derivatives of a much broader research question, namely: *What characteristics make an organization more or less effective?* Consequently, while my analysis and results are specific to the foreign aid literature, they also have broader implications for other studies of organizations.

These research questions are important both theoretically and substantively. Theoretically, the answers to these questions have implications for effective patterns of aid allocation, institutional design, as well as the overall salience of international institutions. If bilateral aid is indeed found to be substantially less effective compared to multilateral aid, then this has a strong policy implication that countries need to donate more of their aid to these multilateral agencies. However, if these agencies are

found to be little better than bilateral aid donors, it draws a grim picture for their future. Additionally, as more multilateral aid agencies are being created, this study will help illuminate the types of structures and characteristics newly developed agencies should pursue in order to be as effective as possible. From a policy perspective, as the foreign aid community places an increasing emphasis on aid effectiveness, it is important that the effects of donations from all types of members, not just individual donor states, are considered. Each of my research questions contributes to this task in a different way. The first addresses macro differences between bilateral and multilateral aid agencies, while the second provides a more micro-level description of how and when multilateral aid is able to contribute to effective development. By addressing multilateral agencies in this comprehensive manner, I hope to provide a more detailed picture as to the usefulness of multilateral aid in promoting effective aid policies.

1.3 Organizations and Effectiveness

In order to envisage an effective aid agency, I draw on decades of studies related to organizational performance. Previous research has described how organizational traits such as a large budget, staff education, oversight mechanisms, incentive structures, and organizational culture, networks, constituent support, goal clarity, etc. contribute to improvements in organizational effectiveness. In order to address my research questions on foreign aid, I focus on three of these as the foundation of my theory of organizational effectiveness: motivation, specialization, and autonomy. Agency motivation is critical because it helps employees focus on tasks and goals, and also creates a sense of purpose within the agency, both of which have been found to enhance organizational performance (Moynihan and Pandey, 2005). Specialization allows the agency to benefit from the gains that stem from a division of labor, as de-

scribed in economics. Finally, autonomy influences the ability of the organization to operate independently, as restricting organizational operations has often been found to be detrimental for performance (Rainey and Steinbauer, 1999).

Applying this theory to my research questions, I expect that bilateral aid will be more effective at promoting development as it is more likely to be motivated by development and specialized. Additionally, when comparing among multilateral agencies, I expect those that are more specialized and autonomous to be more effective aid donors. Taken together, these arguments provide a strong argument that multilateral aid should be more effective at promoting development than bilateral aid, and that substantial variation exists among multilateral aid agencies that should be accounted for.

1.4 Roadmap

In order to address these research questions, the remainder of my dissertation proceeds as follows. In Section 2, I provide an overview of the current state of the literature regarding foreign aid effectiveness. In Section 3, I present a general theory of organizational effectiveness and describe how agency motivation, specialization, and autonomy contribute to organizational performance, both in a broad sense and specifically in the context of foreign aid. After applying this argument to my two research questions, I derive four testable hypotheses regarding multilateral aid effectiveness.

In order to test my hypotheses, I first rigorously measure agency specialization and autonomy in Sections 4 and 5, respectively, and present two original datasets. In Section 4, I build on previous studies that have addressed specialization among aid agencies, but unlike these past studies I apply this concept specifically in demonstrating the difference in specialization levels between bilateral and multilateral aid

agencies. I then use two different measurements to capture levels of country, region, and sector specialization. While issues of agency autonomy have been studied in relation to delegation to multilateral aid agencies, none have yet examined how autonomy impacts aid effectiveness. Therefore, in Section 5 I present an original dataset that measures the autonomy of multilateral aid agencies through voting procedures and agency funding patterns. After presenting the data, I then empirically and rank agencies based on their autonomy scores.

With this new data on agency characteristics, I test my hypotheses in Section 6, 7, and 8 by examining economic growth rates in recipient countries. In Section 6, I examine differences between bilateral and multilateral aid agencies. Section 7 examines how specialization of aid agencies impacts their effectiveness. In Section 8, I investigate the impact of agency autonomy on the effectiveness of multilateral aid organizations.

Section 9 provides an overview of my argument and findings. I conclude that despite the multitude of criticisms that have been leveled at them, multilateral agencies offer a much more conducive platform for achieving development goals compared to bilateral agencies. Furthermore, my dissertation provides the foundation for a more extensive investigation of how organizational characteristics of aid agencies affect development outcomes.

1.5 Conclusion

Overall, the evidence presented throughout my dissertation offers strong support for a more substantial use of the multilateral aid system. This conclusion implies that if states are truly interested in using aid to advance developmental priorities and achieve the MDGs, they should move away from bilateral aid spending and instead channel aid through specialized and autonomous multilateral agencies. Alternatively,

bilateral aid agencies can undertake a process of internal reform, by focusing their spending and making aid more about development and less about politics. While it is unreasonable to believe that states will relinquish their bilateral aid programs entirely, as they provide a highly useful tool of foreign policy, efforts can nevertheless be made to urge states to channel their aid through multilateral aid agencies in order to avoid the continued politicalization of foreign aid. If the international community is truly invested in alleviating poverty throughout the globe, multilateral aid offers the best solution.

This conclusion lies in sharp contrast to many of the criticisms that international organizations currently face. Scholars, policymakers, and politicians often decry the failures of multilateral aid agencies. Criticisms of the IMF and World Bank, for example, are prolific. But if we are to improve aid's track record and actually achieve sustainable development goals, leveling criticisms at these institutions is not enough. Instead, we must look deeper in order to find out if they are truly as bad as the critics claim, especially considering the available alternatives. While multilateral aid agencies are unlikely to ever be completely devoid of problems, I argue that based on my results, they represent the best option currently available within the aid community. Moving beyond this, we must also ascertain if the problems that have been directed at organizations such as the IMF and World Bank are universal to all multilateral aid agencies. If these problems are specific to certain institutions, then identifying them will only assist in overcoming them. If these problems are persistent in all multilateral agencies, then more radical change may be necessary. Regardless of the result, we need a more detailed analysis of the inner workings of these agencies in order to ascertain what makes them successful, and what causes them to fall short of their potential.

Finally, although the argument presented here focuses on issues of aid effectiveness, its implications are much broader in scope. Throughout my dissertation, I ground my argument in interdisciplinary studies of bureaucratic politics, delegation, and political economy. This broad foundation not only contributes to the strength of my theory, but also allows my findings to have significance for other subfields of political science as well. The benefits that multilateral aid agencies supply clearly have implications for studies of bureaucracies and the general salience of all international organizations. Perhaps the most novel contribution this dissertation makes is in regards to agency autonomy. While governments are often loathe to relinquish control of policymaking, the evidence presented here suggests that oftentimes only by relinquishing control can goals actually be met.

2. FIFTY YEARS OF AID RESEARCH: A REVIEW

The question of what makes aid effective is the subject of an expansive literature spanning over half a century. Researchers in this area have asked questions such as: *How can the aid community make aid more effective? What policies foster successful development? What policies are problematic for development? How do we measure "effectiveness"? Is effectiveness determined by how aid is given? Or are recipient characteristics the critical factor?* and, *What types of aid should we be giving?* In asking these questions, scholars have developed a substantial understanding of when foreign aid is, and is not, effective. Given the notable amount of work that has already been done in this area, I provide a review of these studies to serve as a foundation for my own argument and analysis.

My review of the literature demonstrates that most of the time, bilateral donors provide aid in order to promote their own geo-strategic interests. This self-interested nature of bilateral aid is then reflected in studies regarding bilateral aid effectiveness, which find limited support for the argument that aid is actually promoting development in recipient countries. If we consider the fact that most of the time bilateral aid has not been given to promote development, this conclusion is hardly surprising. The few studies that address multilateral aid, however, paint a more positive picture. Multilateral aid appears to be targeted towards poorer countries, and those with institutions more likely to capitalize on the funds they receive. These findings offer a prelude to my theoretical argument, which expands upon the organizational characteristics that contribute aid effectiveness.

I proceed in four main parts. First, I define two key concepts–development and effectiveness–that are critical components of my dissertation. Second, I review the

literature on aid allocation. While aid allocation is not my main focus, it is nevertheless useful to discuss the factors that drive aid spending patterns. Aid cannot be effective if it is not received, or if only minimal amounts are received by developing countries. Therefore, before considering how aid can work, we must first examine who actually gets aid, why, and under what conditions. Third, I review studies of aid effectiveness on a variety of issues areas. I conclude by summarizing the main points of previous work on foreign aid.

2.1 Defining Key Concepts

Before evaluating claims as to what makes aid more or less effective at promoting development, I first define each of these concepts. The term *development* encompasses the ultimate goals of aid and is often synonymous with foreign aid. Aid is often referred to as "development assistance," and the OECD's main foreign aid database is even called "Official Development Assistance". In order to be considered ODA, aid must be, "...administered with the promotion of the economic development and welfare of the developing countries as its main objective..."(OECD, 2015). Yet these definitions are repetitive at best. To provide a clear definition of development, I revert to that provided by Merriam Webster, which defines development as, *the act or process of growing or causing something to grow or become larger or more advanced.* Thus, development is a form of progress, growth, or expansion. The question then becomes, within a recipient country, what is foreign aid meant to develop? Development could be captured by any one of a number of indicators. While many studies focus on economic growth as their main indicators, development could also be reflected by improvements in education, the environment, infrastructure, health care, political institutions, trade, or water sanitation, to name a few. Development should therefore not simply be interpreted as economic growth, because (as economists will

quickly point out) increases in income do not necessarily deliver benefits to all citizens. Instead, evaluations of development must consider the entire spectrum of factors that can improve quality of life. In light of this, I allow the term development to incorporate any indicator that reflects advancement in an aid recipient.

An "effective" development policy can then be simply defined as one that is successful in promoting the development of a recipient country. Foreign aid can be considered effective when it increases a recipient country's GDP per capita, reduces its carbon emissions, enrolls more children in school, or lowers mortality rates. Any one of these results reflects a success for foreign aid. While reviewing the literature on aid effectiveness, I highlight the indicators various authors have used to investigate whether or not an aid policy has been effective. While many scholars address aid effectiveness using economic growth as their dependent variable, others (although far fewer) analyze equally important outcomes.

2.2 The Politics of Aid Allocation

When the era of foreign aid began in the 1950s, for the first time ever, there appeared a systemized sense of moral obligation by states to help those that were less fortunate. As articulated in Truman's inauguration speech after World War II, Western states believed that, "...only on the basis of a just international order in which all states had a chance to do well was peace and prosperity possible" (Lumsdaine, 1993, p. 30). The vision was that foreign aid would help contribute to world peace by encouraging development in poor countries and alleviating the suffering that underlies violent uprisings. In reality, however, aid quickly became a tool of statecraft, one that often disregarded the needs of the developing world in order to ensure the advancement of political agendas. Below, I demonstrate how aid allocation is too often influenced by political issues. Additionally, I highlight those studies

that distinguish between bilateral and multilateral aid flows, as well as the relatively few cases that exclusively examine aid allocation by multilateral aid agencies.

2.2.1 Studies on the Allocation of Bilateral Aid

Numerous studies have demonstrated that a majority of the time, bilateral aid donors give aid in a manner that benefits their own strategic or economic interests rather than those of the recipient. Rather than being used primarily to address development concerns, bilateral aid has become a political tool, one that can be used to extract valuable policy concessions from recipient governments, or to bolster support for foreign allies. As Kosack (2003) clearly states:

> *It is relatively rare that aid is given solely for the benefit of the recipient country: as noted earlier, there is often a good deal of self-interest inherent in aid, especially in bilateral aid* (p. 14).

This pessimistic viewpoint has been borne out in many studies. For example, in a case study analysis of France, Japan, Sweden, and the U.S. during the 1980s, Schraeder, Hook and Taylor (1998) find evidence that strategic and economic motivations largely outweighed humanitarian concerns for aid distributions. The authors further argue that Cold War strategy was a prime determinant of how the U.S. spent their aid money, in that U.S. allies were much more likely to receive aid. In another study, Alesina and Dollar (2000) argue that political and strategic considerations dominated bilateral aid allocations from 1970-1994. Specifically, they find evidence that similarity of UN voting behavior and a recipient country's colonial past are more determinant of aid giving than the political institutions or economic policies of recipient states.

Using a game theoretic model, Bueno Bueno de Mesquita and Smith (2007) present a formal argument of how bilateral aid can be used to strategically bene-

fit donor states. The author's posit a theory of aid being exchanged for policies in the framework of the selectorate theory. Donors give aid in return for beneficial policy concessions, and recipient leaders use the aid to provide benefits to their coalition supporters. Evidence from U.S. bilateral aid allocations support their argument. Bueno Bueno de Mesquita and Smith (2009) extend this argument by allowing nations to bargain over the size of the policy concessions that are being traded for aid. The authors then test their argument using bilateral aid flows to recipients. Assuming that aid is fungible, the model demonstrates that as salience, coalition size, and resources in the recipient state increase, the donor gives an increasing amount of aid in order to maintain desired policy concessions.

Political concerns have also been shown to underly the motives of aid given various development sectors. Drury, Olson and Belle (2005) find that U.S. foreign policy factors are critical determinants of whether or not to provide humanitarian aid, as well as how much aid should be distributed. Examining U.S. humanitarian aid from 1964-1995, the authors find that U.S. allies are much more likely to receive disaster assistance than non-allies, especially during the Cold War. The authors conclude that, "Indeed, our results paint a picture of high U.S. foreign policy decision makers as realists at heart, seeing disasters as opportunities to enhance security" (Drury, Olson and Belle, 2005, p. 470). Expanding on this, Kevlihan, Jr. and Biglaiser (2014) investigate aid given in instances of conflict rather than just natural disasters, and examine the post-Cold War and post 9/11 periods. Using infant mortality rates as a measure of need and war casualties as a measure of conflict intensity, they find that the U.S. does actually exhibit some altruistic motives when conflict is included as a measure.

Economic considerations are also a key determinant of bilateral aid distribution patterns. Foreign aid can be used to bolster trade ties, or can even promote the

interests of specific firms or contractors within the recipient through the use of tied aid (Tierney et al., 2011; Radelet, 2006). Younas (2008) shows that OECD countries tend to allocate more aid to recipient nations that import more goods in which the donor state has a comparative advantage. Therefore, he argues that aid can be given not simply to promote the interests of individual firms in the recipient state, but also for donors to acquire an overall higher share of the recipient's imports. Lundsgaarde, Breunig and Prakash (2010) test bilateral aid flows and find that aid is given primarily to support the commercial interests of the donor state. They find that aid is given to trading partners in order to strengthen export markets and to support donor firms.

Several other factors have also been studied as determinants of bilateral aid. Carey (2007) examines the conditionality of aid based on the human rights practices of recipient countries and shows that, despite the rhetoric countries employ to ensure the public that aid is going to "good" countries, human rights practices have no bearing on aid allocation. In an analysis of U.S. economic aid, Demirel-Pegg and Moskowitz (2009) reach a different conclusion. They find that change in the international environment matters, as they demonstrate that economic development was more important for U.S. aid before the Cold War, but that human rights are more influential in the post-Cold War world.

In another study, Berthélemy (2006) investigates differences in allocation patterns among bilateral donors, arguing that the behavior of each donor is unique, and that aggregating them is empirically wrong. Berthélemy (2006) states that, "Aggregating donors is valid only under the assumption that all donors behave the same, which seems to be wrong" (p. 179). The author concludes by distinguishing between altruistic donors (Switzerland, Austria, Ireland, and the Nordic countries) and ego-

istic donors (Australia, France, Italy, Japan, and the U.S.) and demonstrating that differences exist between these two groups.

It is important to emphasize that allocation decisions are not made in a vacuum, but are subject to strategic calculations as well. This is demonstrated by Knack, Rogers and Eubank (2011), who investigate the varying provisions of tied aid based on the amount of donor fragmentation within a recipient country. Building on collective action theory, the authors argue that when a donor has a larger share of aid in a recipient country, they will provide less tied aid because they want the aid to be effective. In other words, they have a greater incentive to make sure that their aid is actually working. The authors find support for their argument in a test of aid allocation in 2006.

It is also worth discussing briefly the rise of a new group of donors within the aid community. While developed democracies have been the dominant sources of aid donations for decades, non-DAC countries in emerging economies such as China, Brazil, Saudi Arabia, Kuwait, Venezuela, and the United Arab Emirates have been providing increasing levels of development aid (Woods, 2008). Some estimates state that by 2006, this group of donors had contributed over $8.5 billion in foreign assistance. Increases in aid from this group of donors is concerning on several levels. First, few studies have examined the nature and consequences of aid from this group of emerging donors. Second, these donors often do not impose conditionality constraints on their development funds, in sharp contrast to many DAC donors, and even more so to multilateral donors (Woods, 2008). Without conditions attached to aid funds, emerging donors are essentially offering the same levels of assistance to aid recipients, but at a cheaper price. Whether or not these funds will be as effective in promoting effective and responsible development patterns remains to be seen. Third and lastly, the foreign policy goals of these donors are often at odds with countries

in the DAC. With increasing tensions between the East and West, the use of foreign aid to solidify allies, secure economic relationships, and extract policy concessions is especially concerning.

2.2.2 Studies Comparing Bilateral and Multilateral Aid Allocation

Few studies of aid allocation have made a clear distinction between types of aid. This is a mistake because bilateral and multilateral aid are starkly different. Asher (1962), an early scholar of foreign aid lists the benefits of multilateral aid in that it is nonpolitical, enables coordination among donors, promotes efficiency, and reduces the relative costs of aid giving by reducing administrative costs. Supporting this argument, in one of the earliest studies of multilateral versus bilateral aid allocation, Alfred Maizels (1984) examines 80 developing countries from 1969-1970 and 1978-1980 and finds that bilateral aid is driven by political, economic, and military strategic interests, whereas multilateral aid is driven by recipient need. These results have also been supported by more recent studies of aid allocation. Focusing on both bilateral and multilateral aid flows, Dollar and Levin (2006) study the "selectivity" of aid allocation decisions, emphasizing the importance of good institutions and policies in recipient countries as being key for aid effectiveness, as advocated in the 2002 Monterrey Consensus. Examining aid to developing countries from over forty donors from 1984-2003, the authors find that multilateral aid is in fact channeled to countries with better institutions, such as rule of law, property rights, and democracy. Bilateral aid on the other hand, has only a weak relationship with democracy, and there is no significant impact of rule of law or property rights on bilateral aid allocation. Overall, the authors conclude, "multilateral aid is more 'selective' than bilateral aid" (Dollar and Levin, 2006, p. 2036)

In their widely cited work, Burnside and Dollar (2000) examine both growth and aid allocation to 56 developing countries from 1970-1993. Using information on budget surplus, inflation, and trade openness in recipient countries, the authors create a policy index which is their key variable for determining both aid allocation and effectiveness. In their study of aid allocation, the authors find that multilateral aid is given to countries with low income levels, smaller populations, and better policy environments. Bilateral aid, however, is not targeted towards countries with good policy environments. This suggests that aid governed by multilateral aid agencies is more likely to go to countries with good policies, and ultimately result in economic growth.

Alesina and Weder (2002) examine how corruption impacts aid allocation from 1975-1994. They find that while the U.S. gives more aid to corrupt governments, Australia and Scandinavian countries give aid to less corrupt governments. In terms of multilateral aid allocation, they find no systematic difference between it and bilateral aid. The authors then conclude that on the whole, neither type of aid seems to discriminate based corruption levels in recipient countries. In their discussion, the authors describe how this is somewhat counterintuitive:

> *Since international organizations should be less directly affected by the colonial history of the recipients, international alliances, and geopolitical considerations, one may expect that multilateral aid flows may be more responsive to the policies and institutions of receiving countries. Specifically, one may expect that multilateral aid should penalize corruption more than bilateral aid* (Alesina and Weder, 2002, p. 1128).

I return to this puzzling finding in my final discussions.

Investigating the relationship between aid allocation and human rights, Neumayer (2003) explicitly distinguishes bilateral and multilateral aid flows. Using the Political Terror Scale (PTS) as a measure for respect for human rights, Neumayer (2003)

examines aid allocation with panel data from 1984-1995. He finds little general evidence that respect for human rights matters at all. Only multilateral aid seems to show any real promise, with multilateral agencies giving more aid to countries that improve their civil and political rights, especially for the post Cold War era.

A recent book by Hicks et al. (2010) examines the allocation of environmental assistance to developing countries. The authors empirically examine allocation patterns of both bilateral and multilateral aid donors, and also provide case studies to highlight their argument. The authors conclude that bilateral aid donors are actually more responsive to a recipient country's environmental need than multilateral aid donors. Hicks et al. (2010) also finds that bilateral aid donors are more likely to pay attention factors that may signal the potential success of an environmental aid project, compared to multilateral aid donors. These conclusions are quite negative in regards to multilateral aid, and beg the question as to why any donor would utilize a multilateral aid organization at all.

In another early investigation of aid allocation, Rowe (1978) investigates U.S. bilateral and multilateral aid allocation to Latin America from 1961-1970. Rowe (1978) specifically studies whether U.S. interests are able to drive multilateral aid allocation patterns, reflecting a common criticism of multilateral agencies in that they are merely conduits for their more powerful member states. Despite being "nonpolitical" agencies, Rowe (1978) describes several ways in which political considerations can affect multilateral aid allocation: namely, the influence of powerful donors, such as the U.S., on voting patterns as well as informal negotiations, and evaluations of economic or financial criteria for recipient states. His findings suggest that each agency varies according to how political considerations affect their allocation patterns. The IDA, UNDP, and other UN programs have a weak relationship with political variables that are driving U.S. aid, indicating that multilateral aid is in fact distinct from

bilateral aid in this case. Other agencies, however, specifically the IBRD and IDB, are strongly associated with "conservative politics," factors such as civilian control of the military, democratic or semi-democratic regimes, and the presence of labor forces in politics. Ultimately, Rowe (1978) concludes that multilateral aid agencies are not simply reflections of U.S. policy preferences, but are able to exert their own influence over aid allocation decisions under certain conditions.

2.2.3 Studies on the Allocation of Multilateral Aid

Relatively few studies have exclusively examined aid allocation by multilateral aid agencies. Several studies have found evidence demonstrating that multilateral institutions are able to pursue policies that are devoid of national interests. Burnside and Dollar (2000) find that aid controlled by multilateral agencies is allocated more to countries with good policies. Hlavac (2007) also finds conditional support for this argument. His findings demonstrate that aid from multilateral agencies is indeed targeted towards the neediest populations in sub-Saharan Africa from 1995-2004. In their study, Clist, Isopi and Morrissey (2012) find that the European Commission (EC) and World Bank will give more of their aid in the form of general budget support to those recipients who demonstrate better expenditure monitoring and allocation systems.

Several studies have addressed multilateral aid's relationship with human rights practices in recipient countries. Tsoutsoplides (1991) studies aid allocation by the European Community from 1975-1980 and finds a positive and significant association between amounts of aid received and the recipient country's Physical Quality of Life Index (PQLI) score. Neumayer (2003) also investigates the relationship between multilateral aid allocation and human rights. Specifically, he examines the allocation patterns of four regional development banks and three UN agencies with regard to

recipient behavior on human rights. Using panel data from 1983-1997, the PQLI score, PTS data, and corruption levels, he finds that aggregate multilateral aid is targeted towards countries with a greater respect for political freedom, as well as smaller and poorer countries. Interestingly, he also finds that colonial past is a key determinate of multilateral aid giving, indicating that bilateral preferences can also have spillover effects on multilateral aid allocation. Neumayer (2003) further finds that multilateral aid allocation varies depending on who the donating agency is. UN agencies are more likely to consider human development needs, as captured by the PQLI score, compared to the regional development banks, who focus mainly on economic need. He also finds that political freedom is significant for the Inter-American Development Bank (IDB), UN International Children's Emergency Fund (UNICEF), and UN Transitional (UNTA), but that this finding is relatively weak. Overall, he concludes that political freedom and corruption levels do not matter for aid allocation by these agencies, making them appear little better than their bilateral counterparts.

In another study, Öhler and Nunnenkamp (2014) take an in depth look at the regional aid allocation aid projects by the World Bank and the African Development Bank (AfDB). The authors argue that it is important to look at allocation patterns within recipient countries, as substantial variation may exist. They therefore examine allocation within 27 recipient countries. They test the argument that multilateral agencies are more likely to provide aid to needier regions, regions with better governance, regions with lower levels of conflict, and regions in which political leaders were born. Testing World Bank projects from 2005-2011, and AfDB projects from 2009-2010, the authors surprisingly do not find any support for the argument that multilateral aid is targeted to needier regions, whether this is measured through higher infant mortality rates, worse maternal health, or more severe malnutrition.

This would seem to go against what multilateral agencies espouse to do. Furthermore, the authors describe that while the World Bank appears to stay clear of conflict situations, the AfDB does not avoid conflict-prone regions, and has even engaged in promoting conflict resolution. Öhler and Nunnenkamp (2014) also conclude that favoritism is an important determinant of how multilateral aid is allocated regionally, indicating that multilateral aid is often able to be captured by leaders.

Schneider and Tobin (2013) discuss how the internal characteristics of aid agencies may affect their distribution patterns. Specifically, they analyze allocation by the EC from 1977-2006 and find that a recipient country will receive more aid when there is a powerful coalition within the EC that has an interest in that recipient, or when it is a poor country and there is a heterogeneity of preferences among members of the EC. In the first case, when members of the EC have similar interests, they are able to manipulate the actions of the EC and direct more aid to those countries that they have economic, political, or strategic interests in. In the second case, members with divergent interests are unable to manipulate the actions of the EC, allowing the agency to distribute more aid to poorer countries.

In their recent book, *Greening Aid*, Hicks et al. (2010) devote two of their chapters to multilateral aid agencies. They provide case studies of environmental aid policies from the World Bank, the Asian Development Bank (AsDB), the Global Environmental Fund (GEF), and the OPEC Fund for International Development (OFID). The authors demonstrate that spending by each of these agencies has changed substantially over time, and that it also varies according to different institutional structures, political interactions, preferences, and specialization of the agencies. The authors find that overall, multilateral aid agencies are now providing less environmentally harmful aid, or dirty aid, and are providing more environmentally neutral aid through programs such as health and education. In terms of agency characteris-

tics, the World Bank in particular is shown to be highly influential, especially in the environmental sector, as many other multilateral agencies follow its lead in terms of how and to whom they should donate to. However, the authors also find that the World Bank has been especially reluctant to provide more environmentally responsible aid projects and to reduce environmentally harmful projects. Much of the progress that has been made is a direct result of pressures from donating members, especially the U.S. The AsDB has also made improvements in its environmental aid portfolio, but these changes are usually a source of tension between wealthier donor states and impoverished recipient states. Recipients often protest, or at the very least are highly skeptical of environmental reform policies, as they are concerned that environmental concerns will trump important infrastructure projects that are needed for development. Nevertheless, the AsDB continues to expand its activities in the environmental sphere. The authors then discuss how the GEF has been plagued by administrative and organizational disagreements since its inception, which at one point resulted in the agency being completely restructured only three years after it had been created. OFID has also increased its environmental aid, although its primary focus continues to be on poverty reduction and economic growth. Overall, the study by Hicks et al. (2010) suggests that multilateral aid agencies are increasing their environmental aid, but that there are also tensions within them among donors, debates on what types of environmental projects they should finance, and a struggle between the tradeoff of pursuing poverty reduction versus environmentally responsible aid.

2.2.4 Summary of Aid Allocation Literature

Overall, the discussion presented above suggests that bilateral aid is often given for political, strategic, or economic interests that benefit the donor state rather than

the recipient. Multilateral aid, on the other hand, presents a more positive picture. Multiple studies suggest that multilateral aid is more responsive to recipient need, issues of human rights, and good governance in recipient countries compared to bilateral aid. The summary is not entirely positive, however. Other studies have cited allocation problems associated with multilateral aid, such as regional favoritism (Öhler and Nunnenkamp, 2014) and corruption (Alesina and Weder, 2002; Neumayer, 2003). Hicks et al. (2010) also demonstrate how multilateral aid agencies may not be as good at providing environmentally responsible aid as compared to bilateral aid agencies. Irregardless of these shortcomings, the general trend appears to be that multilateral aid is distributed in a manner more conducive to promoting development than bilateral aid, although this finding is not without caveats.

2.3 Is Foreign Aid Effective?

The second main category that studies of foreign aid have focused on is the issue of effectiveness. For the most part, these studies examine the effectiveness of aid in promoting economic growth. However, developmental goals are far more varied than economic growth. Nevertheless, other studies of aid effectiveness, such as conflict, education, health policies, or the environment, are greatly outnumbered by studies of economic growth. Below, I briefly summarize some key works regarding aid effectiveness. Admittedly, I place an emphasis on economic growth studies, as a reflection of the state of the literature. I also separate my discussion by agency type in order to highlight the differences that exist between bilateral and multilateral aid agencies. My review indicates that on the whole, there remains little consensus regarding the effectiveness of foreign aid.

2.3.1 Bilateral Aid Effectiveness

Theoretically, there are several mechanisms through which aid is thought to help facilitate economic growth. First, aid is expected to increase capital spending in the recipient country. The infusion of aid into a country allows the government to spend more than it would normally be able to, and thus stimulates the domestic economy and contributes to economic growth (Radelet, 2006; Wright and Winters, 2010). A second mechanism is that when aid is given in a conditional manner, it can lead to changes in economic and political institutions, allowing aid to indirectly contribute to development (Radelet, 2006). A third mechanism through which aid is expected to enhance economic development is through transfers of technology or knowledge, which in turn enhance the economic productivity of the recipient country (Radelet, 2006). A final mechanism is that by making improvements in healthcare and education, foreign aid will indirectly enhance worker productivity and thus, economic performance (Radelet, 2006).

Critics, however, argue that in reality aid does more harm than good. Foreign aid has been accused of propping up inept governments, perpetuating ineffective political systems and economic practices, and encouraging corruption among government officials. Hancock (1989) offers a stark condemnation of foreign aid, stating that:

> *[I]in the developing countries, aid has perpetuated the rule of incompetent and venal men whose leadership would otherwise be utterly non-viable; it has allowed governments characterized by historic ignorance, avarice and irresponsibility to thrive; last but not least, it has condoned - and in some case facilitated - the most consistent and grievous abuses of human rights that have occurred anywhere in the world since the dark ages* (p.93).

Far from contributing to the economies of developing countries, critics claim that aid is often never even used for developmental purposes. The recent embezzlement of an estimated $12 million by Malawi's former President Bakili Muzuli is a stark reminder

of the potentially corruptible influence aid can have (Moyo, March 21, 2009*b*). In addition to promoting corruption, foreign aid has been accused of actually hurting the economies of recipient states because it reduces savings, causes the currency to appreciate, and as a consequence, discourages private investment (Radelet, 2006).

Scholarly research investigating the true relationship between foreign aid and development has found a broad range of evidence supporting both of these extreme perspectives, as well more moderate viewpoints. Radelet (2006) and Addison, Mavrotas and McGillivray (2005) reach a positive conclusion, and state that foreign aid has indeed improved the lives of the world's poor. On the other hand, in a macro-study of 97 empirical studies of foreign aid, Doucouliagos and Paldam (2008) conclude that development aid has ultimately not been effective. Clemens et al. (2012) on the other hand, argue that studies do not sufficiently consider the length of time it may take for aid to impact economic growth. Examining aid and growth over a longer time frame, the authors find that aid does in fact promote growth when evaluated in a longer time frame.

Many other scholars have found evidence supporting the effectiveness of foreign aid, but only under certain conditions. In their highly debated article, Burnside and Dollar (2000) find that aid does lead to growth, but only when it is given to countries with good political institutions. Easterly (2003) challenges these relatively optimistic findings on a positive relationship between aid and growth, and in an extension of Burnside and Dollar's dataset, Easterly, Levine and Roodman (2004) find evidence that challenges the robustness of Burnside and Dollar's (2000) findings. Mosley, Hudson and Verschoor (2004) also find a positive relationship between aid and poverty reduction, if aid is given in a conditional manner. Winters (2010) suggests that foreign aid will be more effective in promoting economic growth when there are more

accountability mechanisms in place, such as democratic political institutions and a strong rule of law.

Other studies on the conditional effectiveness of aid cite donor motivations as being key determinant variables of aid's success. Bobba and Powell (2007) argue that aid will only be effective when given to recipients who are not allies of the donor state, as aid given to allies is often used to buy policy concessions, or to buy goods and services from that specific donor, thereby rendering the aid given relatively ineffective. Using voting patterns from the UN General Assembly, the authors find support for their argument. Bearce and Tirone (2010) argue that aid is only effective when donors can obtain strategic benefits from giving aid. Their study finds evidence that economic reform and growth are linked with foreign aid, but only for the post-Cold War period in which the strategic benefits of providing aid dropped substantially. Bandyopadhyay and Wall (2007) conclude that while aid has no impact on growth, it does improve national health levels, education, and institutional quality in recipient countries.

Another criticism of foreign aid is that it can perpetuate the rule of autocrats (Bauer, 1972; Friedman, 1958). As Ahmed (2012) demonstrates through a formal model and empirical evidence, aid allows governments to transfer funds to support patronage activities rather than supporting welfare programs. In a study of the short and long term effects of aid on government tenure, Kono and Montinola (2009) argue that aid can promote political survival, but that its effects are contingent upon regime type and time horizon. The authors argue that current aid is more likely to help democratic regimes stay in power, as they can quickly disperse the aid in social spending. Autocracies on the other hand, stockpile aid for emergencies and use these funds to perpetuate their rule in times of crisis. In their study of 162 developing countries from 1960-1999, they find that while current aid can promote

democratic regimes, long term flows of aid to autocracies will also perpetuate those regimes. Bermeo (2014) argues that aid can insulate authoritarian leaders from turnover because it is a non-tax revenue. She therefore expects that donors will provide fungible aid to strategic allies and non-fungible aid to non-allies. Testing her argument on 129 recipient countries from 1973-2010, she finds that the amount of fungible aid a country receives varies over time depending on the country's strategic importance and the attractiveness of a democratic transition.

Bearce (2013) challenges this argument, and states that depending on regime type, there are different causal channels through which aid will impact growth. He first argues that democracies do not invest more than autocracies, as demonstrated by Przworski et al. (2000). Second, he argues that if democracies did indeed invest more compared to autocracies, then aid should actually lead to more growth in autocracies, since without aid, they are only spending money on consumption and private goods. Alternatively, Bearce (2013) argues that aid can encourage growth by promoting institutional reforms. However, once again the effectiveness of aid in this case is dependent on regime type. With fewer veto players, autocracies may be better able to enact economic reform compared to democracies. This would again suggest that foreign aid may actually be more effective in promoting economic growth compared to democracies. In conclusion, Bearce (2013) suggests that the effect of regime type on the relationship between aid effectiveness and economic growth is not as straightforward as some would suggest.

Accusations regarding foreign aid's effects on internal conflict are mixed. Since aid is a potentially lootable resource, it can may encourage the formation and continuing existence of rebel groups, as they can use aid money as a source of income. On the other hand, Savun and Tirone (2012) argue that aid can help alleviate the risk of civil wars during economic downturns, as it allows governments to continue

social spending programs rather than cutting them, thereby making rebellion less attractive.

Studies have also examined aid's relationship with democracy and democratization. Bermeo (2011) argues that the source of aid is highly important for regime type in recipient countries. Aid from democratic donors is much more likely to prompt a democratic transition, while aid from authoritarian regimes decreases the likelihood of democratization. While Goldsmith (2001) finds a small positive relationship between aid and democracy in sub-Saharan Africa from 1975-1997, Dunning (2004) reexamines this argument and finds that the positive finding is constrained to the post-Cold War period. The authors argue that since the end of the Cold War, geopolitical concerns are no longer as dominant as they were beforehand. Therefore studies of foreign aid should be attuned to the potential different effects aid can have in these two time periods.

2.3.2 Multilateral Aid Effectiveness

Generally, studies devoted solely to the effectiveness of multilateral aid agencies remain quite rare. A large share of those studies that have been conducted usually focus on total levels of aid, or bilateral aid, and include results relating to multilateral aid only as an empirical afterthought, without presented any theoretical expectation as to the potentially different effects each type might have. Rajan and Subramanian (2008), for example, examine both bilateral and multilateral aid flows but conclude that neither has a significant relationship with economic growth. Studies by Ram (2003, 2004) reach a much more negative conclusion in regards to multilateral aid effectiveness. In both studies, the author disaggregates aid into bilateral and multilateral aid flows, and finds that bilateral aid is substantially more effective than multilateral aid. He attributes this to the conditionality measures, such as struc-

tural adjustment, that multilateral agencies attach to their aid. Ram (2004) tests the same argument examining the good policy argument presented by Burnside and Dollar (2000), and again finds that even in good policy environments, multilateral aid does not promote economic growth. In contrast, Headey (2008) finds that multilateral aid has had quite a substantial effect on economic growth, while bilateral aid has had a positive effect only in the post-Cold War period. Minoiu and Reddy (2010) distinguish between multilateral and bilateral aid flows, and expect multilateral aid to be spent more on development activities as opposed to non-development activities. In an analysis of growth in developing countries from 1960-2000, the authors find a positive but insignificant relationship between multilateral aid and economic growth. The authors further find that donor characteristics have an effect on growth that has no relation to recipient characteristics. This suggests that donor type, and donor characteristics matter. While they measure these in the case of bilateral aid donors, they do not do the same for multilateral aid donors.

Studies comparing multilateral and bilateral have also addressed issues beyond economic growth. Studying the effect of legal origin on aid effectiveness, Wamboye, Adekola and Sergi (2014) analyze 32 African countries from 1975-2010 and find that multilateral aid contributes to growth only in countries with British legal origins. Terrorism has also been studied in relation to foreign aid. Bandyopadhyay, Sandler and Younas (2014) argue that multilateral aid and bilateral aid will reduce incidents of terrorism, but in different ways. Bilateral aid will reduce transnational terrorism, as it will be used in counterterrorism efforts. Multilateral aid, on the other hand, will reduce domestic incidences of terrorism because it can improve economic conditions and living standards in recipient countries. Using a generalized method of moments (GMM) estimation method, the authors find support for their argument. In the health sector, Nunnenkamp and Öhler (2011) study the relationship between

aid and alleviating HIV/AIDS. Using a difference-in-difference-in-difference approach and examining the Global Fund, they find that aid from multilateral organizations has surprisingly not been effective in reducing the number of AIDS related deaths, but that bilateral aid from the U.S. has actually helped in this area. The reasoning behind this, they suggest, is that multilateral aid organizations spread their funds out quite substantially, which limits the amount of impact they are able to have in a single country. The U.S. and other bilateral aid donors, on the other hand, focus their funding on countries with severe HIV/AIDS epidemics, and are therefore able to make a more sizable impact. Lancaster (1999) offers a promising study of aid agencies in her book, *Aid to Africa*. However, she too focuses mainly on bilateral donor agencies, with the exception of the World Bank and the EC.

Other studies have focused exclusively on multilateral aid agencies. Vreeland (2003) argues that the IMF actually hurts economic growth in recipient countries, and that IMF programs exacerbate income inequality due the conditionality constraints that they impose on recipients. Another study by Winters (2013) examines World Bank projects from 1996-2005. He argues that projects that are more precisely targeted will be more effective, as they are less likely to be fungible and subject to corruption. By more precisely targeting the geographic area to which a project will operate, government accountability is enhanced, and the project is more likely to achieve its goal. Examining the Implementation Completion Reports of 600 World Bank projects, Winters (2013) finds that those projects targeted to single cities or regions, or specific industries or businesses are less likely to be captured than national level projects, and are thus more effective.

Another study focusing on multilateral aid in the environmental sector by McLean (2015) examines how strategic interactions between multilateral aid organizations and recipient governments can promote environmentally favorable outcomes. Using a

formal model, McLean (2015) argues that multilateral aid provided for environmental purposes can successfully attract the support of recipient governments and ultimately be successful, but only when they use aid as a carrot to induce recipients to cooperate with projects rather than through capacity building. Essentially, her model shows that multilateral aid agencies that attract government co-financing will be more successful in reaching project goals. Simply providing more aid money, however, will actually reduce the likelihood of a successful project because the donor has a much higher standard for success that a less developed country will be less likely to be able to achieve. Her empirical study of 177 projects issued by the GEF between 1991 and 2007 demonstrates that the agency is able to induce recipient governments to make environmental improvements. Her results demonstrate how the conflicting interests and motivations of donor agencies and recipient governments create strategic interactions that can inhibit environmental protection.

2.3.3 Summary of Aid Effectiveness Literature

The above literature review indicates that studies of aid effectiveness are far from conclusive. Critics of foreign aid have argued that it has failed to achieve economic development, and has even been cited as extending episodes of civil conflict, all the while wasting billions of dollars of development funding (Easterly, 2006; Moyo, March 21, 2009*b*). Supporters of aid, however, argue that it does indeed promote development, and can also be used in such a manner that may even alleviate potential conflict situations or improve the environment. However, each of these successes is oftentimes conditional upon an additional factor, such as recipient institutions. In terms of multilateral aid, the overall assessment is equally mixed. Some studies find a positive relationship between multilateral aid and growth, while others find that it has a negative association. Critics of multilateral aid organizations argue that they

impose constraints on their funding and do not focus enough activities in a single area to achieve sizable results. Thus, past work suggests that multilateral aid will be more effective when it is targeted locally (Winters, 2013), and when it is able to induce recipient support of project goals (McLean, 2015).

2.4 Conclusion

The literature review presented here highlights several important findings regarding aid allocation and aid effectiveness. First, it is quite clear that bilateral aid is often allocated to further the domestic political and economic interests of the donor government, while multilateral aid agencies often motivated more by recipient need. Second, the effectiveness of foreign aid in general remains highly debated. Although some studies have found support for the argument that aid does promote development, others find equally compelling evidence that aid has not had any positive impact. Given that the aggregate findings regarding aid's effectiveness are so mixed, researchers are now conducting more micro-level analyses as to the type of aid that is most effective, as well as the conditions under which aid is most likely to succeed. The results of these studies will provide a more comprehensive understanding of aid's true impact on development.

My main contribution to this ongoing debate is to highlight how differences among aid agencies affect aid outcomes. Although much of the literature has focused on factors within recipient countries that impact development, my argument scrutinizes the aid agencies themselves. While many studies have acknowledged the inherent differences that exist among aid agencies, especially the differences that exist between bilateral and multilateral aid agencies, as of yet none have specifically explored and tested how these differences impact actual aid results. I address this void in the remainder of my dissertation.

3. A THEORY OF ORGANIZATIONAL EFFECTIVENESS

When examining international organizations or domestic government agencies, one of the most prevalent concerns for policymakers is their effectiveness. As these organizations are designed to serve a specific purpose, assessing whether or not they are in fact achieving their goals is an important and ongoing task for researchers. The issue of organizational effectiveness is especially pertinent to the aid community, as the 2005 Paris Declaration states that, "aid effectiveness must increase significantly" in order to reach the Millennium Development Goals (OECD, 2008). To this end, scholars and policymakers have endeavored to identify the aid agencies and policies that foster the best results. Casting this issue in the the broader context of international and domestic organizational effectiveness, my contribution to this research area is to highlight how the internal characteristics of organizations directly impact their ability to deliver positive results. Drawing on past work in political science and public administration, I identify and discuss in detail three such factors: motivation, specialization, and autonomy. Each of these factors plays a key role in contributing to overall organizational success.

After describing my broader theory of how internal characteristics impact organizational success, I next use this theory to answer my two previously posed empirical research questions regarding multilateral aid effectiveness. The first question I ask is: *What organizational factors make bilateral or multilateral aid more effective?* As discussed in Section 1, although both bilateral and multilateral aid agencies are designed to distribute foreign aid abroad, there are important differences that characterize each type. Bilateral aid agencies, for instance, often provide more aid than multilateral agencies, but they are also tasked with pursing both their domestic

geopolitical interests along with the goal of helping to alleviate third world poverty. Meanwhile, multilateral aid agencies are more divorced from these domestic political constraints, but must then navigate through the institutional constraints placed on them. I argue that these differences must be considered if we are to truly comprehend the effectiveness (or lack thereof) of these two types of aid agencies. Drawing on my general theory of organizational effectiveness, I argue that two key organizational differences–motivation and specialization–will make multilateral aid more effective than bilateral aid.

My second research question focuses on comparing multilateral aid agencies to each other. Although I argue above that multilateral aid agencies are likely to be more effective aid organizations compared to bilateral aid agencies due to their motivations and specialization, it is also important to recognize that a substantial amount of variation exists within multilateral aid agencies themselves. Thus, my second research question is: *What organizational factors make some multilateral aid agencies more effective than others?* In my argument, I highlight how variations in two organizational characteristics–specialization and autonomy–lead to differences in multilateral aid effectiveness.

The remainder of this section proceeds in four main parts. First, I present a general theory of organizational effectiveness focusing on the internal organizational characteristics. Second and third, I apply this argument to my two research questions regarding foreign aid effectiveness. In each, I develop testable hypotheses that I empirically test in Sections 6, 7, and 8. I conclude by discussing the implications of my theory for the aid community, as well as describing the next steps I take in order to test my argument.

3.1 Describing an Effective Organization

Understanding what makes an organization effective is a challenging task to say the least. Past research on organizations has found evidence that factors such as networks (Provan and Milward, 2001; Provan and Kenis, 2008), goal clarity (Moynihan and Pandey, 2005), managerial style and leadership (O'Toole and Meier, 1999; Meier and O'Toole, 2002), organizational culture (Moynihan and Pandey, 2005; Rainey and Steinbauer, 1999), and the centralization of decision-making power (Wilson, 1989) all have important influences on the outcomes that the organization is able to deliver. Likewise, studies of foreign aid have demonstrated that effectiveness is determined by political and economic preferences, human rights considerations, strategic interactions with the recipient state, and the type of aid that is provided. Stepping back from such a myriad of conditions, I ask a simple question: *What does an effective organization look like?* The list of possible answers to this question is potentially endless. While acknowledging the wide range of factors that have been cited as contributing to enhanced organizational performance, I limit my discussion to three factors that are especially pertinent to studies of foreign aid agencies: motivation, specialization, and autonomy. While I first discuss each factor in broad terms, I then discuss it more specifically in the context of foreign aid.

3.1.1 Motivation

The first factor that I argue will contribute to an organization's effectiveness is its motivation. If the motivation of the organization is unclear, it will be more difficult for it to achieve positive results due to conflicting perceptions of what precisely the organization is intended to accomplish. This strong relationship between motivation, or goal clarity, and organizational performance has been well-documented in public administration research. According to these studies, having clear and specific goals

motivates agency employees to perform better (Wright, 2001; Rodgers and Hunter, 1992). As described by Moynihan and Pandey (2005), "A clear task allows the organization to communicate goals easily, develop a mission-oriented culture, and reduce the potential for rival, confusing, and contradictory management systems and actions because of conflicting goals" (p. 427). Thus, goal clarity enhances performance in that it provides a focal point for agency activities. Rather than getting lost in vague idealisms, organizations with clear motivations are better able to concentrate their efforts.

Applying this argument to foreign aid agencies is quite straightforward: if an agency is motivated by development goals, they will pursue developmentally oriented policies. If, however, the agency is motivated to disburse their aid in order to further geopolitical interests, this distracts them from promoting development, and consequently renders the aid less effective than it otherwise might have been. The effect of geopolitical aid can also manifest itself in the interaction between the donor and recipient, whereby donor motivations influence how recipients spend aid funds. A recent study by Kilby and Dreher (2009) states this relationship quite clearly:

> *If the donor is motivated by recipient need, its allocation decision depends on how the recipient uses aid. This induces the recipient to select developmental policies. If the donor is motivated by self-interest, its allocation decision does not depend on how the recipient uses aid and the recipient does not select development policies* (p. 1).

Thus, the motives of aid giving clearly matter in terms of the ultimate effectiveness of aid.

The global aid community has readily acknowledged the diminishing effectiveness of aid when it is distributed for geopolitical reasons. Consequently, they have established a variety of standards meant to urge aid agencies to allocate their funds based on policies of good governance and need. The Paris Declaration on Aid Effectiveness

adopted by the DAC in 2005 emphasized, among other things, that donors should align themselves with local plans for poverty reduction, shift their focus to development related results, and be held accountable for results (OECD, 2008). Building on this, the Accra Agenda for Action in 2008 stressed that donors focus their aid on actions that will positively impact development (OECD, 2008). Finally, the 2011 Busan Partnership for Effective Development Cooperation again stressed the importance of result oriented aid policies, and states that, "Having a sustainable impact should be the driving force behind investments and efforts in policymaking" (OECD, 2011).

There are two main reasons why aid motivated by development needs will be more effective than aid stemming from alternative motives. The first is that this type of aid is more likely to be targeted to poorer recipients. When aid is provided to poor recipient countries, it has the potential to have a substantial impact in terms on development because it is able to address severely dire economic conditions, conditions that may improve markedly with only slight increases in aid. Although evidence of economic growth may not appear for a more extended time period, as it takes years to build an effective infrastructure and strong political institutions, in sectors such as healthcare or education, small contributions can make a huge difference. A single dose of the oral polio vaccine, for example, costs a mere $0.10-0.13 (Global Polio Eradication Initiative, 2015), and in Africa $500-650 can send a child to school for a year (Aid for Africa, 2015). In another example, consider two countries that struggle with poverty, although at different levels: Nigeria, whose gross domestic product (GDP) per capita in 2013 was estimated at $3,006 per year; and Niger, which is contiguous to Nigeria but whose GDP per capita was estimated at $415 per year (World Bank, 2015). Now consider if each country experienced a $100 increase in these rates. This would result in a 24% increase in GDP per

capita for Niger, but only a 3% increase for Nigeria. Clearly then, aid targeted to poorer countries has a relatively greater impact. When economic or political factors influence aid giving, however, these poor countries are more likely to be overlooked in favor of those that can provide a desired political or economic return. Thus, geopolitical motivations can undermine development by neglecting the poorest of the poor.

The second way that politically neutral aid can promote effective development is by allocating aid to countries with good political and economic institutions. As demonstrated by Burnside and Dollar (2000), Mosley, Hudson and Verschoor (2004), and Winters (2010), aid is more effective when it is given to countries with better political and economic institutions. Countries with poor political and economic institutions are more likely to waste aid through government consumption or corruption, both of which have plagued foreign aid effectiveness. One of the biggest criticisms of foreign aid is that it is siphoned off by corrupt public officials and little of it ultimately reaches its intended sector. When donors provide geopolitically motivated aid, they are less likely to be concerned with corruption issues. As discussed by Bauer (1972), Friedman (1958), and Ahmed (2012), aid given in this manner can perpetuate the rule of autocrats, as it allows them to divert aid money into patronage activities, and provides little positive impact in the realm of actual development. Thus, when concerns of good governance are eschewed for geopolitical interests, aid becomes less effective.

These arguments can also be viewed as a "selection effect." By providing aid to poorer recipients with good institutional environments, agencies that are developmentally oriented are essentially choosing the countries which are most likely to produce a positive return on aid spending. But a similar argument can be made for geopolitical aid. However in this case, agencies are selecting into countries that

will provide returns on aid that are beneficial to the donor rather than the recipient. Thus, while geopolitical aid provides private benefits, developmentally motivated agencies are able to produce development results precisely because they select countries based on their motivation to promote development.

3.1.2 Specialization

The second factor that will enhance the effectiveness of an organization is its level of specialization. The argument that specialization can translate into more effective organizations is found in the logic of division of labor. Specialization has long been advocated by economists as a way to help improve production and efficiency. As described by Adam Smith in the *Wealth of Nations*, concentrating on a single task improves worker "dexterity," reduces the amount of time spent transitioning from one task to another, and promotes "the application of proper machinery" (Smith, 1904). Using the example of a pin maker, Smith demonstrates how a laborer operating individually is only able to produce a few pins, whereas a group of laborers who each focus on a more specific task are able to produce thousands. In addition to firms, this logic has been applied to countries as well. Rather than attempting to make every product on their own, countries focus on products in which they have a comparative advantage, and then trade for the other products they need. A division of labor essentially allows firms and countries to achieve economies of scale, whereby they are able to reduce their overhead costs, and thus produce more goods in a more efficient manner.

Specialization among foreign aid agencies has the potential to yield similarly positive results. For purposes of my discussion, I define agency specialization as: *the extent to which an aid agency focuses its allocation on a single country, geographical region, or development sector.* Thus, when an agency focuses its aid activity on fewer

targets, it is more specialized than an agency that distributes its aid equally among all targets. Related to agency specialization is the issue of aid fragmentation, or the proliferation of donors within a single recipient country, region, or sector. Aid fragmentation is defined by the OECD as, "too many donors giving too little aid to too many countries." Similarly, Acharya, de Lima and Moore (2006) define proliferation as, "the extent to which an aid donor disperses its aid budget among a portfolio of potential recipients" (p. 9). While the two concepts are highly interdependent, each refers to a distinct phenomena. Whereas specialization focuses on the activities of the agency, fragmentation examines the resulting nature of aid within a single country, region, or sector. High fragmentation within a recipient country, for example, implies that the country is receiving aid from too many donors. Specialization, on the other hand, focuses on the behavior of a single agency. Thus aid proliferation is a consequence of a lack of agency specialization, as well as a lack of coordination among aid donors. I discuss the relationship between these two concepts in more detail below.

Issues of specialization and fragmentation have received an increasing amount of attention in recent years. Both have been cited as critical factors for improving overall aid effectiveness by both Paris Declaration and Accra Agenda for Action. The Paris Declaration, for instance, specifically states that, "Excessive fragmentation of aid at global, country or sector level impairs aid effectiveness" (OECD, 2008, p. 6). Despite repeated calls for increases in agency specialization to alleviate these problems, change in agency behavior has not been forthcoming (Easterly and Williamson, 2011; Easterly and Pfutze, 2008). The consequences of such a lack of specialization are quite dire. As described by the World Bank (2010), "When aid comes in too many small slices from too many donors, transaction costs go up and recipient countries have difficulty managing their own development agenda" (p. 131). Foreign aid

scholars Easterly and Pfutze (2008) have similarly criticized the lack of specialization among aid donors, stating that:

> *The real-world effect of this fragmentation is that each recipient must contend with many small projects from many different donors, which breeds duplication, takes up much of the time of government ministers in aid-intensive countries, forfeits the opportunity to scale up successes or gains from specialization, and creates high overhead costs for both donors and recipients* (pp.39-40).

This argument has been empirically substantiated by a recent study on the consequences of aid proliferation for economic growth in developing countries. In their article, Kimura, Mori and Sawada (2012) examine the consequences of bilateral aid proliferation for economic growth. Their results indicate that Sub-Saharan Africa, which has low economic growth rates, is plagued by high levels of aid proliferation, Meanwhile, aid proliferation is quite low in East Asian countries, whose growth rates are significantly higher than those of Sub-Saharan African countries. Examining a cross-national dataset using GMM estimation methods, the authors find that aid concentration has a positive and significant effect on economic growth rates.

The juncture between the concepts of agency specialization and aid proliferation warrants special attention. The problems associated with aid proliferation (recipient countries receiving aid from too many donors) is rooted in two sources. The first is a lack of specialization within donor agencies themselves. As agencies diversity their aid portfolios amid a myriad of recipient countries, regions, and sectors, their ability to implement effective aid programs in each of these targeted areas diminishes, thereby rendering their aid less effective than it otherwise could have been. This lack of effectiveness is subsequently compounded when other donor agencies behave in a similar manner. As evidenced from the quotations above, when recipient countries

receive aid from a large number of aid donors, their transaction costs go up and aid effectiveness is diminished.

Agency specialization offers a way to alleviate these costs. In addition to the gains provided by a division of labor, agency specialization has a further benefit in that it can increase the expertise and competency of agency staff, thereby making it more likely that their projects will achieved the desired results. However, observing this effect may be difficult, as these benefits will only be provided if a group of aid agency's specialize and coordinate their behavior. Alternatively, if agencies either do not specialize and/or do not coordinate their act activities, then recipient governments will continue to receive highly fragmented aid, which is not conducive to development. Thus, agency specialization must occur first within agencies, and then agencies must coordinate their activities in order to fully reap the gains that specialization provides.

Using past research on foreign aid effectiveness as well as the logic underlying economic factors of scale as a guideline, below I describe three ways in which specialization can enhance the effectiveness of the agency. These include the ability of the agency to: (1) devote more resources to each targeted location or sector; (2) reduce transaction costs; and (3) increase agency expertise. I then discuss potential counterarguments to specialization, such as issues of spillovers and network effects, as well as the problem of coordination among donor agencies.

The first reason that donor specialization can improve aid effectiveness is that it allows the agency to provide more funding to each targeted recipient or sector. For specialized donor agencies, limiting their targets means that they have fewer activities over which their funding will be divided. This allows aid specialists to provide more funding to each of their targets, whether they be individual country recipients, regions, or aid sectors. By providing proportionally more aid to each targets, agencies are able to achieve better outcomes compared to aid generalists precisely because

the target is receiving more funding. To illustrate this argument, consider two aid agencies: an aid generalist (G) and an aid specialist (S). The aid generalist does not specialize either in terms of its geographical or sectoral distribution of aid. The aid specialist, on the other hand, focuses their aid activities within a more limited geographical and/or sectoral sphere. Each agency distributes aid to x_G and x_S targets respectively. Logically, we can assume that aid specialists distribute aid to fewer targets compared to aid generalists ($x_S < x_G$). Each agency also has a budget of b_G and b_S. If we assume that $b_G = b_S$, then the aid specialist is able to devote more of their resources to each of their targets. This argument holds even when the budgets of the two agencies are not equal. If we eliminate this assumption and instead assume that $b_G > b_S$, the aid specialist will still be able to distribute more funds to their targets, so long as $b_G/x_G < b_S/x_S$. Thus, even if they have smaller overall aid budgets, aid specialists can potentially distribute more aid to each of their targets compared to aid generalists. In terms of development outcomes, larger contributions help to reduce the likelihood of fragmentation within the recipient, which has been shown by Kimura, Mori and Sawada (2012) to be detrimental for economic growth.

The second reason that specialized aid can enhance development is that it reduces the transaction costs that agencies incur. Using the definition provided by Brown et al. (2000), transaction costs are, "the costs arising from the preparation, negotiation, implementation, monitoring and enforcement of agreements for the delivery of ODA" (p. 7). The authors then elaborate on this definition by dividing transaction costs into three different categories. The first are administrative costs, which entail things such as staffing and overhead. For aid agencies, administrative costs are produced by identifying worthwhile projects to pursue, bargaining and decision-making while negotiating the details of aid agreements, and monitoring that

the agreement is carried out as planned (Lawson, 2009, p. 8). Taken all together, these administrative costs can be quite substantial. The World Bank, for example, spent approximately $350,000 over two years while preparing a loan proposal and another $70,000 each year supervising the project until it was completed (Brown et al., 2000, p. 14). The second category of transaction costs discussed by Brown et al. (2000) are the indirect costs of the aid on development goals. Examples of such indirect costs include, "undermining government ownership and policy consistency of ODA and public expenditure more generally; disbursement delays (and possible effects on future commitments), reduced effectiveness (as resources may go to lower priority areas), and over-financing of capital vis--vis recurrent expenditure" (p. 7). The third category are opportunity costs, which entail the trade-offs that are made in order to focus time and energy on each project. The latter two categories are obviously difficult to observe, but exist nevertheless.

By specializing on a particular sector or recipient, donor agencies are able to reduce these transaction costs. Fewer targets means that each agency has to spend less time and energy finding projects to implement, establishing and maintaining aid relationships, negotiating project terms, and monitoring project outcomes. Returning to the scenario presented above, transaction costs, t, will decrease as x, the number of targets, decreases. This implies that $t_S < t_G$. As a result, the aid generalist will have to devote a greater proportion of their budgets to pay for their transaction costs, and will consequently have to provide less funding to each of their targets: $(b_S - t_S)/x_S > (b_G - t_G)/x_G$. Thus, due to lower transaction costs, aid specialists should be able to provide more actual funding compared to aid generalists.

The third way in which specialization can improve aid effectiveness is by providing more in-depth development related expertise. Similar to the transaction cost argument advanced above, specialization allows agencies to invest more knowledge

in each of their targets. Rather than maximizing financial resources, as is the case in reducing transaction costs, in this case specialized aid agencies are able to maximize their country, region, or sector specific knowledge. When aid agencies limit their aid targets, they are able to dedicate more of their staff's resources to improving development in each of those targets. This is the fundamental logic in the public administration literature regarding goal clarity. As a result, for two agencies of similar size, an aid specialist will be able to develop more in-depth knowledge for each of its targets compared to an aid generalist. The World Bank, for example, which dedicates a great deal of its aid to environmental issues, has a staff of over 270 environmental professionals (Hicks et al., 2010, p. 218). It is quite difficult to envisage an aid generalist with the capacity to support a similarly knowledgable staff. As a result of this increase in knowledge resources, aid specialists are able to implement projects and policies that have been more thoroughly planned and researched, and therefore have a greater likelihood of enhancing development. Gerlak (2004) for instance, documents how GEF work on water resource management in the Black Sea and Danube regions has helped to create and spread scientific knowledge through extensive diagnostic evaluations and strategic action plans they implemented with participating countries. Without the GEF, it is unlikely that countries could have individually come together to form such a massive concerted effort on researching and attempting to resolve the problems that the region faced.

Specialized aid agencies can also generate deeper expertise through staff learning and task repetition. As has been shown in economics, when workers focus on a single task they become both better and faster at completing that task. Since they perform the same task repeatedly, workers are able to learn how to complete that task more competently and efficiently, and as a result are abel to take advantage of economies of scale. The same benefits apply to specialized aid agency workers. Acharya, de Lima

and Moore (2006) describe this problem of aid proliferation as being, "...analogous to an individual lawyer trying to deal with a hundred cases in any one week...[t]here is just not enough attention to go around" (Acharya, de Lima and Moore, 2006, p. 15). By working with a limited number of targets, aid workers in specialized agencies are able to capitalize on task repetition and the knowledge that they gather when performing these activities. Aid workers in specialized agencies are more likely to understand the types of projects that are needed, those that are most feasible, what projects have worked in the past, and to have already established contacts in their target areas. As a result, the experience that aid agencies are able to develop in each of their areas of specialization helps them to implement more effective aid projects.

It is important to note that agency expertise is not exclusive to specialized agencies, as aid generalists can also possess high levels of expertise. A study of aid fragmentation in Burkina Faso by Dreher and Michaelowa (2010) discusses how government officials specifically prefer donors with greater levels of technical and sectoral expertise, regardless of the volume of aid they are actually providing. While the authors specifically identified UNICEF, Food and Agriculture Organization of the United Nations (FAO), and the World Health Organization (WHO) as being highly regarded for their expertise, certain bilateral agencies were equally appreciated for their expertise (Dreher and Michaelowa, 2010, p. 21). My argument however, does not dismiss the potential for high levels of expertise within aid generalists. Instead, I focus on the implications of specialization for the distribution of an agency's knowledge resources and how learning can help create a more knowledgable staff. Neither of these arguments assumes that aid generalists are not as competent as specialized aid agencies. Instead, my argument regarding expertise is grounded on treating expertise as a type of resource that an agency possess. Assume that both an aid specialist and an aid generalist possess similar levels of expertise, $e_S = e_G$. If this

expertise must be divided over the number of targets that each agency funds, it logically follows that the aid specialist will be able to provide more expertise to each target: $e_S/x_S > e_G/x_G$. If we go beyond this assumption and argue that specialized agencies actually possess greater levels of expertise than general agencies, $e_S > e_G$, the impact of this argument becomes even larger. Thus, I expect specialized aid agencies to produce more effective aid policies because they are able to devote more staff resources to each of their targets.

In sum, these arguments suggest that the amount of funding and expertise that aid specialists are able to devote to each of their targets should be greater than that provided by aid generalists, thereby making specialized aid more effective. However, there are important potential counterarguments to this. Most notably is that even if agencies provide less specialized aid, they are still able to provide effective aid. For example, agencies whose portfolios are more fragmented may benefit from spillover effects and enhanced networking opportunities. Country and/or sector specific knowledge, for instance, can often be applied to other countries and/or sectors as well. Similarly, increasing the size of an agency's portfolio also increases their contacts to other actors in the aid community, such as government officials, experts, implementing agencies, NGO groups, etc. This allows even an aid generalist to implement aid in an effective manner.

The problem with this line of reasoning is that it discounts the ramifications of such agency behavior at the target level. That is, although it may not be costly to the agency to proliferate their aid portfolios, it is costly for the recipient countries, regions, or sectors. The famous case of Tanzania is a case in point. As reported by former World Bank president James D. Wolfensohn, Tanzania hosts over 1,000 aid missions and makes 2,400 annual reports to donor agencies indicates that a recipient countries must devote a substantial amount of their resources to dealing

with aid agencies.[1] Consequently, aid recipients must devote more of their resources on less productive activities such as negotiating aid contracts, meetings with donor governments, and filing reports on aid projects. The presence of multiple donor agencies has also been shown to diminish the bureaucratic capacity of recipient governments (Knack and Rahman, 2007). As donors work to produce tangible results, they "poach" educated government officials in order to capitalize on their expertise. With more donors operating in a single target area, the demand for educated locals increases, and many in the population are likely to leave for more lucrative employment in the private sector (Knack and Rahman, 2007). This decreases the capacity of the public sector, and thereby reduces aid effectiveness.

A further problem associated with multiple donor agencies being present in a recipient country, region, or sector is that it induces a free-rider problem. Rahman and Sawada (2012) demonstrate this by augmenting the team production model put forth by Holstrom (1982) in the context of foreign aid and selfish aid agencies. As donor agencies provide a joint outcome, and donor agencies are expected to receive private gains from aid effectiveness, the optimal supply of aid will be undersupplied. Thus, the authors conclude that a proliferation of aid donors can lead to suboptimal outcomes for development due to problems of free-riding.[2]

To summarize, development policies implemented by aid specialists should be more effective as they are able to reduce their transaction costs and provide policies that have been more thoroughly examined by aid experts. While each of these arguments is applicable individually, when combined they provide a strong case that specialized aid will be more effective than non-specialized aid. This is not to say

[1] Roodman (2006) even argues that these figures underestimate the severity of aid proliferation in Tanzania at the time.

[2] This problem is solved when the donor agencies are altruistically motivated, as the outcome then becomes a public good.

that aid should be supplied by a single donor to each recipient country, region, or sector. Competition and pressure to succeed is undeniably health for aid agencies and development policies. However, there does appear to be a threshold at which the number of active donors in a given sector of development becomes unproductive (Roodman, 2006). At present, however, donor proliferation appears to significantly exceed this threshold, warranting continued encouragement for aid agencies to limit their aid activities.

3.1.3 Autonomy

The third factor that I argue will enhance organizational effectiveness is autonomy. In a broad sense, autonomy can be defined as the ability of an organization to act independently. Autonomy is an interesting organizational characteristic because it effects organizational performance indirectly rather than directly. Autonomy does not determine the goals that the organization has, nor does it determine the budget or human capital of an organization. However, the ability of the organization to effectively pursue its goals and utilize its endowments in a positive manner is highly dependent on organizational autonomy. Many prominent studies of government agencies have focused on the issue of bureaucratic "red-tape" and its consequences (Wilson, 1989). Brewer and Selden (2000), for instance, describe how excessive managerial levels inhibit organization effectiveness. Rainey and Steinbauer (1999) also highlight the importance of autonomy, stating that, "Autonomy to manage its mission and tasks tends to enhance an agency's performance..." (p. 16). Thus, even if an organization possess positive traits that are expected to enhance performance, it will only achieve positive results if it is sufficiently autonomous. When applying this logic to foreign aid, the expectation is that agencies will only be effective donors when they have autonomy from their managers, in this case donor governments. Below, I use a

principal-agent model as a foundation for my argument in order to describe in more detail the problem that a lack of autonomy creates for aid effectiveness.

Within a principal-agent relationship, the principal (donor) delegates authority to an agent (aid agency). The problem for aid agencies is that while they are created to address development, at the same time, donor governments can obtain short term domestic gains by using foreign aid funds to further their own geopolitical interests. Therefore, a time-inconsistency issue arises, much the same as that faced by national governments in setting monetary policy (Kydland and Prescott, 1977; Barro and Gordon, 1983*a*). On the one hand, donor governments have mandated aid agencies to promote development. On the other, they also have an incentive to use foreign aid to advance their own domestic interests. I argue due to this preference inconsistency, aid agencies must be autonomous in order to fulfill their goals and address development issues effectively. In order to demonstrate this, I first describe the insights that principal-agent theory offers in the context of foreign aid agencies. I then discuss how a lack of autonomy can hinder the benefits that other organizational factors provide.

Autonomy is a multifaceted concept that is a key factor in studies of principal-agent theory. As noted above, in a principal-agent model, the principal delegates authority to an agent with the expectation that the agent will pursue the principal's interests. However, as the agent also has their own preferences, the principal must find ways to entice the agent to act in such a way that maximizes the utility of the principal. Ross (1973) describes this relationship in his seminal study applying agency theory to the design of contracts in economics, while Mitnick (1973) provides a similarly groundbreaking study in political science. In each of these studies, the authors describe the principal's problem as one of motivating the agent to act in a manner that the principal prefers. The agent, on the other hand, faces a decision

of pursuing their own self-interests versus those of their principal. It is at this point that agent autonomy becomes a crucial factor. Offering a broad definition in their study of delegation to international organizations, Hawkins et al. (2006) define autonomy as, "the range of potential independent action available to an agent after the principal has established mechanisms of control" (p. 8). There are two key components of this definition that it is important to highlight. The first is that autonomy determines the agent's "range of potential independent action." If the agent has sufficient levels of autonomy, they are able to pursue their own interests above those of their principal. Principals, on the other hand, want to delegate to an agent that shares their preferences in order to maximize their own utility. When the preferences of the principal and agent diverge, delegation can be costly, as the agent may not pursue policies that are preferred by the principal. As discussed by Jensen and Meckling (1976), the magnitude of these costs depends upon the divergence between the principal's and the agent's preferences, as well as the effort that the principal exerts in order to control agent behavior. However, the ability of a principal to delegate to an agent that perfectly reflects their preferences can only be achieved under conditions of complete information. In reality, this is unlikely to occur, as agents can engage in "hidden action", or can disguise their actions through "hidden information" (Arrow, 1985). Thus, due to asymmetric information, the principal can rarely be certain that the agent fully shares its preferences.

Because principals can never be certain that they are delegating to an agent that truly shares their preferences, they can attempt to mitigate the potential losses of delegation by limiting agent autonomy. This leads to the second key component of the definition provided by Hawkins et al. (2003), which is that autonomy is dependent upon the principal's "established mechanisms of control." As detailed in studies of congressional delegation, principals often restrict the actions of their agents because

of concerns of adverse selection and moral hazard, whereby the agent pursues policies that diminish the potential gains of the principal (Pollack, 2003). Carpenter (2001) succinctly describes this problem, known as agency slack, as when, "bureaucrats take actions consistent with their own wishes, actions to which politicians and organized interests defer even though they would prefer that other actions (or no action at all) be taken" (p. 4). Agency slack can manifest itself in two ways: shirking and slippage (McCubbins and Page, 1987). Shirking occurs when agents engage in limited efforts on behalf of the principal. Slippage occurs when agents shift their preferences away from those of the principal (McCubbins and Page, 1987). Both can diminish the utility of the principal while increasing the utility of the agent. Thus, while principals are eager to benefit from delegation, they are simultaneously wary of agents slacking, as it is costly for them.

Autonomy is therefore important because it determines the ability of the agency to pursue their own preferences rather than those of their donors. Thus, I offer a more specific definition of autonomy in the context of foreign aid agencies as: *the ability of the agency to pursue independent aid policies and achieve its mission and purpose.*[3] When autonomy increases, agencies have greater independence from their donor governments, and consequently a greater ability to pursue their own interests. Donor governments, on the other hand, may resist such attempts by aid agencies to increase their levels of autonomy, especially when they do not share the preferences of the agency, as delegating to agents with divergent preferences can lead to problems

[3]In addition to Hawkins et al. (2003), I draw on two other sources for my definition of agency autonomy. The first is from Lancaster (1999), who defines autonomy in the context of foreign aid agencies as, "the ability of an organization to make policy decisions to achieve its mission and purposes" (p. 78). The second is from Haftel and Thompson (2006), who propose a similar concept of independence in their study of international organizations, stating that, "...independence for an IO is the ability to operate in a manner that is insulated from the influence of other political actors– especially states" (p. 256). In my definition I capture both the emphasis on independence from Haftel and Thompson (2006) as well as the pursuit of agency mission as emphasized by Lancaster (1999).

of moral hazard and adverse selection (Jensen and Meckling, 1976). Therefore, the autonomy of the agency is of critical concern for both the donor and the agency alike.

The ultimate impact of the discrepancy between donor and aid agency preferences is that the benefits that stem from other positive organizational characteristics are less likely to have a positive impact. Consider, for example, an ideal aid agency. That is, one that is motivated to promote development, has strong leadership, a good supply of knowledgable and committed employees, and is specialized. If the agency is autonomous, it is more likely to be effective because it will capitalize on all of these positive traits. However, if autonomy is lacking, these can be negatively influenced by the principal. Donor governments may pressure the agency to alter their aid policies in order to promote goals and interests that conflict with the goals of development. Therefore while the autonomy of the aid agency does not make aid more effective directly, its indirect effects are just as important.

3.2 Comparing Bilateral and Multilateral Aid Agencies

Below, I apply my theory of organizational effectiveness to my first research question: *What organizational factors make bilateral or multilateral aid more effective?* Drawing from the factors described above, I argue that multilateral aid should be more effective than bilateral aid due to differences in agency motivation and specialization. I discuss each of these arguments in turn below.

3.2.1 Examining Agency Motivations

The first reason that multilateral agencies will be more effective than bilateral agencies is that they are more likely to be motivated to provide nonpolitical aid (Asher, 1962). Unlike bilateral agencies, multilateral agencies are designed with the explicit purpose of addressing development concerns. This argument has been demonstrated by several studies comparing bilateral and multilateral aid alloca-

tion. According to these studies, bilateral aid allocations are primarily motivated by geopolitical strategic interests (Alfred Maizels, 1984; Alesina and Dollar, 2000; Nowak-Lehmann et al., 2009), and pay little attention to recipient qualities such as corruption (Alesina and Weder, 2002); institutional quality, rule of law, property rights, and democracy (Alfred Maizels, 1984); policy environments (Burnside and Dollar, 2000); and human rights (Neumayer, 2003). This is detrimental for development because rather than aid being distributed to countries who need it the most, or those countries which have good institutions and will be able to translate aid into real economic growth, bilateral aid is allocated to strategic allies or countries with which the donor has strong economic ties. The Cold War, for example, was a key determinant of U.S. aid distribution patterns in that U.S. allies received substantially more aid than non-U.S. allies. While the Cold War and its effects have largely dissipated today, donors continue to favor their allies when it comes to aid distribution patterns. This fact is clearly demonstrated in a recent book by Vreeland and Dreher (2014), whereby the authors describe how powerful states are able to extract policy concessions from elected members of the UN Security Council through carrots including, but not limited to, foreign aid.

Economic motivations follow a similar pattern of self-interests. Fleck and Kilby (2001) find that of the $12.9 billion that U.S. Agency for International Development (USAID) provided in contracts during 1995, $11 billion of that went directly to U.S. firms. In another study using a time series analysis, Nowak-Lehmann et al. (2009) show that German bilateral aid increased German exports by approximately the same amount as the amount of aid given. This type of economic patronage is often provided in the form of tied aid, aid that is dispensed with the contingency that the goods and services it provides be implemented or sourced by the donor state (OECD and UNDP, 2014). This limitation on the choices that a recipient country has for

actually using their aid can significantly constrain aid effectiveness. According to one study, tied aid is 15-25% less cost-effective compared to untied aid (Clay, Geddes and Nattali, 2009). While the percentage of untied bilateral aid from DAC members has grown from 72% in 2008 to 79% in 2012, there is still much improvement to be made in terms of untying aid (OECD and UNDP, 2014).

Alternatively, many past studies have demonstrated that multilateral aid agencies are devoid of the geopolitical motivations that plague bilateral aid agencies. Beginning with the study by Alfred Maizels (1984), studies of multilateral aid allocation have highlighted that the primary motivating factor for these agencies is recipient need. This has been expanded upon by Burnside and Dollar (2000), who find that multilateral aid is allocated more to poorer countries, as well as those with better policy environments. Other studies have shown that multilateral aid allocations also consider issues of corruption (Alesina and Weder, 2002), institutional quality (Dollar and Levin, 2006), and human rights (Neumayer, 2003) in an effort to ensure that their aid is truly being used to promote development. A recent field experiment in Uganda has even shown that individuals prefer multilateral aid, as it they believe it to be less polarized and more transparent than bilateral aid (Milner, Nielson and Findley, 2013).

To demonstrate this argument further, I examine the goals of forty-four multilateral aid agencies. In order to do this, I relied on the stated missions or purposes of the agencies, as articulated in their charters or (if unavailable) described on their website. The results are presented in Table 3.1. These statements, which are written and agreed upon by founding donor governments, all stress the importance of addressing development concerns. While some agencies focus on development in a broad sense, such as the United Nations Development Programme (UNDP), others focus on development within a specific issue area, such as the WHO. Regardless of

their level of concentration, the overarching theme of multilateral is to help promote development. This evidence clearly shows that multilateral aid agencies are developmentally oriented.

Compounding the benefits that politically neutral aid provides, Rodrik (1996) argues that the development motivation that underlies multilateral aid organizations enables them to extract policy concessions or changes from recipients that would be unsuccessful if pursued by bilateral aid agencies. According to Rodrik (1996), if the recipient observes the multilateral agency as being politically neutral, they are less likely to suspect it of promoting an ulterior motive. Indeed, the political neutrality of these agencies, and the legitimacy that this lends to their aid donation policies, is one of the key benefits provided by multilateral aid agencies (OECD, 2013). This is especially important in light of rising donations from new aid donors, such as China, Russia, India, Saudi Arabia and others, as there is widespread concern that many of these new donors will support rogue political regimes, harm the environment, and ignore conditions of good governance (Woods, 2008). These donors generally do not demand the same conditionality constraints that other donors do, which may persuade recipients to accept aid from these new donors over traditional bilateral aid donors. Being politically neutral, multilateral aid donors offer a solution to this problem.

Table 3.1: Agency Mission Statements

Agency	*Mission*
African Development Bank	The purpose of the Bank shall be to contribute to the sustainable economic development and social progress of its regional members individually and jointly.
African Development Fund	The purpose of the Fund shall be to assist the Bank in making an increasingly effective contribution to the economic and social development of the Bank's members and to the promotion of co-operation (including regional and sub-regional co-operation) and increased international trade, particularly among such members. It shall provide finance on concessional terms for purposes which are of primary importance for and serve such development.
Arab Bank for Economic Development in Africa	The objective of the Bank is to foster economic, financial and technical cooperation between African countries and Arab World countries. To achieve this objective, the Bank shall: (i) Participate in financing economic development in African countries; (ii) Stimulate the contribution of Arab capital in African Development; (iii) Participate in providing the technical assistance required for development in Africa.
Arab Fund for Economic and Social Development	The Fund shall contribute to the financing of economic and social development projects in the Arab states and countries.
Asian Development Bank	The purpose of the Bank shall be to foster economic growth and co-operation in the region of Asia and the Far East (hereinafter referred to as the "region") and to contribute to the acceleration of the process of economic development of the developing member countries in the region, collectively and individually.
Asian Development Bank Special Funds	The purpose of the Bank shall be to foster economic growth and co-operation in the region of Asia and the Far East (hereinafter referred to as the "region") and to contribute to the acceleration of the process of economic development of the developing member countries in the region, collectively and individually.
Caribbean Development Bank	CDB intends to be the leading catalyst for development resources into the Region, working in an efficient, responsive and collaborative manner with our BMCs and other development partners, towards the systematic reduction of poverty in their countries through social and economic development.

Table 3.1: (continued)

Agency	*Mission*
Central American Bank for Economic Integration	The Bank's objective shall be to promote the economic integration and the balanced economic and social development of the founding countries...
European Bank for Reconstruction and Development	In contributing to economic progress and reconstruction, the purpose of the Bank shall be to foster the transition towards open market-oriented economies and to promote private and entrepreneurial initiative in the Central and Eastern European countries committed to and applying the principles of multiparty democracy, pluralism and market economics...
European Commission	The Commission's main roles are to: propose legislation which is then adopted by the co-legislators, the European Parliament and the Council of Ministers; enforce European law (where necessary with the help of the Court of Justice of the EU); set a objectives and priorities for action, outlined yearly in the Commission Work Programme and work towards delivering them; manage and implement EU policies and the budget; represent the Union outside Europe (negotiating trade agreements between the EU and other countries, for example.).
European Development Fund	The EDF funds cooperation activities in the fields of economic development, social and human development as well as regional cooperation and integration.
European Investment Bank	We support projects that make a significant contribution to growth and employment in Europe. As part of our counter-cyclical approach, our activities focus on four priority areas: innovation and skills; access to finance for smaller businesses; climate action; strategic infrastructure.
Food and Agriculture Organization of the UN	...for the purpose of: raising levels of nutrition and standards of living of the peoples under their respective jurisdictions; securing improvements in the efficiency of the production and distribution of all food and agricultural products; bettering the condition of rural populations; and thus contributing towards an expanding world economy and ensuring humanity's freedom from hunger.

Table 3.1: (continued)

Agency	*Mission*
Global Alliance for Vaccines and Immunizations	The purpose of the GAVI Alliance is to promote health by: (i) providing vaccines and the means to deliver such vaccines to people in the poorest countries; (ii) facilitating the research and development of vaccines of primary interest to the developing world; and (iii) to provide support in connection with achieving the foregoing purposes by helping to strengthen health care systems and civil societies supporting such purposes in the developing world.
Global Environment Facility	The Global Environment Facility (GEF) addresses global environmental issues while supporting national sustainable development initiatives.
Global Fund	The purpose of the Global Fund is to attract, manage and disburse resources that will make a sustainable and significant contribution to the reduction of infections, illness and death, thereby mitigating the impact caused by HIV/AIDS, tuberculosis and malaria in countries in need, and contributing to poverty reduction as part of the Millennium Development Goals established by the United Nations.
Inter-American Development Bank Special Fund	The purpose of the Bank shall be to contribute to the acceleration of the process of economic and social development of the regional developing member countries, individually and collectively.
Inter-American Development Bank	The purpose of the Bank shall be to contribute to the acceleration of the process of economic and social development of the regional developing member countries, individually and collectively.

Table 3.1: (continued)

Agency	*Mission*
International Fund for Agricultural Development	The objective of the Fund shall be to mobilize additional resources to be made available on concessional terms for agricultural development in developing Member States. In fulfilling this objective the Fund shall provide financing primarily for projects and programmes specifically designed to introduce, expand or improve food production systems and to strengthen related policies and institutions within the framework of national priorities and strategies, taking into consideration: the need to increase food production in the poorest food deficit countries; the potential for increasing food production in other developing countries; and the importance of improving the nutritional level of the poorest populations in developing countries and the conditions of their lives.
International Bank for Reconstruction and Development	The purposes of the Bank are: (i) To assist in the reconstruction and development of territories of members by facilitating the investment of capital for productive purposes, including the restoration of economies destroyed or disrupted by war, the reconversion of productive facilities to peacetime needs and the encouragement of the development of productive facilities and resources in less developed countries...
International Development Association	The purposes of the Association are to promote economic development, increase productivity and thus raise standards of living in the less-developed areas of the world included within the Association's membership, in particular by providing finance to meet their important developmental requirements on terms which are more flexible and bear less heavily on the balance of payments than those of conventional loans...

Table 3.1: (continued)

Agency	*Mission*
International Development Association - Multilateral Debt Relief Initiative	The objective of the Initiative is to provide additional support to HIPCs to reach the MDGs while ensuring that the financing capacity of the IFIs is preserved. Debt relief to be provided under the MDRI will be in addition to existing debt relief commitments by IDA and other creditors under the Enhanced HIPC Debt Initiative. The MDRI provides a framework that commits to achieve two objectives: deepening debt relief to HIPCs while safeguarding the longterm financial capacity of IDA and the AfDF; and encouraging the best use of additional donor resources for development by allocating them to low income countries on the basis of policy performance.
International Finance Corporation	The purpose of the Corporation is to further economic development by encouraging the growth of productive private enterprise in member countries, particularly in the less developed areas, thus supplementing the activities of the International Bank for Reconstruction and Development (hereinafter called the Bank).
International Labor Organization	The International Labour Organization (ILO) is devoted to promoting social justice and internationally recognized human and labour rights, pursuing its founding mission that labour peace is essential to prosperity. Today, the ILO helps advance the creation of decent work and the economic and working conditions that give working people and business people a stake in lasting peace, prosperity and progress. Its tripartite structure provides a unique platform for promoting decent work for all women and men. Its main aims are to promote rights at work, encourage decent employment opportunities, enhance social protection and strengthen dialogue on work-related issues.

Table 3.1: (continued)

Agency	*Mission*
International Monetary Fund (Concessional Trust Funds)	The purposes of the International Monetary Fund are: (i) To promote international monetary cooperation through a permanent institution which provides the machinery for consultation and collaboration on international monetary problems; (ii) To facilitate the expansion and balanced growth of international trade, and to contribute thereby to the promotion and maintenance of high levels of employment and real income and to the development of the productive resources of all members as primary objectives of economic policy; (iii) To promote exchange stability, to maintain orderly exchange arrangements among members, and to avoid competitive exchange depreciation; (iv) To assist in the establishment of a multilateral system of payments in respect of current transactions between members and in the elimination of foreign exchange restrictions which hamper the growth of world trade; (v) To give confidence to members by making the general resources of the Fund temporarily available to them under adequate safeguards, thus providing them with opportunity to correct maladjustments in their balance of payments without resorting to measures destructive of national or international prosperity; (vi) In accordance with the above, to shorten the duration and lessen the degree of disequilibrium in the international balances of payments of members.
Islamic Development Bank	The purpose of the Islamic Development Bank (hereinafter called the Bank), shall be to foster economic development and social progress of member countries and Muslim communities individually as well as jointly in accordance with the principles of the Shari'ah.

Table 3.1: (continued)

Agency	*Mission*
Joint United Nations Programme on HIV/AIDS	UNAIDS is an innovative United Nations partnership that leads and inspires the world in achieving universal access to HIV prevention, treatment, care and support. UNAIDS fulfills its mission by: Uniting the efforts of United Nations Cosponsors, civil society, national governments, the private sector, global institutions and people living with and most affected by HIV; Speaking out in solidarity with the people most affected by HIV in defense of human dignity, human rights and gender equality; Mobilizing political, technical, scientific and financial resources and holding ourselves and others accountable for results; Empowering agents of change with strategic information and evidence to influence and ensure that resources are targeted where they deliver the greatest impact; and Supporting inclusive country leadership for comprehensive and sustainable responses that are integral to and integrated with national health and development efforts.
Multilateral Investment Guarantee Agency	The objective of the Agency shall be to encourage the flow of investments for productive purposes among member countries, and in particular to developing member countries, thus supplementing the activities of the International Bank for Reconstruction and Development (hereinafter referred to as the Bank), the International Finance Corporation and other international development finance institutions.
Nordic Development Fund	The Nordic Development Fund (NDF) is the joint development finance institution of the five Nordic countries. The objective of NDF's operations is to facilitate climate change investments in low-income countries.
OPEC Fund for International Development	The objective of the Fund is to reinforce financial cooperation between OPEC Member Countries and other developing countries by providing financial support to assist the latter countries on appropriate terms in their economic and social development efforts.
Office of the Commissioner for Human Rights	The mission of the Office of the United Nations High Commissioner for Human Rights (OHCHR) is to work for the protection of all human rights for all people; to help empower people to realize their rights; and to assist those responsible for upholding such rights in ensuring that they are implemented.

Table 3.1: (continued)

Agency	*Mission*
Organization for Security and Cooperation in Europe	The OSCE's comprehensive view of security covers three ?dimensions?: the politico-military; the economic and environmental; and the human. The OSCE's activities cover all three of these areas, from "hard" security issues such as conflict prevention to fostering economic development, ensuring the sustainable use of natural resources, and promoting the full respect of human rights and fundamental freedoms.
UN Department of Peacekeeping Operations	United Nations Peacekeeping helps countries torn by conflict create the conditions for lasting peace. We are comprised of civilian, police and military personnel...In addition to maintaining peace and security, peacekeepers are increasingly charged with assisting in political processes; reforming judicial systems; training law enforcement and police forces; disarming and reintegrating former combatants; supporting the return of internally displaced persons and refugees.
UN Economic and Social Council	ECOSOC, one of the six main organs of the United Nations established by the UN Charter in 1946, is the principal body for coordination, policy review, policy dialogue and recommendations on economic, social and environmental issues, as well as for implementation of the internationally agreed development goals.
UN Office for the Coordination of Humanitarian Affairs	OCHA's mission is to: Mobilize and coordinate effective and principled humanitarian action in partnership with national and international actors in order to alleviate human suffering in disasters and emergencies. Advocate the rights of people in need. Promote preparedness and prevention. Facilitate sustainable solutions.
United Nations Democratic Republic of Congo Pooled Fund	The Democratic Republic of the Congo Pooled Fund (DRCPF) is a pooled funding mechanism established in 2006 for humanitarian activities in the DRC. Under the overall authority of the Humanitarian Coordinator (HC) for the DRC, the DRCPF is intended to give the HC greater ability to target funds to the most critical humanitarian needs, encourage early donor contributions and enable a rapid response to unforeseen circumstances.

Table 3.1: (continued)

Agency	*Mission*
United Nations Development Program	The United Nations Development Programme (UNDP) is the UN's global development network, advocating for change and connecting countries to knowledge, experience and resources to help people build a better life.We are on the ground in 177 countries and territories, supporting their own solutions to development challenges and developing national and local capacities that will help them achieve human development and the Millennium Development Goals. Our work is concentrated on four main focus areas: Poverty Reduction and Achievement of the MDGs; Democratic Governance; Crisis Prevention and Recovery; Environment and Energy for Sustainable Development. UNDP helps countries attract and use aid effectively. In all our activities, we promote the protection of human rights and the empowerment of women.
United Nations Economic Commission for Europe	The United Nations Economic Commission for Europe (UNECE) as a multilateral platform facilitates greater economic integration and cooperation among its fifty-six member States and promotes sustainable development and economic prosperity through: policy dialogue, negotiation of international legal instruments, development of regulations and norms, exchange and application of best practices as well as economic and technical expertise, technical cooperation for countries with economies in transition. The UNECE contributes to enhancing the effectiveness of the UN through the regional implementation of outcomes of global UN Conferences and Summits. Its terms of reference have been defined by ECOSOC.
United Nations International Children's Emergency Fund	UNICEF is mandated by the United Nations General Assembly to advocate for the protection of children's rights, to help meet their basic needs and to expand their opportunities to reach their full potential. UNICEF is guided by the Convention on the Rights of the Child and strives to establish children's rights as enduring ethical principles and international standards of behaviour towards children.

Table 3.1: (continued)

Agency	*Mission*
United Nations Peacebuilding Fund	...the following shall be the main purposes of the Commission: (a) To bring together all relevant actors to marshal resources and to advise on and propose integrated strategies for post-conflict peacebuilding and recovery; (b) To focus attention on the reconstruction and institution-building efforts necessary for recovery from conflict and to support the development of integrated strategies in order to lay the foundation for sustainable development; (c) To provide recommendations and information to improve the coordination of all relevant actors within and outside the United Nations, to develop best practices, to help to ensure predictable financing for early recovery activities and to extend the period of attention given by the international community to post conflict recovery...
United Nations Population Fund	The mandate of the UNFPA is (1) to build the knowledge and the capacity to respond to needs in population and family planning; (2) to promote awareness in both developed and developing countries of population problems and possible strategies to deal with these problems; (3) to assist their population problems in the forms and means best suited to the individual countries' needs; (4) to assume a leading role in the United Nations system in promoting population programmes, and to coordinate projects supported by the Fund.
United Nations Relief and Words Agency for Palestine Refugees in the Near East	Following the 1948 Arab-Israeli conflict, UNRWA was established by United Nations General Assembly resolution 302 (IV) of 8 December 1949 to carry out direct relief and works programmes for Palestine refugees...The Agency?s services encompass education, health care, relief and social services, camp infrastructure and improvement, micro-finance and emergency assistance, including in times of armed conflict.
World Food Programme	The purposes of WFP are: (a) to use food aid to support economic and social development; (b) to meet refugee and other emergency and protracted relief food needs; (c) to promote world food security in accordance with the recommendations of the United Nations and FAO.

Table 3.1: (continued)

Agency	*Mission*
World Health Organization	WHO is the directing and coordinating authority for health within the United Nations system. It is responsible for providing leadership on global health matters, shaping the health research agenda, setting norms and standards, articulating evidence-based policy options, providing technical support to countries and monitoring and assessing health trends.

Sources: Excerpts from agency documents. For each agency, the primary source consulted was its charter. If the charter was not found, I examined other sources, including agency websites and other agency documents.

It is important to emphasize that my argument here does not assume that bilateral aid is completely ineffective at promoting development. Indeed several studies have demonstrated that bilateral aid has, under certain conditions, been successful (Burnside and Dollar, 2000; Radelet, 2006; Addison, Mavrotas and McGillivray, 2005; Mosley, Hudson and Verschoor, 2004; Winters, 2010). However, if the primary purpose of bilateral aid is to promote donor interests, then it is less likely that development will be achieved as effectively or efficiently compared to instances when aid is given primarily for developmental purposes. Aid given for geopolitical reasons has often been found to provide little benefit for development, as it is likely to be diverted to corrupt leaders, consumed by the government, or targeted towards donor firms. Thus, even if bilateral aid does at times succeed in increasing economic growth or improving quality of life in recipient countries, we can assume that had a greater portion of it been given for developmental purposes, the results would have been even more substantial.

In light of these arguments, I expect multilateral aid will be more effective at promoting development because it is more likely to be motivated by development concerns than bilateral aid. As such, multilateral aid is expected to "select" itself into good developmental environments and therefore produce more effective aid. It is also possible, however, that multilateral aid may be just as ineffective as bilateral aid. In fact, several studies have suggested that despite the logic that multilateral aid agencies should promote development, they are actually ineffective, or even possibly even detrimental to development (Ram, 2003, 2004; Vreeland, 2003). If this is true, then it suggests problems in the allocation policies of multilateral aid agencies, such as the conditions it attaches to aid are too stringent and are actually harming recipient economies. This is the argument advanced by Vreeland (2003) in his critique of the IMF. However, despite these potential problems, I expect that multilateral aid

in general to be more effective at promoting development because of its political neutrality. I state this expectation formally in Hypothesis 1.

Hypothesis 1 *Multilateral aid will be more effective than bilateral aid because it is more likely to be given without geopolitical motivations.*

If confirmed, Hypothesis 1 would provide strong evidence that the best way to eliminate the political biases of aid is to channel more funding through multilateral agencies. On the other hand, evidence that multilateral aid is no more effective than bilateral aid poses a serious question as to the utility of such agencies.

3.2.2 Who Specializes?

The second reason that multilateral aid should be more effective than bilateral aid is that it is more likely to be specialized. This expectation has been substantiated by past research. A 2011 OECD Report on Division of Labor, for instance, examined significant aid relationships among 23 DAC countries and 23 multilateral agencies in 2009. Significant aid relationships are defined as either the donor providing a higher share of aid to the recipient than its overall share of global aid, or the donor being one of the larger donors in the recipient that cumulatively account for more than 90% of the recipient's total aid (4th High Level Forum on Aid Effectiveness, 2011, pp. 5-6). The report found that 45% of bilateral aid relationships with partner countries were non-significant, compared to 34% of multilateral aid relationships (4th High Level Forum on Aid Effectiveness, 2011). However, when using both criteria in conjunction to define a significant aid relationship, multilateral agencies are ranked lower than bilateral agencies. The best multilateral aid donors were the IDB, UN Relief and Works Agency for Palestine Refugees in the Near East (UNRWA), and the Caribbean Development Bank (CarDB). Another study of 21 bilateral aid agencies and 8 multilateral agencies from 2005 to 2009 found little difference between bilateral

and multilateral fragmentation levels, though this may be in part due to a smaller sample than the previous study (Bürcky, 2011). In this case, the author examined the number of countries and sectors each donor was active in, as well as the size of their donations to each recipient.

Two academic studies by Easterly and Pfutze (2008) and Easterly and Williamson (2011) use similar approaches to examine the aid practices of bilateral and multilateral aid agencies.[4] In these studies, the authors use the Herfindahl index to measure agency specialization in terms of both recipients and sectors. The studies find that for bilateral aid agencies, "fragmentation is rampant," both in terms of aid recipients and development sectors (Easterly and Williamson, 2011, p. 1936). This lack of specialization is even true for relatively small bilateral donors, such as Luxembourg, Ireland, and Belgium, who would be most likely to benefit from the reduced transaction and overhead costs of specialization. In regards to multilateral aid agencies, the authors of both studies find somewhat mixed results. Overall, multilateral aid agencies have higher Herfindahl scores compared to bilateral aid agencies, indicating that they are more specialized. However, overall these specialization levels are still quite low. For example, the average sector Herfindahl score for bilateral aid agencies is 0.10, but is 0.29 for multilateral aid agencies and 0.50 for UN agencies (Easterly and Williamson, 2011, p. 1936). Both studies also found that multilateral agencies designed to address specific geographical regions, specifically the UNRWA and the regional development banks, distributed less fragmented aid. In fact, Easterly and Pfutze (2008) find that several regional development banks (the International Development Agency (IDA), AfDB, AsDB, and IDB) have some of the best overall

[4]It is worth noting that the studies of Easterly and Pfutze (2008) and Easterly and Williamson (2011) are interested in aid practices rather than aid effectiveness. The authors also emphasize the poor quality of the available data on each of the measures they study, and therefore caution that their results must be interpreted carefully.

practices of all aid agencies. The authors evaluated these agencies on measures of fragmentation, as well as selectivity, ineffective channels, overhead, and transparency. The four multilateral development banks mentioned before rank in the top five of all aid agencies. In regards to sectoral specialization, the studies find less positive support for the argument that multilateral aid agencies are more specialized than bilateral aid agencies. Easterly and Pfutze (2008) find that bilateral aid is actually better than multilateral aid, although neither of these groups perform very well. Meanwhile, Easterly and Williamson (2011) find that multilateral aid agencies designed to focus on a specific sector are better at providing specialized aid. Agencies such as the World Food Programme (WFP), the Global Fund, the Joint United Nations Programme on HIV/AIDS (UNAIDS), and the Nordic Development Fund have high Herfindahl scores in regards to their allocation sector aid. Several multilateral aid agencies that are not specialized, however, do not score as well. In fact, multiple UN agencies have some of the lowest Herfindahl scores of all aid agencies. Despite the low scores of the UN agencies, according to the study by Easterly and Williamson (2011), multilateral aid remains aggregately more specialized compared to bilateral aid, although the authors find that neither of these groups is nearly as specialized as they could be.

Other studies have compared bilateral and multilateral aid fragmentation levels over time. In an OECD study of aid fragmentation, Frot and Santiso (2008) demonstrate with the Herfindahl Index that aid donors have become much more fragmented over time. Bilateral aid in particular, is highly fragmented, although multilateral aid has also become more fragmented over time. With regard to multilateral aid agencies, however, the authors state that there is widespread variation. Some multilateral agencies, such as the UNRWA, Montreal Protocol, and CarDB are highly specialized while others, such as the UNDP, UNTA, and UN Population Fund (UNFPA), are

highly fragmented (Frot and Santiso, 2008, p.36). Expanding on this, Frot (2009) investigates the relationship between aid fragmentation and the length of a donor-recipient aid relationship. He finds that the longer an aid relationship has existed, the greater share of aid the recipient receives from the donor. As a result, a large part of the fragmentation that donors exhibit today is a consequence of adding new recipients to their aid portfolios. These new recipients receive substantially smaller portions of a donor's budget, while recipients that entered into an aid relationship early on continue to receive larger portions of the donor's aid budget. Frot (2009) establishes this relationship for DAC donors as well as multilateral aid agencies, and finds that it is robust to the population size, income levels, and the colonial pasts of recipient countries. Building on these previous studies, Frot and Santiso (2010) examine fragmentation at the sector level, arguing that aggregate levels of fragmentation at the recipient level do not accurately reflect actual fragmentation levels. While a donor may appear to be highly fragmented in terms of its recipients, it may contribute a large portion of its aid to a particular sector in a recipient country. Additionally, by examining fragmentation on a sector level, the authors are able to provide a more detailed picture as to exactly how donors need to coordinate their aid efforts. Frot and Santiso (2010) find that donors have shifted their spending from economic and production sectors to social sectors. Their study does not, however, expand their findings to discuss changes in sectoral allocation based on agency type.

If we first consider the motivations and process of creating a multilateral aid agency, the fact that they are more specialized than bilateral aid agencies should not be surprising. When creating any international organization, states are addressing collective action issues that they cannot resolve on their own. These organizations are therefore created to address a particular concern that states have. Their purpose may be to protect human rights, promote trade, or coordinate financial arrangements.

Regardless of which issue they are designed around, the entire *raison d'tre* for the organization is to address this particular issue. As a result, from their very inception, these organizations are specialized and have a clear, focused goal. For example, the objective of the World Trade Organization (WTO) is to promote global trade, the objective of the International Criminal Court (ICC) is to pursue transnational justice, and the objective of the International Atomic Energy Association (IAEA) is to promote and monitor the peaceful use of nuclear energy. Within the foreign aid community, regional development banks and sector specific agencies all have narrow objectives they have been designed to achieve. The AfDB, for instance, focuses specifically on development concerns within Africa, while the WHO is a global leader on health issues. Not all multilateral aid agencies, however, are aid specialists. Indeed, many multilateral agencies are aid generalists, designed to address development in a broad sense. The UNDP is one such agency. The UNDP has four main areas that it concentrates on in order to promote global development: poverty reduction, democratic governance, crisis prevention and recovery, and the environment and energy for sustainable development. In another example, the objectives of the World Bank agencies, including the International Development Association (IDA) are to, "...promote economic development, increase productivity and thus raise standards of living in the less-developed areas of the world..." While these multilateral aid generalists are still addressing development concerns, they are not focused on a specific region or sector.

In contrast to multilateral aid agencies, bilateral aid agencies will mostly consist of aid generalists for two main reasons. The first is that these agencies are simply not designed to target aid to a specific recipient, region, or sector in the same way that some multilateral aid agencies are. That is, when these organizations were created, they were not designed to be specialized. Instead, they are meant to focus on devel-

opment in a broad sense by distributing aid across multiple sectors and recipients, while simultaneously complimenting domestic foreign policy. This is exemplified in the statement by USAID that, "USAID carries out U.S. foreign policy by promoting broad-scale human progress at the same time it expands stable, free societies, creates markets and trade partners for the United States, and fosters good will abroad." With such a sweeping mandate, including goals of promoting democracy and human rights, securing trading partners and key strategic allies, along with promoting development, USAID is not well suited to focus on any single sector or recipient. The same can be said of other bilateral aid agencies. The United Kingdom's Department for International Development (DFID), for example, is committed to improving development, supporting the MDGs, increasing transparency, strengthening governance in fragile states, improving the lives of women and girls, and promoting climate change. Any move by the agency to become specialized, would therefore be contrary to their intended purpose.

The second reason that bilateral aid is unlikely to specialize can be found in their incentive structures. Even though bilateral aid agencies are not designed to be aid specialists, it is possible that they may evolve and become specialists in response to increasing demands from the intentional aid community. Sweden for example, announced in 2007 that it would cut its number of aid recipients in half as a response to growing international concerns of aid fragmentation (Frot and Santiso, 2008). Australia and Japan are also known to be more geographically specialized aid donors (Frot and Santiso, 2008). However, the majority of the time, such responsiveness of a bilateral aid agency is unlikely to occur due to the pressure it receives from the government to use aid to bolster foreign geopolitical interests. Additionally, bilateral aid agencies must also respond to lobbying pressures from firms and interest groups, who want aid to be targeted towards certain industries or issue areas. As a result,

rather than focusing their activities on any one recipient or one sector, bilateral donors consistently distribute highly fragmented aid, as this type of aid spending reflects the overall preferences of their government and its constituents. This type of behavior has been described by the World Bank as donors wanting to "plant their flags," in recipient countries (World Bank, 1998, p. 26). Essentially, it is in the political and economic interests of bilateral donors to have a wide array of aid programs in multiple recipients (Easterly and Williamson, 2011). As a result, because multilateral aid agencies are more specialized than bilateral aid agencies, I expect them to be more effective at promoting development, as stated in Hypothesis 2.

Hypothesis 2 *Multilateral aid will be more effective than bilateral aid because it is more specialized.*

While past research indicates that specialization differences may be attributable to agency type, they have also emphasized that specialization levels in general are quite poor. Tracking trends in aid fragmentation patterns since the Paris Declaration in 2005, the 2009 and 2011 OECD Reports on Division of Labor show little improvement in the global trend of aid fragmentation (OECD, 2008, 2009; 4th High Level Forum on Aid Effectiveness, 2011). If multilateral agencies are indeed more specialized, this provides a strong policy prescription in that more aid should be channelled through multilateral aid agencies. In this way, the aid community would be able to able to distribute more effective aid funds, given the expected benefits of specialized aid agencies.

3.3 Comparing within Multilateral Aid Agencies

Below, I apply my general theory of organizational effectiveness to my second research question: *What organizational factors make some multilateral aid agencies*

more effective than others? Past studies of aid effectiveness have rarely examined multilateral aid agencies exclusively, and none have examined how differences within this diverse group of organizations affect the outcomes they produce. Thus, the primary goal here is to develop a theorize an effective multilateral aid agency. I argue that specialized and autonomous multilateral agencies are more likely to promote development compared to agencies that are not specialized and that lack autonomy. I discuss each of these two arguments in more detail below.

3.3.1 Specialized Multilateral Agencies

The first factor that I argue will enhance multilateral aid effectiveness is specialization. As discussed above, specialization is important for development because it allows the agency to devote a greater amount of resources to each of their targets, reduces transaction costs, and increases the knowledge and expertise of the agency. Applying this argument to multilateral aid agencies exclusively is therefore very straightforward: multilateral aid agencies with greater levels of specialization will be more effective at promoting development than those with lower levels of specialization. I state this expectation formally as Hypothesis 3.

Hypothesis 3 *Multilateral aid agencies that are specialized will be more effective than multilateral agencies that are not specialized.*

Differentiating among multilateral aid agencies in this manner highlights two main points. The first is that even when comparing bilateral and multilateral aid agencies, it is important to recognize that multilateral agencies are comprised of a large and diverse set of organizations. By investigating the specialization levels among multilateral aid agencies, I am able to provide a richer theory with regard to the effective characteristics of an aid agency. Second, the ways in which multilateral aid agencies specialize also varies substantially. Some focus their attention on a specific

sector, while others concentrate on certain geographical areas. Examining how these differences in specialization affect development will once again provide a deeper understanding of the nature of multilateral aid agencies, and the policies that are best for effective development.

3.3.2 Autonomous Multilateral Aid Agencies

The second factor that will enhance multilateral aid effectiveness is the autonomy of the agency. While political neutrality and specialization are key factors that contribute to agency effectiveness, it is important to recognize that multilateral agencies are, at their core, created by, and ultimately held accountable to donor governments. As a result, the agency's decisions as to where, when, and how to distribute their aid, and thus ultimately their effectiveness, are dependent on their autonomy from donor governments. While previous studies have examined when donor governments will contribute to multilateral aid agencies (McLean, 2012; Schneider and Tobin, 2013), as well as donor attempts to control agency behavior (Nielson and Tierney, 2003; Buntaine, 2014; Vreeland, 2007), my contribution here is to highlight how autonomy is also a key factor in terms of agency effectiveness. Essentially, the ability of the multilateral agency to pursue independent aid policies that reflect their political neutrality and specialization is influenced by their relationship with their principals. In particular, the preferences of both the multilateral agency and the donor government determines how each actor ideally want the agency to spend its funds. Once the donor government has delegated to a multilateral agency, autonomy determines the agency's ability pursue their own preferences. To examine the impact of autonomy, we must therefore first account for the preferences of both actors regarding the use of multilateral foreign aid. Here, I examine how the preferences of donor governments and aid agencies interact along with autonomy to influence multilateral aid policies.

I first discuss the preferences of donor government and multilateral aid agencies. I then examine how the interactions of these preferences impact multilateral agency policies according to varying levels of autonomy. While my primary focus here is on establishing that a preference disjuncture exists between bilateral and multilateral aid agencies, the ultimate impact of this disjuncture on agency policies is manifested by the fact that multilateral agencies are responsible to multiple principals. I address this in more detail in Section 5, which focuses on measuring agency autonomy.

3.3.2.1 Donor Preferences

What are the preferences of donor governments regarding multilateral aid spending? Examining past behavior suggests that an apparent contradiction exists between donor preferences. On the one hand, donor governments consistently use their bilateral aid as a foreign policy tool to help promote their domestic geopolitical and commercial interests (Alesina and Dollar, 2000; Bueno de Mesquita and Smith, 2007, 2009; Tierney et al., 2011; Radelet, 2006; Younas, 2008; Lundsgaarde, Breunig and Prakash, 2010). At the same time, however, donor governments create multilateral aid agencies with the stated purposes of addressing critical development concerns. How are we to reconcile these seemingly contradictory behaviors? There are three potential answers to this question. The first is that governments are motivated to promote development, but are unable to commit to such policies due to issues of time inconsistency. They therefore delegate to multilateral aid agencies as a way to lock in developmental aid policies that may come under public scrutiny or be altered by future governments. The second is that governments are not interested in development goals at all, and instead are merely using multilateral aid agencies as a form of cheap talk, while simultaneously trying to undermine the developmental nature of these organizations by using them to pursue their own domestic interests. The third

is that multilateral aid agencies provide donor governments with an opportunity advance development goals as well their own geopolitical interests. I expand upon each of these possibilities below.

The first potential preference of donor governments regarding multilateral aid spending is that they genuinely prefer that aid be used to address development concerns. However, knowing that domestic political constraints, such as special interest groups, will resist government efforts to use bilateral aid solely for development purposes, the government cannot be sure that its bilateral aid will not be used for development purposes. The solution is for donor governments to use multilateral aid agencies as credible commitment mechanisms. Rather than spending aid bilaterally, the donor government instead allocates it to an agency which is known to have development as their primary goal, thereby locking in their preference for developmental aid programs. The problem is essentially that the government has a time-inconsistent problem, in that they may currently prefer to distribute aid to promote development, but they are unable to commit to these preferences over a longer time horizon. Similar time inconsistency issues have been discussed widely in the context of domestic monetary policy. Kydland and Prescott (1977) describe the problem in that the optimal policy of lowering inflation is unlikely to be achieved, due to time inconsistent preferences of the government. In this case, the government has a long term objective to keep inflation low. At the same time however, the government also has a short term objective to maintain lower levels of unemployment, in order to appease the public. Rational economic agents (labor and the firm) are knowledgable of this discrepancy, and they incorporate the government's expected inflation level into their wage bargaining contract (Barro and Gordon, 1983*a*). This leads to inflation rates that are excessively high, forcing the government to use expansionary monetary policy in order to promote economic growth (Barro and Gordon, 1983*b*).

The result is that although the government prefers to maintain lower inflation rates, rational economic actors are able to capitalize on the fact that governments also have short term objectives of maintaining political office. While Barro and Gordon (1983*b*) argue that government reputation can potentially mitigate this effect, Rogoff (1985) describes how an independent central bank can help promote stable monetary policy, as they will not be influenced by similar time inconsistency issues. Thus, by delegating power to a third party, the government is able to insulate itself from this time inconsistency problem.

International organizations are often utilized in manner similar to central banks, allowing states to commit themselves to policies that may not be in their future interests (Fearon, 1997). For example, Elkins, Guzman and Simmons (2006) describe the usefulness of international organizations in tying states hands for dispute resolution mechanisms in international investment treaties. Bernhard, Broz and Clark (2002) make an analogous argument in the context of exchange rates, as do Simmons and Danner (2010) for the creation of the ICC. Milner (2006) applies credible commitment theory to multilateral aid agencies, and describes how they provide a way for governments to signal that they are pursuing developmentally oriented aid policies. In her study, Milner (2006) argues that governments allocate to multilateral aid agencies as a way to signal to the public that they are in fact pursuing economic development, rather than strategic interests. In doing so, governments are able to maintain higher overall aid budgets. While Milner (2006) assumes that governments are primarily interested in using aid for strategic purposes and use multilateral agencies to facilitate their strategic spending, this does not always have to be true. Governments could instead be genuinely committed to promoting development, but fearful that future governments may have different preferences. They therefore delegate to

these agencies as a way to lock-in developmentally oriented goals, much the same as governments delegate to an independent central bank to lock-in monetary policy.

The second possibility is that states are not genuinely committed to multilateral aid agencies only pursuing developmentally oriented goals. In this case, delegating to multilateral aid agencies can be seen as a form of "cheap talk." As has been consistently demonstrated by previous studies, national governments utilize their own bilateral aid in order to further their domestic geopolitical and commercial interests. Past studies have also shown that this domestic self-interest seems suffuse the principal-agent relationship in multilateral aid agencies. For example, some argue that the creation of the AsDB in 1966 was motivated by a Japanese interest in its less developed neighbors as potential trading partners and sources of raw materials (Hicks et al., 2010), while the U.S. hoped to use the AsDB to support its military in Vietnam (Kappagoda, 1995). Agencies such as the International Monetary Fund (IMF) are replete with anecdotes of donors pressuring and manipulating agencies to adhere to their interests rather than established agency goals and policies. Vreeland (2007) even argues that in order for the IMF to truly advance development, its Executive Board needs to be insulated from political pressures. He states that, "If the governance of the IMF is freed from pursuing foreign policy objectives, the institution might be able to function more closely to its mandate" (Vreeland, 2007, p. 136). Similarly, Stone (2008) describes how the U.S. can use its preponderance of power within the IMF to "capture" the organization and manipulate conditionality programs to suit its strategic interests during times of crisis in politically important recipient countries, which undermines the long-term goals of the organization. In a study of three multilateral development banks, Humphrey (2014) describes how the composition of the agency in terms of borrowers and non-borrowers strongly influences the interest rates that are attached to these loans. Humphrey (2014) finds that

the IDB, which is balanced between borrowers and non-borrowers, and the Andean Development Corporation (CAF), which is controlled by borrowers, offer cheaper loans compared to the World Bank, which is controlled by non-borrowers. Despite being the largest development bank of the three, the World Bank sets higher interest rates in order to boost their income and protect the interests of their donor states. Thus, even though the World Bank has the potential to offer more developmentally oriented loans than the other two development banks because it is wealthier, it chooses not to do so because of the constraints imposed on it by its principals.

A third possibility is that donor governments prefer multilateral aid agencies serve both functions. In this case, donors use multilateral agencies in order to satisfy their dual desires of promoting development goals, as well as their own geopolitical interests. This blended view of donor preference for multilateral aid spending reflects the motivations of the founding of the modern foreign aid regime. While Lumsdaine (1993) argues that a sense of "humanitarian internationalism" was the main driving force behind the Marshall Plan and subsequent aid programs, whereby developed countries had a responsibility to assist those that were struggling with poverty, others have argued that U.S. hegemony, the growing threat of communism, and an acknowledgement of the potential domestic economic benefits foreign aid would provide were also key motivations (Wood, 1986).[5] From this viewpoint, donor governments are not necessarily development adverse, nor are they entirely altruistic in their motivations. Rather, their purposes are more complex. Donor governments are supportive of development for the sake of alleviating poverty, but also recognize the political and commercial benefits that development can provide, such as securing military allies and gaining access to new trade partners.

[5]Lumsdaine (1993) disagrees with this, and continues to argue that each of these factors were insufficient in explaining the foundation of the modern foreign aid regime. For more details on his arguments, see Lumsdaine (1993, pp. 51-62).

Having examined past studies of bilateral aid allocation, as well as attempts by donor governments to influence multilateral aid policies in favor of their own domestic interests, I argue that it is unlikely donor governments prefer that multilateral aid agencies solely address development concerns. Instead, their preference is more likely that these agencies pursue domestic interests in addition to addressing poverty. While poverty concerns may have been a driving force for the creation of many multilateral agencies, as argued by Lumsdaine (1993), a substantial amount of evidence suggests that donor governments have not maintained these altruistic motivations. It is now common for donor governments to use foreign aid to support their own geopolitical and commercial interests, and given the many well-documented attempts of donor governments to use multilateral aid in a similar manner, I conclude that their preference is that multilateral aid be used in a similarly donor-oriented manner. This is not to say that donor governments never want multilateral aid agencies to take action relating to poverty, as in many cases they undoubtedly do. However, as described in the credible commitment argument presented above, it is unlikely that donor motives are able to remain altruistic for an extended period of time. I return to this argument after discussing multilateral agency preferences.

3.3.2.2 Multilateral Preferences

What then are the preferences of multilateral agencies? While the above discussion indicates that donor governments have selfish, or at best, mixed motives regarding multilateral aid spending, we must also ask if multilateral aid agencies have variable preferences as well. According to Table 3.1, the charters and goals of multilateral aid agencies are to promote development. This has been substantiated by previous studies as well, which find that multilateral aid agencies generally provide aid to poorer recipients and those with good political institutions (Alfred Maizels,

1984; Burnside and Dollar, 2000; Dollar and Levin, 2006; Alesina and Weder, 2002). This evidence suggests that a majority of the time, multilateral aid agencies act as *faithful agencies*, and adhere to their mandates of addressing development concerns.

It is entirely possible however, for multilateral aid agencies to behave as *unfaithful agencies*, acting in selfish ways that do not promote development. This argument has long been made by public choice scholars, who argue that public officials act according to their own self interests, rather than those of the public (Buchanan and Tullock, 1962; Downs, 1967; William A. Niskanen, 1971). Elaborating on public choice theory, Lowi (1979) as well as Epstein and O'Halloran (1999), describe how bureaucrats are not necessarily irreproachable in that they only act to maximize public goods. Instead, they can be highly opportunistic and, "may be motivated as much by the desire to pursue their own policy goals, inflate their budgets, and increase their scope of control as by their desire to follow congressional intent" (p. 8). It is therefore plausible that multilateral aid agencies are behaving in a similarly unfaithful manner, by focusing on increasing their budget, staff, and influence, rather than pursuing developmentally oriented goals. Öhler and Nunnenkamp (2014), for example, have sharply criticized multilateral aid agencies for being irresponsive to issues of recipient need. William Easterly is also particularly vocal in his criticism of multilateral aid agencies (and all aid agencies in general), equating them to "cartels" that have "run amok" (Easterly, 2002).

The question then becomes: are multilateral agencies generally faithful or unfaithful agencies? While acknowledging the problems that may accompany multilateral aid agencies as described by Easterly (2002), I argue that these agencies are more likely to be faithful rather than unfaithful agents. According to agency charters, multilateral aid appears to strongly prefer that aid be spent on development. Although this type of evidence does not necessarily imply that agencies are behaving

according to their stated goals, it has been substantiated by multiple empirical studies of multilateral aid allocation. Furthermore, these statements also become highly important if we consider that they are the metric against which agency behavior is being evaluated, both internally by the agencies themselves, as well as externally by donor governments and third parties. If we view multilateral aid agencies as independent actors, as advocated by Barnett and Finnemore (1999, 2004), we should clearly expect them to act in a manner that justifies their presence and demonstrates the utility of their organization. Multilateral activities are therefore tailored to achieve the goals set out in their mission statements. The annual reports of multilateral aid agencies make clear references to their contributions. For example, the latest annual report from the World Food Programme states that it provided food assistance to 80.9 million people across 75 countries, reduced or stabilized undernutrition for 7.2 million children under age 5, and goes on to highlight other agency achievements. If multilateral aid agencies act contrary to their missions, they are not only acting against their own interests, but they run the risk of losing donor funding, and being openly criticized by their donors as well as by third parties. For example, in 2011 the United Kingdom ceased funding several multilateral organizations, citing problems of poor transparency and low "value for money" (Provost, 2013). In another example, the World Bank faced a huge backlash from environmental NGOs against several of its aid projects, which were seen as environmentally unsound (Hicks et al., 2010). Given the strong stated preferences of multilateral aid agencies to promote development, as well as the serious repercussions they potentially face if they deviate from their mandates, I conclude that multilateral agencies generally prefer that they spend their aid in a manner that addresses development concerns.

3.3.2.3 Multilateral Aid Policies

The above two parts have established that a discrepancy exists between the preferences of donor governments and multilateral aid agencies regarding the manner in which multilateral aid funds should be used. While donor governments may at times be motivated to address development concerns, they are also prone to trying to use multilateral aid funds to secure geopolitical and commercial interests. Multilateral agencies, on the other hand, are strongly oriented towards development. The result is that a tension exists between the donor governments and the agencies. The resulting disjuncture between the government's stated preferences for development and its actual behavior is problematic because it sends a mixed message to the agency as to what types of policies it should pursue. This is true even if the donor government wants to use multilateral aid for dual purposes, since the stated mandates of the agencies do not include references to the domestic political goals of their donors. Essentially, there exists no *internal* incentive for the agency to pursue policies that do not directly contribute to their mission. As a result, the expectations of the donor government and the actions of the multilateral agency will be incongruent. However, while most of the literature on aligning principal-agent preferences focuses on issues of agency slippage, whereby the agent is diverging from its mandates and the stated preferences of its principals (McCubbins and Page, 1987), the exact opposite is happening here. In this case, it is the principal, not the agent, who is *ex post* deviating from the initial contract, a concept I refer to as *principal slippage*. Although donor governments establish aid agencies with the express purpose of addressing development concerns, their actual preferences, whether altered over time by changing political environments, or having been contrary to agency goals in the first place, do not reflect those that they embedded in the agencies. By informally altering the

agent's mandate in this way, it is the donor government who has created drift.[6] Gutner (2005) voices this concern in his study of environmental aid, asking, "Yet what if the problem comes from the delegation side, in the sense that the principals are delegating tasks that do not easily conform to the institution's mission and internal incentive systems...?" (pp.20-21). A similar issue of *principal slippage* underlies the relationship between governments and central banks. Although the bank is initially created to help stabilize monetary policy, in times of economic downturn, the government would prefer that the bank pursue policies that directly counter its original mandate (Rogoff, 1985). The trade-off is essentially one of short, versus long term gains, much the same as that faced by donor governments in setting aid policy.

Given this disjuncture between the preferences of donor governments and multilateral agencies, it becomes the actions that a multilateral agency should take become unclear, as they face competing directives from their principals. On the one hand, they can choose to disregard the principal's altered preferences and adhere their original mandate. On the other, they can adapt to the principal's revised preferences and alter their spending patterns accordingly. It is at this point that agency autonomy becomes critical. When autonomy is low, it is easier for donor governments to pressure multilateral aid agencies to alter their behavior. As a result, they are more likely to succumb to these pressures and ultimately alter their spending to reflect the geopolitical concerns of their donors. This is a suboptimal outcome for both parties. For the agency, their credibility as a development organization is undermined. For the donor governments, although they are able to realize the short term gains of promoting their geopolitical interests, they are also sacrificing the long term gains that reducing poverty can provide. Numerous studies have linked a lack of economic

[6]Note here that I am not addressing instances of re-contracting (which happen quite rarely), but instead instances of informal contract revision.

development with an increased likelihood of conflict, terrorism, and autocracy (Collier, 2003; Piazza, 2011; Barro, 1999). Therefore, while states may be achieving short term gains, they are potentially sacrificing their own long term security.

If, however, autonomy levels are high, multilateral aid agencies will be able to resist *principal slippage*, and can continue to spend their aid in a manner that enhances development. Multilateral aid agencies can offer positive benefits to donor governments as well, and provide a potential solution to their time-inconsistent preferences, so long as they have sufficient autonomy required to do so. In this case, agency autonomy is beneficial for donor governments, as it allows them to pursue their initial long term goals of development, goals that they otherwise would have sacrificed for the sake of domestic interests. A similar result is expected with regard to independent central banks. Cukierman, Webb and Neyapti (1992) in particular note that, "...central bank independence and an explicit mandate to pursue price stability are generally regarded as important institutional devices for ensuring price stability" (p. 354). In this way, the autonomy of the bank is directly contributing to the government's welfare, just not in the way that the government would prefer given their short time horizon. Moreover, it is also arguable that the bank's actions are actually providing a greater benefit to the government than they would have received had they realized their preference of raising inflation rates.

For both multilateral aid agencies and central banks then, the principal is altering their incentive structure, and thereby attempting to undermine the purpose of the agency. Only when the bank or agency is autonomous is it able to resist these attempts and implement its preferred policies, policies that are ultimately more optimal than those which their principals would have them pursue. This argument becomes particularly important when we consider the fact that many studies have documented instances of *quid pro quo* behavior in multilateral aid agencies, espe-

cially with regard to the ability of strong states to manipulate aid agencies into pursing political objectives. Stone (2004, 2008) and Vreeland (2007), for instance, describe how the U.S. is able to manipulate IMF policies. This may seem to suggest that multilateral aid policies can simply be overhauled by a single powerful donor, making them little better than bilateral aid agencies. However, this conclusion is unwarranted for two main reasons. The first is that agency autonomy can mitigate this potentiality. That is, when multilateral agencies have a sufficient degree of independence from donor governments, such instances are much less likely to occur. Second, even when autonomy levels are low, it will be more difficult and time consuming for a donor government to pressure and influence a multilateral aid agency in comparison to their ability to direct their bilateral aid flows. In attempting to alter multilateral aid policies, donor governments must convince the agency's managers, and deal with additional input and pressure stemming from other donor governments. Thus, while multilateral aid agencies may at times be "captured," the ability of a single donor to utilize an agency to secure their own political goals will be much less pronounced compared to bilateral aid, due simply to the costs of attempting to influence agency behavior.

To conclude, I expect that multilateral aid agencies will generally behave as faithful agents, acting to maximize the effectiveness of their development policies. Donor governments, on the other hand, are expected to exhibit *principal slippage*, whereby they establish multilateral aid agencies to address development concerns but subsequently alter their expectations and pressure aid agencies to use their funds in a manner that furthers their domestic geopolitical and strategic self interests. The implications for such a relationship within the principal-agent framework are quite profound. If national governments try to utilize multilateral aid organizations in this manner, it poses a serious problem for the ability of the agency to effectively

address development concerns. I therefore expect that more autonomous multilateral agencies will be more effective, as stated in Hypothesis 4.

Hypothesis 4 *Multilateral aid agencies that are autonomous will be more effective than multilateral agencies that are not autonomous.*

If autonomy levels are low, governments are more likely to capture the multilateral aid agency, essentially rendering it as a bilateral aid agency in disguise. However, when autonomy is high, the aid agency should have the ability to resist such attempts to alter their aid policies, resulting in effective development policies. Multilateral aid agencies therefore offer a potential solution to the problem of national governments utilizing aid for geopolitical purposes, but only so long as they are able to independently pursue developmentally oriented goals.

3.3.2.4 Autonomy and Bilateral Aid

Before concluding, it is worth briefly revisiting the debate between bilateral and multilateral aid agencies in light of my argument on agency autonomy. Although I focus my discussion of autonomy on comparing among multilateral aid agencies, autonomy can also be expected to vary among bilateral aid agencies as well. In the principal-agent model, bilateral aid agencies are agents just as multilateral aid agencies are. They are therefore held accountable to their principals (donor governments) in much the same way as multilateral agencies are. Similarly, the amount of autonomy that bilateral aid agencies exhibit can also be expected to vary from agency to agency. Such variation mimics that of central banks, which have also been documented as having diverse levels of autonomy from their controlling governments. This leads to the argument that if autonomy levels vary within both bilateral and multilateral aid agencies, it is entirely possible for some bilateral aid agencies to have greater autonomy than some multilateral aid agencies. Although this argument is

not beyond the realm of possibility, I argue that it is unlikely due to differences in the principal-agent relationship with donor governments that bilateral and multilateral aid agencies have. While multilateral aid agencies are responsible to multiple donor governments in the form of a collective principal, bilateral aid agencies are only responsible to a single principal. Therefore, while multilateral aid agencies are able to expand their autonomy as a result of the potential for conflict among their collective principal, bilateral aid agencies cannot expect this (Lyne, Nielson and Tierney, 2003). As a result, bilateral aid agencies must carefully adhere to the desires of their donor governments, which generally prefer to use aid for political and strategic gains. If bilateral aid agencies deviate from these preferences, they are much more likely to face sanctions compared to a multilateral aid agency. In consideration of these differences, I expect multilateral agencies to be more effective, due to increased levels of organizational autonomy. However, it is entirely possible for a bilateral aid agency to become sufficiently autonomous so that it surpasses other multilateral aid agencies. Such a possibility, however, is beyond the scope of this research.

3.4 Conclusion

In this section, I have presented a general theory of aid effectiveness in which organizational motivation, specialization, and autonomy are critical variables contributing to organizational performance. Using this theory as a guideline, I then applied it to my two previously stated research questions focusing on the issue of foreign aid effectiveness. The first simply asks if multilateral aid is more effective than bilateral aid. According to my theory, because multilateral aid agencies are politically neutral and more specialized, they should be more effective than bilateral aid. The second focuses exclusively on multilateral aid agencies, and asks what traits make these agencies relatively more effective. I argue that specialization and

autonomy are key factors that will determine the relative success of the multilateral agency. Thus, from my general theory of organizational effectiveness, I am able to extract four testable hypotheses regarding aid effectiveness. The remainder of this dissertation is devoted to testing these hypotheses. In order to accomplish this, I first describe these concepts in more detail and present original datasets measuring them in Sections 4 and 5. I then empirically test my hypotheses in Sections 6, 7, and 8. The results of these analyses ultimately provide a detailed description of the utility of multilateral aid agencies, as well as the specific traits of aid agencies that are most conducive to promoting development.

4. MEASURING AGENCY SPECIALIZATION

The hundreds of foreign aid agencies operating today are incredibly diverse. These agencies are comprised of bilateral agencies, multilateral agencies, NGOs, regional development banks, World Bank agencies, UN agencies, large agencies, small agencies, issue specific agencies, regionally focused agencies, broadly focused agencies, etc. Some agencies have small budgets, such as Iceland, which in 2012 provided just over $11 million in aid funds. Others have incredibly large budgets that surpass the GDPs of many independent countries. The U.S., for instance, in 2012 committed itself to providing over $17.5 billion in aid funds. In another example, some agencies deliver aid throughout the globe, such as the UNDP, which in 2012 distributed aid to 136 recipients. Meanwhile, other agencies distribute aid to far fewer recipients, such as the UN Economic Commission for Europe (UNECE), which distributed aid to only two recipients in 2012. Some agencies are designed to promote a single development issue, such as the WHO, which focuses on global health issues. Others, such as the World Bank, address every aspect associated with development, ranging from water sanitation to general budget support.

In this section, I focus on a single aspect of aid agency variation: specialization. As described in Section 3, specialization among aid agencies has received an increasing amount of attention within the foreign aid community, as it is argued to provide substantial benefits in terms of aid effectiveness. In fact, the aid community is so convinced of the importance of specialization that they have repeatedly emphasized it as one of the ways in which donors need to improve their aid practices. The Accra Agenda for action specifically states that, "The effectiveness of aid is reduced when there are too many duplicating initiatives, especially at country and sector levels"

(OECD, 2008, p. 17). As a response, the OECD formed the Division of Labor and Complementarity task team under the Working Party on Aid Effectiveness to specifically address issues of aid fragmentation, and continues to promote the idea that donor fragmentation is bad for development. Previous work investigating specialization has made important progress, but has not yet thoroughly identified the connection between agency type and specialization levels. Therefore, in this section I emphasize the differences between bilateral and multilateral aid agencies, and present detailed measurements of three potential types of agency specialization.

The remainder of the section proceeds as follows. First, I define specialization and describe the various ways in which agencies can specialize. Second, I present my measurement methods. I measure agency specialization in three ways: country specialization, regional specialization, and sector specialization. After ranking aid agencies in each of these areas, I then test my argument by using panel regression analysis in order to determine if multilateral aid agencies are indeed more specialized compared to bilateral aid agencies. My results present strong evidence that multilateral aid is more likely to be specialized than bilateral aid. I conclude by discussing the implications of this for multilateral aid effectiveness.

4.1 Conceptualizing Agency Specialization

As stated previously in Section 3, I define specialization as: *the extent to which an aid agency focuses its allocation on a single country, geographical region, or development sector.*[1] I therefore refer to agencies that provide concentrated aid, as *aid specialists*. An aid specialist may concentrate its spending either geographically, or on a certain sector of development. For example, specialized agencies may focus their aid on issues such as global health, the environment, or education; a geographical

[1]While my definition of specialization is similar to past studies, it is not identical. I discuss the difference in greater detail in the following subsection.

region, such as Africa or the Caribbean; or on a specific recipient country, such as Tanzania. Specialization can either be designed into the aid agency or may simply be the result of a conscious choice by the agency. Many multilateral aid agencies, for instance, are designed to address specific aid sectors or regions. It is entirely possible, however, for bilateral or other multilateral aid agencies to specialize as well. In order to accomplish this, the agencies need only to alter their allocation patterns accordingly. Rather than being a by-product of institutional design, however, specialization in these instances reflects an active choice of the agency. A country with a colonial past, for instance, may direct its aid towards its former colonies, while a country that is particularly concerned about the environment may target its aid towards environmental projects. A prime example of this is French foreign aid, which, according to a draft law adopted in 2013, has prioritized 85% of its aid to be targeted towards sub-Saharan Africa and the southern shore of the Mediterranean. This sort of distinction can be viewed as a difference between *de jure* and *de facto* specialization. Agencies that are *de jure* specialists are those designed to address a certain development issue or geographical region. Agencies that are *de facto* specialists are those that do not have specialization designed into their institution, but nevertheless allocate aid in a specialized manner. In this section, I examine both types.

Regardless of the origin of agency specialization (*de jure* or *de factor*), there are two main types of aid specialists. The first type are agencies that address a specific sector associated with development. These agencies focus their attention on a narrow policy area. The WHO, for example, concentrates its activities on health matters, including policy, research, and data analysis in that field (World Health Organization, 2015). While the agency may enact multiple policies to achieve its goal, they all fall within the agency's area of specialization. In another example, in order to promote child welfare UNICEF undertakes a variety of policies and programs, focusing

on issues such as child development and survival, basic education, gender equality, HIV/AIDS in children, and child protection (UNICEF, 2015). Despite this array of focal points, the agency remains specialized, as all of its activities are ultimately geared towards improving child welfare. The second type of aid specialists are those that focus their attention on a narrow geographical area. These agencies are mostly comprised of regional development banks, but other agencies also fall in this category, as they operate with a specific geographical focus. The objective of the AfDB, for instance, is to "spur sustainable economic development and social progress in its regional member countries (RMCs), thus contributing to poverty reduction."(African Development Bank, 2015). This suggests that while the AfDB concentrates on a specific region, it does not limit itself in terms of the types of sectors that it focuses on. Instead, this regional specialist still pursues general development goals, however the regional scope of these goals is more limited. The UNRWA, while not a regional development bank, can be considered both a geographical and an issue focused agency, as it focuses its attention on refugees in Palestine. By narrowing the number of potential recipients, both of these agencies can be considered geographical specialists.

At the other end of the spectrum are what I describe as *aid generalists*. These types of agencies have a broad array of goals they are hoping to address through their aid programs, including development, trade, democracy, human rights, the environment, health issues, gender equality, etc. Additionally, aid generalists tend to distribute their aid globally rather than confining it to a specific geographical area.

My definition of specialization is designed to be flexible, and constitutes more of a continuum rather than an absolute. This is especially true for those agencies that are not explicitly designed to address a specific issue or geographical region. Depending on the types of aid policies an agency pursues over time, agencies can move

up and down this continuum by becoming more or less specialized. For instance, a country that initially pursued a broad scope of aid policies may change its priorities and subsequently pursue a specialized aid portfolio. Thus, my classification of agencies into categories of aid generalists and aid specialists is not static, but instead responds to changes in agency behavior. The ability of agencies to move along this continuum, however, will be influenced by whether the agency is *de jure* or *de facto* specialized. Agencies that are *de jure* specialized will have more difficultly becoming a aid generalists, as this is contrary to their organizational purpose, agencies that are *de facto* specialized will be more mobile.

4.2 Measurement

In this subsection I measure agency specialization using multiple datasets on foreign aid from the OECD. Although the datasets all originate from the OECD, they measure aid in different ways. As noted by Dreher and Michaelowa (2010) and Mürle (2007), the data on which fragmentation indicators are calculated is important choice, as different datasets will yield different results. Although the majority of aid studies rely on the OECD's ODA dataset, several aid fragmentation scholars have noted that this aggregate measure may be inappropriate when measuring specialization. Mürle (2007), for instance states that only activities that are actually taking place within the recipient country should be included in studies of aid fragmentation. He therefore excludes debt relief, student costs, support to refugees, administrative costs, and humanitarian aid in his analysis of fragmentation levels in European aid (Mürle, 2007, pp. 9-10). Reflecting this logic, the OECD created a dataset of programmable aid in order to more accurately capture the amount of planned funding that is actually being transferred from the donor agency to the recipient. This dataset of Country Programmable Aid (CPA) excludes unpredictable aid flows (i.e. humanitarian aid

and debt relief), aid that entails no cross-border flows (i.e. administrative costs, imputed student costs, promotion of development awareness, research, refugees), aid that is not part of cooperation agreements between governments (i.e. food aid, aid from local governments), and aid that is not programmable by the donor (OECD, 2009, p. 19). CPA is measured in disbursements and covers the years 2000-2012 for aid recipients and from 2004-2008 for sectors. While CPA is obviously the more preferred base data, it is quite limited in terms of its temporal coverage. Therefore as a robustness check, I perform the same analysis presented below using ODA commitment data, which is available from 1966-2013. The results are virtually the same, and are included as Appendix A.

Table 4.1 lists the bilateral and multilateral aid agencies included in my analysis. The CPA and ODA datasets contain information on 28 DAC donors, as well as 32 multilateral aid agencies.[2] I choose to focus my analysis on DAC donors rather than all available bilateral donors due to questions data consistency and reliability. With regards to multilateral aid agencies, while the ODA and CPA do not cover the entire universe of multilateral aid donors, the sample is quite representative of the major multilateral aid donors operating today.

Capturing the concept of agency specialization is a complicated task. One way to measure it is by simply examining the goals of the agency, which can be easily found in their mission statements. These statements could subsequently be coded according to whether they are concerned primarily with a specific development sector, or if they have a regional focus. Using mission statements as a guide, the evidence presented in Section 3 shows that multilateral aid agencies are often designed to address a specific aspect of development. In this section, I examine three distinct

[2]The EU is also included as a member of the DAC. Here I classify it as a multilateral agency because it is dependent on donor countries for its funding.

Table 4.1: Aid Agencies in CPA and ODA Datasets

Bilateral	*Multilateral*
Australia	AfDB
Austria	AfDF
Belgium	Arab Fund (AFESD)
Canada	AsDB Special Funds
Czech Republic	BADEA
Denmark	CarDB
Finland	EBRD
France	EU Institutions
Germany	GAVI
Greece	GEF
Iceland	Global Fund
Ireland	IAEA
Italy	IBRD
Japan	IDA
Korea	IDB Sp.Fund
Luxembourg	IFAD
Netherlands	IMF (Concessional Trust Funds)
New Zealand	Isl.Dev Bank
Norway	Montreal Protocol
Poland	Nordic Dev.Fund
Portugal	OFID
Slovak Republic	OSCE
Slovenia	UNAIDS
Spain	UNDP
Sweden	UNECE
Switzerland	UNHCR
United Kingdom	UNFPA
United States	UNICEF
	UNPBF
	UNRWA
	UNTA
	WHO

types of specialization. The first two (country and region) are geographical types of specialization. The third is sector specialization, which captures an agency limiting its funding to fewer development areas. Table 4.2 list those multilateral aid agencies that have a regional or sectoral focus according to their charter or mandate as shown in Table 3.1. As can be seen, thirteen multilateral aid agencies are classified as having a regional focus, while fourteen multilateral aid agencies specialize in a specific sector. The UNRWA appears in both columns, as it address refugees in Palestine, giving it both a regional and sectoral focus. In total, of the 32 multilateral aid agencies included in the data, 26 of them are aid specialists according to their mission statements. The multilateral aid agencies that are not aid specialists are the EU Institutions, the International Bank for Reconstruction and Development (IBRD), and IDA (both of which are World Bank agencies), the IMF, and the UNDP. Each of these agencies are aid generalists, and focus on overall economic growth in developing countries.

Table 4.2: Nominal Specialization Based on Agency Mission Statements

Agency	*Geographic Specialization*	*Sector Specialization*
AfDB	✓	
AfDF	✓	
Arab Fund (AFESD)	✓	
AsDB Special Funds	✓	
BADEA	✓	
CarDB	✓	
EBRD	✓	
GAVI		✓
GEF		✓
Global Fund		✓
IAEA		✓
IBRD	✓	
IDA		
IDB Sp.Fund	✓	
IFAD		✓
IMF (Concessional Trust Funds)		
Isl.Dev Bank	✓	
Montreal Protocol		✓
Nordic Dev.Fund		✓
OFID	✓	
OSCE	✓	
UNAIDS		✓
UNDP		
UNECE	✓	
UNHCR		✓
UNFPA		✓
UNICEF		✓
UNPBF		✓
UNRWA	✓	✓
UNTA		
WHO		✓

In spite of the usefulness of the examining agency mission statements to provide guidance as to which agencies are more likely to be aid specialists, using this method may be misleading for two key reasons. First, aid agencies often change their mission statements along with their priorities. Second, agencies may not adhere to these statements at all. As a consequence, mission statements admittedly are capturing agency statements rather than actual agency behavior. To address this concern, I measure specialization with actual agency behavior by examining how agencies disburse their funds. As this behavior is clearly observable, it is more preferable than relying on agency mission statements.

The subsequent question then becomes how to accurately capture agency specialization. As has been discussed in the aid fragmentation literature, specialization is determined by both the number of targets an agency has, as well as the size of their contributions to these targets. The ideal measure of agency specialization would therefore capture both of these components. Drawing from the aid fragmentation literature, I describe two potential measurements of specialization: the size of an agency's aid portfolio and the Hirschman-Herfindahl index.[3] Below, I discuss the benefits and shortcomings of each type of measurement.

The first measurement of specialization is an agency's portfolio size. This is simply a count of the number of recipients, regions, or sectors an agency contributes

[3]There are two other ways in which donor fragmentation is often measured that I do not consider here: the Theil Index and a concentration ratio. The Theil Index is an inequality measurement related to the Gini coefficient. The problem with the Theil index is that it does not reflect changes in population. Thus, measuring donor specialization with the Theil Index would not take into consideration the number of targets to which the agency is donating. The second method is a concentration ratio, which is often used by the OECD. In order to determine whether or not an aid relationship is significant, the the donor must provide a higher percentage of the recipient's aid compared to its share of total aid, and the donor must be one of the largest donors to the recipient by cumulatively providing at least 90% of the recipient's aid (OECD, 2009). An aid concentration ratio is subsequently calculated for each agency depending on how many of their aid relationships are significant. While useful, this measurement of aid fragmentation is more oriented towards measuring fragmentation within the recipient rather than specialization of the agency. I therefore do not include it in my analysis here.

to. Higher counts indicate lower levels of specialization, as the agency has to divide their funds over more targets. This measurement is often used by the DAC as a baseline in evaluating aid fragmentation levels (Dreher and Michaelowa, 2010). While these counts provide good descriptive statistics, they do not capture the relative share of the agency's contribution to each recipient or sector compared to its overall budget. An agency dividing its aid equally among three recipients, for instance, would have the same count as an agency that gives 90% of its aid to a single recipient and 5% to two other recipients.

To address this shortcoming, I use an additional measure of specialization: the Hirschman-Herfindahl Index (hereinafter referred to as the Herfindal Index or HHI). Initially used in economics as a measure of market concentration, this measurement is common in studies of aid fragmentation, and has been used in numerous studies (Frot and Santiso, 2008; Kimura, Mori and Sawada, 2012; Knack and Rahman, 2007; Easterly and Pfutze, 2008; Easterly and Williamson, 2011). The Herfindahl index captures a firm's share of the market by summing the squared proportions of each firm's share. The resulting values are bounded between $1/n^2$ and 1, with higher values indicating greater levels of concentration. Below, I calculate three separate HHI scores based on agency geographical and sectoral activities. The unit of analysis is agency-year. The first is a geographical measure of agency specialization based on donor contributions to recipient countries (*Country Specialization*). The second measure is also a geographical measure of specialization, but uses regions rather than individual countries (*Region Specialization*). The third measures sector specialization and captures whether an agency concentrates their activities on a certain aid sector

(*Sector Specialization*). These indices are calculated as follows:

$$\textit{Country Specialization}_{it} = \sum_{c=1}^{n} a_{ct}^2$$

$$\textit{Region Specialization}_{it} = \sum_{r=1}^{n} a_{rt}^2$$

$$\textit{Sector Specialization}_{it} = \sum_{s=1}^{n} a_{st}^2$$

where i represents each aid agency and t represents each year. The value a indicates the amount of aid as a proportion of the agency's total budget that is targeted to a specific country, region, or sector. Thus, if an agency provides 75% of its total budget to a single recipient country, $a = 0.75$. The values c, r, and s represent the countries, regions, and sectors over which the agency is distributing aid, respectively. The resulting measures of specialization can be interpreted as the probability that two randomly selected aid dollars from a single agency-year are being directed towards the same country, region, or sector, respectively. Higher HHI values indicate that the agency has higher levels of specialization. Table 4.3 presents an example of calculating agency specialization using the Herfindahl Index in more detail. The table presents the expenditure patterns of two aid agencies who are funding four potential development sectors. Agency 1 divides its funding equally among these four groups, with a resulting HHI score of 0.25. Agency 2, on the other hand, devotes a majority of its funding to sector 1, giving it a higher HHI score of 0.73. Thus, the Herfindahl Index is able to capture the specialization levels of each agency.

The problem with the Herfindahl Index is that does not always accurately reflect an aid agency's portfolio size. In fact, as stated by Frot and Santiso (2008), the HHI only reflects portfolio size through its lower bound ($1/n^2$). As a consequence, two

Table 4.3: Example Calculation of Specialization Herfindahl Index

	Agency 1		*Agency 2*	
	Amount Given	*Proportion of Total*	*Amount Given*	*Proportion of Total*
Sector 1	\$5 million	0.25	\$17 million	0.85
Sector 2	\$5 million	0.25	\$1 million	0.05
Sector 3	\$5 million	0.25	\$1 million	0.05
Sector 4	\$5 million	0.25	\$1 million	0.05
Total	\$20 million	1.00	\$20 million	1.00
Calculation:	$0.25^2 + 0.25^2 + 0.25^2 + 0.25^2$		$0.85^2 + 0.05^2 + 0.05^2 + 0.05^2$	
HHI:	0.25		0.73	
Specialization	Low		High	

aid agencies with different portfolio sizes may receive the same HHI score. I present a concrete example of this problem in Table 4.4. In this example, two agencies provide aid to a group of recipients. Agency 1 distributes its aid equally among three recipients, while Agency 2 distributes more than half of its aid to a single recipient, and them provides small portions of aid to another eight recipients. Despite the fact that Agency 2 provides aid to three times as many recipients as Agency 1, their HHI scores are nearly identical. Thus, while the HHI is more informative as to the concentration of a donor's aid portfolio, it is not without flaws.

Below, I use the size of an agency's portfolio along with the Herfindahl Index to measure country, region, and sector specialization. My analysis represents a departure from previous work in four ways. First, I examine more types of specialization. Many studies, such as Acharya, de Lima and Moore (2006), Dreher and Michaelowa (2010), and Frot and Santiso (2008) examine only country specialization, while the studies by Easterly and Pfutze (2008) and Easterly and Williamson (2011) take this

Table 4.4: Example of Herfindahl Index Shortcomings

Agency	*Recipient*									*HHI*
	1	2	3	4	5	6	7	8	9	
Agency A	0.33	0.33	0.33	-	-	-	-	-	-	0.3333
Agency B	0.02	0.03	0.05	0.05	0.5	0.05	0.10	0.10	0.55	0.3338

one step further and examine sector specialization as well. None of these studies, however, examine regional specialization. While related to country specialization, region specialization captures the fact that specialization gains can be had at the regional level as well as the country and sector level. Limiting aid activities to a single region can reduce transaction costs and increase regional agency expertise. Additionally, it is common for a bilateral aid agency to have regional interests, and for a multilateral aid agency to have a regional orientation. Thus, it makes intuitive sense as to why regional specialization may also promote effectiveness. Second, I measure specialization by using portfolio size and portfolio concentration. While each of these methods has advantages, neither is a flawless measure. In previous work, Acharya, de Lima and Moore (2006) use the Theil Index, while Easterly and Pfutze (2008) and Easterly and Williamson (2011) use Herfindahl scores. By using two measurements, I am able to provide more robust evidence regarding agency specialization levels. Third, I calculate yearly specialization scores for each agency. Previous studies, Easterly and Pfutze (2008) and Easterly and Williamson (2011) for instance, only calculate a single specialization score for aid agencies. However, this provides a static measure of a potentially dynamic process, as agencies can become more or less specialized over time. I allow for this possibility in my measurements. Fourth, I focus my analysis on comparing bilateral and multilateral aid agencies. While previ-

ous studies have examined specialization levels among individual aid agencies, they have not directed their attention to the fact that this may be attributable to simple differences in agency type. For instance, Acharya, de Lima and Moore (2006) and Frot and Santiso (2008) limit their focus to bilateral aid agencies; and although Easterly and Pfutze (2008) and Easterly and Williamson (2011) do distinguish between bilateral and multilateral aid agencies, for the most part, the main focus of previous studies has not been to focus on agency type as a determinant of specialization levels. I argue that this is an oversight of the potential positive contributions multilateral aid can provide.

4.2.1 Country Specialization

The first type of specialization I investigate is country specialization. By limiting their funding to fewer aid recipients, agencies are able to focus more of their resources on each of these recipients and can potentially provide them with more effective development assistance. Figure 4.1 compares the portfolio sizes of bilateral and multilateral aid agencies. The data indicate that on average from 2000-2012, bilateral aid agencies consistently provided aid to more recipients compared to multilateral aid agencies. However, as shown in Figure 4.2, the average Herfindahl scores of bilateral and multilateral aid agencies over the same time period suggest that after accounting for the size of agency contributions, multilateral aid may not be as specialized compared to bilateral aid.

In order to provide more detailed information on country specialization for each donor agency, I also rank them based on their portfolio sizes and their portfolio concentration. In order to do this, I proceed in several steps. First, I sort the agencies from best to worst on each dimension. Second, I calculate their percentile rank, which indicates the percentage of agencies with specialization scores less than or equal to the

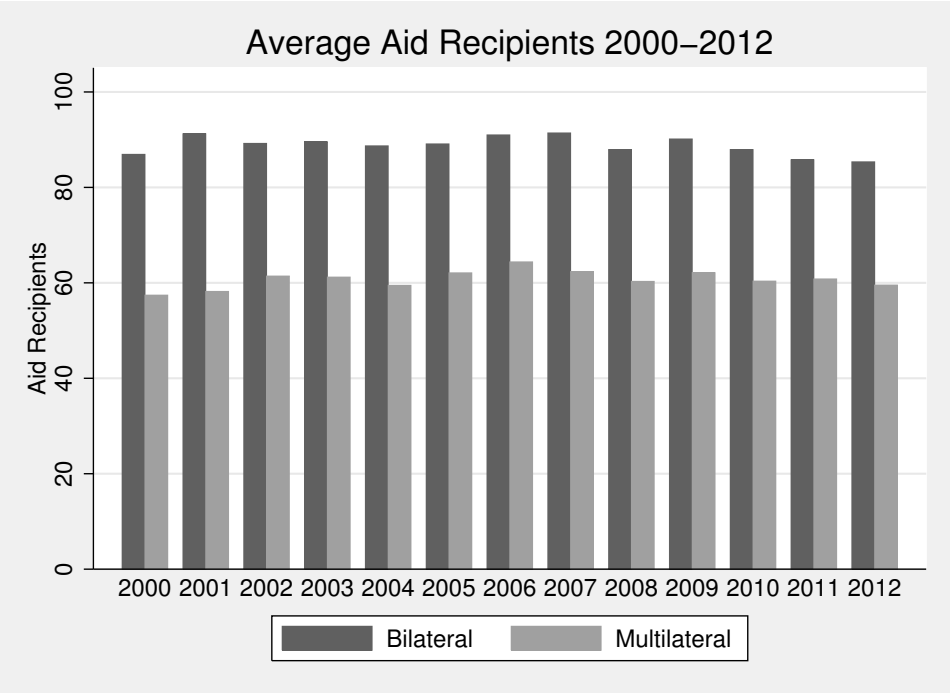
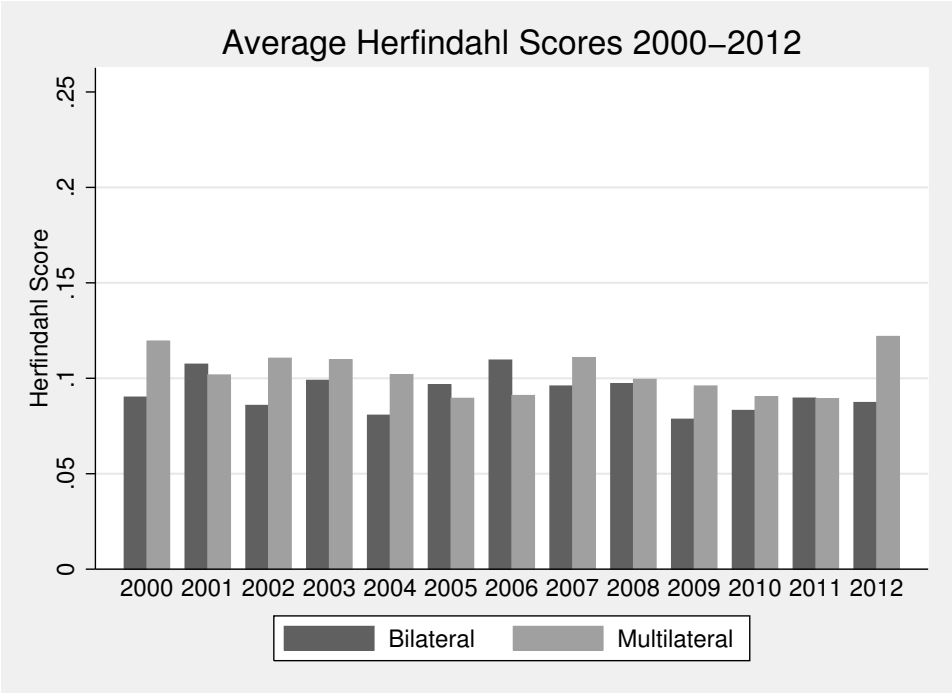


Figure 4.1: Bilateral v. Multilateral Recipients, CPA Data

agency in question, with higher percentile rankings indicating greater specialization levels relative to the specialization levels of all other agencies. Acknowledging the fact that agencies may become more or less specialized over time, I calculate these rankings for each year. To summarize this information, I average these yearly scores and rank agencies accordingly. The rank of the average percentile rank is therefore presented in Table 4.5. Smaller counts or portfolio sizes indicate greater levels of country specialization, while higher Herfindahl scores indicate greater specialization.

Table 4.5, ranks aid agencies based on their country specialization levels. For the count variable, multilateral aid agencies are much more specialized, as these agencies occupy nine of the top ten rankings. However, multilateral aid agencies also occupy five of the bottom ten rankings, with UNTA ranked at the very bottom. For the Herfindahl scores, the distinction between bilateral and multilateral aid agencies is



Notes: The scale of the Figure has been altered to better show the data. The full scale is 0-1.

Figure 4.2: Bilateral v. Multilateral Recipients Herfindahl Scores, CPA Data

not as pronounced. Multilateral agencies only comprise half of the top ten most specialized aid agencies, but make up nine of the least specialized aid agencies. The most specialized aid agency in both cases is the UNECE. However, the data provide only a single observation for this agency, in which they provide all of their funding to a single recipient (Albania). Therefore, it may be inappropriate to label the UNECE as being the most specialized aid agency. On the other hand, the UNRWA, which is ranked second and third in count and Herfindahl scores respectively, consistently provides specialized aid across the entire time period. Designed to address the issue of Palestinian refugees, the UNRWA distributes aid to only three countries: Jordan, Lebanon, and Syria. The Montreal Protocol, another multilateral aid agency that is not regionally focused, is also highly specialized. Designed to promote environmental

issues in developing countries, the Montreal Protocol focuses its distribution on a smaller group of recipients, averaging 12.92 recipients each year.

In addition to the graphical evidence and rankings provided above, I also statistically test the difference in country specialization levels between bilateral and multilateral aid agencies using a difference of means test. The results for these two tests, along with summary statistics for agency counts and Herfindahl scores by agency type, are presented in Table 4.6. As Table 4.6 demonstrates, on average multilateral aid agencies provide aid to fewer recipients compared to bilateral aid agencies, and this difference is statistically significant at the 0.001 level. For agency Herfindahl scores, however, this difference is not apparent. The means and medians of both agency types are quite similar, and the t-test indicates that there is not a statistically significant difference between bilateral and multilateral aid agencies. This indicates that while multilateral aid agencies may provide aid to fewer recipients, once we account for the size of their contributions to these recipients, they are not any more specialized than bilateral aid agencies.

Overall, the variables measuring country specialization indicate that both bilateral and multilateral aid agencies are not nearly as specialized as they could be. This result supports those found by Easterly and Pfutze (2008) and Easterly and Williamson (2011), who found little difference in country specialization levels between bilateral, multilateral, and UN aid agencies.[4] Thus, although multilateral aid agencies do appear to provide aid to fewer recipients, the general trend is that donor agencies still need to make reforms in their spending patterns if they are to conform to DAC goals of increasing specialization levels in the future.

[4]Easterly and Pfutze (2008) and Easterly and Williamson (2011) separate UN agencies from other multilateral aid agencies. I do not make the same distinction here but do address this in my analysis.

Table 4.5: Agency Rankings: Country Specialization, CPA Data

	Count		*Herfindahl*	
Donor Agency	*Rank*	*Average*	*Rank*	*Average*
UNECE	1	1.00	1	1.00
UNRWA	2	3.00	3	0.40
CarDB	3	9.92	6	0.18
Iceland	4	11.08	7	0.20
Montreal Protocol	5	12.92	2	0.43
Arab Fund (AFESD)	6	11.80	13	0.14
UNPBF	7	12.50	14	0.21
EBRD	8	15.67	17	0.12
Nordic Dev.Fund	9	19.08	21	0.09
OSCE	10	16.00	12	0.13
IDB Sp.Fund	11	24.62	8	0.16
Slovak Republic	12	26.45	10	0.25
AfDB	13	23.00	18	0.11
AsDB Special Funds	14	27.38	16	0.12
BADEA	15	31.91	32	0.06
IMF (Concessional Trust Funds)	16	32.77	22	0.10
AfDF	17	37.92	27	0.06
Slovenia	18	39.20	11	0.14
Portugal	19	42.00	5	0.20
Isl.Dev Bank	20	44.15	34	0.06
OFID	21	60.15	47	0.03
GAVI	22	68.17	33	0.06
New Zealand	23	69.77	24	0.07
Luxembourg	24	67.54	28	0.06
Poland	25	70.08	4	0.29
IDA	26	75.69	38	0.05
Ireland	27	73.08	20	0.10
IFAD	28	77.00	51	0.03
Greece	29	73.69	9	0.21
Denmark	30	80.08	39	0.05
Czech Republic	31	77.77	19	0.12
Belgium	32	82.85	29	0.07
Australia	33	83.54	15	0.13
GEF	34	86.83	37	0.06
Austria	35	88.00	30	0.06
IAEA	36	93.86	57	0.01
Netherlands	37	97.69	44	0.04
Finland	38	97.92	35	0.06
Italy	39	98.77	36	0.05
Switzerland	40	98.69	48	0.03
Sweden	41	100.08	41	0.04
Global Fund	42	100.00	46	0.03
Spain	43	101.08	45	0.04
Canada	44	103.08	40	0.04
Norway	45	104.77	43	0.04
UNAIDS	46	104.63	55	0.02
WHO	47	105.00	56	0.02
United Kingdom	48	111.08	31	0.06
Korea	49	118.69	26	0.07
UNICEF	50	118.54	50	0.03
UNFPA	51	118.77	54	0.02
Germany	52	127.46	49	0.03
UNDP	53	128.77	53	0.02
France	54	130.00	42	0.04
United States	55	132.62	23	0.09
EU Institutions	56	135.92	52	0.02
Japan	57	138.46	25	0.07
UNTA	58	139.56	58	0.01

Table 4.6: Summary Statistics: Country Specialization, CPA Data

Variable	*Mean*	*Median*	*Std. Dev.*	*Min*	*Max*	*N*
Bilateral Count	88.77	93	32.47	4	141	354
Multilateral Count	60.80	45	44.72	1	142	299
			T-test: $t = 9.00(533), p = 0.000$			
Bilateral Herfindahl	0.09	0.06	0.09	0.02	0.63	354
Multilateral Herfindahl	0.10	0.05	0.13	0.01	1.00	299
			T-test: $t = -1.13(527), p = 0.259$			

Notes: The null hypotheses for each of the two difference of means tests is that the means of bilateral and multilateral specialization scores are equivalent ($H_0 : \mu_B = \mu_M$). The alternative hypothesis is that they are not equivalent ($H_a : \mu B \neq \mu_M$). The t-tests assume unequal variances, therefore I report Satterthwaite degrees of freedom. P-values indicate a two-tailed test, $Pr(|T| > |t|)$.

4.2.2 Region Specialization

While country specialization scores are quite low for both bilateral and multilateral aid agencies, it may be unfair to evaluate aid agencies on a recipient basis. With over 100 developing countries in need of assistance, asking aid agencies to focus their spending on only of few of these countries is perhaps overly ambitious. Nevertheless, policy reports by the OECD (OECD, 2009) as well as academic studies (Easterly and Williamson, 2011; Easterly and Pfutze, 2008) continue to evaluate aid agencies along measures of country specialization. But the evidence of country specialization is quite poor. Instead of expecting aid agencies to limit their focus to a few individual recipients, it may be more appropriate to promote and examine levels of *regional* specialization. There are several reasons for this. Bilateral donors are often keen to maintain their regional sphere of influence. Alternatively, a regional focus may be suitable for those countries with a colonial past. Multilateral donors are also often

designed around a regional focus. Column 1 of Table 4.2 lists 14 agencies in the CPA and ODA datasets that have a regional focus. While regional specialization does not allow donors to capitalize on all the benefits provided by specialization, as they will still have to divide their resources and pay the costs of operating in multiple countries, it is undoubtedly more preferable than an agency contributing to recipients spread all over the globe. By having a regional focus, donors are able to capitalize on regional knowledge and trends, and can more easily transport resources and personnel among recipient countries.

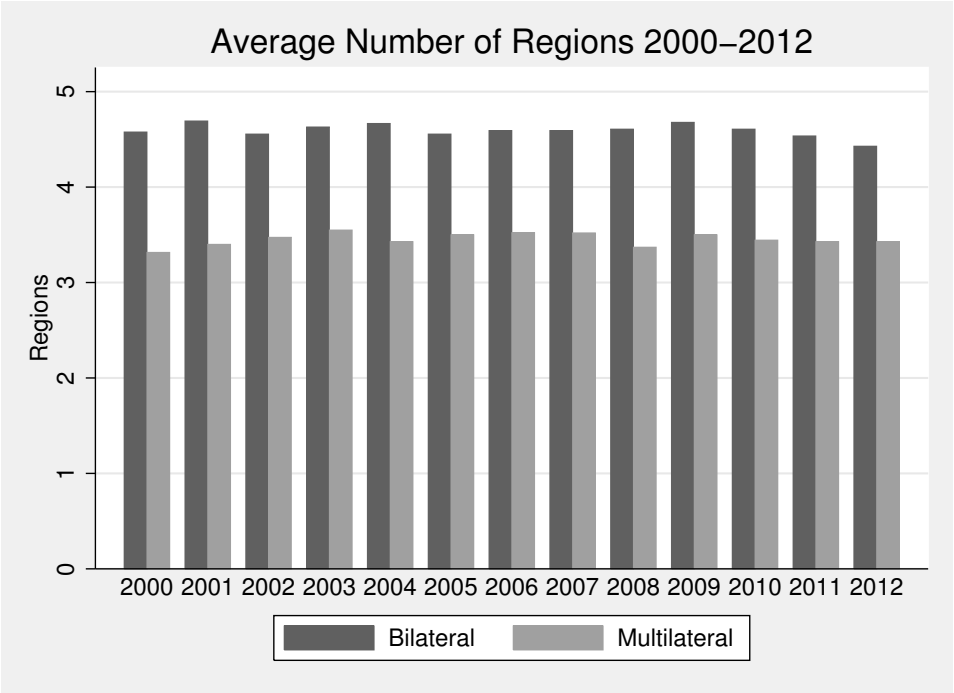


Figure 4.3: Bilateral v. Multilateral Count of Regions, CPA Data

To examine regional specialization, I divide aid recipients into five major regional groups following the divisions of the OECD. These geographical regions are: Asia, Africa, America, Europe, and Oceania. Figure 4.3 shows that on average from 2000-

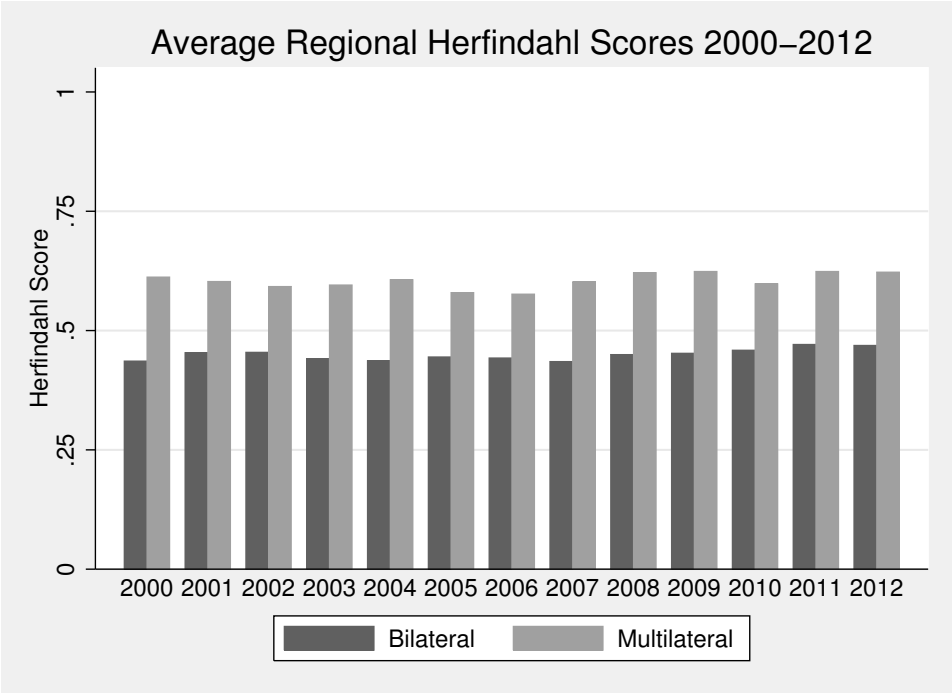


Figure 4.4: Bilateral v. Multilateral Herfindahl for Regions, CPA Data

2012, bilateral aid agencies provide aid to at least one additional recipient region compared to multilateral aid agencies. Turning to the the Herfindahl scores of donor agencies, Figure 4.4 shows that the average scores of multilateral aid agencies have consistently surpassed those of bilateral aid agencies in the past fourteen years. Overall, the graphical evidence suggests that multilateral agencies have higher levels of region specialization compared to bilateral aid agencies.

In Table 4.7, I rank donor agencies using the same method as country specialization. The results indicate that for both variables, multilateral aid agencies are more specialized than bilateral aid agencies. In terms of the number of regions that agencies provide funding to, multilateral aid agencies comprise the top fifteen most specialized agencies. For the Herfindahl scores, multilateral aid agencies are also ranked very high, and make up the top ten most specialized agencies. How-

ever, multilateral aid agencies are also ranked low in both variables. For counts, the GEF, Global Fund, UNAIDS, and Global Alliance for Vaccines and Immunizations (GAVI) are the worst four donors. Multilateral agencies also have four of the lowest five Herfindahl scores, including the GEF, WHO, UNTA and IAEA. While the graphical evidence and rankings would indicate that multilateral aid agencies are more regionally specialized, it is important to recognize that not all multilateral agencies have high levels of regional specialization.

Last, I test the difference between agency types for region specialization. Table 4.8 presents summary statistics and the difference of means tests for each type of agency. Both the count and Herfindahl variables suggest that multilateral aid is more specialized than bilateral aid, and that this difference is statistically significant. For instance, bilateral aid agencies provide aid to an average of 4.59 regions while multilateral aid agencies on average provide aid to only 3.59 regions. Moreover, the distribution of this aid is substantially more concentrated for multilateral aid agencies, as demonstrated through the differences in their Herfindahl scores. To conclude, the results here strongly support the argument that multilateral aid is more specialized than bilateral aid agencies.

Table 4.7: Agency Rankings: Region Specialization, CPA Data

	Count		*Herfindahl*	
Donor Agency	*Rank*	*Average*	*Rank*	*Average*
UNRWA	1	1.00	1	1.00
IDB Sp.Fund	1	1.00	1	1.00
CarDB	1	1.00	1	1.00
AfDF	1	1.00	1	1.00
BADEA	5	1.00	5	1.00
AfDB	6	1.00	6	1.00
EBRD	7	2.00	13	0.57
AsDB Special Funds	8	2.00	8	0.95
Arab Fund (AFESD)	9	2.00	15	0.60
UNECE	9	2.00	7	0.98
OSCE	11	2.00	18	0.61
UNPBF	12	2.33	9	0.85
Nordic Dev.Fund	13	3.00	36	0.42
Isl.Dev Bank	14	3.38	23	0.51
Montreal Protocol	15	3.62	10	0.83
Slovak Republic	16	3.64	35	0.43
Iceland	17	3.46	19	0.63
Luxembourg	18	4.08	45	0.36
Portugal	19	4.08	22	0.54
New Zealand	20	4.15	17	0.55
IAEA	21	4.14	58	0.26
Poland	22	4.23	29	0.51
Czech Republic	23	4.23	37	0.42
Slovenia	24	4.20	12	0.72
IMF (Concessional Trust Funds)	25	4.31	24	0.52
Italy	26	4.38	48	0.34
Belgium	27	4.46	16	0.59
Denmark	28	4.46	33	0.44
IFAD	29	4.54	38	0.41
WHO	30	4.50	55	0.32
Greece	31	4.54	31	0.50
Spain	32	4.62	51	0.33
Netherlands	33	4.62	41	0.38
Sweden	34	4.69	47	0.35
OFID	35	4.77	39	0.41
Ireland	36	4.77	11	0.73
Canada	37	4.85	49	0.34
Finland	38	4.92	43	0.37
Norway	39	4.92	42	0.37
Switzerland	39	4.92	57	0.28
UNTA	41	5.00	56	0.30
UNICEF	42	5.00	26	0.47
Japan	42	5.00	14	0.59
Australia	42	5.00	25	0.46
UNDP	42	5.00	34	0.43
United States	42	5.00	44	0.37
Germany	42	5.00	52	0.33
France	42	5.00	28	0.47
EU Institutions	42	5.00	50	0.34
United Kingdom	42	5.00	30	0.45
IDA	42	5.00	32	0.45
Austria	42	5.00	53	0.32
UNFPA	42	5.00	40	0.39
Korea	42	5.00	20	0.57
GEF	55	5.00	54	0.31
Global Fund	56	5.00	27	0.46
UNAIDS	57	5.00	46	0.37
GAVI	58	5.00	21	0.54

Table 4.8: Summary Statistics: Region Specialization CPA Data

Variable	*Mean*	*Median*	*Std. Dev.*	*Min*	*Max*	*N*
Bilateral Count	4.59	5	0.58	1	5	354
Multilateral Count	3.35	4	1.64	1	5	305
		T-test: $t = 11.55(368.64), p = 0.000$				
Bilateral Herfindahl	0.45	0.41	0.14	0.27	1.00	354
Multilateral Herfindahl	0.61	0.47	0.27	0.23	1.00	305
		T-test: $t = -9.12(437.48), p = 0.000$				

Notes: The null hypotheses for each of the two difference of means tests is that the means of bilateral and multilateral specialization scores are equivalent ($H_0 : \mu_B = \mu_M$). The alternative hypothesis is that they are not equivalent ($H_a : \mu B \neq \mu_M$). The t-tests assume unequal variances, therefore I report Satterthwaite degrees of freedom. P-values indicate a two-tailed test, $Pr(|T| > |t|)$.

4.2.3 Sector Specialization

The third and final type of specialization I investigate is sector specialization. When a development issue is particularly salient, aid donors will target their spending towards that issue and/or create multilateral agencies to focus specifically on that policy. As has been documented by Hicks et al. (2010), many bilateral aid donors have recently focused more environmental aid, as it is of growing global concern. In addition, donor countries have created several multilateral aid agencies to specifically focus on environmental aid, such as the GEF, the Global Fund, the Montreal Protocol, and the Nordic Fund. Other multilateral agencies similarly focus on other development issues, as illustrated in column 2 of Table 4.2. By focusing on a single sector, donor agencies are able to maximize their expertise on the subject, and can potentially use their resources in a more efficient manner.

Below, I use CPA data to present count and Herfindahl specialization scores for bilateral and multilateral aid agencies on their levels of sector specialization. While CPA data is limited both temporally (data is only available from 2004-2008) and in terms of the multilateral agencies that it covers, it is the more preferred base data for calculations of agency specialization. I therefore present results using CPA data here, but note that the results using ODA data are highly similar.[5] Table 4.9 lists the twelve sectors along which CPA aid is classified.[6] Comparing this list with the sector specialized multilateral agencies listed in Table 4.2, there is a strong similarity between the sectors along which aid is divided and the types of specialized agencies that exist. For example, health is obviously a highly salient development issue, as GAVI, UNAIDS, and the WHO all focus on health issues, while the UNFPA focuses on reproductive issues, an even more specific aspect of health. Other sectors such as agriculture, the environment, and refugees are also addressed by specialized multilateral aid organizations.

Figure 4.5 shows the average count of sectors to which bilateral and multilateral agencies distribute aid from 2004-2008. Clearly, on average multilateral aid agencies contribute to far fewer aid sectors compared to bilateral aid agencies. We can draw the same conclusion when considering the Herfindahl scores of these agencies. As shown in Figure 4.6, bilateral aid agencies appear to on have on average a significantly lower sector specialization score compared to multilateral aid agencies. This graphical evidence implies that not only are multilateral aid agencies contributing aid to fewer development sectors, but that they are also concentrating their aid more in these areas.

[5]See Appendix A for the ODA results.

[6]For a list of sectors specified in the ODA data, see Table A.7. To facilitate a comparison between the two datasets, I aggregate the ODA data based on CPA data sector classifications. However, one could perform other analyses using different sector categories.

Table 4.9: Aid Sectors in CPA Data

Agriculture
Economic Infrastructure
Education
Environment
General Budget Support
Government and Civil Society
Health
Multi-sector
Other Production Sectors (Forestry, Fishing, Industry, Mining, Construction, Trade Policy and Tourism)
Other Social Infrastructure
Population Policies and Reproductive Health
Water Supply and Sanitation

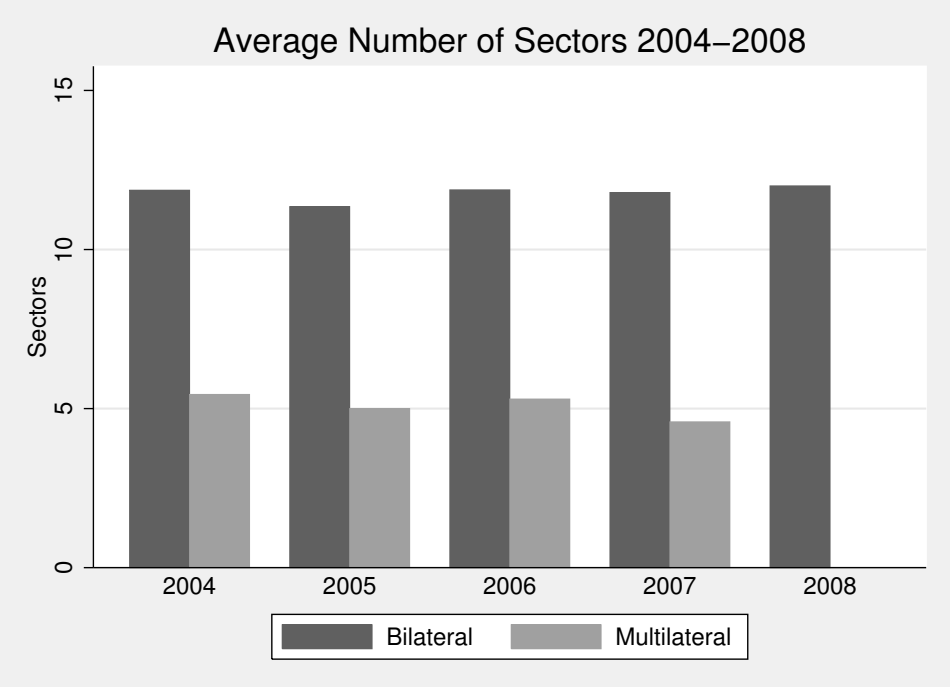


Figure 4.5: Bilateral v. Multilateral Count of Sectors, CPA Data

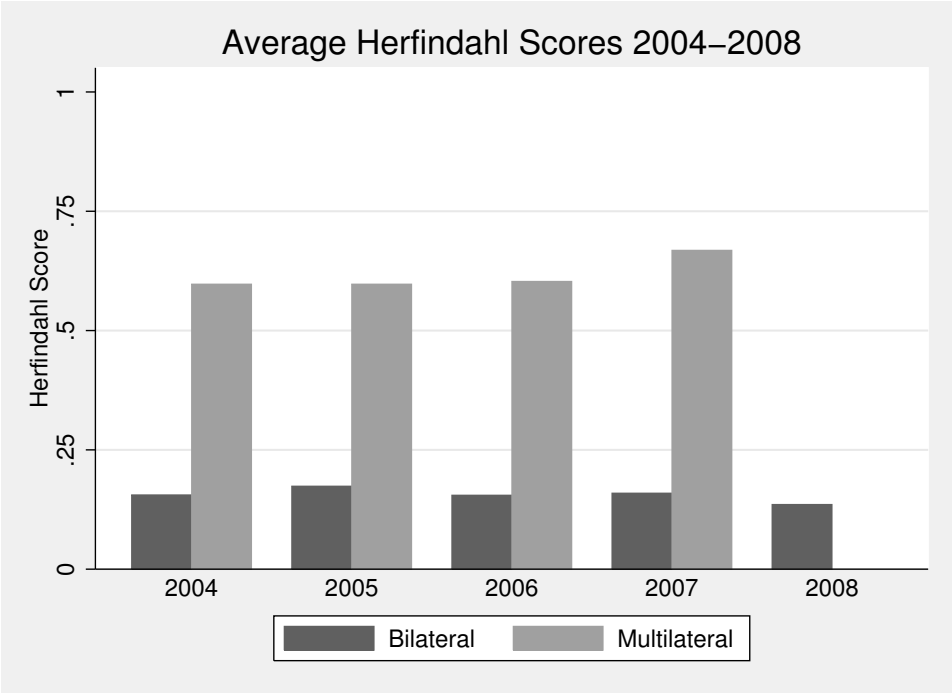


Figure 4.6: Bilateral v. Multilateral Sector Herfindahl Scores, CPA Data

In Table 4.10, I rank each agency according to their average percentile ranks each year. The results support the graphical evidence: multilateral aid agencies distribute aid to fewer sectors on average compared to bilateral aid agencies. Of all bilateral agencies, only South Korea ranks in the top ten of the count variable. For the Herfindahl measure, New Zealand is the only bilateral agency present in the top ten. Not surprisingly, many of the top sector specialists are issue specific agencies. These agencies all score highly in terms of sector specialization, including the UNFPA, UNAIDS, GAVI and the Global Fund for health issues; and the GEF for the environment.

Finally, I statistically test the difference between bilateral and multilateral agencies for sector specialization in Table 4.11. The results indicate that multilateral aid agencies are significantly more likely to be specialized compared to bilateral aid

Table 4.10: Agency Rankings: Sector Specialization, CPA Data

	Count		*Herfindahl*	
Donor Agency	*Rank*	*Average*	*Rank*	*Average*
IMF (Concessional Trust Funds)	1	1.00	3	1.00
UNFPA	1	1.00	2	1.00
GAVI	3	1.00	1	1.00
UNAIDS	4	1.25	4	1.00
GEF	5	1.50	5	1.00
Global Fund	6	2.00	8	0.52
UNRWA	7	2.00	6	0.63
UNPBF	8	2.00	7	0.93
UNICEF	9	8.50	13	0.21
Korea	10	11.00	15	0.19
Luxembourg	11	11.00	20	0.16
UNDP	11	11.00	9	0.38
Austria	13	11.20	35	0.13
IDA	14	11.25	21	0.15
Switzerland	15	11.50	29	0.14
Greece	16	11.50	14	0.22
Finland	17	8.67	17	0.27
France	18	11.80	33	0.12
New Zealand	19	11.75	10	0.24
Belgium	20	12.00	31	0.13
Germany	20	12.00	22	0.14
Denmark	20	12.00	36	0.12
Netherlands	20	12.00	32	0.13
Italy	20	12.00	23	0.14
Norway	20	12.00	18	0.15
AfDF	26	12.00	30	0.14
Ireland	26	12.00	25	0.15
Australia	26	12.00	11	0.22
Portugal	26	12.00	16	0.19
Sweden	26	12.00	27	0.14
Japan	26	12.00	12	0.21
Canada	26	12.00	26	0.14
EU Institutions	26	12.00	28	0.15
Spain	26	12.00	34	0.14
United States	26	12.00	24	0.14
United Kingdom	26	12.00	19	0.15

agencies. Furthermore, this difference is quite sizable. While bilateral agencies provide aid to an average of 11.74 sectors, multilateral agencies provide aid to only an average of 5.05 sectors. Taking into consideration the amount of funding that each sector receives only amplifies this result. The probability that two randomly chosen aid dollars from a bilateral agency are being directed towards the same sector is 0.16, while the same probability for a multilateral agency is 0.62. This is strong evidence supporting the argument that multilateral agencies are significantly more specialized in terms of development sectors compared to bilateral aid agencies.

Table 4.11: Summary Statistics: Sector Specialization, CPA Data

Variable	*Mean*	*Median*	*Std. Dev.*	*Min*	*Max*	*N*
Bilateral Count	11.74	12	1.05	2	12	101
Multilateral Count	5.05	2	4.66	1	12	41
		T-test: $t = 9.10(41.64), p = 0.000$				
Bilateral Herfindahl	0.16	0.14	0.05	0.11	0.54	101
Multilateral Herfindahl	0.62	0.61	0.36	0.12	1.00	41
		T-test: $t = -8.08(40.72), p = 0.000$				

Notes: The null hypotheses for each of the two difference of means tests is that the means of bilateral and multilateral specialization scores are equivalent ($H_0 : \mu_B = \mu_M$). The alternative hypothesis is that they are not equivalent ($H_a : \mu B \neq \mu_M$). The t-tests assume unequal variances, therefore I report Satterthwaite degrees of freedom. P-values indicate a two-tailed test, $Pr(|T| > |t|)$.

4.3 Discussion

While the above analysis and discussion indicates a strong tendency for multilateral agencies specialize more often compared to bilateral agencies, there are nuances

to this conclusion. In this subsection, I discuss two issues in more detail. First, I examine the relationship among agency specialization scores in order to determine if agencies must make some sort of tradeoff in order to specialize in one area rather than another. Second, I empirically test whether specialization levels could be driven by factors other than agency type. The results suggest that

4.3.1 Relationship among Specialization Types

When an agency chooses to specialize–either by focusing on a specific country, region, or sector–it is quite possible that they must sacrifice being similarly specialized in other areas. For instance, by specializing on environmental policy, an agency may be unable or unwilling to limit their scope even further by focusing their activities geographically as well. Indeed, the nominal examination of multilateral agency mission statements in Table 4.2 found only one instance of an agency that specialized on a specific development sector and geographic region: the UNRWA. However, it may also be easier for an agency that specializes in a specific region to also limit their focus to In order to examine this in more detail, I provide the pairwise correlation coefficients between agency specialization scores in Table 4.12, and graphically present this evidence in Figure 4.7. In both Table 4.12 and Figure 4.7, I examine the percentile scores and overall rankings of the agencies separately. I also separate my analysis by agency type.

In general, the results indicate a mostly positive relationship. This is especially true for the country and regional specialization scores, whose pairwise correlation coefficients range from moderate to strong for both types of agencies whether examining percentiles or rankings. As an agency focuses their activities on fewer recipient countries, they are also more likely to limit their activities in terms of geographic regions, and vice versa. As a result, not only is the agency benefitting from more

country specific knowledge, they are also able to transfer the regional aspects of this knowledge to other recipient countries.

A more complicated picture emerges when examining the relationship between sector specialization scores and other types of specialization. While sector count specialization percentiles and rankings have a moderate to weak relationship with country and region specialization scores for bilateral agencies, this relationship is less pronounced for multilateral agencies. This indicates that while bilateral agencies that specialize in a specific sector may also tend to specialize geographically, the same cannot be said about multilateral agencies. Rather, when these agencies have higher specialization count scores, their relationship with other types of specialization is very weak. This indicates that focusing on fewer sectors may come at a cost of not specializing geographically for multilateral agencies. This relationship is more pronounced for both bilateral and multilateral agencies when examining sector Herfindahl scores. In this case, sector specialization has a very weak, and at times even negative relationship with other specialization scores (with the exception of sector counts). For example, for multilateral agencies the pairwise correlation coefficient between sector HHI and region HHI is -0.151 and -0.158 for percentiles and rankings respectively. Although relatively weak, these coefficients nonetheless suggest that multilateral agencies may have to make a decision as to whether they become geographical or sector specialists. The tradeoffs for bilateral aid agencies, on the other hand, do not appear to be as pronounced.

To conclude, the pairwise correlation evidence presented here provides two general conclusions. First, country specialization and region specialization appear to be mutually reinforcing for both agency types. Second, a greater tradeoff appears in terms of agencies specializing either in terms of geography or sectors, especially for multilateral aid agencies. Thus, it is important that specialization studies account

Table 4.12: Pairwise Correlations for Agency Specialization

	Country Count	Country HHI	Region Count	Region HHI	Sector Count	Sector HHI
Percentiles						
Bilateral						
Country Count	1.000					
Country HHI	0.690	1.000				
Region Count	0.923	0.561	1.000			
Region HHI	0.487	0.670	0.370	1.000		
Sector Count	0.492	0.487	0.448	0.172	1.000	
Sector HHI	-0.004	0.429	-0.030	0.379	0.364	1.000
Multilateral						
Country Count	1.000					
Country HHI	0.918	1.000				
Region Count	0.875	0.813	1.000			
Region HHI	0.696	0.762	0.782	1.000		
Sector Count	0.146	0.134	0.044	0.076	1.000	
Sector HHI	0.035	-0.002	-0.084	-0.151	0.781	1.000
Rankings						
Bilateral						
Country Count	1.000					
Country HHI	0.673	1.000				
Region Count	0.877	0.522	1.000			
Region HHI	0.488	0.656	0.336	1.000		
Sector Count	0.471	0.461	0.482	0.125	1.000	
Sector HHI	0.020	0.470	0.010	0.418	0.332	1.000
Multilateral						
Country Count	1.000					
Country HHI	0.903	1.000				
Region Count	0.879	0.783	1.000			
Region HHI	0.723	0.796	0.750	1.000		
Sector Count	0.172	0.150	0.100	0.091	1.000	
Sector HHI	0.055	0.000	-0.048	-0.158	0.797	1.000

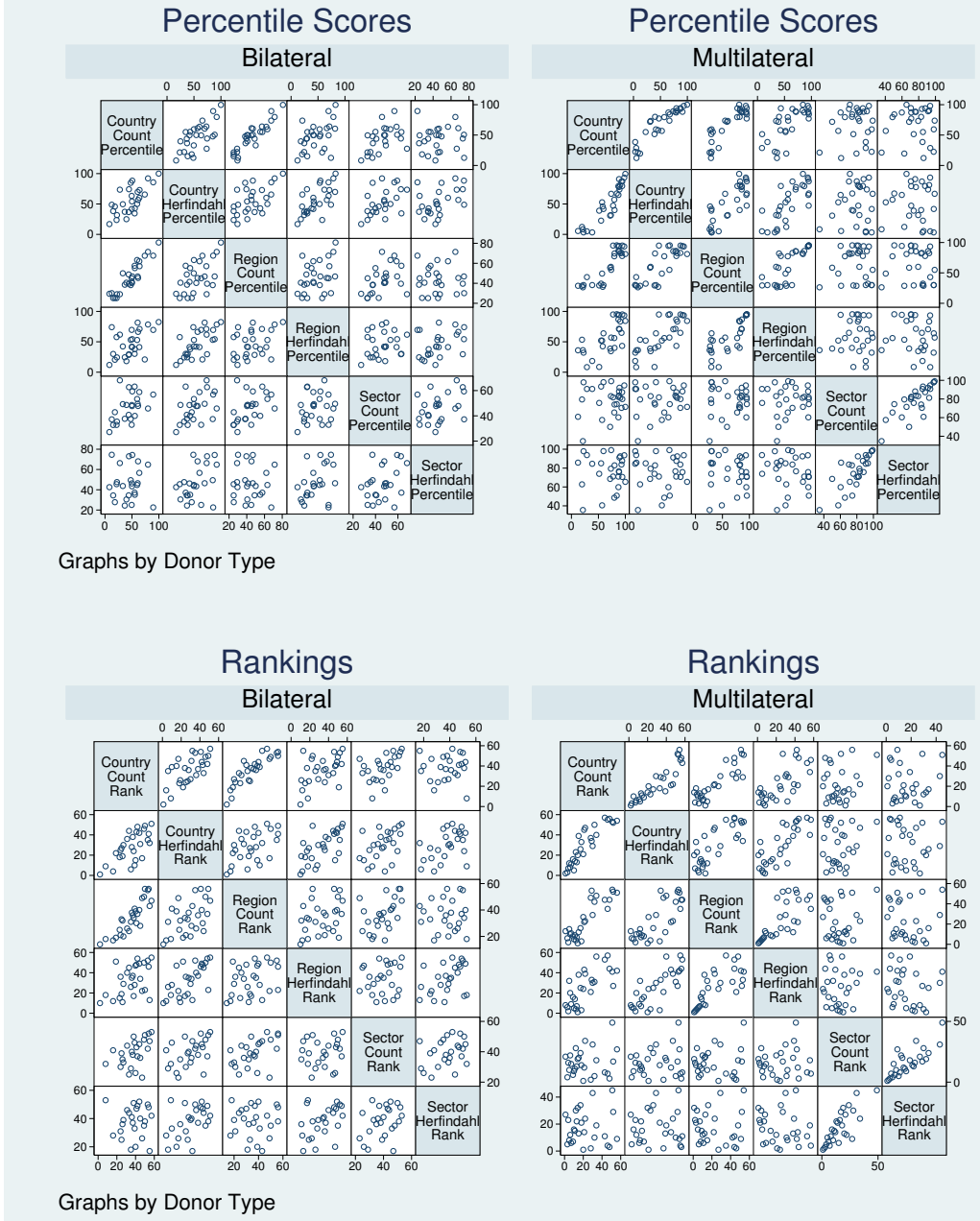


Figure 4.7: Correlations of Agency Specialization

for different types of agency specialization, as they have important implications for other aspects of agency behavior.

4.3.2 Predicting Specialization Levels

The second issue I address is the potentiality that specialization is driven by factors other than agency type. In this subsection, I empirically analyze this possibility. The unit of analysis is agency-year. The key independent variable is *Multilateral*, a simple dummy variable that captures whether or not the agency is a multilateral. Other factors, however, could also influence the specialization levels of the agency. Easterly and Pfutze (2008) and Easterly and Williamson (2011) suggest that specialization levels may be driven by the size of the agency's budget: smaller aid agencies may specialize simply because they do not have the resources to finance an expansive aid portfolio. As a result, specialization may be determined by the amount of funds an agency can distribute rather than their type. I therefore include the logged total amount of aid disbursed by the agency in a given year as a measure of agency budget (*Log Budget*). It is also possible that other characteristics of multilateral agencies may be driving differences in specialization levels. I therefore include dummy variables for regional development banks (*RDB*) which may be more geographically specialized, World Bank agencies (*World Bank*), and UN agencies (*UN*), both of which may focus on certain development sectors. The dependent variables I analyze are the sizes of the agency's aid portfolios and the Herfindahl scores of the agencies. I discuss the results below.

The first set of dependent variables I analyze are the counts of the number of recipients which an aid agency provides funding to, or their portfolio size. More specialized aid agencies should have smaller portfolio sizes. Because the dependent

variable is a count, I use a negative binomial regression.[7] The results are presented in Table 4.13. Columns 1, 3, and 5 include only the multilateral dummy variable and agency budget, while columns 2, 4, and 6 add the dummy variables on agency type. Overall, the results indicate that multilateral aid agencies are significantly more likely to provide aid to fewer targets, whether those targets be countries, regions, or sectors. Additionally, the result is robust to the inclusion of other factors, such as the agency's budget and various types of multilateral aid agencies. Column 2, however, shows that UN agencies provide aid to more countries, while Column 4 shows that the World Bank provides aid to a greater number of regions. Regional development banks, on the other hand, provide aid to fewer regions, which is to be expected. In general, the results provide strong support for the claim that multilateral aid agencies are more specialized than bilateral aid agencies.

The second set of dependent variables are the Herfindahl scores capturing agency portfolio concentration. I use panel data analysis with year fixed effects and robust standard errors. The results are presented in Table 4.14. The first two columns estimate country specialization. In this case, the model is poorly fit, as none of the results are significant. This confirms the evidence presented earlier that in terms of country Herfindahl scores, multilateral agencies are not more specialized than bilateral agencies. The next two columns estimate regional specialization. In this case, multilateral agencies do have a positive and statistically significant effect on levels of specialization. This result holds even when controlling for other agency characteristics. Agency budgets do not appear to influence specialization levels, indicating that the size of the agency does not necessarily drive its decision to specialize. As ex-

[7]Another option would have been to use a Poisson model. This is appropriate for the dependent variable for country specialization because it is over dispersed. While the dependent variables for region and sector specialization are not over dispersed, a negative binomial model is still acceptable as it converges to the Poisson model, as shown in the values of α in Table 4.13.

Table 4.13: Negative Binomial Analysis of Portfolio Size, CPA Data

	Country		*Region*		*Sector*	
	(1)	(2)	(3)	(4)	(5)	(6)
Multilateral	-0.311**	-0.496***	-0.264***	-0.264**	-0.796***	-1.072**
	(0.149)	(0.170)	(0.090)	(0.117)	(0.267)	(0.548)
Log Budget	0.198***	0.206***	0.058***	0.042***	0.082***	0.064***
	(0.040)	(0.040)	(0.014)	(0.012)	(0.030)	(0.024)
RDB		-0.351		-0.574*		
		(0.283)		(0.303)		
UN		0.697**		0.157		0.267
		(0.264)		(0.186)		(0.659)
World Bank		-0.244		0.228*		0.872
		(0.184)		(0.133)		(0.562)
Constant	3.233***	3.192***	1.143***	1.240***	1.921***	2.045***
	(0.264)	(0.271)	(0.096)	(0.083)	(0.214)	(0.166)
α	0.323	0.258	0.000	0.000	0.000	0.000
Observations	653	653	659	659	142	142

Notes: Robust standard errors clustered by agency in parentheses. Yearly fixed effects omitted. *** p<0.01, ** p<0.05, * p<0.1

Table 4.14: Panel Analysis of Herfindahl Scores, CPA Data

	Country		*Region*		*Sector*	
	(1)	(2)	(3)	(4)	(5)	(6)
Multilateral	0.021	0.007	0.151***	0.121*	0.455***	0.554***
	(0.026)	(0.029)	(0.055)	(0.069)	(0.092)	(0.152)
Log Budget	-0.007	-0.006	-0.001	0.001	-0.056***	-0.055***
	(0.015)	(0.015)	(0.014)	(0.014)	(0.011)	(0.012)
RDB		-0.008		0.241*		
		(0.044)		(0.127)		
UN		0.062		-0.011		-0.126
		(0.079)		(0.113)		(0.189)
WB		-0.032		-0.135*		-0.421***
		(0.055)		(0.078)		(0.156)
Constant	0.145*	0.134*	0.448***	0.433***	0.521***	0.518***
	(0.081)	(0.080)	(0.089)	(0.092)	(0.073)	(0.076)
Observations	653	653	659	659	142	142
Groups	58	58	58	58	36	36
R-Squared	0.112	0.045	0.126	0.185	0.615	0.656

Notes: Robust standard errors clustered by agency in parentheses. Yearly fixed effects omitted. *** p<0.01, ** p<0.05, * p<0.1

pected, regional development banks have a positive and significant effect on regional specialization levels. Meanwhile World Bank agencies have a negative effect on region specialization levels, reflecting their global orientation. The last two columns estimate sector specialization. Once again, the dummy variable for multilateral aid has a positive and significant effect in both estimations. In these estimations, however, agency budgets have a negative and statistically significant impact on specialization levels. This confirms the suspicions of Easterly and Pfutze (2008) and Easterly and Williamson (2011), who suggest that smaller agencies may specialize due simply to a lack of funding. World Bank agencies also appear to have lower specialization levels, once again reflecting their broad mandate. Overall, the results provide strong support for the argument that multilateral aid is more specialized than bilateral aid in the case of regional and sector specialization. The results for country specialization, however, fail to support this.

4.4 Conclusion

In this section, I began with the observation advanced by multiple policymakers and scholars that aid fragmentation is a severe problem that needs to be addressed. The lack of specialization by aid donors increases their transaction costs, places undue burdens on recipients, and ultimately diminishes the effect that aid can have in contributing to development. As a first step in addressing this concern, I examined levels of aid agency specialization using portfolio size, Herfindahl scores, and rankings along three types of specialization. The data provides strong evidence that in most cases, multilateral aid is indeed more specialized than bilateral aid. This is true regardless of whether the agency is a *de jure* or *de facto* aid specialist, and provides a strong policy prescription for the aid community. If specialization is truly as effective at promoting development as it is argued to be, then donors should provide

more of their aid to these specialized multilateral agencies. By doing so, donors would be providing aid in a more effective manner, and would therefore promote better development results. Similarly, bilateral agencies should continue to endeavor to become more specialized, as focusing their funding on a certain country, region, or sector could drastically improve their aid effectiveness. Overall, the aid community as a whole should continue to emphasize increased levels of specialization.

With regard to multilateral agencies, it is important to note that the decision of whether or not they are in fact aid specialists can sometimes be outside of their control. Acharya, de Lima and Moore (2006) specifically note this, stating that multilateral aid agencies often have no real flexibility with regard to their levels of specialization, while bilateral agencies do have this flexibility. Multilateral agencies are, at their core, international organizations that are controlled by their member states. Merely acknowledging the specialization levels of multilateral agencies is therefore not sufficient. We must also examine how member states can influence spending patterns within these agencies, making them aid specialists or aid generalists. In the next section, I examine this issue of agency autonomy both for the important consequences it has for agency specialization, and for the consequences it has for overall agency practices and aid effectiveness.

5. MEASURING MULTILATERAL AGENCY AUTONOMY

As discussed in Section 3, autonomy is a critical factor for multilateral aid effectiveness as it determines the ability of the aid agency to pursue politically neutral and specialized aid policies. While multilateral agencies are established with the ultimate goal of promoting global development, their donor governments suffer from *principal slippage*, which can potentially limit their ability to enact effective development policies. Within the context of international organizations, the importance of autonomy is not new. International relations scholars first studied autonomy as it related to state sovereignty and the role of international organizations in the state system. As described by Haftel and Thompson (2006), the concept of autonomy and the salience of international organizations are inextricably linked: "The independence of an institution largely determines its authority and influence–in short, its ability to shape international politics"(p. 254). The realist viewpoint is that as international organizations are both created and controlled by states, they have no independent voice and therefore no real impact on international politics. Alternatively, neoliberals view them as forums through which states can consolidate their preferences (Krasner, 1983; Strange, 1997), and constructivists view consider them actors that can alter state interests and values (Wendt, 1999). More recently, the role of international organizations remains debated, although increasing evidence suggests that they do, in fact, matter.[1]

Moving beyond studies of the salience of international organizations, scholars have more recently used principal-agent models to demonstrate the benefits that delegating to an autonomous agency can provide. Given the strong benefits that delegation

[1]See for instance, Hawkins and Jacoby (2003) and Koremenos, Lipson and Snidal (2001).

can provide, states have consistently utilized international organizations to pursue global cooperation on issues such as trade, finance, human rights, the environment, as well as development. The highly influential work of Hawkins et al. (2006) draws on the insights developed in American Politics to provide a detailed principal-agent theory in the international context using a functionalist approach. The authors describe how states create international organizations and then delegate certain powers and responsibilities to them in order to reap the gains of international cooperation. States delegate because they anticipate the benefits that agents provide: managing policy externalities, facilitating collective decision making, resolving disputes, enhancing credibility and creating policy bias (Hawkins et al., 2006, p. 13). However, these studies also demonstrate that principals must provide their agents with a sufficient amount of autonomy in order for them to effectively serve their purpose. My argument regarding multilateral agency autonomy follows in a similar vein: only autonomous agencies will be able to promote development effectively.

Before empirically analyzing this argument, I first describe and measure the concept of autonomy. In this section, I emphasize how the presence of multiple principals in multilateral aid agencies impacts their autonomy though agency voting structures and agency funding by determining the ability of a single principal to influence agency policies. Voting structures are *ex ante* forms of control, that are determined when the agency is created, while agency funding is a form of *ex post* control that can be altered over time. Below, I describe these two characteristics in more detail. I then present an original dataset that measures multilateral agency autonomy along these two dimensions. I conclude by ranking multilateral aid agencies according to their autonomy levels and discussing my findings.

5.1 Multiple Principals and Agency Control

The argument that autonomy is critical for aid effectiveness begs the question of when agencies can act autonomously and where this autonomy comes from. Summarizing the literature on bureaucratic autonomy in American Politics, Hammond and Knot (1996) describe three reasons why bureaucracies can become autonomous political actors. The first is that the President and Congress are indifferent as to the agency's policies, arguing that bureaucratic outcomes are of little interest to their constituents. For multilateral aid agencies, I argue that it is unlikely that donor governments are indifferent as to the policies they pursue. If donor governments were indeed indifferent, we would not observe efforts by donor governments to alter agency behavior, or to match their preferences to those various agencies. However, both of these behaviors have been well documented (Nielson and Tierney, 2003; Buntaine, 2014; Vreeland, 2007). The second reason that agents can become autonomous is that the President and Congress have asymmetric information regarding the agency's policies. Agencies can engage in "hidden action" or can disguise their actions through "hidden information" (Arrow, 1985). In order to avoid this, principals can monitor their agents and attempt to avoid issues of asymmetric information through police patrol and fire alarm mechanisms (Epstein and O'Halloran, 1999). Police patrol mechanisms require the principal to actively monitor the agent's behavior, while fire alarm mechanisms utilize third parties interested in the agent's behavior to alert the principal of undesirable behavior (McCubbins and Schwartz, 1984). Nielson and Tierney (2003), for example, describe how donor governments were able to enact environmental reform at the World Bank through methods such as screening and selection, oversight, checks and balances, as well as creating new contracts. While similar police patrol mechanisms may be difficult and costly for donor governments

to pursue, there are many useful third parties which donors can rely on to help them evaluate the actions of multilateral aid agencies. For example, the World Bank Inspection Panel investigates claims of World Bank policies being disregarded during policy implementation, and the International Finance Corporation (IFC) offers civil society groups the opportunity to file complaints when one of their projects has a negative environmental or social consequence. A study by Buntaine (2014) also describes how states can work with civil society groups to monitor and sanction the World Bank in order to constrain undesirable behavior. Through these monitoring activities, donors are able to check the actions of multilateral aid agencies. The rise of third party NGOs that work with and monitor multilateral aid agencies, as well as the increasing emphasis on transparency and accountability among aid donors, therefore makes the argument that asymmetric information leads to increased levels of agency autonomy less persuasive, as it is has become more difficult for agencies to hide their actions from donor governments.

The third potential reason that agents can become autonomous actors, and the argument I focus on here, is that bureaucracies are responsible to multiple principals. As each principal has their own distinct interests, the agent is able to balance and maneuver around these divergent preferences in order to pursue their own policies (Bryner, 1987; Dahl and Lindblom, 1953; Wilson, 1989). As there is weak evidence that multilateral agency autonomy stems from either donor indifference or asymmetric information, I argue that it is the presence of multiple principals–in this case multiple donor governments–and their ability to control agency behavior that is truly responsible for agency autonomy. The logic of this argument stems from the literature on congressional oversight and control of bureaucratic agencies.[2] When an

[2]The literature also highlights three other reasons why bureaucratic control can be difficult. First, sanctioning is costly to the principal (Kiewiet and McCubbins, 1991; Hawkins et al., 2003). As a result, principals are often tolerant of a certain amount of agency slack, knowing that it would

agent is responsible to multiple principals, it is more difficult for each principal to effectively influence agency behavior, as these actors must coordinate their actions in order to sanction undesirable agent behavior. As the group of principals grows larger, so do problems of collective action. McCubbins, Noll and Weingast (1989) succinctly describe this problem in that as long as one of the principals benefits from agency shirking, they have an incentive to block attempts to sanction the agency. Furthermore, the agent can also observe situations in which the principals have conflicting preferences and exploit them in order to avoid sanctions (Pollack, 1997). As described in studies of congressional delegation, when bureaucracies are responsible to multiple principals, they are able to pursue independent action by balancing the diverse preferences of their principals against each other and maneuvering among them (Bryner, 1987; Dahl and Lindblom, 1953; Wilson, 1989). Therefore when the principals do not share the same preferences, it is easier for the agent to engage in autonomous behavior, as it is more difficult for their principals to effectively coordinate their actions and impose sanctions. A similar logic can be applied to multilateral aid agencies. When an agency is responsible to a greater number of donor governments, the amount of influence each single donor government has over agency behavior will diminish. Additionally, when the preferences of the donor governments diverge, the more difficult it will be for them to coordinate their actions and attempt to sanction agency behavior. As a result, the agency will have greater levels of autonomy when it is responsible to a greater number of donor governments.

A potential counterargument to this is that having a single, dominant donor government may actually enhance agency effectiveness. Rather than enhancing an

often be more costly for them to try and reign in the agent. Second, informational asymmetries within the principal-agent model often strongly benefit the agent, and make evaluation and control by the principal difficult (Pollack, 2003). Third, principal threats may not be credible, due to the fact that the implementing agency is the only available option outside of creating a completely new agency.

agency's ability to pursue independent policies, more members voicing their opinion could actually constrain their activities. For instance, in the context of economic reform, Haggard and Kaufman (1995) argue that the greater amount of fractionalization there is within the party system, the less likely it is that economic reform will take place. However, this argument has been challenged by several recent works. Gehlback and Malesky (2010) in particular present a formal model and empirical evidence on how more veto players can enable economic reform by weakening the power of special interest groups. Other research on market reform in Latin America by Murillo and Martinez-Gallardo (2007), and on policy adjustments by Tommasi, Scartascini and Stein (2010), also find beneficial effects on having more veto players. In the context of foreign aid, the consequences of having multiple member preferences within an agency is demonstrated by Schneider and Tobin (2013), who find that the more donors a multilateral agency has, the greater autonomy they have in their aid distribution decisions. Because the members are focused on solving collective action problems, they are unable to effectively control the actions of the agency itself. Thus, the agency benefits by being able to pursue policies based on its own criteria, rather than those of its members.

In this subsection I focus on two mechanisms through which agency autonomy is affected by the presence of multiple principals: (1) agency voting procedures and (2) agency funding. Voting procedures are formal mechanisms of control established through *ex ante* decisions of donor governments, which can restrict the amount of discretion an agency has (Epstein and O'Halloran, 1999), and provide principals with greater control over the agency (Kiewiet and McCubbins, 1991). In this way, agency autonomy can be restricted at the very beginning due to *ex ante* decisions related to institutional design. For instance, the voting power of each donor government, as

well as the size of the majority needed to pass agency policies, are all organizational factors through which donors can restrain agency autonomy.

The actual influence of agency voting procedures may at times, however, be quite small. It is not uncommon, for instance, for much of the debate and negotiation of multilateral aid policies to be concluded long before they are formally voted on. In this way, focusing solely on voting procedures may be capturing largely *pro forma* activities. In consideration of this, I examine informal sources of autonomy as well in the form of agency funding.[3] Unlike voting procedures, agency funding is a form of *ex post* autonomy. This can vary over time depending on the amount of funding the agency receives, as well as the number of sources it receives funding from. As the agency is dependent upon donor governments for funding, cutting funds is a key way in which they can sanction agency behavior (Pollack, 2003).[4] This type of sanctioning is likely to be particularly effective when the agency is highly dependent on a small group of donor governments. Therefore, although voting procedures and funding patterns affect agency autonomy in different ways, they are both mechanisms through which donor governments can attempt to limit agency autonomy. I discuss both voting procedures and funding patterns in more detail below.

5.2 Voting Procedures

The first source of autonomy that I argue will either enhance or detract from multilateral aid agency effectiveness are the voting procedures of the agency. When donor governments can easily check agency actions through voting procedures, this is will be detrimental for agency autonomy. Thus, voting procedures are critical facets of aid policies, as they collectively serve as a system of checks and balances for

[3]The importance of informal influences on agency behavior is also reflected in studies of central bank independence by Cukierman, Webb and Neyapti (1992).

[4]Other potential sanctions include dismissing personnel, overruling the agency, refusing to comply with agency decisions, or dissolving the agency (Pollack, 2003, p. 45).

donor governments against agency behavior, and provide them with an opportunity to influence agency policies. When donors disagree with proposed policies, voting procedures determine their ability to reject them.[5] This argument becomes clearer when viewed in the context of the veto player literature. As articulated by Tsebelis (2002), a veto player is an individual or collective actor whose agreement is necessary in order to change the status quo. The addition of each veto player shrinks the range of available win sets that are able to overcome the status quo. As a result, when the number of veto players increases, the more difficult it is to alter the status quo. Tsebelis (2002) therefore argues that more veto players will result in greater bureaucratic independence, and consequently greater policy stability. This has been empirically demonstrated by Moser (1999) and Keefer and Stasavage (2003), who show that when more veto players present, political interference in central banks is less likely.

As mentioned above, voting procedures are *ex ante* sources of autonomy that are laid out in the founding documents of multilateral agencies, along with other rules that the agencies must adhere to, including mission, purpose, hierarchy, structure, decision-making procedures, and oversight processes.[6] Voting procedures are a key

[5]The danger of an agency being captured by selfishly motivated donor states is not the only issue that may arise due to voting rules. Recipient countries can also coordinate their actions to try and influence the policies that the agency pursues. Christensen, Homer and Nielson (2011) argue that the increasing power of less developed countries on the Executive Boards of these agencies may allow them to implement policies that lack the constraints or selectivity the agency might otherwise want to pursue in the quest for better development results. This argument, however, is beyond the scope of my study.

[6]These documents are similar to those used to create domestic bureaucratic agencies. Public administration scholars Christiansen (1999) and Verhoest et al. (2004) describe how these types of agreements impact agency policies through the amount of "managerial autonomy" and "policy autonomy" that the agency possesses. Managerial autonomy encompasses, "financial management (e.g. shifting budgets between line items or over years), human resources management (e.g. the selection of employees) or the management of other production factors like logistics, organization and housing" (Verhoest et al., 2004, p. 105), while policy autonomy refers to, "the (sub)processes and procedures it has to conduct to produce the externally prescribed goods or services; the policy instruments to use to implement the externally set policy and the quantity and quality of the goods

characteristic for multilateral aid agencies because they must have their aid projects approved by a supervisory entity. Generally, this approval comes from a Board of Directors or Executive Board, who are themselves acting on behalf of a higher entity.[7] For example, in the Asian Development Bank, the Board of Governors is the highest organizational body, but only meets once a year. In order to supervise the daily functioning of the Bank, authority is delegated to a Board of Directors, which has the authority to, "...supervise ADB's financial statements, approve its administrative budget, and review and approve all policy documents and all loan, equity, and technical assistance operations" (Asian Development Bank, 2015). These Boards have a strong role within the agency, and can use their power to strongly guide and even alter agency policies (Bøäs and McNeill, 2003). When discussing agency voting procedures, I am therefore referring to the rules that govern the agency's Board of Directors, or equivalent body.

Generally, I expect that the presence of more donor governments will increase the agency's autonomy. To clarify this argument, consider the process of passing an aid policy as a strategic game between the agency and their Board of Directors. The multilateral agency makes the first move and proposes an aid policy reflecting its preferences of promoting development. The Board of Directors must then approve the aid policy or coordinate their actions to reject it. When there are a large number of Board members, it is more difficult for them to agree as to the types of policies that the agency should pursue. Each member has their own domestic interests, and reaching an agreement as to how the multilateral aid agency should distribute their aid will thus be difficult to achieve when more members are involved (McCubbins,

or services to be produced; and the target groups and societal objectives and outcomes to be reached by the policy" (Verhoest et al., 2004, p.105).

[7]Throughout the remainder of this study I refer to such entities generally as Boards of Directors or Boards, but acknowledge that within each official aid agency their actual title may differ slightly.

Noll and Weingast, 1989; Nielson and Tierney, 2003). As a result, because the Board members are unable to coordinate their preferences, the agency's proposed policy is passed. Lyne, Nielson and Tierney (2003) describe this quite succinctly in the context of international organizations more generally, stating that, "...conflict among the principals allows the agents to pursue their independent preferences much more than if they had been accountable to a single principals or multiple principals that had similar preferences" (p. 50). Applying the same logic here, when the agency is accountable to a greater number of Board members, the more difficult it is for them to coordinate their action and restrict the actions of the multilateral agency.

In addition to the number of Board Members that govern an aid agency, there are two other components of agency voting procedures that need to be considered. The first is whether the Board of Directors must approve an aid policy by a majority or a supermajority vote. This varies quite substantially within aid agencies. For example, the Arab Fund is governed by majority rule, while GAVI requires a two-thirds majority vote in order to approve their aid policies. For convenience, I categorize all aid agencies which require more than a simple majority as being "supermajorities." I expect that agencies will have more autonomy when fewer votes are needed to pass an aid policy. That is, I expect agencies with majority voting systems to have more autonomy than agencies with supermajority systems. When agencies require a supermajority, it is easier for the policy to be blocked, as it takes fewer Board members voting against the policy for it to fail. For example in a majority vote system, more than half of all Board members would have to vote against the proposed policy. On the other hand, in an agency requiring a three-fourths majority, only little more than a quarter of the Board members would have to coordinate in order to successfully block the aid policy.

The second component is how voting power is distributed. There are typically two forms of voting power distributions within multilateral aid agencies: one-member-one-vote systems and proportional systems. In the one-member-one-vote systems, each member of the Board of Directors is allotted a single vote. UNICEF, for example, has an Executive Board of 36 members that are elected from the UN's Economic and Social Council. Within the Executive Board, each member is able to cast a single vote. Alternatively, in a proportional system, voting power is distributed in a manner roughly equivalent to the amount of funding that the donor government provides or the number of capital subscriptions that they hold. In the IDB, for instance, "Each member country shall have 135 votes plus one vote for each share of ordinary capital stock of the Bank held by that country..." (IADB, 2015). Other agencies have similar, though not identical proportional voting systems. The AfDB, for instance, allots its members 625 votes in addition to one vote for each share of capital the member holds. For agencies with one-member-one-vote systems, the presence of more Board members should enhance the agency's autonomy, as there are more preferences that must be balanced within the agency. For proportional voting systems however, the implications of more Board members are not quite as straightforward. When voting power is based on funding patterns, then the ability of a single donor government to influence agency policies may either be enhanced or diminished. If the donor government provides a substantial portion of the agency's funding, then the agency will have a greater influence on voting procedures, whereas the donor may have a small or negligible influence on the agency if they only provide a small portion of the agency's funding. Generally, I expect that agencies with proportional voting systems will have less autonomy compared to agencies with one-member-one-vote systems. Proportional systems allow Board members the possibility of increasing their voting power, and therefore their influence over multilateral agencies. One-

member-one-vote systems, on the other hand, maintain a limited range of influence for each Board member. Thus, there is a greater likelihood that Board members can use their vote share to influence agency policies in a proportional voting system.

5.2.1 Measurement

In order to examine levels of agency autonomy, I create an original dataset focusing on the voting structures of forty multilateral aid agencies. The sample of agencies are those included in the OECD's aid datasets. In order to measure the voting procedures of multilateral aid agencies, I create variables based on the rules that govern the agency's Board of Directors using the agency's founding document as a guideline. If information on Board members is not included in this document, I use information available on the agency's website. The first variable I create is *Board Members*, a count of the members on an agency's Board of Directors or equivalent body. More Board members are expected to result in greater agency autonomy. Table 5.1 lists each agency and the number of Board members it has.[8] Generally, agencies with smaller Boards are regional development banks, whereas agencies with larger Boards include the World Bank and UN agencies. The agency with the largest Board is the Office of the UN High Commissioner for Refugees (UNHCR), which is governed by the UN's Economic and Social Council (UNESCO). This implies that autonomy levels within World Bank and UN agencies should generally be higher compared to those of regional development banks.

The next variable capture how many votes are needed in order to pass day-to-day aid policies. Of the forty aid agencies that I examine, approximately half of

[8]I list the number of Board members that an agency has currently. In several cases, however, the number of Board members on an agency has changed. For instance, the IBRD, IDA, IDA Special Funds, IFC, and MIGA all originally had 12 Board members, but this number has subsequently increased to 25. Interestingly these agencies generally all share the exact same Board members, although each Board operates individually. Unfortunately, this type of information is not often available. Therefore I use the current number of Board members whenever possible.

Table 5.1: Multilateral Aid Agency Board Members

Agency	*Board Members*
African Development Bank	20
African Development Fund	14
Arab Bank for Economic Development in Africa	11
Arab Fund (Arab Fund for Economic and Social Development)	8
Asian Development Bank	10
Asian Development Bank Special Funds	10
Caribbean Development Bank	18
Central American Bank for Economic Integration	9
EU Institutions	–
European Bank for Reconstruction and Development	23
European Commission	–
European Development Fund	–
European Investment Bank	29
Global Alliance for Vaccines and Immunizations	10
Global Environment Facility	32
Global Fund	15
IDB Special Fund	14
Inter-American Development Bank	14
International Fund for Agricultural Development	18
International Bank for Reconstruction and Development	25
International Development Association	25
International Development Association - Multilateral Debt Relief Initiative	25
International Finance Corporation	25
International Monetary Fund (Concessional Trust Funds)	20
Islamic Development Bank	10
Joint United Nations Programme on HIV/AIDS	22
Multilateral Investment Guarantee Agency	25
Nordic Development Fund	8
OPEC Fund for International Development	–
Office of the United Nations High Commissioner for Refugees	54
Organization for Security and Cooperation in Europe	14
United Nations Democratic Republic of Congo Pooled Fund	–
United Nations Development Program	36
United Nations Economic Commission for Europe	–
United Nations International Children's Emergency Fund	36
United Nations Peacebuilding Fund	31
United Nations Population Fund	36
United Nations Relief and Words Agency for Palestine Refugees in the Near East	27
World Food Programme	36
World Health Organization	34

Notes: I only include Board Members who represent states. For example, GAVI has 18 Board Members, but only 10 of them are states.

them require a simple majority to pass their aid policies. These agencies include a number of development banks, as well as most of the UN agencies. Fifteen agencies, however, require more than a simple majority. The Caribbean Development Bank, for instance, requires a two-thirds majority, the UNECE requires a three-fourths majority, while the Nordic Development Fund, UNICEF, and the UN Peacebuiliding Fund (UNPBF) require a consensus. Table 5.2 lists these agencies that require more than a simple majority and states the number of votes required for them to pass an aid program. To code this component of agency voting procedures, I create two different variables on the majority rules of the agency. The first, *Majority Rule, Dummy*, is a dummy variable which is coded as one for all agencies in which a majority is required, and zero for all agencies that require a more than a simple majority, which I refer to as "supermajority." The second, *Majority Rule, Categorical*, is a categorical variable that entails a more detailed coding of agency voting requirements. Agencies which require a simple majority vote are coded as three, while agencies which require sixty-percent or two-thirds majority are coded as two, agencies which require a three-fourths majority are coded as one, and agencies which require a consensus are coded as zero. For each of these two variables, higher values indicate higher levels of autonomy.

The fourth variable is whether the agency has a one-member-one-vote system or a proportional voting system. This variable, *Vote System* is a categorical variable, coded as two for agencies with a one-member-one-vote system, one for agencies with both a one-member-one-vote system and a proportional system, and zero for agencies with a proportional voting system. Once again, the variable is coded so that higher values indicate greater agency autonomy. Most agencies with one-member-one-vote systems are UN agencies, or other issue specific aid agencies, such as the GAVI or the Global Fund, whereas most agencies with proportional systems are de-

Table 5.2: Multilateral Aid Agencies Requiring a Supermajority

Agency	*Majority Required*
Global Environment Facility	Sixty percent
African Development Bank	Two-thirds
Asian Development Bank	Two-thirds
Asian Development Bank Special Funds	Two-thirds
Caribbean Development Bank	Two-thirds
Global Alliance for Vaccines and Immunizations	Two-thirds
OPEC Fund for International Development	Two-thirds
Organization for Security and Cooperation in Europe	Two-thirds
African Development Fund	Three-fourths
IDB Special Fund	Three-fourths
Inter-American Development Bank	Three-fourths
United Nations Economic Commission for Europe	Three-fourths
Nordic Development Fund	Consensus
United Nations International Children's Emergency Fund	Consensus
United Nations Peacebuilding Fund	Consensus

velopment banks or other financial funds. The GEF is distinct in this area in that its encompasses both types of voting systems.

Table 5.3 classifies each of the agencies in my sample according to the variables *Vote System* and *Majority Rule, Dummy*. The first column lists those agencies that have a one-member-one-vote system, and the second column lists agencies which have a proportional voting system. The first row are agencies that have a majority voting system while the second row includes agencies with a supermajority voting system. The Table shows that slightly more than half of the agencies in my dataset are proportional voting systems, compared to fifteen agencies with one-member-one-vote systems. Majority voting systems are also slightly more prevalent, with twenty agencies compared to fifteen which require a supermajority. Clearly, there

Table 5.3: Summary of Agency Voting Procedures

One-Member-One-Vote	**Proportional Voting**
Majority	*Majority*
UNAIDS	AFESD
UNDP	BADEA
UNFPA	CABEI
UNHCR	EBRD
UNRWA	EIB
WFP	IBRD
WHO	IDA
	IDA-MDRI
	IFAD
	IFC
	IMF (Concessional Trust Funds)
	Isl. Dev Bank
	MIGA
Supermajority	*Supermajority*
GAVI	AfDB
GEF*	AfDF
Nordic Dev. Fund	AsDB Special Fund
OFID	Asian Dev. Bank
OSCE	CarDB
UNECE	GEF*
UNICEF	IDB
UNPBF	IDB Sp. Funds

*In the GEF, votes are based on membership and funding.
Notes: The Global Fund is a one-member-one-vote system but is missing data on vote majorities needed.
Information is fully missing for the EC, EDF, EU Institutions, and UN Fund for Congo.

is significant variation within multilateral aid agencies when classified according to their voting procedures.

5.3 Agency Funding

The second source of autonomy that I argue will impact agency effectiveness is agency funding. While voting structures capture the official role that donors have in approving agency policies, agency funding also plays an important role. Since the agency must continue to receive funds from donor governments in order to maintain their aid operations, the threat of a donor government reducing or eliminating funding to the agency can have an important impact on the agency's policies, regardless of the voting procedures of the agency. In exchange for funding, donor governments can attempt to extract policy concessions from multilateral agencies such as revising their operating procedures, using domestic firms from donor governments to implement aid projects, distributing more aid to recipients who are strategically or economically important to the donor government, or removing conditionality constraints of aid projects in order to placate friendly recipient governments. Essentially, donor governments can use financial contributions in order to secure their own interests rather than promoting those of the multilateral agency.

The influence of budgets has been highlighted previously by scholars of public administration as well international relations. Christiansen (1999); Verhoest et al. (2004), for example, describe how financial autonomy influences the ability of the principals to constrain the behavior of bureaucratic agencies. Financial autonomy is defined as the extent to which the agency is dependent on the government for funding, or if it is able to generate its own revenue. Within the European Commission, Pollack (2003) discusses how one of the key ways governments can sanction the organization is through budget cuts. As the agency needs funds in order to operate, monetary

sanctions are one of the most severe and effective ways to entice the agency to adopt policies preferred by the donor. A prime example is the influence of the U.S. in World Bank environmental reform as described by Hicks et al. (2010). The authors specifically state that, "As the largest shareholder, the US government learned very quickly that the most effective way to influence the Bank's behavior is to threaten the flow of its money" (p. 194). When the World Bank did not acquiesce to U.S. demands regarding access to GEF project documents, $30 million of funding was redirected to USAID (Hicks et al., 2010). Martens (2005) also describes how donor funding can influence agency behavior, stating that, "most agencies take care not to approve a budget that runs counter to the interests of the major donors" (p. 659).

Agency funding can be either a formal or informal source of autonomy, depending upon the agency's voting procedures. For agencies with a proportional voting system, funding patterns are a formal means of agency control, as voting power is distributed based on funds provided to the agency. For agencies with one-member-one-vote systems, donors can also informally influence agency policies through their monetary contributions.

The ability of a donor government to use their funds as a way to influence agency policies also depends on the number of other donor governments the agency receives funding from, as well as the size of these contributions. Unlike a domestic bureaucracy, multilateral aid agencies do not depend on a single source for their funding. Rather, they can potentially receive contributions from dozens of donor governments. As a result, the funding of a single donor government becomes less important as the number of other donor governments increase. If an agency receives contributions from fifty donor governments, it is less likely to alter its policies if a single one threatens to reduce or stop their funding, as the agency will still be supported by forty-nine others. On the other hand, if the agency is only funded by a handful of

donor governments, a loss of any one of those will have a much more substantial impact. An increased number of donor governments funding the agency also increases the likelihood that the donor governments will disagree about the types of policies that they want the agency to pursue, allowing the agency greater levels of autonomy.

In addition to the number of donors that an agency receives funding from, it is also important to consider the distribution of this funding across donor governments. If a multilateral agency receives a majority of its funding from a single or small group of donor governments, there is a greater possibility that the agency will have lower autonomy. When agency funding is concentrated, the agency is more likely to alter their policies to fall in line with those donor governments providing the majority of their funding. When agency funding is more equally dispersed among donors, the agency is less beholden to each government, and can pursue autonomous aid policies. Consider, for example, an agency that receives 90% of its funding from a single donor government, while another ten donor governments provide 1% each. The agency will clearly value the large donor the most, giving it a strong degree of influence over agency policies. This is true regardless of the agency's formal voting procedure. Alternatively, a single donor government is unable to have this degree of influence when agency funding is more equally dispersed. Thus, it is not only the number of donor governments that we must consider, but also the amount of funding that each of them provides relative to the others.

This argument regarding funding concentration is also helpful because it accounts for the potential presence of a dominant donor government. For example, in 2014 the U.S. had a 16.75% vote share in the IMF (IMF, 2015). Although most IMF policies only require a simple majority to be passed, in some instances they require an 85% supermajority to pass a resolution, effectively providing the U.S. with veto power over IMF policies. The consequences of this have been described by Stone (2004)

and Stone (2008), who shows how the preponderance of U.S. power within the IMF allows it to remove conditionality constraints for recipients that it considers to be strategically important. The U.S. also acts as a dominant donor government in the Inter-American Development Bank, as it holds approximately 30% of the agency's vote share, and a three-fourths majority is required to approve agency policies (IADB, 2015). In this way, the U.S. actually has veto power over the agency. When donors have a substantial amount of voting power within an aid agency, then the autonomy of the agency suffers. In order to gain approval of their aid programs, agencies with a veto player will have to ensure the policy is acceptable to their dominant member.

5.3.1 Measurement

I next examine agency funding patterns. In order to capture budgetary forms of control, I use OECD data on donor contributions to multilateral aid agencies from 1968-2013. The unit of analysis is agency-year and all aid values are commitments measured in constant 2012 USD million. While the dataset does not include funding information for all forty aid agencies included in my sample, it does provide information for twenty-five of these agencies.[9] These are listed in Table 5.4.

To examine my arguments, I create two variables related to agency funding. The first, *Number of Donors*, is a count of the number of DAC donor governments contributing to each agency.[10] Figure 5.1 shows the average number of donor governments that provide aid to each multilateral aid agency. In the graph, I separate agencies into "international" and "regional" types in order to highlight the differ-

[9]Unfortunately the sample size here is much smaller than the universe of all multilateral aid agencies. Future work should endeavor to document in greater detail the sources of all multilateral agency funding.

[10]The OECD data has significantly limited data on funds received from non-DAC donors. However, as DAC members are generally the largest aid donors, and those who we would most expect to try and pressure multilateral agencies to alter their aid policies, I do not believe excluding non-DAC donors posses a problem for my argument here.

Table 5.4: Multilateral Agencies with Funding Information

Af. D B
African Dev. Fund
AsDB Special Funds
Asian Dev. Bank
CABEI
Caribbean Dev. Bank
EC
EDF
EIB
IBRD
IDA
IDA-MDRI
IDB
IDB Special Oper. Fund
IFAD
IFC
IMF
MIGA
UN Fund For Congo
UNDP
UNFPA
UNHCR
UNICEF
UNRWA
WFP

ences between them. Most of the UN agencies, with the exception of the UN Fund for Congo, receive contributions from at least seventeen donor governments, whereas several development banks receive funding from only a few. Generally, although multilateral agencies receive on average funding from approximately twelve donor governments each year, regional agencies appear to receive funding from slightly less than average, while international agencies receive funding from more than average.

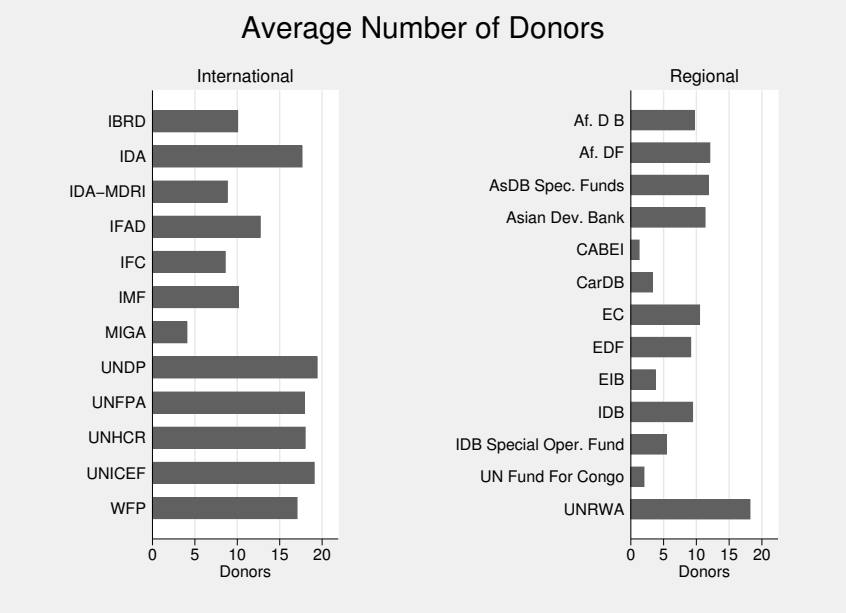


Figure 5.1: Average Number of Donors by Agency

The second variable captures the concentration of agency funding. In order to create this variable, I use the Herfindahl Index which, as discussed in the previous section on specialization, is commonly used in economics to calculate market share. The unit of analysis is agency-year. The variable is calculated as follows:

$$Funding\ Concentration_{it} = \sum_{d=1}^{n} a_{dt}^2$$

where i represents each multilateral aid agency, d represents each donor government, and t represents each year. The value a_{dt} indicates the proportion of aid a donor government provides to an agency in a given year compared to total of contributions to the agency in that year. The variable *Funding Concentration* can be interpreted as the probability that two randomly selected aid dollars being given to an agency are from the same donor government. Higher values indicate that the agency's funding is concentrated among fewer donor governments, while lower values indicate that the agency's funding is more equally distributed. Table 5.5 presents an example of this calculation similar to Table 4.3 in Section 4. In this case, however, we are examining agency funding rather than agency expenditure. In the Table, Agency 1 is funded equally by four different donor governments, whereas Agency 2 receives most of its funding from a single donor government. The final HHI value captures this difference, as the HHI for Agency 1 is much lower than the HHI for Agency 2. Therefore, I expect Agency 1 to be more autonomous, as its funding is not as concentrated as that of Agency 2.

Figure 5.2 shows that on average, multilateral aid agencies have relatively well dispersed aid funding. *Funding Concentration* generally varies between 0.2 and 0.4. Figure 5.3 shows the average level of *Funding Concentration* for each agency. Once again, I separate agencies into "international and "regional" groups. As can be expected from their high number of donor governments funding them, UN agencies have low levels *Funding Concentration*. Meanwhile, contributions to regional agencies are generally more concentrated. For instance, the Central American Bank for Economic Integration (CABEI) has the highest average level of *Funding Concentration*.

Table 5.5: Example Calculation of Autonomy Herfindahl Index

	Agency 1		*Agency 2*	
	Contribution Amount	*Proportion of Total*	*Contribution Amount*	*Proportion of Total*
Donor 1	\$5 million	0.25	\$17 million	0.85
Donor 2	\$5 million	0.25	\$1 million	0.05
Donor 3	\$5 million	0.25	\$1 million	0.05
Donor 4	\$5 million	0.25	\$1 million	0.05
Total:	\$20 million	1.00	\$20 million	1.00
Calculation:	$0.25^2 + 0.25^2 + 0.25^2 + 0.25^2$		$0.85^2 + 0.05^2 + 0.05^2 + 0.05^2$	
HHI:	0.25		0.73	
Autonomy:	High		Low	

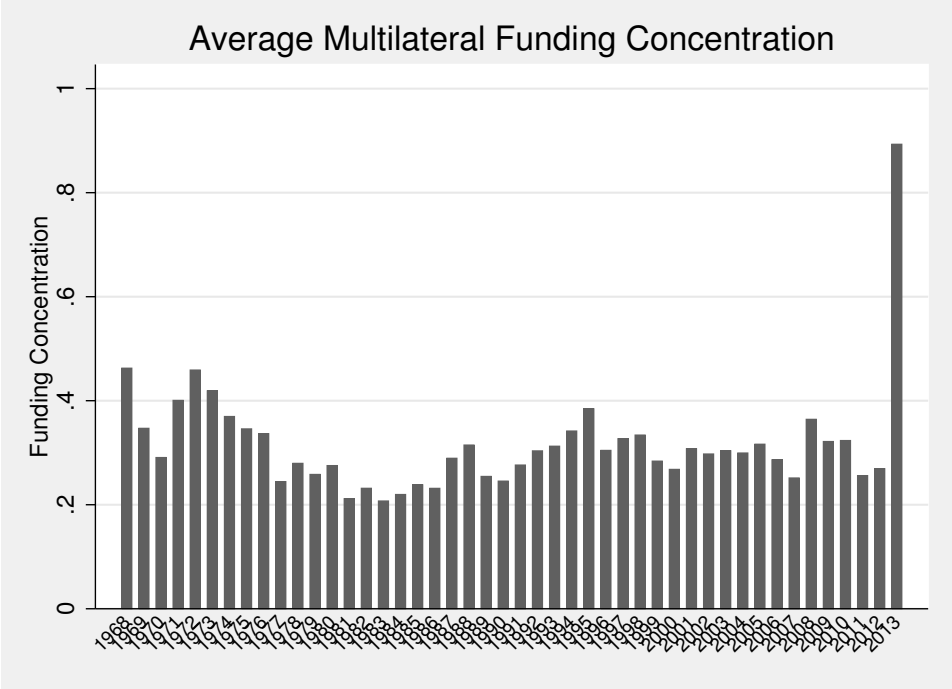


Figure 5.2: Average Yearly Funding Concentration

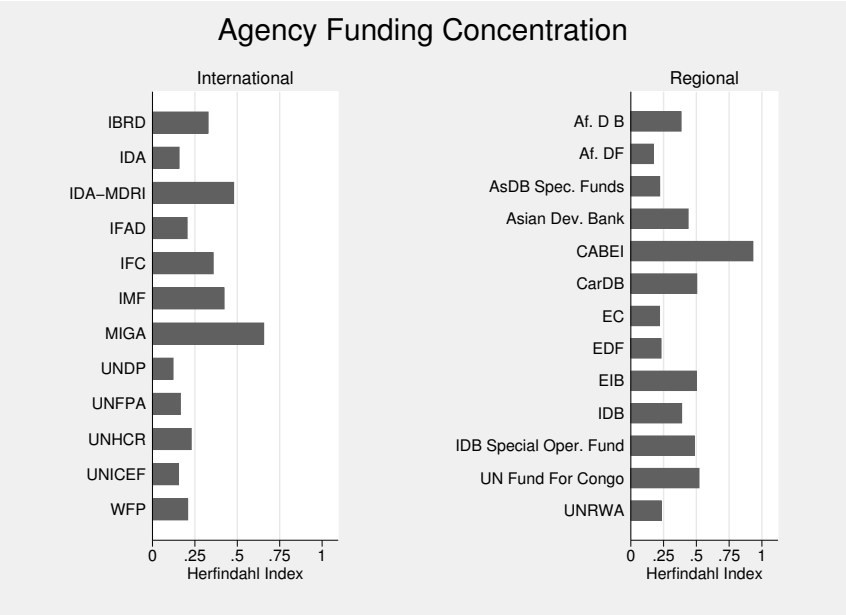


Figure 5.3: Average Funding Concentration by Agency

Table 5.6: Summary Statistics of Agency Funding Variables

Variable	*Mean*	*Median*	*Variance*	*Min*	*Max*	*N*
Number of Donors	11.91	12	41.25	1	26	920
Funding Concentration	0.31	0.21	0.06	0.08	1.0	920

Table 5.6 presents summary statistics for the two variables described above. The data clearly indicate that there is substantial variation within multilateral aid agencies with regards to their funding patterns. While some agencies receive relatively well distributed funding from a large number of donor governments, others receive much more concentrated funding from a smaller number of donor governments. From

my argument above, the implications of this are that the agencies with more donors and aid which is relatively less concentrated will have substantially more autonomy, and should be able to deliver better results on development policies.

5.4 Comparing Agency Autonomy

Having collecting information regarding both agency voting procedures and agency funding, in this subsection I combine these variables in order to rank and compare the expected autonomy levels of multilateral aid agencies. I begin by creating a subindex based solely on the voting procedures of each agency. Unlike agency funding patterns, these characteristics are constant over time. In order to create this index, I calculate the percentile rank of the variables *Board Members*, *Majority Rule, Categorical*, and *Vote System*, where higher percentile ranks indicate higher levels of autonomy. I then average these three variables to create a subindex of the agency's overall level of voting procedure autonomy.[11] The results are presented in Table 5.7. According to the rankings, the most autonomous agency is the Food and Agriculture Organization of the UN. In fact, with the exception of the European Investment Bank, the top ten most autonomous agencies based on voting procedures are all UN affiliated agencies. Meanwhile, the regional development banks and funds are ranked as the least autonomous agencies, with the Inter-American Development Bank scoring the lowest.

I next create a subindex for multilateral aid agencies based on their funding patterns using the two agency funding variables created above, *Number of Donors* and *Funding Concentration*. In order to rank agencies according to their funding patterns, I transform the variable *Funding Concentration* so that higher values indicate greater levels of autonomy. The resulting variable, *Funding Distribution* is there-

[11] This method of using percentile rankings is also used by Easterly and Pfutze (2008) and Easterly and Williamson (2011) in their ranking of aid agency practices.

Table 5.7: Subindex for Agency Voting Procedures

Agency	*Rank*	*Board Number Percentile*	*Majority Percentile*	*Vote System Percentile*	*Overall Percentile Rank*
FAO	1	97%	-	79%	88%
UNHCR	2	100%	73%	79%	84%
UNFPA	3	90%	73%	79%	81%
WFP	3	90%	73%	79%	81%
UNDP	3	90%	73%	79%	81%
WHO	6	83%	73%	79%	78%
ILO	7	72%	-	79%	76%
UNRWA	8	69%	73%	79%	74%
UNAIDS	9	50%	73%	79%	67%
EIB	10	75%	73%	28%	58%
UNICEF	11	90%	6%	79%	58%
Global Fund	12	36%	-	79%	58%
GEF	13	81%	33%	55%	56%
OFID	14	-	33%	79%	56%
UNPBF	15	78%	6%	79%	54%
IDA-MDRI	16	61%	73%	28%	54%
MIGA	16	61%	73%	28%	54%
IFC	16	61%	73%	28%	54%
IDA	16	61%	73%	28%	54%
IBRD	16	61%	73%	28%	54%
EBRD	21	53%	73%	28%	51%
IMF	22	46%	73%	28%	49%
UNECE	23	-	16%	79%	47%
OSCE	24	29%	33%	79%	47%
IFAD	25	40%	73%	28%	47%
GAVI	26	15%	33%	79%	42%
BADEA	27	22%	73%	28%	41%
Isl.Dev Bank	28	15%	73%	28%	39%
CABEI	29	8%	73%	28%	36%
Af. D B	30	46%	33%	28%	35%
AFESD	31	4%	73%	28%	35%
Caribbean Dev. Bank	32	40%	33%	28%	34%
Nordic Dev. Fund	33	4%	6%	79%	30%
AsDB Special Funds	34	15%	33%	28%	25%
Asian Dev. Bank	34	15%	33%	28%	25%
African Dev. Fund	36	29%	16%	28%	24%
IDB	36	29%	16%	28%	24%
IDB Special Oper. Fund	36	29%	16%	28%	24%

fore simply calculated as 1 – *Funding Concentration*. This can be interpreted as the probability that two randomly selected aid dollars will have originated from different donor governments. Next, because these two variables change over time, I first obtain the average of both variables. I then calculate the agency's percentile rank for each of these variables, and average the percentile ranks in order to determine the agency's final ranking on funding patterns.[12] The results are presented in Table 5.8. Once again, many of the UN agencies are ranked highest, with the UNDP, UNICEF, and UNFPA claiming the top three spots. Unlike the subindex on voting procedures, however, regional development banks are not all ranked at the bottom. The African Development Fund, for example, ranks sixth in terms of agency funding autonomy. On the other hand, CABEI is ranked the lowest, indicating that it relies heavily on few donors for its funding.

[12] As a robustness check, I also used an alternative method by calculating agency percentile ranks for each year and averaging across those values. The results are highly correlated to those presented here ($r = 0.988$).

Table 5.8: Subindex for Agency Funding Patterns

Agency	*Rank*	*Number of Donors Percentile*	*Funding Distribution Percentile*	*Overall Percentile Rank*
UNDP	1	100%	100%	100%
UNICEF	2	96%	96%	96%
UNFPA	3	88%	92%	90%
IDA	4	80%	88%	84%
UNRWA	5	92%	64%	78%
UNHCR	6	84%	68%	76%
WFP	6	76%	76%	76%
IFAD	6	72%	80%	76%
African Dev. Fund	6	68%	84%	76%
EC	10	56%	72%	64%
AsDB Special Funds	11	64%	60%	62%
IBRD	12	44%	52%	48%
IDA-MDRI	13	48%	44%	46%
Asian Dev. Bank	14	60%	28%	44%
EDF	14	32%	56%	44%
IMF	16	52%	32%	42%
Af. D B	17	40%	40%	40%
IFC	18	28%	48%	38%
IDB	19	36%	36%	36%
IDB Special Oper. Fund	20	24%	24%	24%
EIB	21	16%	20%	18%
Caribbean Dev. Bank	22	12%	16%	14%
MIGA	22	20%	8%	14%
UN Fund For Congo	24	8%	12%	10%
CABEI	25	4%	4%	4%

Last, I combine the subindices on agency voting procedures and funding patterns to create a composite index of agency autonomy. To create the final rankings on agency autonomy, I averaged the percentile ranks of voting patterns and agency funding patterns and ranked the agencies accordingly. The results are presented in Table 5.9. The agency ranks presented in the second column only rank those agencies for which I have complete data, while I include rankings for agencies with incomplete data in the final column.[13] Examining the agencies with complete data, the most autonomous agency according to my index is the UNDP. Other UN agencies also score quite high, occupying the next five highest positions. The World Bank agencies (IBRD, IDA, IFC, MIGA) are scattered throughout the rankings, with the IDA being ranked 7th, while MIGA is ranked 18th. Regional development banks and funds are generally expected to have lower levels of autonomy, as most of them are in the lower half of the index rankings. This observation holds even if we examine rankings including agencies with missing data. The rankings based on missing data also confirm that UN agencies are generally expected to be more autonomous than World Bank agencies, regional development banks or funds, and issue specific agencies. Interestingly, issue specific agencies are either ranked in the middle, such as the Global Fund, or more towards the bottom, such as GAVI.

[13]In effect, the final ranking assigns weights of 0.167 to each of the voting procedure variables and weights of 0.25 to each of the funding variables. As a robustness check, I also calculated each agency's rank allowing the variables to have equal weight (0.20). The results are essentially the same ($r = 0.986$).

Table 5.9: Composite Index of Agency Autonomy

Agency	*Rank*	*Overall Percentile*	*Vote Percentile*	*Funding Percentile*	*Alternative Rank*
UNDP	1	90%	81%	100%	1
UNFPA	2	85%	81%	90%	3
UNHCR	3	80%	84%	76%	4
WFP	4	78%	81%	76%	6
UNICEF	5	77%	58%	96%	7
UNRWA	6	76%	74%	78%	8
IDA	7	69%	54%	84%	10
IFAD	8	61%	47%	76%	13
IBRD	9	51%	54%	48%	19
African Dev. Fund	10	50%	24%	76%	20
IDA-MDRI	11	50%	54%	46%	21
IFC	12	46%	54%	38%	24
IMF	13	45%	49%	42%	25
AsDB Special Funds	14	44%	25%	62%	27
EIB	15	38%	58%	18%	31
Af. D B	16	38%	35%	40%	32
Asian Dev. Bank	17	35%	25%	44%	34
MIGA	18	34%	54%	14%	35
IDB	19	30%	24%	36%	36
IDB Special Oper. Fund	20	24%	24%	24%	38
Caribbean Dev. Bank	21	24%	34%	14%	39
CABEI	22	20%	36%	4%	40
FAO	-	-	88%	-	2
WHO	-	-	78%	-	5
ILO	-	-	76%	-	9
UNAIDS	-	-	67%	-	11
EC	-	-	-	64%	12
Global Fund	-	-	58%	-	14
GEF	-	-	56%	-	15
OFID	-	-	56%	-	16
UNPBF	-	-	54%	-	17
EBRD	-	-	51%	-	18
UNECE	-	-	47%	-	22
OSCE	-	-	47%	-	23
EDF	-	-	-	44%	26
GAVI	-	-	42%	-	28
BADEA	-	-	41%	-	29
Isl.Dev Bank	-	-	39%	-	30
AFESD	-	-	35%	-	33
Nordic Dev. Fund	-	-	30%	-	37
UN Fund For Congo	-	-	-	10%	41

5.5 Conclusion

In this section, I have described in more detail how agency autonomy impacts aid effectiveness in the context of multilateral aid agencies. Focusing on how multilateral agencies are accountable to multiple principals, I emphasize how voting procedures and agency funding are important sources of agency autonomy, and present an original dataset with five variables capturing these factors for forty aid agencies.

Examining overall levels of agency autonomy, the general trend presented here is that UN agencies should be more autonomous than other types of multilateral aid agencies. This autonomy stems from two main sources: the larger Boards of Directors that the agency has, as well as the greater number of donors providing funding to the agencies. With such a diffusion of power within the agency, it is difficult for any single donor or group of donors to control agency behavior. The opposite trend is apparent for regional development banks. These agencies are generally beholden to a smaller group of Directors and donor governments, enhancing each actor's ability to control agency behavior.

The next step is to test whether agencies with higher levels of autonomy are in fact more effective at promoting development. Drawing together my previous theoretical work, I proceed in the next three sections to test my argument that multilateral aid is more effective at promoting development. In these empirical tests of my argument, I examine how a key development outcome, economic growth, is affected by agency type and agency characteristics. Using the variables created here and in Section 4 on agency specialization, I examine their impact on aid effectiveness. Taken together, these studies will provide concrete evidence as to not only the overall effectiveness of multilateral aid compared to bilateral aid, but also the importance of accounting for the varying institutional characteristics of these agencies.

6. EXAMINING THE EFFECTIVENESS OF AID: AGENCY MOTIVATION

In this section, I test my first hypothesis related to aid effectiveness. As discussed in Section 3, multilateral aid agencies are expected to be more effective at promoting development than bilateral aid agencies because of their politically neutral motivations. As a result, the aid that multilateral agencies provide to recipient countries should be more effective because it will target poorer countries and target countries with better institutions, reduce transaction costs. While numerous studies have examined the relationship between aid and development, my study differs from these previous works in by focusing on the distinction between bilateral and multilateral aid agencies, and examining how agency characteristics impact aid results.

Although there are numerous indicators along which development progress could be measured, the key indicator that I focus on is economic growth, as this is the predominant indicator of development among studies of aid effectiveness. As numerous researchers have noted, estimations of aid and economic growth are plagued with empirical challenges, most notably the issue of endogeneity between aid allocation and a recipient country's economic growth rate. Before beginning my analysis, I review this literature and discuss these estimation problems in the context of my theoretical approach. This review has several benefits. First, as much of the literature on aid and growth involves replications and extensions, it is helpful to provide a more detailed discussion of these foundational studies. Second, the literature review provides guidance as to the potential methodological approaches that can be undertaken. Finally, this review further illustrates the gaps in the literature that I am able to fill here.

The results of my analysis are quite striking. First, they indicate that multilateral aid is more effective than bilateral aid at promoting economic growth. Additionally, my results indicate that there is a significant statistical difference between the effect of bilateral and multilateral aid flows. Overall, the results support Hypothesis 1 regarding the impact of agency motivation on aid effectiveness.

The remainder of this section proceeds as follows. First, I present a literature review of past studies that have empirically estimated the relationship between foreign aid and economic growth. I focus my discussion on the various methodological approaches that previous scholars have used, as well as the benefits and drawbacks of each approach. Second, I describe my methodological approaches and how my estimation methods address concerns specific to models of economic growth and foreign aid. Third, I describe my data and sources. In particular, I discuss how I separate aid, both by agency type and specialization levels. By breaking down aid in this manner, I am able to more accurately identify the types of agencies and agency characteristics that are best for aid effectiveness. Fourth, I empirically test my first hypothesis that multilateral aid is more effective than bilateral aid because it is allocated without geopolitical motivations. To conclude, I summarize my results and discuss their implications for the debate over aid effectiveness.

6.1 Past Studies of Aid and Economic Growth

I begin my literature review with the work of economist Peter Boone from the mid-1990s.[1] In his work, Boone argues that different political regimes will spend aid in a manner that will benefit their supporters. He then demonstrates that elitist governments can be expected to waste aid funds, as they will use aid to maximize their own welfare (Boone, 1996). To conduct his analysis, Boone treats aid as an

[1]For additional reviews on the relationship between aid and growth see Dalgaard, Hansen and Tarp (2000), Doucouliagos and Paldam (2008), and Roodman (2014).

endogenous variable that is determined by primarily by the size of the aid recipient, as well as various political factors. He therefore uses the following variables as instruments for aid flows: the recipient country's population; whether the recipient is a friend of the U.S., OPEC, or France; and past inflows of aid that have been lagged twice. His sample covers 96 countries and his time period uses three year averages from 1971-1973 and 1988-1990. Although he uses a variety of estimation techniques including ordinary least squares, instrumental variables, and fixed effects regression, his results generally reach the same conclusion: as government consumption rises due to aid inflows, there is no evidence that it results in increased benefits to the poor, as measured by infant mortality, primary schooling, and life expectancy. He concludes that while aid may increase the size of government, it has no significant impact on combating poverty.

The next major study of aid and growth was conducted by Craig Burnside and David Dollar. In their article, Burnside and Dollar (2000) argue that aid does have a positive impact on growth, but that its impact is conditional on good economic policies in the recipient country. In order to demonstrate this, the authors create a policy index comprised of the weighted impact on growth of the following variables: the Sachs and Warner dummy variable for trade openness, inflation, budget surplus, and government consumption. Similar to Boone, the authors use an instrumental variable approach in their estimation. Specifically, they use their policy variable, the population of the recipient, arms imports relative to total imports, and a series of dummy variables capturing the political interests of various donor governments as instruments for aid allocation. Burnside and Dollar's sample included 56 countries and uses four year averages from 1970-1973 to 1990-1993. Using both OLS and two-staged least squares, the authors find that the interaction of aid with their policy variable has a positive impact on economic growth. Studies by Collier and Dollar

(2001, 2002) bolstered these results, as they also found a positive relationship between aid and good policy environments. Other studies, however, sharply criticized these findings. Easterly, Levine and Roodman (2002) in particular presented a study in which they maintained Burnside and Dollar's methodology, but extended their data to include the time period of 1993-1997, as well as an additional six recipient countries. Once this data was added, Easterly, Levine and Roodman (2002) produce results that contradict those of Burnside and Dollar (2000). In particular, the positive effect of aid in recipients with good policy environments disappears, leading the authors to conclude that aid has no discernible impact on growth in recipient countries.

A further progression in the aid and growth literature was allowing aid to impact growth patterns in a non-linear manner. By including aid squared in their studies, the work of Hadjimichael et al. (1995), Durbarry, Gemmell and Greenaway (1998), and Lensink and White (1999) indicated that aid has a positive effect on growth, but that this effect has a diminishing return. Hansen and Tarp (2001) then combined the insights of these studies with the logic advanced by Burnside and Dollar (2000) that aid is only consequential for growth in good policy environments by including a quadratic aid variable and aid's interaction with the policy variable. In order to analyze their theory, the authors use OLS as well as an instrumental variables approach. Initially, the aid variable is instrumented in much the same ways as it was in Easterly, Levine and Roodman (2002), although Hansen and Tarp (2001) lag all aid regressors by one period and also add the squared value of aid. However, the authors argue that their insignificant findings are due to a lack of exogeneity of the instrumented aid variables. Additionally, the authors posit that ignoring country specific effects is also leading to inaccurate results. To remedy these problems, Hansen and Tarp (2001) instead suggest using generalized method of moments (GMM) estimation.

The authors describe that while an instrumental variables approach is able to model endogeneity (as long as the chosen instruments are valid), any country specific effects are subsumed into the error term, leading to inconsistent estimation since growth (the dependent variable) will be correlated with the error term. Using a fixed effects model to address this issue is problematic because it assumes that the independent variables are exogenous to the error term. The benefit of GMM estimation is that it offers a way to include country fixed effects along with potentially endogenous regressors. Estimation using GMM differences the data to remove the fixed effects, and then uses lagged observations to instrument the endogenous variables. Given these benefits, Hansen and Tarp (2001) use GMM regression models in their analysis and find that aid has quite a substantial effect on economic growth. However, when comparing OLS and GMM estimations, the authors find that the results are quite sensitive to estimation techniques. Although their results in regards to aid and growth are are variable, their analysis of the impact of aid on investment is more robust, leading them to conclude that aid is able to increase economic growth both directly and indirectly through increasing investment flows.

An article by Dalgaard, Hansen and Tarp (2004) contributes to the literature by adding geographical factors that they argue are structural characteristics with a direct impact on economic growth. In particular, geographical factors such as tropical land area, tropical diseases, and being landlocked have been shown to be detrimental for growth. By including an interaction of aid along with the proportion of tropical land, the authors demonstrate that the significant finding by Burnside and Dollar (2000) regarding the interaction of the aid and policy variable disappears, while the new interaction term is significant and negative. These findings also hold when including a squared value of aid, as estimated in Hansen and Tarp (2001). The authors investigate this relationship using a series of OLS and GMM regressions,

and consistently find that when the proportion of tropical land is included, aid has a positive and significant impact on rates of real GDP per capita growth. Thus, the authors conclude that it is geography, rather than policy, that is is driving aid's influence on growth.

Returning to the issue of endogeneity, Rajan and Subramanian (2008) argue that past studies of aid and growth have used inappropriate instruments. In particular, the authors are critical of the use of aid and policy variables as valid instruments, stating that it is unlikely that they are truly exogenous to growth patterns in the recipient country. The authors further argue that including lagged aid and policy variables as instruments essentially "amounts to claiming that contemporaneous policy affects growth directly but lagged policy does not" (Rajan and Subramanian, 2008, p. 648). A similar argument can be made with regards to including a lagged value of aid as an instrument. Responding to these instrumentation problems, the authors suggest using variables that focus on donor rather than recipient characteristics, thus modeling the supply side of aid allocation. Aid is therefore estimated for each donor-agency pair using variables such as colonial past, common language, the population ratio of the donor to the recipient, and various interactions of these variables. The resulting estimates are then summed across donors for each recipient and each time period. Using this alternative method of instrumenting for aid, the authors then investigate aid and growth using OLS, instrumental variables, and GMM regressions. Throughout their analyses, however, the authors find no positive significant relationship between aid and growth. They suggest that one potential avenue for future research is to investigate more direct evidence of the channels through which aid can impact growth.

In another study, Clemens et al. (2012) also criticize the use of weak instruments and further argue that past work has not adequately considered the timing effects

of aid. First, the authors argue that the instruments used for aid in Boone (1996), Burnside and Dollar (2000), and Rajan and Subramanian (2008) are quite weak. The authors then demonstrate that population size is the primary determinant, while the political ties variables add little power to the instrument. In light of the problems associated with valid instrumentation of the aid variable, Clemens et al. (2012) take a different approach. First, they re-estimate past aid and growth regressions using original (or highly similar) data and methods. Second, they perform the same regressions, but first difference them in order to remove country specific effects, and include a lagged aid variable. Finally, the authors restrict the aid variable to funds that can be expected to have a short term impact on aid, and exclude funding related to more long term goals. The authors then replicate past studies and demonstrate that with these alterations, the effect of aid on growth becomes positive and significant, and is robust to multiple specifications.

Testing the fragility of many of these previous studies, Roodman (2007) demonstrates how changes in periods, control variables, definitions of aid, definitions of policy, removing outliers, and sample size can alter results. To do this, Roodman (2007) performs 77 robustness checks on seven prominent studies of aid and growth. He ultimately concludes that the past decade of cross-country empirical analyses of aid and growth have not produced any robust results indicating the effectiveness of aid. Roodman (2007) suggests that one reason for such a lack of success is that the heterogeneity of aid funds make the data quite noisy, and therefore drown out any indication of overall aid effectiveness. To this end, other studies have approached the aid-growth question using more disaggregated data. Indeed, Kilby and Dreher (2009) argue that past studies of aid and growth have incorrectly assumed that donor motivations do not have an impact on aid effectiveness. As a consequence, the authors

argue that interpretations of aid effectiveness suffer from a homogeneity assumption that does not hold in the real world.

Taking this rejection of the homogeneity assumption as their starting point, Dreher, Eichenauer and Gehring (2013) attempt to discern the effect of geopolitical aid from overall aid on economic growth. Using temporary membership on the UN Security Council as the main determinant of increases in geopolitical aid, the authors interact the aid term with a UN Security Council dummy variable. Dreher, Eichenauer and Gehring (2013) then add this variable to the OLS regressions of Burnside and Dollar (2000), Rajan and Subramanian (2008), and Bueno de Mesquita and Smith (2010). Additionally, the authors first difference their equations, similar to Clemens et al. (2012), in order to remove the potential for omitted variable bias in the form of country fixed effects. Their results indicate that once geopolitical aid is accounted for, the effects of overall aid on growth become positive and significant, while aid interacted with the UN Security Council dummy variable has a negative and significant coefficient. These results hold across other specifications as well, leading the authors to conclude that aid granted for political reasons is less effective than other types of aid.

Other studies have addressed aid effectiveness in specific development sectors. Michaelowa and Weber (2006), for instance, use GMM estimation to investigate the effect of education aid on primary school enrollment and completion rates. Their results indicate that education aid does have a positive effect on these two outcomes, although this effect appears to be relatively small. The work of Dreher, Nunnenkamp and Thiele (2008) supports this finding, as the authors also conclude that education aid leads to increases in primary school enrollment rates. In the health sector, Mishra and Newhouse (2007) find that while health aid has had a positive and significant impact on infant mortality rates, the effect is once again small. A later study by

Wilson (2011), however, reaches a different conclusion, and argues that health aid has no discernible effect on infant mortality. Instead, the author argues that health aid is following success rather than causing it.

To summarize, there remains a substantial debate among scholars and practitioners regarding the most appropriate methodological approach for analyzing foreign aid and growth. However, two conclusions stand out. First is the issue of endogeneity and the problem of finding appropriate instruments foreign aid flows. While researchers have attempted to find valid instruments for aid, this is often difficult to do. This suggests alternative estimation methods should be preferred to those that rely on potentially invalid instruments. Second, is the argument that different aid types can have different impacts on development. This finding, supported by Kilby and Dreher (2009), supports my underlying logic, and may also account for the lack of a consensus regarding the effects of aid. I use both of these conclusions as a starting point for my analysis.

6.2 Methodology

As shown from the literature review above, there are several potential methods for estimating the relationship between aid and economic growth. I begin my discussion with a basic regression model of economic growth drawing largely from Hansen and Tarp (2001), shown below.

$$g_{i,t} = \beta_y y_{i,t_0} + \beta_a a_{i,t} + \sum_{j=1}^{k} \beta_j x_{j,i,t} + \omega_t + u_{i,t}. \tag{6.1}$$

In Equation 6.1, i indicates recipient countries and t denotes four year time periods. The dependent variable, $g_{i,t}$, is the average growth rate of real GDP per capita. The initial level of GDP per capita in the country during the four year panel is captured

in y_{i,t_0}, while $a_{i,t}$ captures the aid variable, and other regressors are indicated by k. The error term is indicated by $u_{i,t}$.

The first problem with this approach is that the error term encompasses country fixed effects in addition to random noise, as shown in Equation 6.2:

$$u_{i,t} = \upsilon_i + \epsilon_{i,t} \tag{6.2}$$

This results in inconsistent estimates due to the fact that the error term and the initial level of GDP per capita y_{i,t_0} are correlated. The second problem is that this model does not address the potential endogeneity that exists between aid flows and economic growth. Rather than aid driving growth, aid may in fact be given as a result of growth, with donors targeting their aid to faster or slower growing economies. This implies that many of the same control variables that drive growth may also be driving aid allocation. If this is the case, then Equation 6.1 suffers from simultaneity bias. In order to address this, a common strategy has been to use an instrumental variables approach, or two-stage least squares (2SLS). In this case, aid is first estimated using variables that are expected to be exogenous to growth. Burnside and Dollar (2000), for instance, instrument for aid using initial income levels, population, arms imports, economic policy, and dummy variables for Sub-Saharan Africa, the Franc zone, Egypt, and Central America. The resulting estimates of aid are then stored and used in the growth equation.

While such estimation strategies are beneficial in that they address the endogeneity of aid and growth, they are problematic for two main reasons. The first is that it is difficult to find appropriate instruments for the aid equation. As discussed by Clemens et al. (2012), many of the instruments used by past studies are quite weak. The authors demonstrate that aside from population, the instruments used in studies

by Boone (1996), Burnside and Dollar (2000), and Rajan and Subramanian (2008) are quite weak. Dalgaard, Hansen and Tarp (2000) also discuss the difficulty of instrumenting for aid, as economic factors determining aid allocation are also likely driving growth rates, and therefore cannot be used as valid instruments.

I follow the method proposed by Clemens et al. (2012) to solve these dual problems of endogeneity and country fixed effects. Their approach is to lag the aid variable and then first difference the results, as shown in Equation 6.3.

$$\begin{aligned} g_{i,t} - g_{i,t-1} =& \beta_y(y_{i,t_0} - y_{i,t-1_0}) + \beta_a(a_{i,t-1} - a_{i,t-2}) + \sum_{j=1}^{k'} \beta_j(x_{j,i,t} - x_{j,i,t-1}) \\ &+ (\omega_t - \omega_{t-1}) + (\epsilon_{i,t} - \epsilon_{i,t-1}). \end{aligned} \tag{6.3}$$

The authors argue that this process solves multiple problems. First, it allows aid to have an effect over a longer time period. Second, first differencing accounts for many country specific effects that may not be captured by existing models. Third, it makes no assumption regarding instrumentation. Issues of instrumentation have been particularly problematic in past research that has used 2SLS methods to examine the relationship between aid and growth. Compounding this fact is the nature of my research. I am interested in disaggregating aid based on various factors: agency type, specialization, and autonomy. Thus, my research implies that different types of aid are driven by different factors. This suggests that the instrumentation of aid in past work is inappropriate due to the large heterogeneity of different aid flows. For multilateral aid in particular, I expect income levels to be particularly important for determining levels of aid allocation, but this is clearly an invalid instrument. Instrumenting for other types of aid, such as specialized agencies and autonomous agencies, becomes even more complicated. Rather than attempting to predict aid

levels with weak, and potentially incorrect variables, I choose to restrict my analysis from making any assumptions regarding instrumentation.

6.3 Data Description

The unit of observation is recipient-year and the dataset covers 128 low and middle income countries from 1973-2012.[2] In order to account for the cyclical nature of both aid allocations and business cycles, the unit of analysis is four-year averages of all variables, except the initial level of GDP per capita, which is specific to year one of each panel. The resulting dataset covers ten time periods ranging from 1973-1977 to 2009-2012. This use of four year averages is standard in the aid literature. However, by creating my own dataset rather than replicating the results of past studies, I am able to examine a wider and more recent time period. The analysis by Burnside and Dollar (2000), for instance, ends in 1993, while Easterly, Levine and Roodman (2002) expand this temporal coverage to 1997. Since many subsequent studies used these original datasets as a base, their temporal scope is automatically limited. While replication is helpful in many respects, by not including more recent years, analyses of aid and growth may be presenting an inaccurate picture due to recent global changes. For instance, the end of the Cold War substantially altered aid policies, as has the rise of terrorism and the global financial crisis. In terms of aid policy, states are now more fully committed to addressing poverty concerns than they ever have been, as evidenced by the implementation of the Millennium Development Goals. In light of this, I examine a more complete time period than past studies.

The dependent variable is economic growth. This is measured as the real growth rate of per capita GDP and is obtained from the World Bank. I also include control

[2]See Appendix B for a full list of countries, their income classifications, and their temporal coverage.

variables that are standard in empirical growth models and past studies of foreign aid and growth. First, I include the initial level of GDP per capita for each period in order to capture convergence effects. Logged inflation is included to address monetary policy, while government consumption is included to account for fiscal policy. To account for the effects of global trade, I include measures of imports, exports, and foreign direct investment. Following past models, I also include a lagged measure of broad money (M2) relative to GDP, in order to control for the development of a recipient country's financial system.

I also include an estimate of the economic losses a recipient country may experience due to natural disasters. Natural disasters are undoubtedly costly for recipient countries. While most past research has used loss of life to proxy for natural disaster costs, recent work by Neumayer, Plumper and Barthel (2014) questions this connection. Specifically, the authors describe loss of life and economic losses may not be entirely related. For instance, the authors discuss how early warning systems can dramatically reduce the mortality of a disaster, but this results in underestimating the economic costs of a disaster if it drastically reduces infrastructure. Using data from a re-insurance company Munich Re, the authors present new evidence on natural disasters using estimated economic losses due to tropical cyclones, earthquakes, and flooding. I use an average of these costs a country endured in each observation year in my data.

Various political variables that may affect a country's growth rate are also included. I use Polity IV to capture political institutions, with negative scores indicating more autocratic regimes while positive variables indicate more democratic regimes. The number of assassinations are included to capture civil unrest. War and civil war are included to account for the negative impact that conflict can have on a country's economic system. Logged population is included to control for country

size. I also include several time invariant measures, including a measure of ethnolinguistic fractionalization, and dummy variables for the regions of East Asia and Sub-Saharan Africa.

The key independent variables in my analysis are various measures of foreign aid. All aid variables are measured as aid commitments in constant 2012 USD and are obtained from the OECD's ODA database. Again following past literature, I scale all aid variables by recipient country GDP. In order to demonstrate the differences that exist based on agency type, the first aid variable that I include is total aid a country receives. I then disaggregate this figure based on agency type into either bilateral or multilateral aid. This disaggregation allows me to investigate Hypothesis 1. Table 6.1 provides summary statistics for each of the variables described above.

Table 6.1: Summary Statistics: Base Variables

Variable	*Mean*	*Std. Dev.*	*Min.*	*Max.*
Growth	2.19	3.15	-10.51	22.56
Initial GDP Per Capita	6.95	0.98	4.82	9.27
Total Aid	10.26	12.38	0.03	120.31
Bilateral Aid	6.38	8.04	0.02	72.46
Multilateral Aid	3.88	5.25	0.00	50.85
M2	39.46	26.88	7.82	239.49
Population	16.22	1.60	12.82	21.02
Inflation	2.12	1.08	-1.60	8.01
FDI	0.34	1.61	-8.37	3.74
Consumption n	14.23	7.14	2.80	93.69
Imports	41.23	23.05	0.00	143.94
Exports	32.53	19.29	4.09	112.54
Polity	1.34	6.25	-10.00	10.00
Ethnic	0.50	0.26	0.00	0.93
Assassinations	0.30	0.99	0.00	11.50
War	0.05	0.21	0.00	1.00
Civil War	0.27	0.44	0.00	1.00
East Asia	0.04	0.20	0.00	1.00
Sub Saharan Africa	0.36	0.48	0.00	1.00

6.4 Analysis: Agency Type

Using the lagged differenced approached advocated by Clemens et al. (2012), in Table 6.2, I test my first hypothesis. The unit of analysis is country-period, where variables are averaged over each four year period. Column 1 tests the effect of total aid on development with no additional covariates. Contrary to the findings of Easterly, Levine and Roodman (2002), Roodman (2007), and Rajan and Subramanian (2008), all of whom also find no positive relationship between aid and growth, the results here indicate that increases in aid do have a positive impacts on economic growth rates in developing countries. If we separate aid based on agency type as shown in columns 2 and 3, however, this result only holds for multilateral aid agencies, Increases in bilateral aid, on the other hand, are found to have no significant impact in promoting development. Column 4 builds on this base analysis by including both bilateral and multilateral aid, as well as adding the economic control variables. The results again confirm the utility of multilateral aid, which has a positive and significant coefficient while bilateral aid's effect is negative and insignificant. Examining other variables, increases in foreign direct investment have a strong positive effect on economic growth rates, whereas excessive government consumption is detrimental for development. In column 5, I add the political variables of regime type and assassinations. In this regression, neither bilateral nor multilateral aid has a significant effect on economic growth rates. In column 6, I eliminate the natural disaster costs variable, as it is temporally limited to 1980-2008. When this variable is excluded, the results once again hold. It is worth noting, however, that even in column 5, the coefficients on bilateral and multilateral aid are still as expected. Thus, while my hypothesis is not confirmed in column 5, the positive findings of the other regressions lend stronger support to my hypothesis. It is also worth noting,

however, that the positive impact of multilateral aid is quite limited. In column 6, a 1% increase in multilateral aid as a percentage GDP only results in a 0.1% increase in economic growth rates. Thus, while multilateral aid may be providing positive results, they are not as strong as desired.

In addition to the regressions in Table 6.2, I also conduct a coefficient equality test between bilateral and multilateral aid when both variables are included in the equation. Coefficient equality tests are useful in that they are able to test additional hypotheses regarding specific variables. In this case, Hypothesis 1 states that multilateral aid is *more* effective than bilateral aid. This implies that not only should the coefficient for multilateral aid be positive and significant, but it should also be statistically different than the coefficient for bilateral aid. This is easily accomplished by using a Wald Test. The null hypothesis is that $\beta BilateralAid = \beta MultilateralAid$. For columns 4 and 6, the results clearly reject the null and support Hypothesis 1. While the coefficient equality test fails to reject the null in column 5, again this may be attributable to the limited temporal scope of the natural disaster variable.

In Table 6.3, I investigate the impact of bilateral and multilateral aid more extensively by examining different subsamples based on geographic region and income levels. If multilateral agencies are truly motivated by recipient need, they should be more effective in these country groups. Similarly, if geopolitical factors are motivating the allocation and policies of bilateral aid agencies, I expect bilateral aid to be less effective in low income countries or countries located in Sub-Saharan Africa. This is due largely to the fact that such countries offer little strategic incentive to donor countries. This expectation is clearly supported in columns 1 and 2, which examine aid to Sub-Saharan African and low income countries, respectively. In both cases, the results of the regression analysis and coefficient equality tests indicate that multilateral aid is better at promoting economic development compared to bilateral

Table 6.2: Comparing Bilateral and Multilateral Aid

	(1)	(2)	(3)	(4)	(5)	(6)
Initial GDP PC	-10.630***	-12.047***	-11.060***	-6.625***	-6.364**	-7.850***
	(1.598)	(1.653)	(1.808)	(2.445)	(2.786)	(2.258)
Total Aid	0.086**					
	(0.034)					
Bilateral Aid		0.050		-0.046	-0.058	-0.049
		(0.035)		(0.038)	(0.041)	(0.036)
Multilateral Aid			0.073**	0.092*	0.067	0.106*
			(0.036)	(0.051)	(0.059)	(0.056)
M2				0.006	-0.002	-0.010
				(0.019)	(0.021)	(0.019)
Population				2.140	-0.850	-4.556
				(4.079)	(4.800)	(4.495)
Inflation				-0.191	-0.338	-0.297
				(0.207)	(0.218)	(0.188)
Gov. Consumption				-0.213***	-0.140**	-0.084
				(0.062)	(0.062)	(0.059)
FDI				0.670***	0.687***	0.542***
				(0.165)	(0.161)	(0.152)
Disaster Costs				-0.046	0.009	
				(0.063)	(0.064)	
Democracy					0.027	0.037
					(0.049)	(0.047)
Assassinations					-0.171	-0.113
					(0.106)	(0.121)
Constant	0.776*	-1.062**	0.738*	-0.007	-0.583	-0.910
	(0.419)	(0.532)	(0.430)	(0.573)	(0.768)	(0.868)
Observations	782	801	783	439	381	465
R-squared	0.226	0.234	0.206	0.251	0.252	0.259
Countries	123	123	124	105	92	92
Coefficient Equality Tests for Bilateral and Multilateral Aid						
$H_0 : \beta B.Aid = \beta M.Aid$						
$H_a : \beta B.Aid \neq \beta M.Aid$						
				$F = 2.73$	$F = 1.91$	$F = 3.33$
				$p = 0.099$	$p = 0.168$	$p = 0.069$

Notes: Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 6.3: Comparing Bilateral and Multilateral Aid: Sub-Samples

	Sub Saharan Africa (1)	*Low Income* (2)	*Lower Middle Income* (3)	*Upper Middle Income* (4)
Initial GDP PC	-9.739***	-7.773***	-2.867	-7.453
	(2.428)	(2.794)	(2.691)	(5.943)
Bilateral Aid	-0.115**	-0.154***	-0.037	-0.120
	(0.052)	(0.056)	(0.062)	(0.313)
Multilateral Aid	0.145**	0.174**	-0.080	0.442
	(0.067)	(0.073)	(0.073)	(0.882)
M2	0.053	0.086	-0.040	-0.008
	(0.053)	(0.074)	(0.025)	(0.035)
Population	3.162	3.876	2.657	-18.437
	(4.545)	(5.113)	(8.710)	(16.451)
Inflation	-0.286	-0.190	-0.573*	-0.007
	(0.371)	(0.392)	(0.298)	(0.402)
Gov. Consumption	-0.143*	-0.063	-0.189*	-0.138
	(0.075)	(0.138)	(0.096)	(0.119)
FDI	0.579**	0.450*	0.654***	0.970**
	(0.272)	(0.255)	(0.215)	(0.436)
Disaster Costs	0.079	0.215*	-0.065	-0.039
	(0.085)	(0.127)	(0.073)	(0.139)
Democracy	0.071	0.081	-0.030	0.081
	(0.070)	(0.072)	(0.068)	(0.172)
Assassinations	-0.830	-1.504*	0.062	-0.198
	(1.108)	(0.849)	(0.177)	(0.166)
Constant	-0.535	-0.216	-1.468	0.575
	(0.960)	(1.155)	(1.141)	(1.996)
Observations	149	102	158	121
R-squared	0.316	0.372	0.267	0.338
Countries	39	27	38	27
Coefficient Equality Tests for Bilateral and Multilateral Aid				
$H_0 : \beta B.Aid = \beta M.Aid$				
$H_a : \beta B.Aid \neq \beta M.Aid$				
	$F = 5.18$	$F = 6.97$	$F = 0.15$	$F = 0.38$
	$p = 0.024$	$p = 0.010$	$p = 0.695$	$p = 0.541$

Notes: Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

aid, which is harmful to economic growth. Such a distinction is not borne out in columns 3 and 4, which examine middle income countries. In these cases, neither bilateral nor multilateral aid has a significant effect on growth rates.

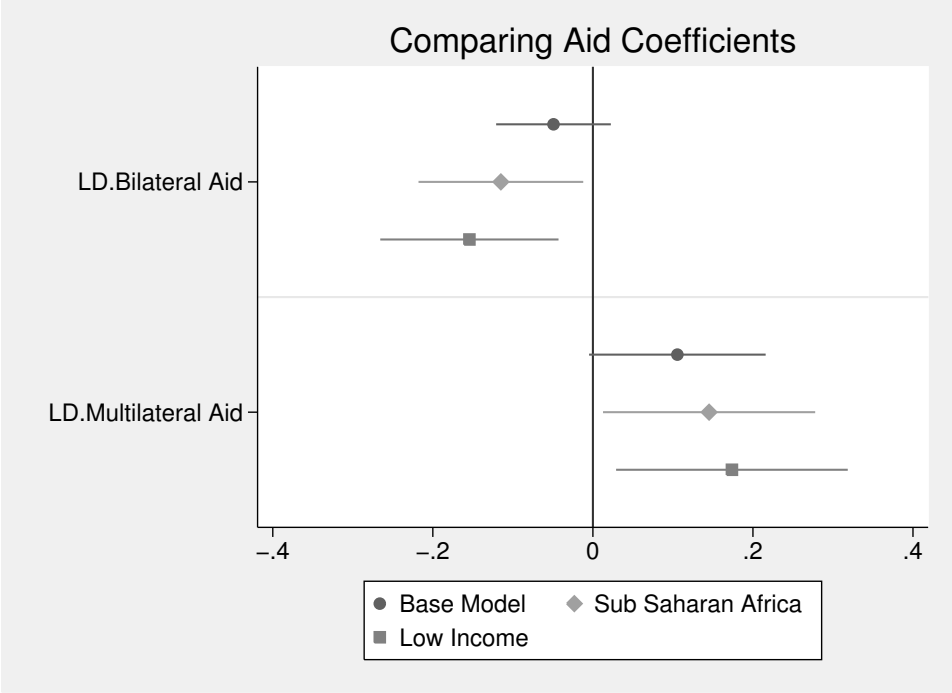


Figure 6.1: Comparing Bilateral and Multilateral Aid: Regression Coefficients

Figure 6.1 plots the aid coefficients and confidence intervals of the results presented in column 6 of Table 6.2 and columns 1 and 2 of Table 6.3. Taken together, the results in Tables 6.2 provide strong support for Hypothesis 1. Not only does multilateral aid have a positive and significant impact on economic development, its effect is also statistically different than the effect of bilateral aid. These results are especially pronounced for poor and sub-Saharan African countries.

6.4.1 Robustness Check: GMM Estimation

As a robustness check, I also estimate the models above using difference and system GMM estimation methods developed by Arellano and Bond (1991) and Blundell and Bond (1998). These methods provide an alternative solution the issues of endogeneity and country specific effects discussed above. Using Equation 6.1 as the base regression model, tthe issue of country fixed effects is solved by using the Anderson and Hsiao (1981) transformation for dynamic panel models. Using this approach, Equation 6.1 is transformed through first differences. This results in Equation 6.4:

$$\begin{aligned} g_{i,t} - g_{i,t-1} =& \beta_y(y_{i,t_0} - y_{i,t-1_0}) + \beta_a(a_{i,t} - a_{i,t-1}) + \sum_{j=1}^{k} \beta_j(x_{j,i,t} - x_{j,i,t-1}) + \\ & (\omega_t - \omega_{t-1}) + (\epsilon_{i,t} - \epsilon_{i,t-1}). \end{aligned} \tag{6.4}$$

While this transformation solves the issue of correlation between the country fixed effects and lagged dependent variable, the issue of endogeneity remains. Specifically, we can expect that $y_{i,t-1_0}$ and $x_{i,j,t-1}$ will be correlated with $\epsilon_{i,t-1}$. However, this can be remedied by recognizing the fact that lagged observations of the regressors can be used as valid instruments. This is true for both exogenous and endogenous variables, we simply must use different lag lengths. For instance, if $x_{i,j,t}$ is exogenous, then $x_{i,j,t-1}$ is a valid instrument. If $x_{i,j,t}$ is endogenous, $x_{i,j,t-2}$ is a valid instrument. GMM estimation methods take advantage of this.[3] In difference GMM, developed by Arellano and Bond (1991), lagged levels of the variables are used as instruments for the differenced equation. The Blundell and Bond (1998) approach, known as system GMM, takes this a step further by creating a level equation as well by using lagged differences as instruments. The level equation is then used in conjunction with the

[3]For a more technical explanation of GMM estimation, see Roodman (2006).

lagged levels to instrument for the endogenous variables. In this way, both difference and system GMM are able to address issues of unobserved country heterogeneity and ensure that the regressors are exogenous. While GMM methods are potentially better for modeling endogeneity, they still rely on instrumentation and GMM tests for instrumentation are quite weak Rajan and Subramanian (2008). Additionally, system GMM can create large upwards biases in the independent variables. Moreover, these methods are quite computationally intense, and require the researcher to make a series of relatively subjective decisions such as the lag level to be employed, as well as which variables are to be treated as endogenous.

In each of the GMM regressions, economic growth, initial income levels, aid, as well as the economic and political variables are treated as being endogenous. The exogenous variables used to determine the levels equation in system GMM are population, ethnic fractionalization, the East Asia and Sub-Saharan Africa dummy variables, and the time period dummy variables. Due to gaps in the panel, I use orthogonal deviations rather than first differences, although my results are robust to using first differences instead. In terms of lag length, the convention in GMM estimation is to use lags two and above to instrument for the endogenous variables Roodman (2007). This, however, assumes that the error term is not serially correlated. If it is, then the instruments are no longer valid and deeper lags must be used. To check this, I use the Arrellano Bond test for second order serial correlation. The null hypothesis is that there is no serial correlation in the residuals. If this null hypothesis is rejected, I use lags three and above. I report the number of lags used, as well as the p-values of the Arrellano Bond test in each regression.

The other diagnostic test I perform is the Hansen test for over identifying restrictions. A critical assumption for GMM models is that the instruments used are exogenous (Roodman, 2007). Using a Wald test, the Hansen J test statistic examines

Table 6.4: Comparing Bilateral and Multilateral Aid: GMM Estimation

	Difference GMM (1)	*System GMM* (2)
Initial GDP PC	-1.627	-1.122
	(1.184)	(1.043)
Bilateral Aid	0.002	-0.177**
	(0.081)	(0.087)
Multilateral Aid	0.126	0.302***
	(0.092)	(0.108)
L.m2	0.018	0.020*
	(0.039)	(0.011)
Population	5.177	0.349
	(3.325)	(0.248)
Inflation	-0.557**	-0.363
	(0.275)	(0.356)
Gov. Consumption	-0.059	0.047
	(0.066)	(0.099)
FDI	0.415	0.559*
	(0.295)	(0.315)
Democracy	0.057	-0.010
	(0.074)	(0.070)
Disaster Costs	0.006	0.015
	(0.062)	(0.084)
Sub-Saharan Africa		-2.012**
		(1.020)
East Asia		0.326
		(1.110)
Ethnic Frac.		-2.041
		(1.288)
Assassinations	-0.048	-0.221
	(0.258)	(0.318)
Observations	379	493
Countries	90	98
Hansen Test†	0.649	0.207
AB Test‡	0.107	0.241
Number of Lags	2	3
Number of Instruments	79	83
Coefficient Equality Tests for Bilateral and Multilateral Aid		
$H_0 : \beta B.Aid = \beta M.Aid$		
$H_a : \beta B.Aid \neq \beta M.Aid$		
	$\chi^2 = 0.55$	$\chi^2 = 7.15$
	$p = 0.459$	$p = 0.008$

Notes: Robust standard errors in parentheses. Time period dummies omitted. *** p<0.01, ** p<0.05,* p<0.1

† This is the p-value for the Hansen J Test statistic of overidentifying restrictions. The null hypothesis is that the instruments are jointly exogenous.

‡ This is the p-value for the Arrellano Bond Test for second or third level autocorrelation in first differences. The null hypothesis is that there is no serial correlation. If only two lags are used I report the AR(2) p-values. If three lags are used, I report the AR(3) p-values.

the null hypothesis that the regressors in the model are jointly exogenous. The problem with the Hansen test is that it is weak in the presence of too many instruments. Therefore, unusually high p-values indicate an underlying problem with the model. I report the number of instruments used, as well as the p-values for the Hansen test in my results. While I initially estimated GMM models for the restricted samples of sub-Saharan Africa and each of the three income groups, the p-values for the Hansen test were all unreasonably high (in many cases they were reported at 1.000). The underlying cause of this was the fact that the number of instruments was much greater than the number of countries in the panel, and GMM models should have fewer instruments than the number of panels across which they are estimating (Roodman, 2007). As the sub-Saharan Africa and income group regressions drastically reduced the number of countries in the sample, the number of instruments was at times more than three times larger than it should be. I therefore do not report the results of these subsample regressions, as they are appropriate for GMM estimation.

In Table 6.4, I implement both difference and system GMM in order to demonstrate the robustness of my findings across multiple specifications. The findings are mixed. While the results for difference GMM presented in column 1 find no support for Hypothesis 1, the results for system GMM presented in column 2 strongly support this hypothesis. Multilateral aid has a strong, positive impact on economic growth rates, while bilateral aid has a similarly strong negative impact. This distinction is supported by the coefficient equality test as well.

6.5 Conclusion

In this section, I have demonstrated how the motivation and specialization of aid agencies impact their effectiveness. Although past research has found inconsistent evidence regarding the effectiveness of aid, I demonstrate that simply by disaggre-

gating aid based on agency type produces important differences in the results. While the effect of bilateral aid is either negative or indistinguishable from zero, multilateral aid has a consistently positive effect on growth rates. These findings hold across empirical specifications specifically designed to address two key problems known to plague estimates of aid and growth: endogeneity and unobserved country heterogeneity. Both the approach advocated by Clemens et al. (2012) and the GMM methods advanced by Arellano and Bond (1991); Blundell and Bond (1998) are empirically rigorous, and estimations using these methods provide support for my arguments.

The implications of my results are quite profound. If multilateral aid is truly a more effective pathway for promoting development, this offers a strong policy prescription to the aid community. Namely, more aid should be channeled through multilateral institutions. It is also important to highlight the limitations of these findings. Although the coefficients for multilateral aid and specialized multilateral aid are generally positive, they are also usually quite small. Thus, while multilateral aid may be comparably more effective than bilateral aid, it is not producing as strong of a positive result as desired. Accordingly, there still remains much to do in designing and implementing more effective aid policies, among both bilateral and multilateral aid agencies alike.

7. EXAMINING THE EFFECTIVENESS OF AID: AGENCY SPECIALIZATION

In this section, I test Hypotheses 2 and 3 related to agency specialization. Hypothesis 2 states that multilateral aid will be more effective than bilateral aid because it is more likely to be specialized. Similarly, Hypothesis 3 states that specialized multilateral aid agencies will be more effective compared to less specialized multilateral aid agencies. Specialization is beneficial for aid agencies because it allows the agency to contribute more resources to each target area, reduces transaction costs, and increases levels of agency expertise.

In order to test these arguments, the remainder of this section proceeds in the following manner. First, I describe my data and methodology. Specifically, I describe how I incorporate agency specific characteristics into the analysis conducted in Section 6. Second, I build on my original analysis and examine how country, region, and sector specialization levels impact aid effectiveness. I use the lagged difference approach advocated by Clemens et al. (2012). I then discuss my findings, which are contrary to my expectation that specialization improves aid effectiveness. I conclude by discussing the implications of my results for the aid community.

7.1 Data Description

In order to empirically investigate my hypotheses, I incorporate a measure of agency specialization into my original analysis. In Section 4, I presented a comprehensive dataset on the country, region, and sector specialization levels of bilateral and multilateral aid agencies. There are a total of six specialization measures: country portfolio size, country Herfindahl score, region portfolio size, region Herfindahl score, sector portfolio size, and sector Herfindahl score. However, these variables

are observed at the agency-year level, whereas the unit of observation for my analysis is recipient-year. Therefore, the first task is to transform these agency specific characteristics. In order to accomplish this, I proceed as follows. I first calculate the percentage of aid that the agency contributes to a recipient country in a given year, based on total contributions to the recipient in that year. This is represented in Equation 7.1, where a indicates agencies, r indicates recipients, and y indicates year.

$$PercentAid_{a,r,y} = \frac{Aid_{a,r,y}}{TotalAid_{r,y}} * 100 \tag{7.1}$$

As percent aid increases, the agency is of greater importance for the recipient country.

I then interact this percentage with the percentile scores for each of the agency specialization variables. The percentile scores range from 0 to 100, with higher values indicating greater levels of specialization. Thus, the resulting interaction creates an indicator of the specialization of the agency weighted by their relative importance to a recipient country. To reduce this variable to the recipient-year level of analysis, I simply calculate the mean of this interaction. This process is described formally in Equation 7.2, where i represents a specific specialization measure.

$$SpecializationIndex_{i,r,y} = \frac{\sum SpecializationPercentile_{i,a,y} * PercentAid_{a,r,y}}{n_{a,y}} \tag{7.2}$$

This results in a weighted index of specialization for each recipient. Countries receiving large portions of their aid from highly specialized donor agencies will have high specialization index scores. Conversely, agencies with low specialization scores are receiving more of their aid from less specialized agencies. I calculate two estimates of the specialization index: one for bilateral agency specialization and another

for multilateral agency specialization. To account for skewness, I also log all the specialization indices.

For sector specialization, I add an additional to this process by removing multilateral aid agencies that are not expected to contribute directly to economic growth rates. Expecting aid from agencies that focus their activities on issues such as health and the environment to have an immediate impact on growth levels is unrealistic. For many of these agencies, economic growth is not their priority, although it may be a positive byproduct. Instead, these agencies aim to provide social services and improve reduce environmental degradation. I therefore exclude from the analysis agencies with nominal sector specialization that does not contribute to economic growth. These agencies include GAVI, GEF, the Global Fund, IFAD, IAEA, the Nordic Development Fund, UNAIDS, UNFPA, UNICEF, UNPBF, UNRWA, UNHCR, and the WHO. In Table 7.1 I provide summary statistics for the agency specialization indices, which are used in the regressions below.

Of particular note in Table 7.1 are the negative minimum values for each multilateral agency specialization index. As these variables are log transformed, they imply that the specialization indices for multilateral aid agencies are often quite small, falling below a value of one. Thus, while the evidence presented in Section 4 concluded that multilateral aid was substantially more specialized than bilateral aid, when factoring in the importance of this aid, the effect of agency specialization may be mitigated.

7.2 Analysis: Agency Specialization

In Table 7.2, I empirically estimate the effect of agency specialization on economic growth. I use the same methodological approach described in Section 6, where I lag the aid variables and first difference the equation. To incorporate agency specializa-

Table 7.1: Summary Statistics: Specialization Variables

Variable	*Mean*	*Std. Dev.*	*Min.*	*Max.*
Bilateral Country Count	4.79	0.80	3.02	8.57
Multilateral Country Count	6.03	1.07	-1.17	9.21
Bilateral Country HHI	5.38	0.69	3.53	8.99
Multilateral Country HHI	5.49	1.29	-1.87	9.06
Bilateral Region Count	5.22	0.61	3.74	8.07
Multilateral Region Count	6.13	1.06	-1.55	9.19
Bilateral Region HHI	5.40	0.71	2.43	8.75
Multilateral Region HHI	6.22	1.04	-1.17	9.19
Bilateral Sector Count	5.44	0.72	2.60	9.14
Multilateral Sector Count	6.21	1.13	-0.76	8.58
Bilateral Sector HHI	5.67	0.73	2.56	8.85
Multilateral Sector HHI	6.10	1.07	-1.05	8.51

tion, I include a lagged value of the specialization index for bilateral and multilateral aid agencies, as well as the interaction of these variables with aid amounts. If specialization does indeed lead have a positive impact on development, we should expect a positive and significant coefficient for the interaction terms.

As the results show, I find very little support for this expectation. In columns 1 and 2, I examine country specialization. Agencies that focus their resources on fewer countries should be able to deliver better results for economic growth rates. Specifically, country specialization allows an agency to devote more of their time and energy into researching, designing, implementing, and monitoring their aid policies in each recipient. Effective aid policies must identify not only the countries that need aid the most, but also the type of aid that would be most conducive to encouraging development in each country. Accurate and thorough research of aid policies and their ramifications for recipient countries is therefore a time intensive task. When agencies have fewer recipients over which they must divide their time, their aid

Table 7.2: Economic Growth and Agency Specialization

	Country		*Region*		*Sector*	
	Count	*HHI*	*Count*	*HHI*	*Count*	*HHI*
	(1)	(2)	(3)	(4)	(5)	(6)
Initial GDP PC,	-6.848**	-6.582**	-6.856**	-6.668***	-8.411**	-8.949***
	(2.837)	(2.618)	(2.647)	(2.534)	(3.841)	(3.201)
Bilateral Aid	-0.137	-0.278	-0.635*	-0.104	-0.160	0.012
	(0.205)	(0.245)	(0.370)	(0.201)	(0.301)	(0.325)
B. Spec. Index	-0.392	1.493**	-2.250**	-1.711***	-1.504**	-2.106*
	(0.559)	(0.735)	(1.021)	(0.659)	(0.726)	(1.204)
B.Aid*B.Spec.Index	0.012	0.038	0.111	0.009	0.019	-0.012
	(0.041)	(0.046)	(0.072)	(0.039)	(0.056)	(0.067)
Multilateral Aid	0.974**	0.446	1.017**	0.854*	0.228	0.319
	(0.404)	(0.292)	(0.422)	(0.462)	(0.257)	(0.280)
M. Spec. Index	0.409*	0.162	0.119	0.057	-0.058	-0.077
	(0.208)	(0.177)	(0.283)	(0.250)	(0.207)	(0.192)
M.Aid*M.Spec.Index	-0.142**	-0.060	-0.138**	-0.118*	-0.023	-0.037
	(0.064)	(1.021)	(0.061)	(0.069)	(0.038)	(0.042)
M2	0.006	0.006	0.007	0.007	-0.011	-0.003
	(0.019)	(0.020)	(0.020)	(0.020)	(0.028)	(0.028)
Population	1.130	1.362	1.408	0.373	7.433	6.914
	(4.486)	(4.438)	(4.252)	(4.471)	(6.715)	(5.980)
Inflation	-0.404*	-0.394*	-0.419**	-0.375*	0.074	0.039
	(0.219)	(0.215)	(0.213)	(0.216)	(0.273)	(0.249)
Gov. Consumption	-0.142**	-0.140**	-0.139**	-0.125**	-0.105	-0.119*
	(0.059)	(0.060)	(0.058)	(0.058)	(0.067)	(0.067)
FDI	0.661***	0.647***	0.659***	0.695***	0.504***	0.545***
	(0.163)	(0.160)	(0.161)	(0.163)	(0.190)	(0.191)
Natural Disasters	0.025	0.027	0.025	0.030	0.035	0.108
	(0.065)	(0.064)	(0.063)	(0.064)	(0.096)	(0.074)
Democracy	0.029	0.014	0.026	0.022	0.053	0.045
	(0.051)	(0.050)	(0.051)	(0.049)	(0.058)	(0.057)
Assassinations	-0.146	-0.088	-0.143	-0.184*	-0.449**	-0.316
	(0.109)	(0.110)	(0.112)	(0.103)	(0.216)	(0.234)
Constant	-0.037	-0.011	-0.197	-0.318	1.069	-1.089
	(0.701)	(0.661)	(0.687)	(0.680)	(0.921)	(0.934)
Observations	368	368	368	368	212	212
R-squared	0.284	0.294	0.303	0.310	0.360	0.379
Countries	91	91	91	91	85	85

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

policies should improve. Additionally, focusing on fewer countries allows agencies to build better contacts with government officials and firms that are active in each country. With fewer tasks and contacts to juggle, the agency is essentially able to streamline the production of their aid policies.

I examine these claims in columns 1 and 2. Using country portfolio size as the specialization index, column 1 finds a positive and significant coefficient for multilateral aid and the specialization index, but a negative and significant coefficient for the interaction term. Kam and Franzese (2007) highlight that these coefficients cannot be interpreted on their own, as the effect of x on y in an interactive model is not constant, but rather depends on the values of z, the intervening variable. To parse out these effects, I calculate the derivative of my regression to be:

$$\frac{\partial \hat{y}}{\partial M.Aid} = \beta_{M.Aid} + \beta_{M.Aid*M.Spec.Index}(M.Spec.Index) \tag{7.3}$$

where $\partial\hat{y}/\partial M.Aid$ represents the effect of multilateral aid on economic growth rates. Using the coefficient results from column 1, we see that $\partial\hat{y}/\partial M.Aid = 0.974 - 0.142(M.Spec.Index)$. Thus, the effect of multilateral aid on the dependent variable is decreasing as the specialization index increases. In Figure 7.1 I present this graphically by plotting the marginal effects of multilateral aid on economic growth rates. The fitted line demonstrates the negative influence of agency specialization on multilateral aid's effect on economic growth. However, the confidence interval for these estimates is quite wide. Thus, while the coefficients suggest a negative effect of multilateral aid in this case, we cannot conclude that such an effect is statistically different than zero.

Column 1 also shows that the results for bilateral aid and when using country count as the specialization index produces no significant findings. As the analysis

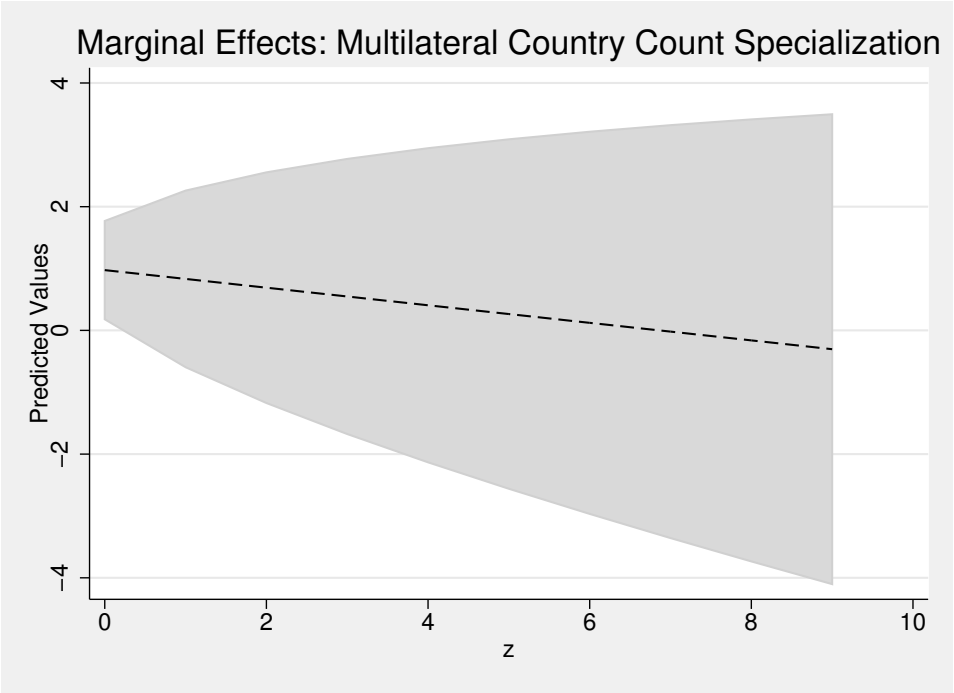


Figure 7.1: Marginal Effects of Multilateral Aid on Economic Growth Rates: Country Portfolio Size

performed in Section 6 found a null effect for bilateral aid, this is result is not entirely surprising, but it does suggest that even greater specialization levels among bilateral aid agencies do not lead to improvements in economic growth rates. Once again, agency specialization does not appear to be contributing to development. Column 2 uses country Herfindahl scores as the specialization index. For multilateral aid agencies, this produces no significant coefficients at all. For bilateral aid agencies, the coefficient for the specialization index is positive and significant. After calculating the effect of increases in specialization levels on economic growth rates however, I find no significant positive results. Generally, it appears that increases in country specialization levels by aid agencies, both bilateral and multilateral, do not produce better results in terms of economic development.

Columns 3 and 4 examine regional levels of agency specialization. As discussed in Section 4, it may be too much to expect donors to specialize on fewer countries. Donors funding patterns are motivated by a variety of factors including recipient need, institutional environments, geopolitical concerns, and colonial histories. But perhaps one of the greatest motivating factors is to increase their own importance by being active in a number of aid recipients. Thus, asking aid agencies to reduce their activities in recipient countries runs counter to their organizational goal of being a large and influential member of the aid community. To remedy this, one potential solution is to have agencies focus their activities regionally. This allows agencies to still provide aid to a number of recipients, but still allows them to capitalize on the benefits of specialization. Past research has clearly demonstrated that economic trends have a spatial component. That is, if your neighbor is poor, you are also more likely to be poor. Moreover, issues such as tariffs, immigration, and refugees, all of which are central to improvements in development, are not country specific but rather are more regional issues. Regional specialization would thus allow agencies to address these concerns in a more comprehensive manner rather than focusing on single countries scattered throughout the world.

While Table 7.2 finds a positive and significant coefficient for multilateral aid in columns 3 and 4, the interaction terms have negative and significant coefficients. Similar to the case of multilateral aid when using country portfolio size as the specialization index, specialization appears to have a negative effect on economic growth rates. Figure 7.2 displays the marginal effects of multilateral aid on economic growth when the specialization index used is region Herfindahl scores. Similar to Figure 7.1, the slope implies a negative association between multilateral aid and economic growth rates as agency specialization levels increase, although this relationship is never statistically significant.

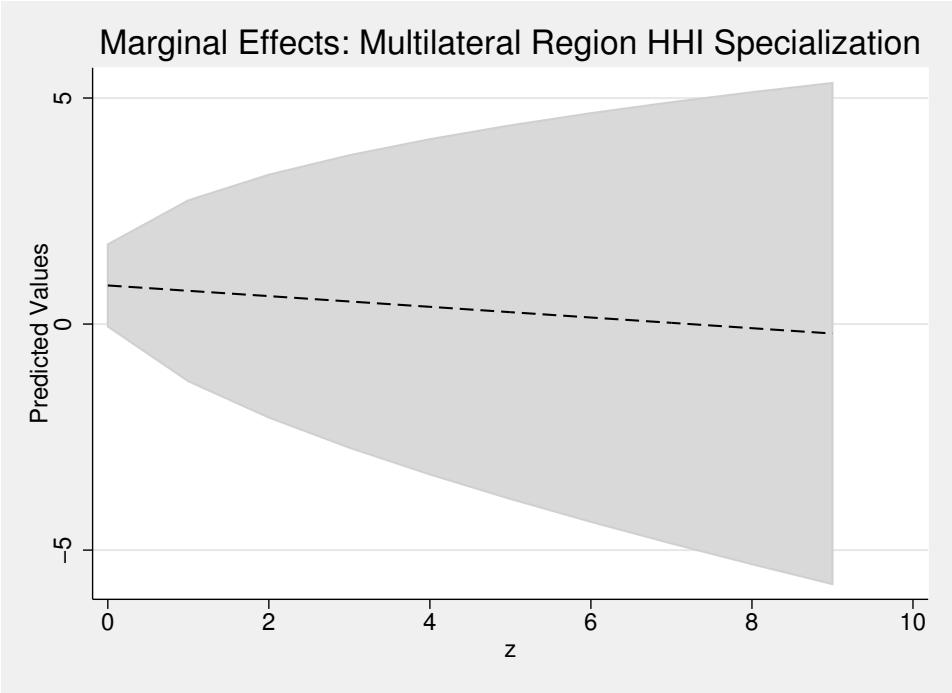


Figure 7.2: Marginal Effects of Multilateral Aid on Economic Growth Rates: Region Herfindahl Score

The results for region specialization when examining bilateral aid are null as well. In both columns 3 and 4, both bilateral aid and the specialization index are found to have negative (and at times significant) coefficients. Figure 7.3 plots the marginal effects of bilateral aid on economic growth rates as agency specialization increases. Again, specialization does not have any positive or significant effect on the dependent variables. The results for region specialization therefore do not support the argument that specialization is able to improve agency effectiveness.

Finally, columns 5 and 6 analyze sector specialization and economic growth rates. When agencies focus on a specific sector of development, they are expected to become experts in their field. As such, their high levels of knowledge are expected to produce positive development results. Examining Table 7.2, these results are perhaps

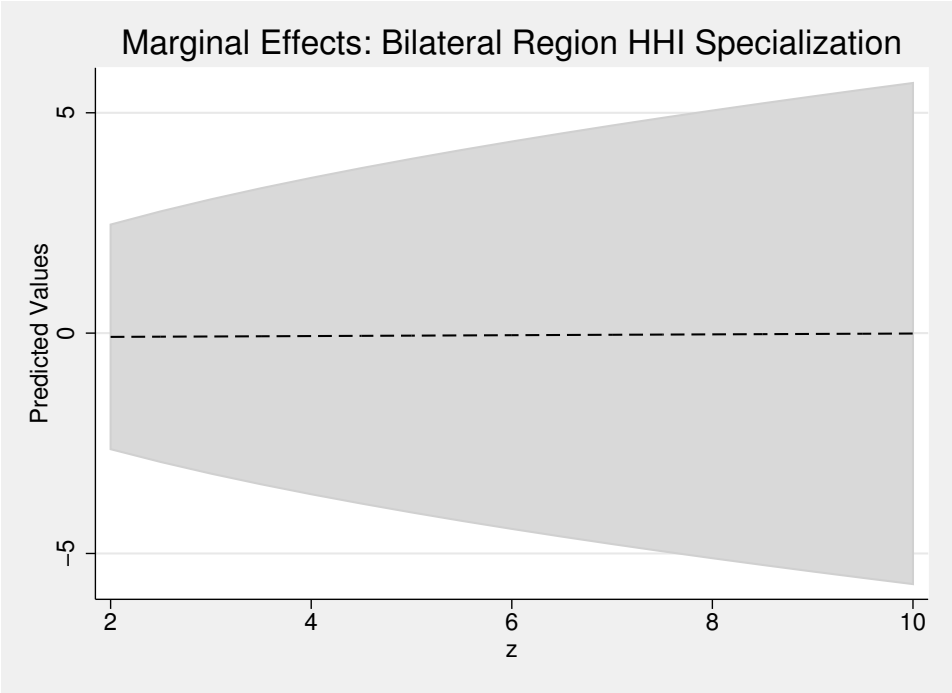


Figure 7.3: Marginal Effects of Bilateral Aid on Economic Growth Rates: Region Herfindahl Score

the most disappointing. In both regressions, the only significant finding is for the bilateral specialization index coefficients, which is negative. In light of all the praise that has been given to agencies that are choosing to focus on specific development sectors, this seems surprising. One problem may be that many of these agencies that specialize on a certain sector are still relatively new, and thus their impacts may not yet be apparent in the data. Establishing an aid agency is a substantial undertaking, one that is likely to be wrought with unforeseen problems. The GEF, for instance, had a great deal of administrative and organizational issues in the first few years after it was created. These haunted the agency for the next several years, as they were unable to attract sizable donations for quite some time (Hicks et al., 2010).

In general, the lack of findings for country, region, and sector specialization provide no support for either Hypothesis 2 or 3. Specialization does not appear to lead to better performance by multilateral aid agencies compared to bilateral aid agencies. Additionally, increases in the specialization levels of multilateral aid agencies are found to have no effect on improving economic growth rates in developing countries.

7.3 Discussion

What are the implications of such negative results regarding agency specialization? In this subsection, I posit three potential explanations for these null results. The first is that specialization simply may not be as beneficial as the aid community expects it to be. Rather than increasing aid effectiveness, specialization may reduce it. For instance, agencies that specialize may sacrifice the potential gains of larger networks that span across countries, regions, or sectors. Additionally, by operating in a diverse setting of recipient countries, aid agencies are able to learn from their experiences, thereby increasing their knowledge and providing them a sense of maturity from their fieldwork. Agencies can then apply this new found knowledge to activities in other areas, essentially creating spillover effects. This argument may be especially applicable for country specialization. Agencies operating in a single country for instance, or even less than five countries, are most likely not as experienced or knowledgable as agencies operating in 50 or 100 recipient countries. Related to this is the fact that agencies operating in fewer countries are most likely going to be much smaller. As such, their aid may be so insubstantial to recipient governments that their specialization levels make little difference, as the government must deal with larger contributions from less specialized agencies. Indeed, the only donor agencies that are observed to provide aid to a single recipient country are Poland, Portugal, and the UNECE. Each of these agencies is quite small, and provides relatively small

amounts of aid, that may be unable to positively influence patterns of economic growth.

Each of these criticisms are valid. However, rather negating the gains that specialization can provide, they rather serve to highlight the limitations of this argument. Indeed, the criticism expressed above actually imply a potential non-linear relationship between specialization and effectiveness. While contributing to too many countries may be ineffective, it may be equally as ineffective to contribute to too few. Easterly and Williamson (2011) make precisely this point, arguing that there may be tipping points at which specialization becomes beneficial. Therefore while the benefits of specialization that were described in Section 3 are still applicable, it is also important to recognize that the relationship between aid and specialization is complex.

A second possible explanation for the lack of positive findings with regard to agency specialization is that the dependent variable of economic growth rates is inappropriate. This argument is most applicable to measures of sector specialization. Many of the specialized agencies that exist target social and environmental issues rather than economic growth. Consequently, aid from these agencies should not be expected to have an immediate or direct impact on growth patterns. Although I eliminate the aid that these agencies provide, further disaggregation may be necessary, as most agencies that specialize do not focus on growth rates specifically. A more accurate analysis of sector specialization would therefore be to examine results on issue areas that specialized agencies target. For instance, evaluations of agencies that focus on health issues would do better to focus their analysis on vaccination rates or child mortality rates in recipient countries. Future work should expand these types of sector based analyses.

Finally, a third possible explanation is that collectively agency specialization levels have not yet reached the point at which they are able to effectively contribute to improvements in development. A series of OECD Reports on Division of Labor have concluded that aid fragmentation levels are quite low to begin with, and furthermore have made little improvement in the last decade (OECD, 2008, 2009; 4th High Level Forum on Aid Effectiveness, 2011). Therefore, while increases in the specialization of a specific agency may be a move in the right direction, unless other agencies improve their specialization levels as well, it will be difficult for recipient countries to benefit from receiving more specialized aid.

7.4 Conclusion

These sum of the results presented in this section is quite provoking. While hailed as a critical factor for improving overall aid effectiveness by the Paris Declaration and Accra Agenda for Action, I find little empirical support for this argument. Examinations of country, region, and sector specialization levels provided no indication that specialization is beneficial for aid effectiveness. It is worth cautioning, however, on the limitations of these findings. First, my regression assumes a linear relationship between specialization levels and economic growth. Given the diminishing returns of specialization, however, future work should examine the possibility of a non-linear relationship between the two variables. Second, the results for sector specialization represent a hard test, as they do not examine the targeted goals that specialized agencies most often have. Third, while specialization may in fact have a positive effect on development, the lack of specialization among aid agencies and resulting high levels of fragmentation that exist in recipient countries may be driving the null results. Thus, while the results presented here provide a first step in examining the

impact of agency specialization on economic growth rates, there remains much to be done in future research to accurately assess this relationship.

For multilateral aid agencies, a conundrum exists. While the rankings from Section 4 clearly indicate that multilateral aid is more likely to be specialized compared to bilateral aid, according to the analysis presented above, this doesn't appear to matter for patterns of world development. If this finding is supported by future research, it suggests that multilateral aid is less likely to contribute to future development precisely because it is more likely to specialize. However, if the null findings on specialization presented above are contradicted in future research, this lends strong support for bolstering the multilateral aid program. As these agencies are often designed to address development in a specific country, region, or sector, utilizing them more in the future should lead to improvements in the Third World.

8. EXAMINING THE EFFECTIVENESS OF AID: AGENCY AUTONOMY

In this section, I test Hypothesis 4 which focuses on variations in the autonomy of multilateral aid agencies. In general, differences within multilateral aid agencies remain largely understudied. Although many case studies exist that focus on the effectiveness of agencies in under certain conditions, none have attempted to analyze how differences among multilateral aid agencies influence development outcomes. That is my primary goal here.

The results of my analysis testify to the importance of further unpacking the heterogeneity of multilateral aid agencies. Overall, I find evidence suggesting that agency autonomy has an important influence on the overall effectiveness of the agency. Thus, it is not only important for aid researchers to seriously consider the impact that multilateral aid agencies can have, but also for scholars of international institutions to consider how internal variations within these organizations affect their operations and performance.

The remainder of the section proceeds as follows. First, I describe my data and methodology. Second, I present my results using the lagged and differencing approach advocated by Clemens et al. (2012). I then use difference and system GMM estimation developed by Arellano and Bond (1991) and Blundell and Bond (1998) as a robustness check. After discussing these results, I present a final analysis of agency effectiveness by combining agency specialization and autonomy scores. I conclude by offering a summary of my findings and a discussion of their implications.

8.1 Data Description

The final hypothesis I test relates to agency autonomy and aid effectiveness. In Section 5, I created an original dataset ranking agencies based on their voting

procedures and funding patterns. These variables that are argued to affect agency autonomy include: the size of a Board of Directors, whether voting power is based on a one-member-one-vote or proportional rule, whether an aid policy has to be approved by a majority or a supermajority, the number of donors that fund the agency, and the concentration of funding among these donors. I summarize my expectations for these variables in Table 8.1.

Table 8.1: Summary of Expectations for Autonomy Variable

	High Autonomy	*Low Autonomy*
Board Size	Large	Small
Voting Power	One-member-one-vote	Proportional
Approval	Majority	Supermajority
Number of Donors	Large	Small
Aid Funding	Diffuse	Concentrated

The unit of observation for the variables collected in Section 5 are at the agency-year level. However, the unit of analysis for my empirical investigation is recipient-year. In order to incorporate these agency characteristics into my empirical analysis, I proceed in the following manner. First, I separate agencies into high and low autonomy groups for each year of observation. This is quite simple for the two autonomy variables that are categorical (majority or supermajority vote systems, proportional or one-member-one-vote systems). In these instances, agencies with a majority vote system and a one-member-one-vote system are classified as the high autonomy group, while agencies with supermajority vote systems and proportional voting distributions are classified as the low autonomy group. This process is more

complicated for the three continuous autonomy variables (board size, donor count, and donor concentration), as well as the indices that I create. In order to separate agencies into high and low groups on these variables, I compare the percentile rank of the variable to its median. Agencies whose percentile rank is higher than the median are classified as high autonomy agencies, whereas agencies whose percentile rank falls below the median are classified as low autonomy agencies. Using these classifications, I then sum the amount of aid provided by each agency type to the recipient country of interest in a given year. This provides me with an aid amount specific to high and low autonomy types at the recipient-year level.

8.2 Analysis: Agency Autonomy

In this subsection, I use this information to empirically test Hypothesis 4. Table 8.2 uses the lagged difference approach advocated by Clemens et al. (2012) to examine each of the autonomy variables individually and their effect on economic growth rates in developing countries. The unit of analysis is recipient-period. Generally, the results are not supportive of my hypothesis. Column 1 examines aid from agencies with large and small Boards of Directors. Although both groups have positive coefficients, they are not significant at conventional levels. Moreover, the coefficient equality test indicates that there is no statistical difference comparing between each type of agency. The same pattern holds in column 2, which examines majority and proportional voting systems: neither aid group is found to have a significant impact on economic growth rates. In column 3, I do find a positive and significant coefficient for majority vote systems. Examining the coefficient equality test, however, indicates that the effect of aid from agencies with majority vote systems cannot be distinguished from the effect of aid from agencies with supermajority vote systems.

Table 8.2: Autonomy Variables and Economic Growth

	Large/ Small Board (1)	*Members/ Prop. System* (2)	*Majority/ Supermajority* (3)	*Donor Count* (4)	*Donor Concentration* (5)
Initial GDP PC	-6.205	-9.224*	-8.881**	-6.240	-13.195**
	(4.153)	(5.094)	(3.462)	(4.858)	(6.071)
Bilateral Aid	-0.061	-0.077	-0.079**	-0.073	-0.082
	(0.048)	(0.068)	(0.036)	(0.047)	(0.075)
High Autonomy	0.116	0.402	0.124*	0.141	0.048
	(0.096)	(0.384)	(0.064)	(0.095)	(0.142)
Low Autonomy	0.137	0.016	0.133	-0.017	-0.148**
	(0.174)	(0.087)	(0.216)	(0.226)	(0.071)
M2	-0.013	-0.008	0.010	0.010	-0.006
	(0.033)	(0.030)	(0.025)	(0.034)	(0.029)
Population	-1.054	1.794	1.445	4.686	5.718
	(6.481)	(6.910)	(5.408)	(5.683)	(8.826)
Inflation	0.197	-0.247	-0.559**	-0.076	0.219
	(0.330)	(0.338)	(0.236)	(0.263)	(0.376)
Gov. Consumption	-0.144*	-0.022	-0.112	-0.173*	-0.086
	(0.078)	(0.086)	(0.083)	(0.091)	(0.132)
FDI	0.712***	0.603***	0.757***	0.673***	0.458***
	(0.219)	(0.172)	(0.170)	(0.220)	(0.159)
Disaster Costs	0.008	-0.095	0.013	-0.048	-0.124
	(0.097)	(0.093)	(0.081)	(0.100)	(0.116)
Democracy	0.025	0.043	0.010	-0.008	0.048
	(0.053)	(0.062)	(0.049)	(0.054)	(0.075)
Assassinations	-0.380	-0.069	-0.387**	-0.359*	-0.112
	(0.359)	(0.072)	(0.195)	(0.183)	(0.105)
Constant	0.442	0.400	0.526	-0.903	-0.230
	(1.150)	(0.825)	(0.687)	(0.965)	(1.321)
Observations	233	198	266	220	143
R-squared	0.274	0.338	0.372	0.280	0.444
Countries	84	79	87	74	60
Coefficient Equality Tests					
$H_0 : \beta HighAutonomy = \beta LowAutonomy$					
$H_a : \beta HighAutonomy \neq \beta LowAutonomy$					
	$F = 0.01$	$F = 0.97$	$F = 0.00$	$F = 0.36$	$F = 1.24$
	$p = 0.929$	$p = 0.327$	$p = 0.968$	$p = 0.549$	$p = 0.268$

Time dummies omitted. Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

I find few results when examining funding characteristics individually either. Although the coefficients of the high autonomy variables are positive, they are not significant. Although the low autonomy groups have negative coefficients, this effect is only significant for agencies whose funding is more concentrated. Additionally, the coefficient equality tests find that the difference between agencies who have concentrated and diffuse funding patterns is not significantly distinguishable. Overall, the results provide little support for the argument that any of the voting procedures and funding patters have a positive impact on development when examined on their own.

Table 8.3 turns to examining the voting sub-index, funding sub-index, and composite autonomy indices created in Section 5. Columns 1 and 2 test the effect of both sub-indices, while columns 3 and 4 examine the composite indices. The results reject Hypothesis 4, as none of the high autonomy groups has a signifiant effect on economic growth. Similarly, the coefficient equality tests all fail to reject the null hypothesis for the high and low autonomy groups. Thus, the results using the lagged difference approach advocated by Clemens et al. (2012) provide no support for Hypothesis 4.

8.2.1 Robustness Check: GMM Estimation

I this subsection, I repeat the above analysis using difference and system GMM estimation. The results are much more positive that those found presented in Tables 8.2 and 8.3. Table 8.4 examines each of the five autonomy variables individually. Column 1 finds a positive and significant effect for aid given by agencies with large boards of directors. Additionally, the difference between large and small boards is statistically different according to the coefficient equality tests. I find similarly positive results for each of the other four autonomy variables. Aid from agencies with a one-member-one vote system, majority voting system, large donors, and diffuse donor funding are all found to have a positive and significant impact on economic

Table 8.3: Autonomy Index and Economic Growth

	Vote Sub Index (1)	*Fund Sub Index* (2)	*Missing Allowed* (3)	*Missing Not Allowed* (4)
Initial GDP PC	-6.659*	-8.100	-8.909**	-13.718*
	(3.938)	(5.295)	(3.737)	(7.015)
Bilateral Aid	-0.051	-0.072	-0.115***	-0.089
	(0.046)	(0.061)	(0.044)	(0.083)
High Autonomy	0.134	-0.059	0.150	-0.015
	(0.112)	(0.103)	(0.095)	(0.101)
Low Autonomy	-0.000	-0.018	0.043	-0.182
	(0.214)	(0.165)	(0.160)	(0.254)
M2	-0.001	0.007	0.010	-0.005
	(0.032)	(0.035)	(0.026)	(0.033)
Population	-1.973	5.827	1.480	-2.429
	(6.140)	(7.806)	(5.809)	(7.296)
Inflation	-0.041	-0.012	-0.366	0.060
	(0.280)	(0.313)	(0.251)	(0.362)
Disaster Costs	-0.017	-0.047	0.002	-0.094
	(0.090)	(0.096)	(0.090)	(0.120)
Gov. Consumption	-0.184**	-0.069	-0.147	-0.009
	(0.075)	(0.097)	(0.090)	(0.142)
FDI	0.649***	0.595***	0.707***	0.356**
	(0.189)	(0.212)	(0.209)	(0.154)
Democracy	0.035	0.013	0.000	-0.002
	(0.054)	(0.070)	(0.050)	(0.084)
D.assassinations	-0.160	-0.313*	-0.226**	-0.296*
	(0.131)	(0.160)	(0.114)	(0.156)
Constant	-0.220	-1.300	-0.704	1.727
	(0.990)	(1.370)	(1.027)	(1.102)
Observations	255	181	239	121
R-squared	0.280	0.299	0.322	0.414
Countries	80	67	78	53
Coefficient Equality Tests				
$H_0 : \beta HighAutonomy = \beta LowAutonomy$				
$H_a : \beta HighAutonomy \neq \beta LowAutonomy$				
	$F = 0.26$	$F = 0.03$	$F = 0.34$	$F = 0.33$
	$p = 0.611$	$p = 0.856$	$p = 0.560$	$p = 0.566$

Time dummies omitted. Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

growth rates. Additionally, in all but three cases (members, supermajority, and donor count for system GMM), the coefficient equality tests reject the null that the effect of high and low autonomy are equivalent. Thus, unlike the results of the Clemens et al. (2012) approach, GMM estimation provides strong support for Hypothesis 4.

In Table 8.5, I examine the effect of the four indices using GMM estimation. The results are highly supportive of Hypothesis 4, in contrast to the result presented in Table 8.2. The weakest finding is on the voting sub-index for both difference and system GMM. In column 1, I find no significant effect for more autonomous agencies based on the voting variables. Note however that the coefficient equality test does find a statistical difference between the high and low autonomy group for difference GMM regardless of the lack of significant findings in the regression results. Column 2 finds that agencies with greater autonomy based on the funding variables have a very strong and positive impact on economic growth rates, and that this difference is distinct from aid provided by agencies with low autonomy. In column 3, I examine the results of the composite autonomy index which allows for missing information on either agency voting or funding. Once again, the results provide strong support for Hypothesis 4. Estimation results for difference and system GMM both find that aid from high autonomy agencies has a positive and significant effect on economic growth rates. Meanwhile, aid from agencies with low autonomy has a negative effect in both regressions, and this effect is significant in the case of difference GMM. The strong positive effect of aid from agencies with high autonomy is also confirmed in column 4, which requires complete information on agency voting and funding variables. For all coefficient inequality tests, the results reject the null hypothesis. Thus, when examining the autonomy indices created in Section 5 using GMM estimation, I find strong and consistent confirmation of Hypothesis 4.

Table 8.4: Autonomy Variables and Economic Growth: GMM Estimation

	Large/ Small Board (1)	*Members/ Prop. System* (2)	*Majority/ Supermajority* (3)	*Donor Count* (4)	*Donor Concentration* (5)
Difference GMM Estimation					
Initial GDP PC	-2.694*	-5.733***	-1.708	-4.106**	-5.967***
	(1.558)	(1.919)	(1.342)	(1.756)	(2.048)
Bilateral Aid	-0.019	-0.103	-0.126**	-0.033	-0.024
	(0.061)	(0.095)	(0.058)	(0.064)	(0.059)
High Autonomy	0.455**	0.806**	0.417***	0.483***	0.574***
	(0.225)	(0.358)	(0.101)	(0.161)	(0.125)
Low Autonomy	-0.126	0.045	0.027	-0.101	-0.314
	(0.170)	(0.106)	(0.175)	(0.169)	(0.195)
Observations	269	238	297	243	182
Number of Countries	86	80	90	75	65
Hansen Test†	0.799	0.522	0.539	0.951	0.997
AB Test‡	0.221	0.717	0.259	0.648	0.298
Number of Lags	3	2	2	2	2
Number of Instruments	81	91	92	92	92
Coefficient Equality Tests					
	$\chi^2 = 2.88$	$\chi^2 = 4.30$	$\chi^2 = 2.78$	$\chi^2 = 4.66$	$\chi^2 = 11.84$
	$p = 0.090$	$p = 0.038$	$p = 0.095$	$p = 0.031$	$p = 0.000$
System GMM Estimation					
Initial GDP PC	-0.530	0.284	0.434	-0.370	0.357
	(0.655)	(0.690)	(1.041)	(0.868)	(0.781)
Bilateral Aid	-0.027	-0.014	-0.124**	-0.049	0.015
	(0.061)	(0.097)	(0.052)	(0.056)	(0.057)
High Autonomy	0.409**	0.858**	0.393***	0.277*	0.711***
	(0.161)	(0.402)	(0.095)	(0.152)	(0.237)
Low Autonomy	-0.076	0.214	0.102	0.086	-0.276
	(0.177)	(0.170)	(0.204)	(0.194)	(0.181)
Observations	378	359	426	364	321
Number of Countries	98	93	98	87	94
Hansen Test†	0.401	0.710	0.774	0.914	0.969
AB Test‡	0.318	0.345	0.595	0.589	0.284
Number of Lags	3	2	2	2	2
Number of Instruments	96	106	107	107	107
Coefficient Equality Tests					
	$\chi^2 = 2.61$	$\chi^2 = 1.64$	$\chi^2 = 0.1.28$	$\chi^2 = 0.42$	$\chi^2 = 6.91$
	$p = 0.107$	$p = 0.201$	$p = 0.258$	$p = 0.519$	$p = 0.009$

Notes: Robust standard errors in parentheses. Time dummies omitted. *** p<0.01, ** p<0.05, * p<0.1
† This is the p-value for the Hansen J Test statistic of overidentifying restrictions. The null hypothesis is that the instruments are jointly exogenous.
‡ This is the p-value for the Arrellano-Bond Test for second or third level autocorrelation in first differences. The null hypothesis is that there is no serial correlation. If only two lags are used, I report the AR(2) p-values. If three lags are used, I report the AR(3) p-values.

Table 8.5: Autonomy Index and Economic Growth: GMM Estimation

	Vote *Vote Sub-Index* (1)	*Fund* *Fund Sub-Index* (2)	*Missing* *Missing Allowed* (3)	*Missing* *Missing Not Allowed* (4)
Difference GMM				
Initial GDP PC	-3.400**	-2.529	-2.838	-2.528
	(1.701)	(1.868)	(1.801)	(1.968)
Bilateral Aid	0.002	-0.055	-0.082	-0.057
	(0.067)	(0.062)	(0.082)	(0.057)
High Autonomy	0.270	0.712***	0.600***	0.688***
	(0.205)	(0.194)	(0.187)	(0.230)
Low Autonomy	-0.317	-0.475***	-0.464**	-0.538**
	(0.215)	(0.168)	(0.228)	(0.270)
Observations	280	213	268	168
Number of Countries	83	69	83	67
Hansen Test†	0.705	0.240	0.890	0.934
AB Test‡	0.109	0.537	0.392	0.183
Number of Lags	3	2	2	2
Number of Instruments	77	87	87	87
Coefficient Equality Tests				
	$\chi^2 = 4.09$	$\chi^2 = 14.25$	$\chi^2 = 8.86$	$\chi^2 = 12.02$
	$p = 0.043$	$p = 0.000$	$p = 0.003$	$p = 0.000$
System GMM				
Initial GDP PC	-1.093*	-0.494	0.282	-0.269
	(0.644)	(0.930)	(0.989)	(0.776)
Bilateral Aid	-0.054	-0.098*	0.008	0.003
	(0.082)	(0.057)	(0.044)	(0.073)
High Autonomy	0.149	0.711***	0.469**	0.568**
	(0.189)	(0.195)	(0.188)	(0.255)
Low Autonomy	0.223	-0.114	-0.205	-0.189
	(0.307)	(0.181)	(0.204)	(0.205)
Observations	394	339	397	269
Number of Countries	95	86	93	85
Hansen Test†	0.605	0.854	0.889	0.836
AB Test‡	0.231	0.502	0.353	0.178
Number of Lags	3	2	2	2
Number of Instruments	91	101	101	101
Coefficient Equality Tests				
	$\chi^2 = 0.86$	$\chi^2 = 6.39$	$\chi^2 = 3.52$	$\chi^2 = 3.89$
	$p = 0.354$	$p = 0.012$	$p = 0.061$	$p = 0.049$

Notes: Robust standard errors in parentheses. Time dummies omitted. *** p<0.01, ** p<0.05, * p<0.1
† This is the p-value for the Hansen J Test statistic of overidentifying restrictions. The null hypothesis is that the instruments are jointly exogenous.
‡ This is the p-value for the Arrellano-Bond Test for second or third level autocorrelation in first differences. The null hypothesis is that there is no serial correlation. If only two lags are used, I report the AR(2) p-values. If three lags are used, I report the AR(3) p-values.

To conclude, the results of Tables 8.4 and 8.5 provide strong support for my argument regarding the importance of agency autonomy. Not only are autonomous agencies able to have a larger impact on economic growth rates, but the potentially negative influence of less autonomous aid agencies is readily apparent. This is compounded by the fact that bilateral aid continues to have a negative and statistically insignificant impact on economic growth. My results suggest that the lack of a positive finding regarding aid's effectiveness in the broader aid literature may be attributable to both a failure to distinguish between aid types, and a failure to identify the potentially negative influence that donor countries may have within multilateral agencies. When multilateral aid agencies are able to operate independently, however, the results here indicate that they have a strong ability to promote economic growth.

While these results are not supported by the base estimation method I employ, the strength of the GMM estimation results nevertheless suggest that important effects exist for aid effectiveness based on agency autonomy. One potential avenue to investigate this effect further is to examine agencies based on quartiles or even a continuum rather than separating them into high and low groups. The consequence of using high and low groups implies the existence of a structural break within the data. Future analysis utilizing these methods can provide a more fine grained investigation of the relationship between autonomy and economic growth rates.

8.3 Combining Specialization and Autonomy

The argument I have made thus far treats agency characteristics separately. In reality, however, the singular agency characteristics that enhance effectiveness do not exist in a vacuum, but are combined and mixed with other factors that may also promote or restrict organizational effectiveness. In this subsection, I combine my analysis of agency specialization and agency autonomy to examine how these two

qualities interact. In order to accomplish this, I proceeded as follows. First, I combine the data ranking aid agencies by specialization and by their autonomy scores. Since the data on bilateral agencies is restricted to specialization, I then separate bilateral aid into a specialized and non-specialized group based on their median percentile scores. For multilateral agencies, I separate agencies into three groups depending on their median percentile specialization and autonomy scores: agencies with high autonomy and high specialization are classified as the *High Group*; agencies with high autonomy but low specialization or vice versa are classified as the *Mixed Group*; and agencies with low autonomy and low specialization are classified as the *Low Group*. I expect aid from the *High Group* to have a positive impact on economic growth rates, whereas aid from the *Low Group* should have a negative impact. I include all five aid variables in each of the regression models.

Table 8.6 presents the results of my analysis using the lagged and differencing approach articulated by Clemens et al. (2012). The unit of analysis is recipient-period. Columns 1 and 2 use country specialization measures and agency autonomy to separate aid agencies. Column 1 shows that for agency portfolio size, specialized bilateral aid has a negative and significant impact on economic growth rates, while multilateral agencies with high specialization scores and high autonomy have a positive and significant impact. This supports the arguments I have made throughout this dissertation. Additionally, a coefficient equality test between specialized bilateral aid and the high group of multilateral aid finds that there is a strong statistical difference between these two groups. Even when bilateral aid agencies provide aid to fewer countries, as they are encouraged to by the international aid community, they are still less effective at promoting development compared to specialized and autonomous multilateral aid agencies. Comparing within multilateral agencies, however, a coefficient equality test between the high and mixed group indicate that

Table 8.6: Analysis of Final Agency Rankings Based on Country Count Rankings and Autonomy Scores

	Country		*Region*		*Sector*	
	Count	*HHI*	*Count*	*HHI*	*Count*	*HHI*
	(1)	(2)	(3)	(4)	(5)	(6)
Initial GDP PC	-6.632**	-6.376**	-6.383**	-6.503**	-6.603**	-6.488**
	(2.792)	(2.769)	(2.822)	(2.750)	(2.787)	(2.819)
Spec. B. Aid	-0.113**	-0.089*	-0.398***	-0.162***	-0.086**	-0.078*
	(0.051)	(0.048)	(0.153)	(0.061)	(0.043)	(0.042)
Non-Spec. B. Aid	0.001	0.072	-0.061	0.022	0.040	-0.000
	(0.055)	(0.114)	(0.053)	(0.051)	(0.030)	(0.101)
High Group	0.161*	0.103	0.209**	0.117	0.039	0.087
	(0.087)	(0.088)	(0.090)	(0.076)	(0.075)	(0.082)
Mixed Group	-0.064	0.031	-0.006	-0.029	-0.013	0.037
	(0.112)	(0.074)	(0.080)	(0.101)	(0.071)	(0.084)
Low Group		1.916**	0.204*	0.398	0.178	0.100
		(0.761)	(0.105)	(0.587)	(0.119)	(0.113)
M2	-0.008	-0.015	-0.012	-0.014	-0.011	-0.012
	(0.022)	(0.022)	(0.021)	(0.022)	(0.021)	(0.022)
Population	-0.861	-2.153	0.667	-1.316	-1.684	-1.173
	(4.943)	(5.100)	(4.870)	(4.882)	(4.826)	(5.308)
Inflation	-0.299	-0.233	-0.318	-0.332	-0.297	-0.319
	(0.219)	(0.228)	(0.214)	(0.220)	(0.220)	(0.219)
Gov. Consumption	-0.133**	-0.129**	-0.153***	-0.137**	-0.160***	-0.124*
	(0.059)	(0.062)	(0.059)	(0.058)	(0.058)	(0.064)
FDI	0.684***	0.680***	0.630***	0.665***	0.701***	0.686***
	(0.162)	(0.162)	(0.162)	(0.160)	(0.162)	(0.159)
Disaster Costs,	0.008	0.002	0.016	0.009	0.013	0.005
	(0.064)	(0.064)	(0.065)	(0.064)	(0.064)	(0.064)
Democracy	0.013	0.029	0.010	0.025	0.020	0.021
	(0.049)	(0.051)	(0.051)	(0.050)	(0.050)	(0.051)
Assassinations	-0.164	-0.179	-0.185*	-0.157	-0.161	-0.167
	(0.106)	(0.108)	(0.109)	(0.105)	(0.109)	(0.108)
Constant	0.343	0.434	0.427	0.502	0.119	0.495
	(0.705)	(0.717)	(0.710)	(0.712)	(0.697)	(0.742)
Observations	382	382	382	382	382	382
R-squared	0.265	0.267	0.284	0.270	0.270	0.259
Countries	93	93	93	93	93	93
Coefficient Equality Tests						
$H_0 : \beta Spec.B.Aid = \beta HighGroup$						
$H_a : \beta Spec.B.Aid \neq \beta HighGroup$						
	$F = 6.38$	$F = 3.12$	$F = 8.71$	$F = 7.55$	$F = 1.96$	$F = 2.82$
	$p = 0.012$	$p = 0.078$	$p = 0.003$	$p = 0.006$	$p = 0.162$	$p = 0.094$
$H_0 : \beta HighGroup = \beta LowGroup$						
$H_a : \beta HighGroup \neq \beta LowGroup$						
	$F\dagger = 1.96$	$F = 6.40$	$F = 0.00$	$F = 0.23$	$F = 1.03$	$F = 0.01$
	$p = 0.162$	$p = 0.012$	$p = 0.973$	$p = 0.631$	$p = 0.312$	$p = 0.927$

Notes: Robust standard errors in parentheses. Time dummies omitted.
Notes: † The F-test was conducted between the high and mixed group.
*** p<0.01, ** p<0.05, * p<0.1

there is no statistical difference between multilateral aid provided by agencies based on specialization and autonomy.

Column 2 uses the Herfindahl country specialization score to separate aid agencies. According to the results, specialized bilateral aid once again has a negative and statistically significant effect on economic growth rates. Interestingly, multilateral aid only has a positive effect for agencies that are non-specialized and have low autonomy. This suggests that agencies who concentrate their spending in fewer recipient countries and are more susceptible to control by their principals are actually better at promoting development. Additionally, a coefficient equality test finds that this aid from the low group is actually more effective compared to aid from the high group. While these findings counter my hypotheses, this is the only instance in which the high groups is found to be statistically less effective than the low group. Examining differences between specialized bilateral aid and the high multilateral aid group again finds a statistical difference, suggesting that even if the low multilateral aid group is better at promoting development, the high group remains superior to aid provided by even the best bilateral aid agencies.

Columns 3 and 4 use region specialization combined with agency autonomy to investigate aid's impact on economic growth rates. Specialized bilateral aid continues to have a negative and significant effect on economic growth rates in both regressions. The coefficient equality tests between specialized bilateral aid and the high multilateral aid group is significant in both regressions, implying once again that even the most specialized bilateral aid is not as effective in promoting growth compared to specialized and autonomous multilateral aid. While the results in column 3 find that aid from both the high and low group have a positive and statistically significant effect, neither is found to be significant in column 4. The coefficient equality tests confirm the lack of difference between these two groups. Overall, the results

in columns 3 and 4 suggest that although multilateral agencies that focus on fewer regions and are autonomous are better than bilateral aid at promoting economic growth, there is little difference among multilateral agencies. This could be due to the fact that the analysis is global in nature. Perhaps if the analysis were constrained to specific regions, the conclusions would change.

Last, columns 5 and 6 combine sector specialization measures with autonomy. The results are mostly negative. Although specialized bilateral aid continues to have a negative and significant impact on economic growth rates, none of the multilateral aid variables are found to have a statistically positive influence. Coefficient equality tests between specialized bilateral aid and the high autonomy group bilateral do find a statistic difference between the two groups, but no such difference is found in comparing within multilateral aid groups. While this finding is contrary to my expectations, I believe it is attributable to the lack of significance regarding sector specialization and aid effectiveness described earlier. Testing the effectiveness of sector specialization using economic growth as the dependent variable presents a hard test. Agencies that specialize in a specific sector should not be expected to contribute to economic growth broadly, but should rather be expected to contribute to their area of focus. Thus, I do not take the results presented above as a rejection of the argument that sector specialization and autonomy do not matter for aid effectiveness. Rather, I argue that more extensive and sectoral based research is needed to investigate this relationship further.

8.4 Conclusion

In this section, I examined a question that is not often asked within the foreign aid community: what types of multilateral aid agencies are most effective at promoting development? Drawing on my general theory of aid effectiveness, I expect

autonomous multilateral agencies would be the most effective. I then tested each of these arguments in turn using an original dataset.

The results are mixed depending on the methodology. Results using the lagged difference approach described by Clemens et al. (2012) found no difference in multilateral aid effectiveness based on autonomy variables or indices. On the other hand, both system and GMM estimation methods found strong and consistent support for the argument that autonomy matters for aid effectiveness. These results hold across individual components of agency autonomy, as well as the final index of autonomy. The implications of these results are quite profound. Not only is multilateral aid more effective than bilateral aid, as demonstrated in Section 6, but multilateral aid that is divorced from the political influence of donor countries is also substantially more effective than agencies which are subjected to these influences. This implies that if we are to truly pursue effective aid policies, delegating more to multilateral aid agencies may not be enough. Donor countries must also relinquish their control of these agencies.

Overall, two broad conclusions emerge from this section. First, not all multilateral aid is the same. This finding parallels other findings that are being made within the aid community which suggest that a more micro-level approach to analyzing the effectiveness of foreign aid is warranted. Second, the findings here lend support for the general salience of international organizations. Although there is a broad literature concerned with the rising power of international organizations and identifying how and when governments can control these agencies, my results indicate that these organizations are most effective when left alone. Specifically, multilateral aid agencies that are autonomous are best at achieving positive development results. Rather than limiting their power then, the international community may be better served if it was expanded.

9. CONCLUSION: MULTILATERAL AID AND THE FUTURE OF AID EFFECTIVENESS

This dissertation began with the premise that multilateral foreign aid agencies have been substantially overlooked by previous research. While numerous studies of bilateral aid have found mixed evidence regarding aid's effectiveness, not nearly as much attention has been paid to the effectiveness of multilateral aid. This is an important omission to address, especially as the aid community tries to create better aid policies in pursuit of the Millennium Development Goals. Although bilateral aid continues to be the dominant form of aid giving, multilateral aid agencies over a potentially more effective avenue through which aid can be channelled. Thus, the main purpose of my dissertation has been to address the understudied area of multilateral foreign aid and how these aid agencies can contribute to overall aid effectiveness.

The results of my analyses have several implications for foreign aid research. The first is that it is important to identify the underlying variations that exist among aid agencies, and to identify how these differences impact the ability of agencies to provide effective aid. Although I focus here on agency motivation, specialization, and autonomy, there are undoubtedly numerous other characteristics that may also influence aid policies, and therefore impact aid effectiveness. Just as current aid research is moving towards examining aid effectiveness on a micro-level by analyzing specific aid recipients and sectors, it is just as important to turn the microscope in the other direction and examine how the origins of aid create good or bad results for development.

Building on this, my results also have real world implications in terms of aid policies. If the aid community is truly interested in promoting effective development, then global allocation patterns should be altered in such a way that more aid is channelled through multilateral aid agencies. While the effect of bilateral aid has long been debated and questioned, my results indicate that multilateral aid offers a much more fruitful avenue for effective development. This is true even if bilateral aid agencies are more specialized, as even specialized bilateral aid is not as effective as specialized multilateral aid. When giving to multilateral aid agencies, however, donors must also consider the differences that exist within aid agencies. Specifically, more specialized multilateral agencies and autonomous aid agencies are more likely to have the greatest positive impact on development outcomes. Providing more aid to these types of institutions may therefore create better results than simply increasing overall aid allocation in the developing world.

My results also have strong implications for the salience of international organizations in general. Although international organizations are often criticized for being inconsequential for global politics, my analysis indicates that, at least in terms of foreign aid, these agencies are anything but. Instead, multilateral aid agencies play a strong and increasingly salient role in addressing development issues throughout the world. Furthermore, these agencies also appear to be even more effective than bilateral aid agencies, despite the fact that account for only 30-40% of of all aid distributed worldwide. Thus, multilateral aid agencies are producing more positive results, and with less money.

Not all multilateral agencies, however, are as effective as others. This finding has implications for the design of bureaucracies and other international organizations as well. If an agency is to be effective, it must have a sufficient amount of autonomy from its principals. This is especially true when the principals face a

time-inconsistency problem, such as that faced by governments for their monetary policy. Establishing an independent organization can help governments overcome these time-inconsistency issues, but only when they are sufficiently insulated from principal influence. This suggests that in the future, multilateral aid agencies should strive to have voting policies that facilitate this. Additionally, my results indicate that agencies that are already established but are not producing positive results may benefit from more, rather than less, discretion, which is often the opposite of what their principals may deem appropriate. Providing these agencies with more discretion may enable them to implement aid policies that are more consistent with effective development policies.

9.1 Ranking Aid Agencies

In order to summarize the findings presented here in a systematic way, in Table 9.1 I provide a final ranking of aid agencies based on their specialization and autonomy scores. As bilateral aid agencies only have specialization scores, I rely solely on these scores for their rankings. Additionally, some multilateral aid agencies are lacking information regarding the sources of their funding. These agencies are noted in the table. The data are drawn from the indices presented in Sections 4 and 5. Agency final rankings are calculated as follows. First, I averaged all specialization percentile scores in order to create a summary specialization score. This included both the count and Herfindahl specialization scores for country, region, and sector specialization. I then averaged this specialization score with the the autonomy index from Section 5 that allows for the presence of missing data. Thus, the results presented in Table 9.1 give 50% weight to agency autonomy and 50% weight to agency specialization.

The results of Table 9.1 tell an intriguing story. First and most obviously, multilateral aid agencies consistently outperform bilateral aid agencies. Admittedly, the

Table 9.1: Final Agency Rankings

Agency and Ranking		Agency and Ranking (*cont.*)	
UNRWA	1	*Slovak Republic*	31
UNDP	2	UNAIDS*	32
UNFPA	3	OFID*	33
UNHCR	4	*Korea*	34
UNICEF	5	*Denmark*	35
IDA	6	Nordic Dev. Fund*	36
IFAD	7	*Austria*	37
Poland	8	GAVI*	38
African Dev. Fund	9	*Australia*	39
AsDB Special Funds	10	Isl.Dev Bank*	40
IBRD	11	GEF*	41
IMF	12	*Belgium*	42
Af. D B	13	*Finland*	43
Portugal	14	*Luxembourg*	44
UNPBF*	15	*Japan*	45
EBRD*	16	*Norway*	46
Caribbean Dev. Bank	17	*Italy*	47
Slovenia	18	*Sweden*	48
UNECE*	19	*Spain*	49
Iceland	20	*France*	50
OSCE*	21	*Switzerland*	51
IDB Special Oper. Fund	22	*Netherlands*	52
Greece	23	*Canada*	53
WHO*	24	*United States*	54
Ireland	25	*United Kingdom*	55
BADEA*	26	*Germany*	56
AFESD*	27	EU Institutions*	57
New Zealand	28		
Global Fund*	29		
Czech Republic	30		

Notes: Rankings based on specialization and autonomy scores. Bilateral aid agency scores are based only on specialization scores.
* Indicates a multilateral agency with incomplete autonomy data.

basis of this strong performance of multilateral agencies is from their higher tendency to specialize. As demonstrated in Section 4, multilateral aid agencies almost always score higher than bilateral aid agencies in terms of their country, region, and sector specialization levels. The implications of this, however, are nonetheless important to acknowledge, especially in light of the positive impacts that specialization is argued to provide. While multilateral aid agencies appear to be taking advantage of these benefits, most bilateral aid donors are not.

Second, within bilateral aid agencies, the results indicate that the largest donors are often the worst performers. The U.S. and U.K., two of the largest aid donors in the world, for instance, are ranked 54th and 55th respectively. This is disappointing, as the aid community has continually highlighted the problems that a lack of specialization can create within recipient countries. To a large degree, this may be attributed to agency budgets. Large donors tend to distribute their funds more widely, while smaller donors have less money to divide over potential recipients and sectors. However, the fact that larger donors choose not to specialize does not necessarily imply that they must distribute their aid in such a fashion. It is entirely possible for a large aid donor to restrict their focus to a specific development sector or region. Unfortunately, this is not occurring.

Third, within multilateral aid agencies an interesting mix emerges regarding the most effective agencies. While UN agencies occupy the top five rankings, others are ranked much lower, such as UNAIDS which falls 32nd. Regional development banks appear to end up somewhere in the middle. The African Development Bank, for instance, does quite well (9th) while the Islamic Development Bank does poorly (40th). Another interesting finding is that GAVI, GEF, and the Nordic Development Fund, all of which are devoted to addressing environmental concerns are ranked quite low. This can largely be attributed to their poor autonomy scores. While

many within the aid community are applauding the emergence of issue specific aid agencies, my results caution that if deprived of autonomy, these agencies may not be as effective as they are expected to be. Overall, the rankings reinforce the fact that a substantial amount of variation exists within multilateral aid agencies. A complete understanding of how these agencies are shaping development necessitates that we acknowledge this variation and incorporate it into our analyses.

Returning to previous research on aid allocation and effectiveness, my results can shed light on many of the seemingly contradictory results presented in the literature. The first is on the ambiguous conclusion regarding foreign aid effectiveness. My analysis here indicates that examinations of total aid may be reaching inconclusive findings due to the fact that they are aggregating bilateral and multilateral aid into a single measure. As the coefficients of these two aid variables are in opposite directions, if summed together they will tend to cancel each other out, thus leading to null findings. Therefore, given the demonstrated differences that exist between bilateral and multilateral aid agencies, specifically with regards to their motivations and specialization, aid studies should actively incorporate this distinction into their estimations of aid effectiveness.

The second relates to the impact of multilateral aid. Although many studies have noted the benefits that multilateral aid can provide due to their non-political nature, others have harshly criticized these agencies as being ineffective, or even politically motivated. According to my analysis, the underlying cause for this discrepancy can be found in the autonomy of the agency. While multilateral aid agencies do potentially offer a way to distribute aid that is devoid of political motivations, this will only occur under the condition of agency autonomy. If the agency is autonomous, it will be able to implement aid policies geared towards development, and provide aid to countries that are most in need, have good institutions, and low levels of corruption.

However, if donor governments are able to exert their influence on multilateral agencies, their aid policies are more likely to mirror those of bilateral aid agencies, and be substantially less effective. These differences have been demonstrated by previous research. For instance, the findings by Rowe (1978) that the IDA, UNDP, and other UN agencies are distinct from bilateral aid, while the IBRD and IBD are not, can largely be explained by differences in autonomy levels. Drawing on my results from Section 5, Table 9.2 demonstrates how the findings of Rowe (1978) can be explaining within my framework. Each of these examples confirms my expectations regarding agency autonomy. The UNDP is expected to be autonomous, as it has a large Board of Directors, uses a one-member-one-vote representation system, is governed by majority rule, and has a low concentration of funding, all of which are factors that I predict contribute to enhanced agency autonomy. The IDB, on the other hand, has a smaller Board of Directors, uses a supermajority voting rule, representation is determined by monetary contributions, and their funding concentration ranks them quite low. Therefore, my expectation that the IDB is likely to have low autonomy is confirmed by Rowe (1978). For the IBRD and IDA, these are more difficult cases due to the fact that the agencies both have a relatively large Board and use majority voting rules, both of which would indicate that they should be autonomous. However, the agencies also both have a proportional representation system, which would detract from agency autonomy. However, if we examine agency funding patterns, this ambiguity disappears. Again drawing from data in Section 5, the IDA is consistently ranked higher in terms of its financial autonomy compared to the IBRD. Using both voting and funding characteristics, I am reach the same conclusion as Rowe (1978) in his case study analysis. Thus, both of my theorized components of autonomy can be used to explain past discrepancies regarding multilateral aid effectiveness.

Table 9.2: Explaining Variations in Multilateral Aid Effectiveness

Agency	*Board Members*	*Majority or Supermajority*	*Members or Proportional*	*Funding Ranking*	*Rowe (1978) Conclusions*
IDB	14	Supermajority	Proportional	19th	Political
IBRD	25	Majority	Proportional	12th	Political
IDA	25	Majority	Proportional	4th	Non-Political
UNDP	36	Majority	Members	1st	Non-Political

Clearly, there are caveats to the ranking system presented above. Mainly, agency specialization and autonomy constitute only two of the many factors that can potentially impact agency effectiveness. Other characteristics such as leadership, capacity, expertise, etc. are all factors that will clearly impact effectiveness as well. However, the evidence presented throughout this dissertation on the importance of three key agency characteristics clearly has implications for the general argument that organizational variations are key to understanding institutional outcomes. Although many studies have suggested that variations in agency characteristics matter for effectiveness, my work is able to combine this expectation with actual empirical testing. Thus, the analysis throughout this dissertation can be considered an important step in terms of focusing research on the internal workings of foreign aid and other governmental agencies and their subsequent impact on outcomes.

9.2 Moving Beyond Foreign Aid

How applicable are these findings for areas outside foreign aid agencies? The suggestion that international organizations may be better at promoting global public goods (such as development) compared to governments is not as controversial as a similar proposition may be in other issue areas. The utility of international orga-

nizations has been repeatedly demonstrated by past literature (e.g. Hawkins et al. (2006)). Furthermore, the acceptance of international organizations as useful actors in world politics is reflected by increased usage and reliance on them by governments in a variety of issue areas. For instance, the creation of the ICC reflects a growing need for the international community for a standing, independent judicial body that can bring perpetrators of of human rights violations to justice. Another example are the dispute resolution mechanisms of international trade organizations, including the WTO. In these situations, the organizations are designed to promote an almost universally accepted public good. Although U.S. continues to withhold their support for the ICC, they mostly support its actions and mission. Generally then, the findings here that international organizations may be better at achieving certain goals than national governments would rather seem to bolster current thought regarding the usefulness of these organizations rather than challenging the existing status quo.

A more controversial picture emerges when we apply my argument regarding agency autonomy to other international organizations in potentially more contentious issue areas. National governments may be much more willing to yield to international organizations when they more or less agree with the norms and policies they promote. There can be little question that governments would like to increase development in the Third World. Thus, increasing the autonomy of multilateral aid agencies may be fraught with political debates, but it is unlikely to pose a real threat to existing donor governments. Enhancing the autonomy of international organizations aiming to provide other commonly agreed on public goods may also prove to be a relatively smooth process. Autonomy, in fact, can actually help governments achieve progress on issues they may otherwise be stalled on. For instance, enhanced autonomy of environmental agencies may be exactly what is needed to help push reluctant states forward in terms of reducing their carbon emissions and adopting more environmen-

tally friendly policies. Similarly, autonomy of trade dispute resolution bodies can increase their appeal to governments, as they are more likely to be unbiased in their decision making.

But what about policies that are decidedly more divisive, such as ethnic conflict and the deployment of peacekeeping troops? Should governments allow for greater autonomy among these organizations as well? I would first argue that my expectations here are oriented more towards the provision of global public goods that are widely agreed upon by the international community. Therefore, I do not rationally expect to easily transplant my theory from the area of development to security. There are two reasons for this. The first is that the question of the appropriate policy to pursue in these instances is often not clear. Although there can be no doubt that generally states will want to reduce or eliminate human suffering as much as possible, deploying troops to accomplish goal does not always achieve this goal. Moreover, any decision in such an environment is likely to be fraught with political issues, both domestically and internationally. Thus, the agency itself will often not have a clear vision as to the policies that it should pursue. This lies in stark contrast to actions by multilateral aid agencies, all of whom know that they want to promote development and must find the best way to accomplish this. In the case of security policy, the agency has no such clear guidance. The second reason rests more in practicality. While governments may be persuaded that the goal of eradicating poverty, slowing global warming, or prosecuting war criminals is a valid reason to give up a portion of their sovereignty, we cannot rationally expect them to be similarly willing when it comes to armed conflict. Nations have been the supreme actors in global politics for centuries. It is not a role they will likely yield, especially when they feel it may threaten their own safety and security at home. Therefore even if security organiza-

tions were to gain greater levels of autonomy, they would be unlikely to retain the support of most governments, ultimately rendering them insignificant.

Overall, I expect my argument to be most applicable to other issue areas in global politics that have a goal that is clear and are widely supported by the international community. Other more contentious political issues, however, are not expected to reap the gains that international organizations provide, especially if these agencies are provided with greater levels of autonomy. Far from enhancing their effectiveness, increased autonomy in agencies that focus on politicized issues may actually diminish their utility.

9.3 Directions for Future Research

In terms of assessing the impact of organizational characteristics on foreign aid's ability to promote third world development, there is much work that remains to be done. First, other organizational factors should be investigated more thoroughly. These include items such as agency leadership, expertise levels and staffing, organizational culture, as well as network analysis. Consider, for example, the importance of agency leadership. The quality of public management has been well documented by studies of public agencies (Brewer and Selden, 2000; O'Toole and Meier, 1999; Meier and O'Toole, 2002). For aid agencies, when leadership is strong, agencies are expected to be more fully committed to their mission (Rainey and Steinbauer, 1999). Additionally, a good leader is able to focus the efforts of the agency towards actions and priorities that both reflect the preferences of the organization and that are readily attainable. Komori (2015), for instance, details how the strong leadership of President Haruhiko Kuroda from 2005-2013 was able to effectively transform the Asian Development Bank from being broadly focused to being more selective and regionally focused. In particular, Komori (2015) describes that while former Pres-

idents had attempted internal reforms previously, these were mostly unsuccessful due to their conservative nature. President Kuroda, however, provided the leadership and political savvy necessary to enact many internal reforms, most notably the program of Regional Cooperation Integration, which was strongly resisted by many donor states. Without similarly strong leadership, aid agencies cannot be expected to be as effective as they might be. A more in depth analysis of this and other organizational factors will thus be fruitful in expounding on how internal variations directly impact aid policies.

Additionally, the autonomy argument presented in Section 3 should also be applied to bilateral aid agencies. Bilateral aid agencies are not merely extensions of their governments. Instead, they are bureaucratic entities with specific structures, cultures, norms, and accountability mechanisms. In some cases, donor countries even have more than one implementing aid agency. The foreign aid of Japan, for instance, is distributed by three distinct agencies (Easterly and Pfutze, 2008). Although they all originate in Japan, substantial differences may exist among these agencies, including their organizational structure, mission goals, leadership, and accountability mechanisms. Failing to address this heterogeneity of bilateral aid agencies is an oversight that should be addressed.

Finally, future work should expand the analysis here to incorporate other indicators of development. Too often studies of foreign aid equate "effective aid" or "effective development" with economic growth. However, aid's purposes and goals are vastly more varied than this. Evaluating aid programs on a single dimension therefore casts development in an unnecessarily narrow framework. While economic growth rates are the standard indicator of a country's development, they do not capture the whole story. Improvements in health, education, the environment, or political institutions are often much more immediate for a country's citizenry. Additionally,

such studies will lend stronger support to the purported benefits of specialization, which were only weakly substantiated by my analysis. However, my analysis focused on economic growth. Expanding to other dependent variables will no doubt provide a richer description of the utility of specialization.

In conclusion, my dissertation provides strong evidence regarding the importance of multilateral aid. While the track record for bilateral aid has largely been mixed, my results suggest that multilateral aid is potentially a much more fruitful channel through which countries can channel their aid to address global poverty. As we reach the end of 2015 and the due date for the MDGs, the developed world will have to reconsider its aid policies, and how to best address the staggering amount of poverty that remains throughout the third world. If we are to adequately address the development goals of the future, multilateralism may be the best way forward.

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APPENDIX A

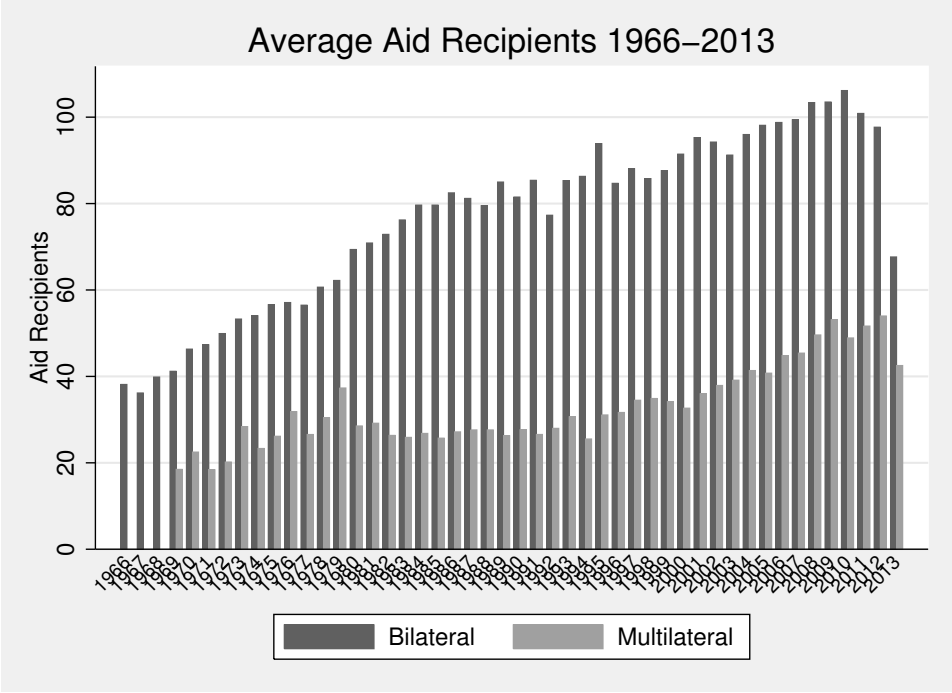

Figure A.1: Country: Bilateral v. Multilateral Recipients, ODA

Table A.1: Agency Rankings: Country Specialization, CPA Data

	Count		*Herfindahl*	
Donor Agency	*Rank*	*Average*	*Rank*	*Average*
UNECE	1	1.50	2	0.89
Poland	2	2.29	1	0.75
UNRWA	3	3.00	3	0.40
CarDB	4	8.46	7	0.25
Nordic Dev.Fund	5	8.50	12	0.18
Arab Fund (AFESD)	6	8.52	8	0.23
UNPBF	7	12.17	11	0.19
Iceland	8	15.50	9	0.20
EBRD	9	14.73	16	0.13
AfDB	10	13.79	5	0.43
OSCE	11	16.00	14	0.13
BADEA	12	15.75	23	0.18
AsDB Special Funds	13	14.84	13	0.18
IDB Sp.Fund	14	17.78	20	0.16
IBRD	15	17.50	39	0.10
Portugal	16	31.14	4	0.39
Isl.Dev Bank	17	21.42	26	0.10
AfDF	18	25.49	33	0.09
Slovak Republic	19	34.50	22	0.11
IMF (Concessional Trust Funds)	20	32.36	21	0.11
IFAD	21	29.09	45	0.06
OFID	22	32.30	47	0.06
Slovenia	23	27.00	18	0.17
Czech Republic	24	51.57	25	0.09
New Zealand	25	50.13	27	0.10
Ireland	26	57.14	19	0.16
Denmark	27	43.43	30	0.10
GAVI	28	69.50	37	0.06
UNHCR	29	48.67	34	0.07
IDA	30	48.77	29	0.11
Sweden	31	55.79	36	0.10
Global Fund	32	74.45	50	0.05
Luxembourg	33	69.42	44	0.05
GEF	34	79.33	40	0.06
Greece	35	78.88	6	0.23
Finland	36	65.60	28	0.11
Norway	37	64.66	38	0.09
Belgium	38	71.07	24	0.15
Australia	39	63.35	10	0.28
Austria	40	75.06	15	0.22
Spain	41	83.81	43	0.08
Switzerland	42	78.17	48	0.06
UNAIDS	43	101.40	57	0.02
Netherlands	44	88.68	42	0.10
Italy	45	89.26	31	0.11
WHO	46	105.67	55	0.02
Korea	47	104.08	17	0.18
UNFPA	48	116.80	56	0.02
Canada	49	101.43	46	0.08
France	50	100.30	49	0.06
EU Institutions	51	104.82	53	0.04
UNICEF	52	119.13	52	0.03
United States	53	108.57	35	0.10
United Kingdom	54	110.94	41	0.08
Japan	55	114.85	32	0.10
UNDP	56	127.90	54	0.02
Germany	57	120.06	51	0.05

Table A.2: Agency Rankings: Region Specialization, CPA Data

	Count		*Herfindahl*	
Donor Agency	*Rank*	*Average*	*Rank*	*Average*
IDB Sp.Fund	1	1.00	1	1.00
CarDB	2	1.00	2	1.00
AfDF	3	1.00	3	1.00
BADEA	4	1.00	4	1.00
AfDB	5	1.00	5	1.00
UNRWA	6	1.00	6	1.00
AsDB Special Funds	7	1.98	7	0.93
EBRD	8	2.00	16	0.56
OSCE	9	2.00	14	0.61
Arab Fund (AFESD)	10	2.00	20	0.57
UNPBF	11	2.33	9	0.80
IBRD	12	3.00	38	0.49
UNECE	13	2.00	8	0.97
Poland	14	2.43	10	0.81
Nordic Dev.Fund	15	2.88	32	0.44
Isl.Dev Bank	16	2.74	25	0.54
Portugal	17	3.41	12	0.74
Iceland	18	4.00	18	0.59
Slovak Republic	19	4.00	51	0.32
Denmark	20	3.72	29	0.49
Czech Republic	21	4.13	36	0.41
IFAD	22	3.91	43	0.41
OFID	23	3.91	39	0.43
Luxembourg	24	4.21	45	0.38
Slovenia	25	4.00	15	0.71
Sweden	26	4.02	40	0.44
IMF (Concessional Trust Funds)	27	4.29	24	0.53
Italy	28	4.30	34	0.46
IDA	29	4.32	30	0.49
Spain	30	4.29	48	0.38
Greece	31	4.53	26	0.51
Ireland	32	4.30	11	0.78
New Zealand	33	4.45	19	0.59
Belgium	34	4.42	17	0.60
WHO	35	4.60	57	0.32
Norway	36	4.43	37	0.45
Switzerland	37	4.57	54	0.36
Finland	38	4.58	35	0.46
Austria	39	4.60	47	0.42
Netherlands	40	4.62	49	0.38
Australia	41	4.57	28	0.50
Global Fund	42	4.91	31	0.49
Japan	43	4.80	13	0.64
UNAIDS	44	5.00	53	0.36
UNFPA	44	5.00	44	0.40
GAVI	46	5.00	21	0.54
Germany	47	4.87	55	0.34
GEF	48	5.00	56	0.31
Korea	49	4.96	22	0.55
Canada	50	4.89	50	0.39
UNDP	51	5.00	42	0.42
UNICEF	52	5.00	27	0.50
UNHCR	53	5.00	33	0.50
EU Institutions	54	4.98	41	0.44
United States	55	5.00	52	0.37
France	56	5.00	23	0.51
United Kingdom	56	5.00	46	0.40

Table A.3: Agency Rankings: Sector Specialization, CPA Data

	Count		*Herfindahl*	
Donor Agency	*Rank*	*Average*	*Rank*	*Average*
IMF (Concessional Trust Funds)	1	1.00	1	1.00
GAVI	2	1.00	2	1.00
UNFPA	3	1.00	3	1.00
UNRWA	4	2.69	5	0.63
Global Fund	5	2.00	10	0.51
EBRD	6	3.29	7	0.58
WHO	7	2.00	4	0.91
UNAIDS	8	2.00	11	0.58
AfDB	9	4.75	16	0.40
Nordic Dev.Fund	10	4.60	8	0.49
OSCE	11	4.00	15	0.49
IFAD	12	5.20	14	0.56
AsDB Special Funds	13	6.70	22	0.32
AfDF	14	6.71	21	0.32
UNPBF	15	5.50	6	0.81
CarDB	16	7.31	23	0.31
UNICEF	17	7.88	29	0.23
GEF	18	6.67	19	0.44
IDB Sp.Fund	19	8.33	32	0.24
IBRD	20	6.09	13	0.39
UNECE	21	8.20	27	0.31
Arab Fund (AFESD)	22	8.20	12	0.58
Korea	23	8.67	26	0.35
Isl.Dev Bank	24	9.00	34	0.23
Luxembourg	25	9.71	44	0.19
Austria	26	7.82	20	0.39
UNDP	27	10.33	9	0.54
BADEA	28	9.50	30	0.26
Greece	29	9.89	18	0.36
Czech Republic	30	10.64	31	0.24
IDA	31	9.00	43	0.21
Iceland	32	10.00	53	0.18
Denmark	33	8.40	39	0.27
OFID	34	11.00	24	0.38
Ireland	35	9.65	36	0.21
Italy	36	8.45	40	0.28
Switzerland	37	8.20	49	0.25
Norway	38	8.26	37	0.29
New Zealand	39	8.62	25	0.34
Finland	40	9.08	41	0.24
Portugal	41	10.75	28	0.24
United States	42	8.45	50	0.22
Spain	43	10.77	47	0.19
Sweden	44	8.48	46	0.24
Netherlands	45	8.59	52	0.24
Australia	46	8.59	33	0.28
Japan	47	8.63	17	0.38
Canada	48	8.63	35	0.28
EU Institutions	49	10.32	45	0.21
Belgium	50	8.70	51	0.23
France	51	8.61	38	0.26
United Kingdom	52	8.72	48	0.24
Germany	53	8.85	42	0.25

Table A.4: Summary Statistics: Country Specialization, ODA Data

Variable	*Mean*	*Median*	*Std. Dev.*	*Min*	*Max*	*N*
Bilateral Count	79.74	89	37.78	1	145	938
Multilateral Count	36.41	24	35.77	1	139	546
			T-test: $t = 22.04(1190.45), p = 0.000$			
Bilateral Herfindahl	0.13	0.08	0.13	0.02	0.54	938
Multilateral Herfindahl	0.14	0.10	0.14	0.01	1.00	546
			T-test: $t = -1.66(1099.04), p = 0.097$			

Notes: Difference of means tests assume unequal variances, therefore I report Satterthwaite degrees of freedom.
P-values indicate a two-tailed test, $Pr(|T| > |t|)$

Table A.5: Summary Statistics: Region Specialization, ODA Data

Variable	*Mean*	*Median*	*Std. Dev.*	*Min*	*Max*	*N*
Bilateral Count	4.51	5	0.73	1	5	939
Multilateral Count	2.82	2	0.07	1	5	550
			T-test: $t = 23.32(684.53), p = 0.000$			
Bilateral Herfindahl	0.48	0.45	0.15	0.25	1.00	939
Multilateral Herfindahl	0.68	0.57	0.27	0.26	1.00	550
			T-test: $t = -16.32(749.37), p = 0.000$			

Notes: Difference of means tests assume unequal variances, therefore I report Satterthwaite degrees of freedom.
P-values indicate a two-tailed test, $Pr(|T| > |t|)$

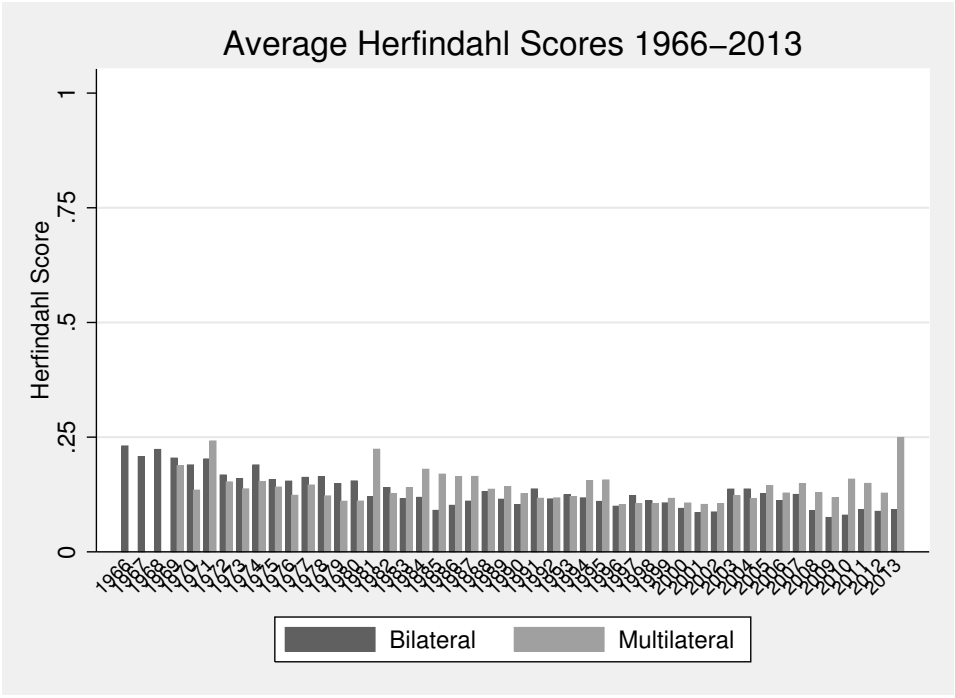

Figure A.2: Country: Bilateral v. Multilateral Country Herfindahls, ODA

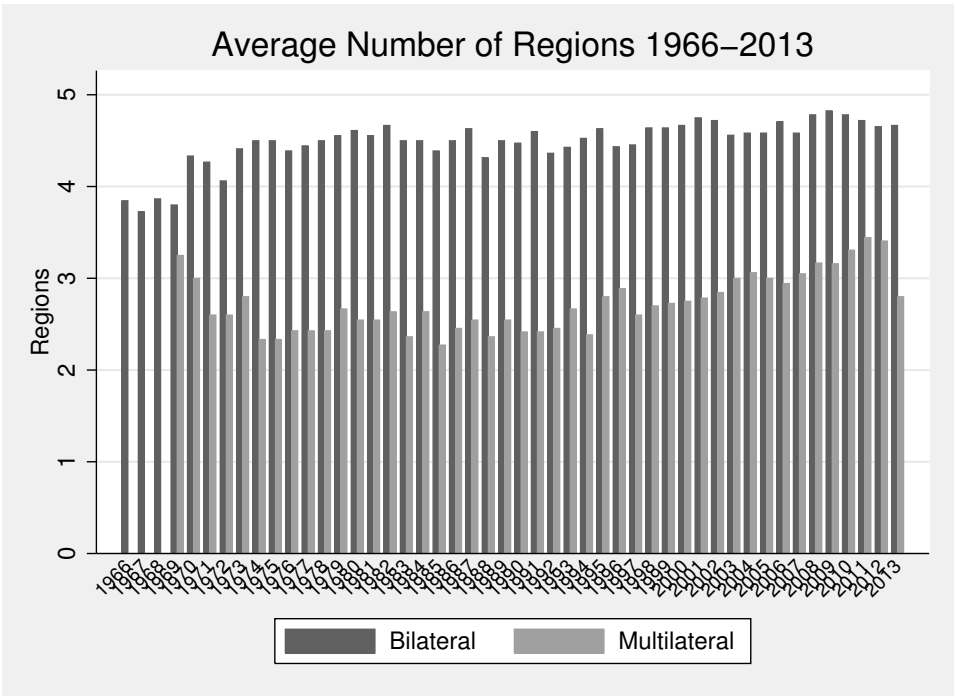

Figure A.3: Region: Bilateral v. Multilateral Count of Regions, ODA

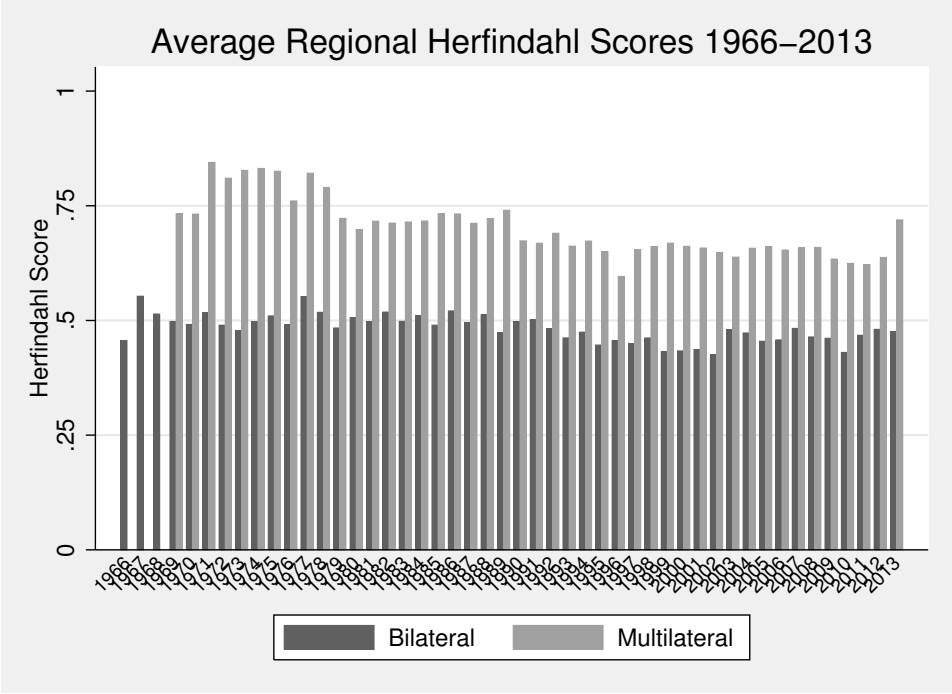

Figure A.4: Region: Bilateral v. Multilateral Herfindahl for Regions, ODA

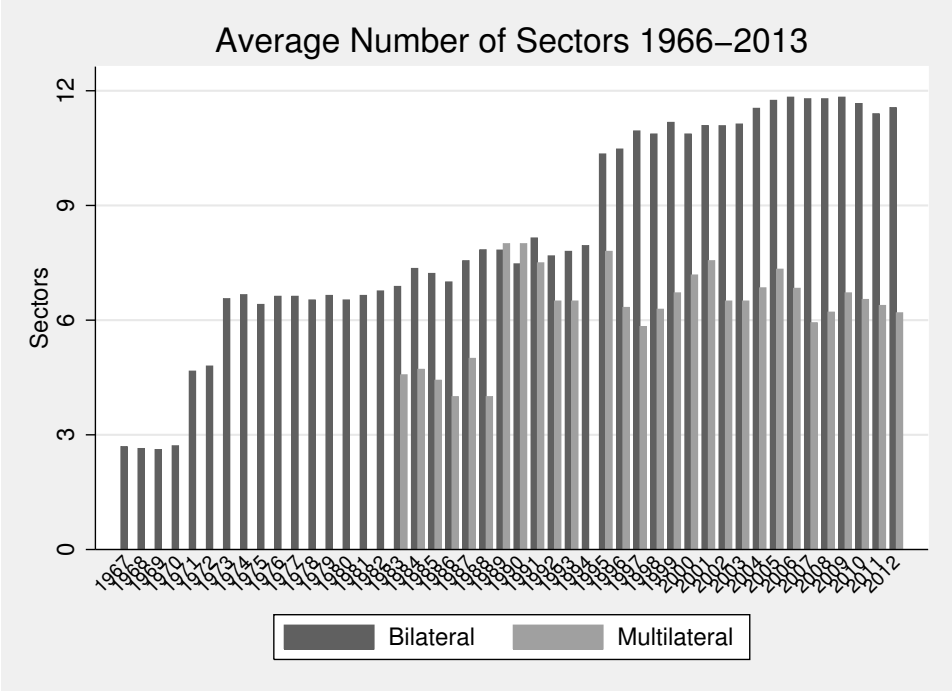

Figure A.5: Sector: Bilateral v. Multilateral Count of Sectors, ODA

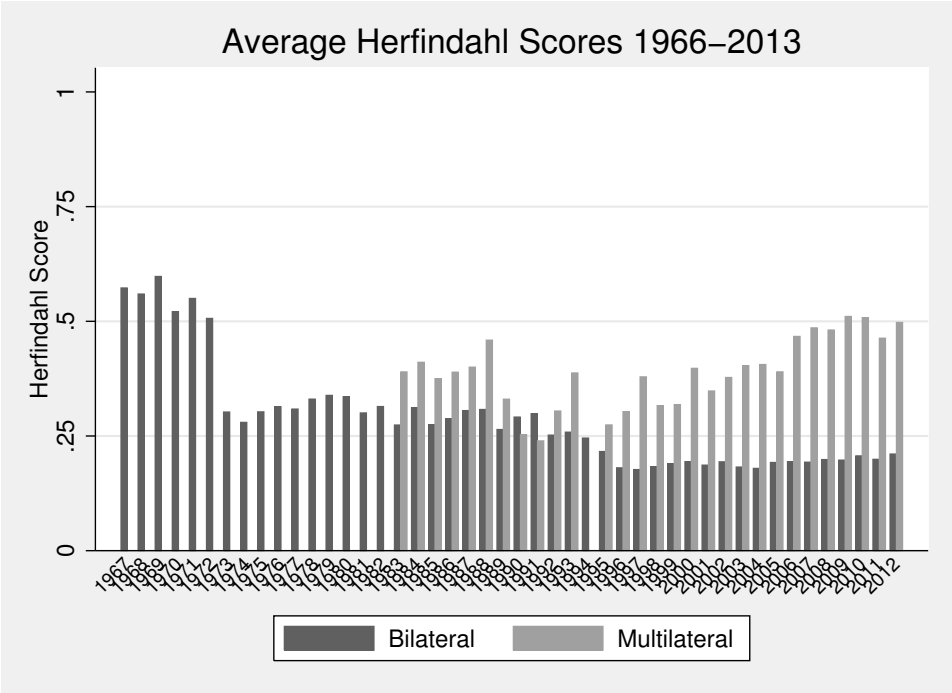

Figure A.6: Sector: Bilateral v. Multilateral Sector Herfindahl Scores, ODA

Table A.6: Summary Statistics: Sector Specialization, ODA Data

Variable	*Mean*	*Median*	*Std. Dev.*	*Min*	*Max*	*N*
Bilateral Count	8.75	9	2.85	1	12	894
Multilateral Count	6.29	6	3.44	1	12	290
			T-test: $t = 11.03(425.31), p = 0.000$			
Bilateral Herfindahl	0.27	0.23	0.15	0.10	1.00	894
Multilateral Herfindahl	0.43	0.35	0.25	0.12	1.00	290
			T-test: $t = -10.27(358.92), p = 0.000$			

Notes: Difference of means tests assume unequal variances, therefore I report Satterthwaite degrees of freedom.
P-values indicate a two-tailed test, $Pr(|T| > |t|)$

Table A.7: Aid Sectors in ODA Data

Social Infrastructure & Services
Education
Health
Population Pol./Progr. & Reproduction
Water Supply & Sanitation
Government & Civil Society
Other Social Infrastructure & Services
Economic Infrastructure & Services
Transport & Storage
Communications
Energy
Banking & Financial Services
Business & Other Services
Production Sectors
Agriculture, Forestry, Fishing
Industry, Mining, Construction
Trade Policies & Regulations
Tourism
Multi-Sector / Cross-Cutting
General Environment Protection
Other Multisector
Commodity Aid / General Prog. Ass.
General Budget Support
Dev. Food Aid/Food Security Ass.
Other Commodity Ass.
Action Relating to Debt
Humanitarian Aid
Emergency Response
Reconstruction Relief & Rehabilitation
Disaster Prevention & Preparedness
Unallocated / Unspecified

Table A.8: Panel Analysis of Herfindahl Scores, ODA Data

	Country		*Region*		*Sector*	
	(1)	(2)	(3)	(4)	(5)	(6)
Multilateral	-0.015	-0.031	0.127**	0.087	0.274***	0.280***
	(0.033)	(0.029)	(0.052)	(0.061)	(0.050)	(0.068)
Log Budget	-0.037***	-0.037***	-0.010*	-0.009*	-0.019*	-0.019*
	(0.008)	(0.008)	(0.005)	(0.005)	(0.010)	(0.010)
RDB		0.043		0.225*		-0.169*
		(0.062)		(0.115)		(0.091)
UN		0.018		0.015		0.118
		(0.075)		(0.110)		(0.115)
World Bank		0.089***		-0.080		-0.262***
		(0.028)		(0.061)		(0.072)
Constant	0.410***	0.411***	0.551***	0.546***	0.344***	0.340***
	(0.066)	(0.067)	(0.045)	(0.045)	(0.076)	(0.077)
Observations	1,484	1,484	1,489	1,489	1,184	1,184
Groups	57	57	57	57	53	53

Notes: Robust standard errors in parentheses. Yearly fixed effects are omitted.
*** p<0.01, ** p<0.05, * p<0.1

APPENDIX B

Table B.1: Sample Description

Recipient	*Years*	*Income Group*
Albania	1997 - 2012	Upper middle income
Algeria	1977 - 2012	Upper middle income
Angola	1997 - 2004	Upper middle income
Armenia	1997 - 2012	Lower middle income
Azerbaijan	2001 - 2012	Upper middle income
Bangladesh	1985 - 2012	Low income
Belarus	2009 - 2012	Upper middle income
Benin	1993 - 2012	Low income
Bhutan	1989 - 2012	Lower middle income
Bolivia	1977 - 2012	Lower middle income
Botswana	1977 - 2012	Upper middle income
Brazil	1981 - 2012	Upper middle income
Burkina Faso	1981 - 2012	Low income
Burundi	1985 - 2012	Low income
Cambodia	1997 - 2012	Low income
Cameroon	1977 - 2012	Lower middle income
Central African Rep.	1981 - 2012	Low income
Chad	1981 - 2012	Low income
China	1985 - 2012	Upper middle income
Colombia	1977 - 2012	Upper middle income
Comoros	2001 - 2012	Low income
Congo, Rep.	1985 - 2012	Lower middle income
Costa Rica	1977 - 2012	Upper middle income
Djibouti	2001 - 2008	Lower middle income
Dominican Republic	1977 - 2012	Upper middle income
Ecuador	1977 - 2012	Upper middle income
Egypt	1977 - 2012	Lower middle income
El Salvador	1977 - 2012	Lower middle income
Ethiopia	1989 - 1996	Low income
Fiji	1977 - 2008	Upper middle income
Former Yugoslav Republic of Macedonia	1997 - 2012	Upper middle income
Gabon	1977 - 2008	Upper middle income
Gambia	1977 - 2012	Low income

Table B.1: (continued)

Recipient	*Years*	*Income Group*
Georgia	1997 - 2012	Lower middle income
Ghana	1977 - 2012	Lower middle income
Guatemala	1977 - 2012	Lower middle income
Guinea	2005 - 2012	Low income
Guinea-Bissau	1989 - 2000	Low income
Guyana	1993 - 2008	Lower middle income
Haiti	2001 - 2008	Low income
Honduras	1977 - 2012	Lower middle income
India	1977 - 2012	Lower middle income
Indonesia	1981 - 2012	Lower middle income
Iran	2001 - 2008	Upper middle income
Iraq	2009 - 2012	Upper middle income
Ivory Coast	1977 - 2012	Lower middle income
Jamaica	2005 - 2008	Upper middle income
Jordan	1977 - 2012	Upper middle income
Kazakhstan	1997 - 2012	Upper middle income
Kenya	1977 - 2012	Low income
Kyrgyz Republic	1997 - 2012	Lower middle income
Laos	1997 - 2012	Lower middle income
Lebanon	2009 - 2012	Upper middle income
Lesotho	1977 - 2012	Lower middle income
Liberia	2001 - 2012	Low income
Madagascar	1981 - 2012	Low income
Malawi	1981 - 2012	Low income
Malaysia	1977 - 2012	Upper middle income
Mali	1993 - 2012	Low income
Mauritania	1985 - 2012	Lower middle income
Mauritius	1977 - 2012	Upper middle income
Mexico	1977 - 2012	Upper middle income
Moldova	2001 - 2012	Lower middle income
Mongolia	1993 - 2012	Lower middle income
Montenegro	2005 - 2012	Upper middle income
Morocco	1977 - 2012	Lower middle income
Mozambique	1993 - 2012	Low income
Namibia	2001 - 2012	Upper middle income
Nepal	1977 - 2012	Low income
Nicaragua	1997 - 2012	Lower middle income
Niger	1977 - 2012	Low income
Nigeria	1981 - 2012	Lower middle income
Pakistan	1977 - 2012	Lower middle income
Panama	1977 - 2012	Upper middle income

Table B.1: (continued)

Recipient	*Years*	*Income Group*
Papua New Guinea	1977 - 2004	Lower middle income
Paraguay	1989 - 2012	Lower middle income
Peru	1977 - 2012	Upper middle income
Philippines	1977 - 2012	Lower middle income
Rwanda	1977 - 2012	Low income
Senegal	1977 - 2012	Lower middle income
Sierra Leone	2005 - 2012	Low income
Solomon Islands	1997 - 2008	Lower middle income
South Africa	1997 - 2012	Upper middle income
Sri Lanka	1977 - 2012	Lower middle income
Sudan	1977 - 2012	Lower middle income
Suriname	1981 - 1984	Upper middle income
Swaziland	1977 - 2012	Lower middle income
Syria	1977 - 2008	Lower middle income
Tajikistan	2001 - 2012	Low income
Tanzania	1989 - 2012	Low income
Thailand	1977 - 2012	Upper middle income
Timor-Leste	2005 - 2012	Lower middle income
Togo	1977 - 2012	Low income
Tunisia	1981 - 2012	Upper middle income
Turkey	1977 - 2012	Upper middle income
Uganda	1993 - 2012	Low income
Ukraine	2009 - 2012	Lower middle income
Venezuela	2009 - 2012	Upper middle income
Vietnam	1993 - 2012	Lower middle income
Yemen	1993 - 2008	Lower middle income
Zambia	1985 - 2012	Lower middle income
Zimbabwe	2009 - 2012	Low income