

Foreign Aid Spending, Institutional Development, and Economic Growth

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Thesis Defense: March 17, 2021

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Introduction

In 1991, after more than forty years of bitter political rivalry and dangerous brinkmanship, the United States emerged victorious from the Cold War. The following years marked a critical turning point for American foreign policy. Geopolitical motivations for foreign aid disappeared and spending stagnated until 2000, when the United Nations established a series of education, health, and welfare benchmarks known as the Millennium Development Goals (MDGs). Countries increased aid spending as altruism promised to replace political opportunism, but even today, nearly all developed nations fail to spend the recommended amount on foreign aid and humanitarian assistance (0.7 percent of GDP). Though the United States outspends every country in terms of gross outlays, it falls far short of the spending goal as well. Foreign aid spending is not particularly partisan; between 60 and 80 percent of Americans surveyed support humanitarian and development assistance, along with every recent presidential administration except for the Trump administration (Ingram 2019). Unfortunately, political science literature reports mixed findings on the efficacy and feasibility of foreign aid as a policy tool to generate growth in developing countries. The mechanisms by which aid supposedly eliminates poverty or creates economic growth are stilted and insufficient for effective policymaking.

This leads to several difficult questions that constitute the “Great Foreign Aid Debate.” How much foreign aid should the United States distribute? What types of programs best reduce poverty or improve health outcomes abroad? Can aid be sustainable for the United States and recipient countries? None of these questions have definitive answers because underlying political and economic institutions constantly fluctuate. Furthermore, severe data limitations and inconsistencies prevent researchers from extrapolating specific findings to wider sets of countries or time periods. As a result, little measurement or methodological standardization exists in

foreign aid research. Authors use widely varying indicators to measure economic performance and political development, which range from income inequality and corruption to poverty and voter participation. Some researchers avoid empirical analyses altogether. By using a combination of World Bank, United Nations, and United States federal government data spanning three decades, this paper establishes a more refined and nuanced answer as to how foreign aid spending and institutions influence economic development. This thesis studies the effects of broad political and social institutions on macroeconomic trends to reach an objective conclusion on the effectiveness of foreign aid. Specifically, *since the end of the Cold War, how have recipient countries' track records of growth and institutional development changed the effect of foreign aid spending on future economic growth?*

The answers to this research question differ widely when excluding outlying country-year pairs and implementing different regression models. However, several conclusions stand out in nearly every analysis. 1) Higher spending, measured as a percent of recipient country gross domestic product, increases economic growth rates, especially on shorter time spans. The effect of spending per capita on economic growth is negligible on every interval. 2) The effect of foreign aid funding on growth diminishes over time, meaning that repeated distributions are imperative for long-term development. 3) Higher human development correlates to lower growth rates, especially in the long-term. The studied country-year pairs demonstrate income convergence, suggesting that American foreign aid flows primarily to middle-income developing nations. 4) Excluding spending outliers—generally Israel and Afghanistan—from the data set increases the correlation coefficients and significance levels in each regression model. Future policy discussions should distinguish between the geopolitical, development, and humanitarian motives behind foreign aid.

Foreign aid distribution will always be a question of individual review and discretion. Too many unknowns, inconsistencies, and disagreements exist within the field to paint an all-encompassing picture of foreign aid and development. With that in mind, the overarching goal of this paper is to afford policymakers and academics alike with relevant, nuanced evidence as to the effects of foreign aid spending and institutions on economic development. This paper serves not only to fill gaps in the literature but also to guide further research.

Literature Review

A. Overview of Foreign Aid and Economic Growth Literature

School of Thought: Institutional Effectiveness

More than anything, the discussion about recipient country institutions has dominated the Great Foreign Aid Debate. Indeed, recipient countries span from nascent democracies to dictatorships, from isolationist to international trading hubs. In the literature, the accountability, equity, and reliability of recipient institutions best predicts the relationship between foreign aid spending and economic growth.

Although donor institutions also play a role in aid efficacy, operationalizing their customs or internal structure is challenging. Very few bodies consistently publish data on their spending habits. Further, the countries and international organizations doling out foreign aid do not represent a wide range of interests or institutions. Until recently, aid distributions almost exclusively originated from Western Europe and its developed country offshoots. The research design section considers these limitations in more detail.

Political institutions play a critical role in foreign aid distribution. Indeed, unilateral aid to foreign governments accounts for more than 20 percent of American foreign aid spending. ActionAid (2017) paints a rosy picture of foreign aid and institutional effectiveness. The group argues that increases in institutional accountability cause a virtuous cycle of increased foreign aid inflows alongside political and economic development. Although they admit that some institutions and countries are not as effective at creating economic growth with foreign aid, aid serves as an incentive for governments to become more accountable and transparent. This creates even more growth, which strengthens governmental relationships with citizens and international donor organizations. Going forward, ActionAid believes that international institutions should

distribute more targeted aid to decrease corruption and make individual humanitarian projects more effective. They suggest expanding access to financial markets in developing countries and enhancing monitoring systems to foster trust between international organizations and recipient governments.

In contrast, a large body of research argues that aid institutionalizes corruption and discourages economic growth. Bader and Faust (2014) argue that autocratic governments tend to implement limited political reforms to appease international observers and receive foreign aid. Corrupt officials, often more present in autocratic countries, tend to use foreign aid to entrench their power. North Korea, for example, repeatedly promised to halt nuclear development in exchange for humanitarian assistance. After each transfer, the monarchy funneled American funds into its nuclear program to increase its bargaining power for the next set of negotiations. Bader and Faust explain that “The logic of political survival suggests that leaders rarely have genuine intentions to democratize, even though they may have an interest in the introduction of nominally democratic institutions” (590). International donors can also play a negative role in aid distribution. During the Cold War, many presidential administrations incorporated geopolitical motives into their aid and intervention foreign policy. The United States supported numerous dictatorships in Latin America and Asia because of their anti-communist sentiments. Similarly, Israel receives foreign aid not for economic development but because the country supports American strategic interests in the Middle East.

Clearly, the relationship between economic and political development plays an important role in which countries receive foreign aid in the first place. Expanding on the research of ActionAid (2017), Dutta and Williamson (2019) find that when ulterior motives and political disagreement are present, aid becomes less effective. Further, inconsistent foreign aid flows

reduce monitoring and implementation effectiveness. Though ActionAid (2017) and Dutta and Williamson (2019) agree that political institutions play a key role in foreign aid implementation, their outlooks differ sharply. The latter research is far more cynical about how the relationship between donor and recipient institutions changes economic development trends.

In recent decades, rising Asian economies, led by China, expanded their foreign policy to include infrastructure investment across the developing world. Though Shimomura (2013) avoids empirical analysis, he investigates the effects of China's flagship foreign policy program, the Belt and Road Initiative. Although the initiative opened smaller countries to debt traps and greater Chinese influence, many saw economic growth because of market expansion and reduced physical trade barriers. In many cases, Beijing pressures recipient countries to adopt political and economic reforms that will benefit China in the future. Shimomura urges researchers to consider confounding variables to avoid misattributing changes in economic growth to unrelated factors.

Some authors agree that political institutions factor strongly into the efficacy of foreign aid but argue that data limitations should dissuade research from employing statistical analysis. Edwards (2014) criticizes the economic community for this reason. The advent of humanitarian and development assistance originated after World War II, and many current recipients of aid—countries in Africa and Asia—did not achieve independence until the 1960s or later. These same countries underwent numerous political shifts that altered domestic institutions and international partnerships. Few long-term outcomes have been fully realized. Further, American institutions foreign policy changed several times over the decades. This inconsistency allows scholars to slice the data to arrive at antithetical conclusions about the relationship between aid and economic growth. In Edwards' view, every dispersion of foreign aid funding should be considered independently to account for the unique geographic, cultural, political, and economic

factors in each recipient case. He urges economists and political scientists to rely on case studies to better understand the effects of aid distribution on economic growth.

Unfortunately, foreign aid papers often fail to account for lurking variables that may play a part in explaining the relationship between aid spending and development. Aside from limited examples, research avoids considering patterns of development and institutional norms despite evidence of different systems altering future growth prospects. This paper strives to definitively address these omissions by holding constant more varied measures of recipient countries' development. From there, I ascertain the effect of foreign aid outlays across different regions, periods, and levels of institutional development.

School of Thought: Timing and Repeated Donations

Poverty research discovered a phenomenon known as the "S-curve," where those below a turning point of income or opportunity cannot escape poverty. At low levels of current income, people face diminishing returns to scale and never have sufficient resources available to live at a level above subsistence. Just to the right of the S-curve inflection point, however, people see increasing returns to scale, with higher future income. The proverbial S-curve graphically demonstrates what is known as the poverty trap. Generally, poverty traps concern individual health, education, or income levels. However, modern research has applied the S-curve to foreign aid distribution and long-run macroeconomic growth as well.

In concert with the recent wave of altruistic foreign aid spending, scholars began exploring the effect of repeated foreign aid contributions on eliminating poverty and creating growth. Larsen (2007) underscores the importance of continued donations and donor persistence in solving poverty traps in developing countries. He argues that once enough monetary resources or time have been spent, developing countries are far more likely to see positive development,

especially with regards to their GDP. Specifically, he explains that “Foreign aid that is lower than the threshold—either 4.6 percent of GNI or \$24.97 per person—has a significantly different effect on the steady state level of income per capita than when foreign aid is larger than the threshold” (87). Though few sources corroborate Larsen’s findings, they are extremely telling and make sense when considering growth outcomes of recent aid distributions. If donor countries like the United States implemented closely crafted programs in developing countries and extended resources for long periods of time, levels of economic growth (and presumably political stability) would arise naturally. Though the Iraq and Afghanistan interventions lasting nearly two decades could counter Larsen’s argument, looking deeper presents strong evidence for his findings. During this time, American policy and military strategy changed drastically in both countries. Three presidential administrations pursued antithetical security and political goals, which made funding for individual programs volatile. Furthermore, the programs pursued in Iraq and Afghanistan never had long-term development goals in mind but rather focused on short-term security aspirations. This vicious cycle contributed to an inefficient and untimely allocation of development assistance.

A similar effect can be seen in almost every country to which the United States provides foreign aid. Internal politics and geopolitical tensions cause massive shifts of foreign policy and spending over long periods. Fortunately, the funding data from the United States Agency for International Development (USAID) and World Bank covers a wide timeline and practically every country on Earth. Though several omissions were made because of incomplete or inconsistent data, the data set includes countries with an array of differing political, economic, and social systems. Therefore, this paper examines Larsen’s findings in more detail.

School of Thought: Track Record

The institutional view of foreign aid receives widespread support from political science scholars. However, limited empirical research has taken place to determine the extent to which past economic and political performance of a country plays into the efficacy of foreign aid. Seldom have researchers asked, “What is the relationship between increasing corruption and economic growth from foreign aid distributions?” or “Does past economic growth predict the effectiveness of individual aid projects?” Again, researchers largely lack relevant and long-term data to answer these questions. Standardized political development indicators produced by the United Nations or World Bank did not become available until about two decades ago. Additionally, developing countries publish scant data about their political and economic performance because they often lack the state capacity or funding necessary to do so. Afghanistan, Somalia, and Sudan exemplify this issue with data collection. Furthermore, states with internal conflict or discrimination between certain ethnic groups have an incentive to mischaracterize or blatantly lie about their performance to secure more foreign aid. Consider the Democratic Republic of the Congo or Ethiopia. Both fester with internal ethnic conflict that eventually spilled into neighboring states. These countries receive large shares of foreign aid going to Africa. Nonetheless, measuring and analyzing Congolese and Ethiopian institutions is extremely difficult and unreliable.

The Clinton administration oversaw a foreign policy shift that focused on humanitarian efforts and state-building, mainly in eastern Europe and Africa. Though aid flows slowed down during the 1990s, by the end of the century, many countries would move towards the more altruistic development goals outlined in the introduction of this section. As the largest outright distributor of foreign aid funding, the United States wanted to make sure its money was being

put towards beneficial projects. To explore the best ways to distribute aid, the Congressional Budget Office (CBO) conducted a wide-ranging report in 1997 that looked at historical and current political institutions of countries, as well as records of where USAID money was distributed. The report found that well-governed countries with market-oriented policies were more likely to make good use of development assistance. Conversely, autocratic and economically restricted countries were more likely to see the aid vanish to corruption and mismanagement. To a lesser extent, the terms on which the donor institutions or countries gave aid also influenced development.

In summary, studies that tried to quantify the benefits of foreign aid and understand its relationships to past performance often fall short with their data and conclusions. The CBO report made sweeping claims—which do have merit and theoretical backing—but lacks large-scale empirical data or case studies, which minimizes the applicability of the conclusions. This paper confirms and expands upon the findings of the CBO using more standardized governance and development indicators.

School of Thought: Implementation

For decades, governments and non-governmental organizations (NGOs) made foreign aid outlays dependent on the actions of domestic institutions in recipient countries. They calculated the effectiveness of foreign aid in terms of the recipient country's institutions based on political factors like corruption, stability, and democracy ratings. It was not until the establishment of the MDGs and subsequent foreign aid surge that donors began to consider implementation methods and project selection as more beneficial to the efficacy of aid than structural adjustment policies.

Individual scholars began researching implementation methods following a series of high-profile economic recessions in recipient countries in the mid-2000s. Chatterjee and

Turnovsky (2007) show that patterns of economic stagnation or failure sometimes follow sustained periods of spending because of shifts in the labor market. They determined that “The link between foreign aid, economic growth, and welfare depends crucially on the mechanism through which a particular aid program, whether tied or untied, is absorbed by the recipient economy” (529). In other words, simply looking at past performance indicators will not always guarantee success in aid distribution. Instead, both NGOs and governments should consider the specific circumstances of the recipient country and decide in what way aid should be distributed. Furthermore, Chatterjee and Turnovsky (2007) argue that an important set of preconditions must be met before any amount of foreign aid can be effectively distributed. Specifically, a recipient country must have a sufficiently educated labor force and capital accumulation in the manufacturing sector. Even with the accountable, organized political systems found in some developing countries, foreign aid distributions without additional human and capital investment are doomed to fail.

Though this paper does not consider individual programs or break down aid spending into categories (i.e., humanitarian, debt-relief, or infrastructure), the economic consequences of foreign aid depend greatly on how and to whom money is distributed. Focusing purely on individual welfare as a measuring stick, Asongu and Nwachukwuwhen (2016) contend that foreign aid should be tailored towards items that will reduce inequality and ensure basic societal functions. Barebones humanitarian aid, the authors argue, subverts long-term growth even if immediate relief seems beneficial. They explain that although variations exist, “First, the impact of aid dynamics with high degrees of substitution is positive. These include aid for: social infrastructure, economic infrastructure, the productive sector, and the multisector. Second, the effect of humanitarian assistance is consistently negative across specifications and models”

(293). This aligns with historical critiques of humanitarian assistance in that misallocated aid creates dependency by undercutting burgeoning domestic industries. Poor people are unable to escape poverty because they lack fundamental health and educational support, which gives rise to a vicious cycle of underperformance and socioeconomic stagnation. Small, directed investments promise to improve future consumption and create growth rather than creating dependency.

Conversely, the effects of international policymaking and institutional structure may change the economic effects of foreign aid. Building on the original research by Bader and Faust (2014), Quibria (2017) argues that donor countries and bilateral international organizations must take steps to increase transparency and accountability of monetary transfers. To some extent, those reforms took place; the IMF and World Bank established anti-corruption offices and began screening donor countries based on governance indicators pertaining to political freedom, corruption, and accountability. Understanding the major issues that corruption (on both sides of foreign aid transactions) causes, Quibria argues that over time, measures taken by international institutions would engender more trust between them and foreign constituents.

Following the global financial crisis in 2008, Greeks disparaged the IMF for applying harsh conditionalities on loan distribution. Whether IMF policies protracted or eased the Greek economy is still a question. But undoubtedly, stronger trust between recipient country citizens and international organizations is key for strong negotiations and aid transfers. Despite progress, Quibria contends that “All these investments in global public goods for controlling corruption have been helpful, yet they do not contribute directly toward progress against corruption in a specific country” (14). He hopes this positive relationship-building will create a positive cycle of

accountability and trust that will eventually make foreign aid more effective and reliable. His article lacks empirical data to back up these claims and necessitates further research.

I personally agree with the *implementation* school of thought, but this paper avoids using it as an explanatory factor for two reasons. First, my research focuses exclusively on recipient country factors of political, economic, and social development. Though donor countries and the types of aid distributed do play a significant role in the effectiveness of foreign aid, most countries and international institutions are not transparent about their distribution. Furthermore, monetary transfers take numerous forms that change over time, which complicates data collection. Increasingly, foreign aid has been multilateral, meaning that non-governmental organizations and foreign governments play a larger part in the distribution process. Conditionalities are largely a policy of the past. Therefore, I think recipient institutions will play a more statistically measurable and significant role in the efficacy of foreign aid distribution. Second, data collection for implementation and international institutions is difficult to come by. The lack of research in the field confirms this, and I feel it would be a waste of energy to pursue this line of analysis further. However, the *implementation* school of thought should be explored by organizations with greater resources to collect data with a broader scope.

B. New Contributions

Although researchers published many empirically significant findings in recent years, the papers use different standardized variables for measuring recipient country institutions. As a result, authors from different schools of thought and ends of the scholarly spectrum reach conflicting conclusion about the same data. This paper clarifies the most desirable circumstances for efficient outlays of foreign aid. Specifically, I use USAID data, which compiles foreign aid spending for the United States Federal Government across all agencies. The data contains

information on a recipient country's apparent institutional development level. To verify and add onto this data, I also use World Bank development indicators. These are split into two categories, one measuring human development and the other measuring government institutions. In sum, my research is encompassing and standardized over time.

This paper focuses on analyzing the relationship between the political, social, and economic track records of recipient countries and their economic performance after receiving foreign aid. The CBO completed limited research in this area in 1997, but few other academic or government bodies considered the same questions. Foreign aid being an expensive and future-thinking consideration for American foreign policy, this research expands on the CBO report to reach definitive, nuanced conclusions on the effect of foreign aid on economic growth.

Research Design and Data

A. Research Question and Hypothesis

To reiterate, the guiding question for this thesis paper asks *since the end of the Cold War, how have recipient countries' track records of growth and institutional development changed the effect of foreign aid spending on future economic growth?* In theory, histories of political stability, accountability, and strong control of corruption combined with high social development indicators will give rise to larger economic growth rates. If foreign aid is truly beneficial under ideal conditions, then regardless of the spending operationalization, more money should correlate with higher economic growth. Furthermore, historical economic growth should be a strong predictor of future growth, especially on shorter periods barring economic collapses or overhauls during the studied period. In effect, socially developed democracies with strong trends of growth will implement foreign aid most successfully, whereas unhealthy and uneducated autocracies with weak historical growth will put foreign aid to waste.

Governments that establish credibility and undergo stable transitions of power more efficiently allocate and manage funds. This efficiency extends to foreign aid projects that those governments (and NGOs) manage in recipient countries. Furthermore, credible countries usually establish more developed international partnerships from which they could receive foreign aid funding. Countries with high levels of social development will have a better foundation for economic growth because their institutions and cultural norms are more conducive to growth and productivity.

Because this research paper is exploratory in nature and aims to eliminate some confusion and inconsistency within the foreign aid literature, my goal is not to disprove current theories but rather inform new ones.

B. Operationalization, Variable Selection, and Data Sources

Economic growth and institutional development are closely tied together. As the diverse literature suggests, foreign aid spending interacts with recipient country institutions in numerous ways. International institutions do impact foreign aid outlays, as do geopolitical motives and domestic policymaking. However, controlling for all these factors would require far more time and resources than those provided or accessible to undergraduate students. On top of these difficulties, there is inherent nuance in what researchers define as international institutions and how these institutions operate. For example, should research consider the political or social factors of donor countries, and which ones? Should they focus on the voting rules or national contributions to bilateral aid organizations like the World Bank? How do specific projects or programs influence growth? There is far too much volatility on the international and domestic levels to consider the effectiveness of foreign aid wholly and accurately. For that reason, and due to my limited time resources, I focus on recipient country institutions. All else equal (as assumed given the long-time spans and standardization of the data), domestic institutions play the largest role in the effectiveness of foreign aid in generating economic growth.

Although it would be ideal to have a complete foreign aid spending data set to and from every country since the beginning of modern international relations and economic growth, several limitations prevented political scientists and economists from finding a definitive answer to the foreign aid question.

Most notably, few governments distribute enough aid in recipient economies to have any measurable impact on economic growth. Some that do, like Russia or China, do not publish much if any consistent data on their disbursements. The United Kingdom and France fund sizable programs around the world and keep record of that spending. Along with other European

countries, the United Kingdom and France—two of the largest donors—recently joined the International Aid Transparency Initiative. The group aims to report consistent foreign aid spending data for every donor country. Unfortunately, the United States does not publish its data to the same standards and combining the two data sets would be extremely time consuming. For the purposes of simplification, and because this paper primarily targets American foreign policy, other donor country spending data is not incorporated. Future additions to this paper will involve data from more donor countries. Thankfully, most of the total foreign aid spending originates from the United States, so the regressions likely capture a large part of economic growth resulting from aid projects.

This paper limits its analysis to the post-Cold War period to simplify data collection and lessen the impact of politically motivated aid spending on the overall effects of aid distribution. No doubt, Cold War foreign policy poses fascinating questions for research, but does not reflect the current and future international community.

The data set includes 30 countries receiving the most aid from the United States in every year since 1990. I chose this number arbitrarily based on data constraints but does reflect an accurate picture of where aid was distributed each year. It sufficiently covers countries from every region and represents a vast array of governmental systems and levels of social development. The USAID provides inflation adjusted spending amounts (2010 US\$) to paint a more accurate picture of yearly spending. From there, using World Bank population and GDP statistics, I calculate two spending variables. First, the *spending ratio* examines the percent of a recipient countries' GDP that was distributed as aid to that country from the United States. The second variable, *spending per capita*, records the country-year spending amount divided by the recipient country's population in that year. This variable aims to capture the effect of foreign aid

spending on individual welfare as a share of the larger economy. As I discuss in the following section, some country-year pairs were excluded and substituted for because of data issues. But even in the years with the most data holes, the country-year pairs were still selected from the top 40 United States aid recipients.

In considering institutional track records, I examine two categories: political and social development. The first captures the effectiveness of political institutions, which play a direct role in controlling foreign aid funds, as well as the political and economic structures of a recipient country. In that capacity, governments collect taxes, establish rules for market transactions if they impose harsh externalities, and distribute money to fund social programs. A country's political institutions play a direct role in economic development. A plethora of research examined the relationship between democracy and economic development. Though I do not discuss topic, it is important to note that I agree with the research showing a strong and bidirectional causal relationship between democracy and a free market economy. Again, my regression models do not specifically test this hypothesis, but strong relationships between economic growth and democratic political institutions (generally associated with democracy) could be soft evidence for the income and democracy hypothesis.

Operationalizing political development can be difficult, especially because many of the variables used in this analysis were only recorded beginning two decades ago. One such set of variables are the Worldwide Governance Indicators (WGI), a comprehensive set of governmental indicators that measure six different political factors: voice and accountability, political stability and absence of violence, regulatory quality, government effectiveness, rule of law, and control of corruption. Each interacts differently with foreign aid and its effect on economic growth.

For the five-year period preceding the collection of WGI data, the source data sets use the Polity5 regime variable from the Center for Systemic Peace. This variable crudely measures governments ranging from absolutist monarchies to full democracies on a scale from negative ten to positive ten. Again, the Polity5 regime variable does not account for differing institutional factors like the WGI data. Instead, it reports a singular regime score for each country-year. Fortunately, it does generally reflect the same trends shown in the WGI data set. Nonetheless, the two political institution variables are used in separate regressions (with slightly different time spans and observations) to avoid confounding.

To measure social institutions, this research employs the Human Development Index (HDI) measured by the United Nations. The HDI goes back to the 1950s, easily covering the time span covered in the data sets. This index is calculated using a geometric average which equally weights health, wealth, and education. Specifically, HDI values are calculated with data on life expectancy, GDP per capita, average years of schooling, and expected years of schooling in each country-year pair. Critics argue the measure focuses too heavily on material wealth and omits more nuanced considerations for human development that include happiness, family connections, and leisure time. However, most economists agree that HDI is a sufficient measure for social development until more accurate and in-depth data can be collected about each country.

Finally, my data set incorporates GDP growth statistics from the World Bank for the dependent and lagged dependent variables. To explain short-, medium-, and long-term economic growth, I create three variables—*year1*, *year5*, and *year10*—that look at the average growth rates during each period. The *year1* variable considers the subsequent year economic growth rate, whereas *year5* measures the average growth from T_1 through T_5 . The *year10* variables

measures average growth between T_1 and T_{10} . With the assumption that past economic growth influences future growth to some extent, the data set also includes the lagged dependent variables *lagcurrent*, *lag4*, and *lag9*. The *lagcurrent* variable measures current year economic growth, denoted as T_0 . The *lag4* variable measures average historical growth from T_{-4} through the current year. Essentially, “what was the average economic growth of a country-year pair over the last five years?” The same exercise was used to construct the *lag9* variable. Each period of future growth is regressed against the equivalent period lagged dependent variable for historical growth. For example, *lag4* is the lagged dependent variable paired with the *year5* dependent variable in the regression.

Table 1: Variable Selection

Variable	Type	Source	Description
Aid Spending (per capita)	IV	USAID	Foreign aid spending divided by the population of recipient country.
Aid Spending (%GDP)	IV	USAID	Aid spending as a percentage of recipient country GDP.
Economic Growth Rates	DV	World Bank	Calculated one-, five-, and ten-year average growth rates in each country.
Historical Growth Rates	Lagged DV	World Bank	Average historical growth rates corresponding to the DV period in question.
Regime Index	Control	CSP (Polity)	Simple scale measuring government structure, from dictatorship to democracy.
WGI	Control	World Bank	Detailed measure of six political indicators, collected from 1996 to present.
HDI	Control	UNDP	Proxy social indicator, constructed with education, health, and income data.

C. Data Cleaning and Organization

Much of the dispute and disparity in foreign aid literature stems from differences in variables and case selection. This paper aims to eliminate much of this uncertainty by presenting a broad and objective approach to the Great Foreign Aid Debate. Therefore, I include this section to clearly explain the reasoning behind my decision-making during the data cleaning process.

Using this information, future researchers will be able to recreate my data sets and solve any issues that may arise within the data. With that said, several issues and holes exist in the data sets that need to be filled to run the linear regression models.

Across the Polity5 regime data set, discrepancies existed around many countries, including island nations, not universally recognized states, and former countries. Specifically, the Marshall Islands, Micronesia, Palau, Palestine, formerly unified Sudan, and Serbia present the most data inconsistencies. It would have been nigh impossible to collect accurate, objective, and consistent data for each specific country-year pair omitted in the Polity5 data set.

Though Somalia received large foreign aid distributions from the United States for much of the studied period, the country completely lacks HDI data because its volatile military and political history made it impossible for UN delegates to safely collect data for many years. Holes exist in the HDI data for other countries, but Somalia was by far the most prominent example receiving substantial amounts of American foreign aid.

Another consideration is that WGI data was collected at two-year intervals from 1996-2002. I calculate an arithmetic average of the preceding and following years for each country to construct a more complete data set with WGI data for every individual year. This method makes the regression more precise but omits certain details about short-term variations in government structure and performance that were not directly measured by the WGI data set. *Table 2* displays the summary statistics of the main data set constructed with these stipulations in mind.

Table 2: Descriptive Statistics of the Inclusive Data Set

Variable	Obs.	Median	Mean	Std. Dev.	Min.	Max.
Spending Ratio (%)	870	0.97	2.60	7.93	0.01	96.5
Spending PC (2010 US\$)	870	12.20	49.67	126.71	0.14	1164.73
Regime	870	5.00	2.91	5.58	-9.00	10.00
HDI	870	0.58	0.58	0.14	0.19	0.92
Voice and Accountability	690	-0.35	-0.42	0.64	-1.84	1.43
Stability and Absence of Violence	690	-0.97	-0.99	0.83	-3.18	1.43
Regulatory Quality	690	-0.35	-0.40	0.65	-2.16	1.61
Government Effectiveness	690	-0.50	-0.49	0.64	-2.24	1.74
Rule of Law	690	-0.65	-0.61	0.64	-1.90	1.57
Control of Corruption	690	-0.74	-0.63	0.59	-1.66	1.65

Finally, and more subjectively, the second set of regression series exclude “dependent states,” or country-year pairs with exceptionally high spending ratios or spending per capita inflows. Country-year pairs were excluded from the original data set if they exceeded the outlier threshold for *spending ratio* or *spending per capita*. The accepted equation for calculating outliers is as follows: $Q3 + 1.5(IQR)$. None of the data points were negative outliers. This constituted excluding country-year data points where the spending ratio exceeded 5.18 percent or spending per capita exceeded 2010 US\$76.69. Values above this amount are omitted because they fall far above the average values for the two spending variables for nearly all the other country-year pairs.

Nearly all the excluded observations contained Afghanistan or Israel. Afghanistan became a top recipient of American foreign aid following the 2001 invasion. But because the country has been steeped in brutal guerilla warfare for much of that time, economic reconstruction and infrastructure-funded projects have largely failed to gain support and help communities. On the other hand, Israel, which consistently receives billions of dollars from the United States, is one of the only developed countries to do so. This is because much of this

Table 3: Descriptive Statistics of the Exclusive Data Set — No Outliers

Variable	Obs.	Median	Mean	Std. Dev.	Min.	Max.
Spending Ratio (%)	743	0.59	1.08	1.14	.01	5.13
Spending PC (2010 US\$)	743	10.06	15.20	15.89	.14	76.56
Regime	743	5.00	3.20	5.51	-9.00	10.00
HDI	743	0.57	0.57	0.13	0.23	0.84
Voice and Accountability	580	-0.34	-0.42	0.61	-1.84	1.43
Stability and Absence of Violence	580	-0.94	-0.96	0.80	-2.99	1.43
Regulatory Quality	580	-0.37	-0.42	0.55	-2.16	1.61
Government Effectiveness	580	-0.51	-0.52	0.53	-2.24	1.74
Rule of Law	580	-0.66	-0.65	0.51	-1.85	1.57
Control of Corruption	580	-0.76	-0.70	0.46	-1.66	1.65

funding is not development-focused, but rather strengthens the relationship between the two countries to further American geopolitical interests in the Middle East.

The summary statistics of the exclusive data set are presented in *Table 3*. By omitting dependent states from the data, the variability in spending drops drastically. The standard deviation of both the spending ratio and spending per capita variables decreases by at least a factor of seven. However, the standard deviation for the institutional development variables (both social and political) does not markedly shift between the two data sets. This suggests that Afghanistan and Israel have similar institutions to other cases in the data set and differ only in the amount of assistance they receive. Excluding these outlying cases does not change the institutional makeup of the country-year pairs in the data set. Instead, it parses out the effect that different levels of spending and institutional development have on growth.

D. Methodology

My statistical analysis includes 52 separate linear regression series using a combination of spending, government, and year variables. None of the variables demonstrate heteroskedasticity, so the regression series exclusively use linear models to approximate the

relationship between foreign aid spending and economic growth in each of the country-year pairs. Because the Polity5 regime data includes only one variable, the country-year-growth pairs regressed in the data set can be displayed in the same regression table. On the other hand, the WGI data consists of six measures, so each growth interval is display separately. To delineate the individual effect of each indicator on growth rates, an additional indicator is added in each regression iteration. Therefore, the WGI regression series look at an individual combination of spending (ratio or per capita) and growth period. Each of these regression tables is displayed for a single period.

A final set of linear regression series were constructed with the addition of a “development category” to each country-year pair. This variable is constructed using three classifications for both the Polity5 regime score and HDI. Therefore, the resulting development category variable contains nine values, ranging from “low development autocracy” to “high development democracy.” None of these regressions showed significant results and are not included in the final version of this paper.

All the regressions were recreated with the exclusive data, bringing the total to 26 tables. The exclusive data set regressions generally increased the coefficients and significance of each independent and control variable. Each of these regressions controlled for the same variables as well as region dummy variables to control for geographical trends in spending and growth. The Middle East served as the base value, and country-year pairs not in that region received a “1” in their respective region identifier column. The five other regions controlled for in the linear regression models include East Asia and Oceania, Europe, South and Central Asia, Sub-Saharan Africa, and the Western Hemisphere as defined by the USAID.

Finally, the entire set of 26 regressions (using inclusive and exclusive data sets) was repeated using a fixed effects model along with the linear regression. This is because the variables associated with foreign institutional development are likely not random. Instead, certain aspects of political and economic institutions are closely tied to each other within countries, and countries with related institutions presumably go through similar economic transitions over time. Therefore, the fixed effects model accounts for the country-year pair, with underlying similarities in each data set. Because the region dummy variable previously served as a proxy for country location, the fixed effects model automatically eliminates them from each regression.

Analysis

Note: All the linear regression tables presented in the main section of this paper include a fixed effects linear regression variable. The regression sets with region-specific dummy variables and no fixed effects control almost universally report smaller and less significant coefficients for the effect of each variable on economic growth rates. Every table not incorporated in the analysis is displayed in the attached appendix.

Each independent and control variable in the data set spans a different scale. For example, the World Bank WGI's range from -2.5 to 2.5 for each variable. Therefore, an opposite country-year pair for a specific indicator score would vary by five times the indicated regression table coefficient. The HDI variable crosses a scale from 0 to 1, with higher values indicating higher human development. Although the linear regression coefficients for HDI are larger than for other variables, the numbers are overrepresented because the value range is quite small. The lowest HDI values in the data set are around 0.3, whereas a few country-year pairs boast values near 0.8. At most, the effective difference between the economic growth rates of any two country-year pairs due to HDI would be half of the reported table value.

The wide-ranging regression analysis present a series of conclusions that differ slightly based on data context, exclusions, and model types. However, they remain consistent with current political theory and other regression tables with similar variables.

Table 4 reports the regression coefficients for both spending variables and the Polity5 data on all three measured periods for economic growth. The effect of spending ratio is strongest on the one-year interval, where a one percent increase in the ratio as a percent of recipient country GDP leads to a 0.138 percent increase in GDP growth rate. The effect of the spending

Table 4

Foreign Aid Spending and Economic Growth Rates (Polity IV Regime Rankings) — Fixed Effects						
	Average Growth Rates					
	1-Year		5-Year		10-Year	
	(1)	(2)	(3)	(4)	(5)	(6)
Current Lag	-0.010 (0.029)	-0.010 (0.030)				
Past 5 Lag			0.002 (0.027)	0.001 (0.027)		
Past 10 Lag					-0.212*** (0.021)	-0.212*** (0.021)
Spending Ratio	0.138*** (0.040)		-0.012 (0.021)		-0.039*** (0.014)	
Spending PC		0.005* (0.003)		0.001 (0.001)		0.0004 (0.001)
Regime	0.145*** (0.048)	0.136*** (0.048)	0.069*** (0.024)	0.070*** (0.024)	0.047*** (0.013)	0.048*** (0.013)
HDI	-6.342* (3.479)	-5.985* (3.503)	-8.027*** (2.152)	-8.048*** (2.153)	3.054** (1.525)	2.899* (1.547)
Observations	870	870	750	750	600	600
R ²	0.026	0.014	0.029	0.028	0.202	0.189
Adjusted R ²	-0.085	-0.098	-0.099	-0.099	0.069	0.053
F Statistic	5.138*** (df = 4; 780)	2.773** (df = 4; 780)	4.881*** (df = 4; 662)	4.828*** (df = 4; 662)	32.513*** (df = 4; 513)	29.942*** (df = 4; 513)

Note:

*p<0.1; **p<0.05; ***p<0.01

ratio variable is negligible at the five-year interval and slightly negative, but highly significant on the longest period. The effects of spending per capita are near zero for every period. The effect of the Polity5 regime score on economic growth is significant and positive at every interval but declines consistently over time. This suggests political institutions are malleable and change on longer time intervals, especially in developing countries which are overrepresented in the data set. HDI is negatively correlated with economic growth at the one- and five-year periods, but positive for the ten-year period.

When conducting the same the regression with the exclusive data set, the results slightly change. *Table 5* shows that the lagged growth variable is now significantly deterministic of future growth at every interval and for both spending variables. In fact, for every one percent increase in current year growth, one-year growth increases by more than 0.3 percent. For every one percent increase in historical five-year average growth, future five-year growth increased by 0.7 percent. In both regime regressions (inclusive and exclusive data sets), past ten-year average

Table 5

Foreign Aid Spending and Economic Growth Rates (Polity IV Regime Rankings) — No Outliers — Fixed Effects						
	Average Growth Rates					
	1-Year		5-Year		10-Year	
	(1)	(2)	(3)	(4)	(5)	(6)
Current Lag	0.327*** (0.036)	0.325*** (0.036)				
Past 5 Lag			0.073** (0.029)	0.070** (0.029)		
Past 10 Lag					-0.200*** (0.022)	-0.200*** (0.022)
Spending Ratio	0.313 (0.229)		0.219* (0.131)		-0.027 (0.077)	
Spending PC		0.001 (0.016)		-0.001 (0.009)		-0.004 (0.006)
Regime	0.146*** (0.043)	0.147*** (0.043)	0.085*** (0.024)	0.087*** (0.024)	0.049*** (0.013)	0.049*** (0.013)
HDI	-2.627 (3.124)	-2.649 (3.159)	-6.093*** (2.147)	-5.977*** (2.164)	5.963*** (1.603)	6.012*** (1.604)
Observations	743	743	642	642	521	521
R ²	0.128	0.126	0.038	0.033	0.182	0.183
Adjusted R ²	0.026	0.023	-0.092	-0.097	0.044	0.045
F Statistic	24.395*** (df = 4; 664)	23.861*** (df = 4; 664)	5.560*** (df = 4; 565)	4.835*** (df = 4; 565)	24.714*** (df = 4; 445)	24.851*** (df = 4; 445)
Note: * p<0.1; ** p<0.05; *** p<0.01						

growth is negatively correlated with upcoming ten-year growth. Like political institutions, economic systems can and do change drastically in decade-long time spans. The data set encompasses only 29 years and compounds this effect. Many countries went through especially volatile periods such as the breakup of the Soviet Union or the Arab Spring in 2011. Overall, the findings of the regime regression sets support previous research that cautions about donating foreign aid to autocratic governments (Bader and Faust 2014).

These Polity5 regime regressions include both spending variables because all the coefficients fit on one table. For the WGI regressions, which report more coefficients, the spending ratio and spending per capita variables are displayed separately. The coefficients of spending per capita on economic growth rates rarely differ significantly from zero, and therefore are only included in the appendix section.

Measuring the effects of regime score on economic growth present rather simplistic results. The Polity5 data set is valuable not for its nuance but for its scope. It reports data on every imaginable country and territory going back to the mid 1800s. To capture the immediate post-Cold War shift of American foreign policy on foreign aid spending, it is necessary to employ the regime variable to have sufficient historical data. However, the World Bank WGI data released in 1996 presents a more distinct picture of political institutions in this period. As explained in the previous section, the two data sets are comparable because higher scores on each of the WGI variables almost always indicates a country is higher up on the regime scale as well. Western European democracies tend to have the highest scores for regulatory quality or political stability with democracies in developing countries falling not far behind. Of course, variation exists between countries, but because even the smallest regression tables consider over 300 country-year pairs and all six of the WGI variables, the deleterious effects of switching from Polity5 to WGI data is negligible.

In the short-term, the spending ratio results are nearly identical when controlling for regime score or *any* iteration of the WGI regression. *Table 6* shows that regardless of which WGI variables are added, the effect of spending ratio on one-year economic growth rates hovers between 0.13 and 0.14 percent for every one-point increase in spending as a percent of recipient country GDP. The results here closely compare to the effects of spending ratio on economic growth found in the one-year spending ratio regression in *Table 2*. Again, the effect of current year growth on one-year future growth is negligible.

As shown in *Table 6*, The effects of each individual WGI variable on one-year growth present interesting results. Only four of the coefficients are significant. First, political stability is highly correlated with increased growth rates in the short-term. For every point increase on the

Table 6

Foreign Aid Spending and 1-Year Economic Growth Rates (A) — Fixed Effects							
	Spending Ratio and World Governance Indicators						
	Effect on 1-Year Growth Rates						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Current Lag	-0.011 (0.030)	-0.033 (0.035)	-0.034 (0.035)	-0.034 (0.035)	-0.039 (0.035)	-0.042 (0.035)	-0.053 (0.034)
Spending Ratio	0.128*** (0.040)	0.139*** (0.036)	0.140*** (0.036)	0.137*** (0.036)	0.143*** (0.036)	0.140*** (0.036)	0.135*** (0.036)
Voice and Accountability		0.892 (0.862)	0.405 (0.919)	0.688 (0.930)	0.641 (0.930)	1.007 (0.952)	0.174 (0.963)
Political Stability			0.659 (0.435)	0.935** (0.459)	0.885* (0.460)	1.154** (0.485)	1.337*** (0.481)
Regulatory Quality				-1.655* (0.892)	-2.510** (1.078)	-1.897* (1.133)	-2.475** (1.128)
Government Effectiveness					1.519 (1.078)	1.792* (1.087)	0.724 (1.106)
Rule of Law						-2.260* (1.302)	-3.967*** (1.354)
Control of Corruption							4.568*** (1.138)
HDI	-2.845 (3.295)	-7.675* (4.014)	-7.053* (4.031)	-5.960 (4.066)	-5.903 (4.063)	-3.193 (4.346)	-1.747 (4.308)
Observations	870	690	690	690	690	690	690
R ²	0.014	0.030	0.033	0.039	0.042	0.047	0.072
Adjusted R ²	-0.097	-0.101	-0.099	-0.095	-0.093	-0.089	-0.063
F Statistic	3.802** (df = 3; 781)	4.649*** (df = 4; 607)	4.185*** (df = 5; 606)	4.075*** (df = 6; 605)	3.782*** (df = 7; 604)	3.697*** (df = 8; 603)	5.160*** (df = 9; 602)

Note: *p<0.1; **p<0.05; ***p<0.01

Table 7

Foreign Aid Spending and 5-Year Average Economic Growth Rates (A) — Fixed Effects							
	Spending Ratio and World Governance Indicators						
	Effect on 5-Year Average Growth Rates						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Past 5 Lag	0.001 (0.027)	-0.115*** (0.034)	-0.109*** (0.034)	-0.075** (0.034)	-0.082** (0.034)	-0.088*** (0.034)	-0.091*** (0.034)
Spending Ratio	-0.016 (0.021)	-0.008 (0.020)	-0.010 (0.020)	-0.013 (0.020)	-0.004 (0.020)	-0.008 (0.019)	-0.009 (0.019)
Voice and Accountability		1.575*** (0.470)	1.771*** (0.501)	1.943*** (0.491)	1.940*** (0.487)	2.473*** (0.493)	2.280*** (0.512)
Political Stability			-0.293 (0.258)	0.071 (0.263)	-0.014 (0.263)	0.313 (0.268)	0.342 (0.269)
Regulatory Quality				-2.378*** (0.497)	-3.180*** (0.565)	-2.349*** (0.584)	-2.455*** (0.589)
Government Effectiveness					1.650*** (0.567)	2.041*** (0.563)	1.853*** (0.579)
Rule of Law						-3.125*** (0.695)	-3.419*** (0.727)
Control of Corruption							0.817 (0.599)
HDI	-6.139*** (2.061)	-11.347*** (2.680)	-11.806*** (2.710)	-10.671*** (2.662)	-10.948*** (2.643)	-7.746*** (2.689)	-7.252*** (2.711)
Observations	750	570	570	570	570	570	570
R ²	0.016	0.096	0.098	0.139	0.153	0.187	0.190
Adjusted R ²	-0.111	-0.048	-0.047	-0.002	0.013	0.050	0.052
F Statistic	3.698** (df = 3; 663)	13.023*** (df = 4; 491)	10.683*** (df = 5; 490)	13.117*** (df = 6; 489)	12.627*** (df = 7; 488)	14.007*** (df = 8; 487)	12.679*** (df = 9; 486)

Note: *p<0.1; **p<0.05; ***p<0.01

WGI scale for stability, growth increases by nearly 1.4 percent. However, the coefficients for regulatory quality and rule of law are large negative numbers significant to at least the .05 level. Some political scientists speculate that in developing countries, inefficient bureaucracy and excessive regulation harms the business environment. That theory could explain the counterintuitive logic as to why, at least on a one-year period, regulation and rule of law are negatively associated with economic growth. Finally, control of corruption reports the largest coefficient of all the WGI variables. For every point increase on this scale, economic growth increases by over 4.5 percent for the following year. This result implies that corruption in recipient countries severely limits the effectiveness of foreign aid.

Many of the regression coefficients change for the five-year interval, as reflected in *Table 7*. Noticeably, the lagged dependent variable shows significance across each of the regression iterations, although the coefficients for lag4 are only slightly negative. The effect of spending ratio on economic growth completely disappeared in this regression. The WGI coefficients show that instead of political stability being sharply associated with growth, strong voice and accountability leads to higher economic growth. In fact, GDP growth rates increase by 2.3 percent on average through the five-year period following a one-point increase in the WGI voice and accountability variable. The same effect occurred with control of corruption and government effectiveness. The first significantly predicted economic growth on the one-year interval, whereas government spending did not influence growth. Averaging five-year growth, government effectiveness becomes significant and positively associated with growth. The only similarity across the two years is that the regulatory quality and rule of law indicators still negatively affect economic growth rates. A one-point increase in those WGI variables cuts down five-year average GDP growth by 2.5 and 3.4 percent, respectively.

Table 8

Foreign Aid Spending and 10-Year Average Economic Growth Rates (A) — Fixed Effects							
Spending Ratio and World Governance Indicators							
Effect on 10-Year Average Growth Rates							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Past 10 Lag	-0.212*** (0.021)	-0.310*** (0.023)	-0.295*** (0.023)	-0.278*** (0.023)	-0.278*** (0.023)	-0.270*** (0.023)	-0.272*** (0.024)
Spending Ratio	-0.040*** (0.014)	-0.035*** (0.011)	-0.039*** (0.011)	-0.040*** (0.011)	-0.040*** (0.011)	-0.040*** (0.011)	-0.041*** (0.011)
Voice and Accountability		0.371 (0.234)	0.726*** (0.242)	0.776*** (0.239)	0.776*** (0.240)	0.964*** (0.257)	0.929*** (0.269)
Political Stability			-0.720*** (0.161)	-0.605*** (0.164)	-0.606*** (0.164)	-0.558*** (0.165)	-0.555*** (0.165)
Regulatory Quality				-0.828*** (0.271)	-0.816*** (0.306)	-0.640** (0.317)	-0.643** (0.318)
Government Effectiveness					-0.030 (0.332)	0.007 (0.331)	-0.019 (0.337)
Rule of Law						-0.768** (0.389)	-0.827** (0.411)
Control of Corruption							0.149 (0.334)
HDI	4.527*** (1.485)	-1.689 (1.961)	-3.827* (1.969)	-4.359** (1.953)	-4.336** (1.971)	-4.415** (1.963)	-4.301** (1.982)
Observations	600	420	420	420	420	420	420
R ²	0.182	0.437	0.468	0.482	0.482	0.488	0.488
Adjusted R ²	0.047	0.312	0.348	0.363	0.361	0.367	0.365
F Statistic	38.225*** (df = 3; 514)	66.450*** (df = 4; 343)	60.075*** (df = 5; 342)	52.835*** (df = 6; 341)	45.157*** (df = 7; 340)	40.337*** (df = 8; 339)	35.792*** (df = 9; 338)

Note:

*p<0.1; **p<0.05; ***p<0.01

Finally, for the ten-year average growth rates shown in *Table 8*, foreign aid spending ratios have a slightly negative, but significant relationship with economic growth across the WGI regression iterations. The near zero coefficients suggest that these relationships reflect an underlying bias in the data, rather than a meaningful causal relationship between current-year foreign aid spending and ten-year average GDP growth. At this long-term interval, voice and accountability is the only WGI variable with a significantly positive coefficient. Political stability, regulatory quality, and rule of law are negatively associated with ten-year growth across the data set. Additionally, each coefficient is outside the 95 percent confidence interval. Clearly, long-run outcomes are determined by higher scores in these areas. The reasoning behind higher regulation and rule of law scores fits into current political theory. Perhaps the negative political stability coefficient depicts a skewed data set, but it does offer itself to future research.

Overall, the preceding regression tables show almost no effects of foreign aid spending ratios on economic growth further than one year in the future. Although the significance of each

WGI coefficient changes over each period, the signs generally stay consistent. Voice and accountability are highly significant for every regression iteration on the five- and ten-year periods. Political stability decreases each period, shifting from a significant positive association over a one-year period to a negative relationship with ten-year growth rates. Government effectiveness seems to have a slight positive to near zero effect on growth depending on the period. The regulatory quality and rule of law indicators are always associated with lower growth rates. Finally, the effect of corruption on economic growth is positive in every period but is not significant in the medium- and long-term.

For the second part of the analysis, I reproduce every WGI regression table using the exclusive data set that omitted outlier country-year pairs. Depending on the growth period in question, the exclusive data set had between 79 to 127 fewer country-year pairs. Israel and Afghanistan make up the bulk of exclusions, with Israel often receiving per capita spending 15 times higher than any other country in the same year. Afghanistan received massive military funding and economic stimulus packages from the United States for more than a decade after 9/11. Combined with war-torn infrastructure, low industrial productivity, and extremely limited exports, GDP stagnated for much of this period. American foreign aid increased the two countries' GDP by up to 50 percent in some years.

Table 9 shows the WGI regression for the one-year period using the exclusive data set. In this case, the spending ratio is highly positively correlated with economic growth. In every one-year WGI regression iteration, for a one percent increase in spending as a percent of GDP, a recipient countries' economic growth increases by more than 0.7 percent. Including every WGI indicator (regression 7) increases that effect to 0.83 percent. In this table, only three WGI coefficients show significance—political stability, rule of law, and control of corruption. A one-

Table 9

Foreign Aid Spending and 1-Year Economic Growth Rates (A) — No Outliers — Fixed Effects							
	Spending Ratio and World Governance Indicators						
	Effect on 1-Year Growth Rates						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Current Lag	0.332*** (0.037)	0.352*** (0.042)	0.349*** (0.043)	0.352*** (0.043)	0.347*** (0.043)	0.339*** (0.043)	0.323*** (0.043)
Spending Ratio	0.317 (0.231)	0.723*** (0.238)	0.730*** (0.239)	0.707*** (0.240)	0.733*** (0.242)	0.784*** (0.242)	0.835*** (0.242)
Voice and Accountability		0.927 (0.738)	0.800 (0.778)	0.911 (0.788)	0.873 (0.790)	1.327* (0.804)	0.855 (0.827)
Political Stability			0.189 (0.366)	0.291 (0.383)	0.277 (0.384)	0.623 (0.404)	0.712* (0.404)
Regulatory Quality				-0.723 (0.791)	-1.163 (0.957)	-0.377 (0.999)	-0.640 (1.001)
Government Effectiveness					0.767 (0.938)	1.185 (0.946)	0.637 (0.972)
Rule of Law						-2.926*** (1.128)	-3.578*** (1.159)
Control of Corruption							2.312** (1.007)
HDI	0.750 (2.983)	-3.084 (3.344)	-2.858 (3.375)	-2.694 (3.381)	-2.659 (3.382)	0.911 (3.634)	1.298 (3.622)
Observations	743	580	580	580	580	580	580
R ²	0.113	0.140	0.141	0.142	0.143	0.154	0.163
Adjusted R ²	0.010	0.018	0.017	0.016	0.016	0.027	0.035
F Statistic	28.273*** (df = 3; 665)	20.663*** (df = 4; 507)	16.560*** (df = 5; 506)	13.934*** (df = 6; 505)	12.031*** (df = 7; 504)	11.488*** (df = 8; 503)	10.884*** (df = 9; 502)

Note:

*p<0.1; **p<0.05; ***p<0.01

point increase in political stability raises GDP growth by 0.71 percent, whereas higher rule of law scores are significantly correlated to lower economic growth in the short-term.

The regression coefficient from the one-year inclusive data set reports a value nearly twice as high, suggesting that Israel, Afghanistan, and other omissions skew the stability variable. The same can be said about many of the other WGI variables. For example, corruption remains statistically significant for predicting one-year economic growth rates. For every point increase in that indicator, a country year pair sees an average growth increase of 2.31 percent. Finally, the rule of law coefficient remains statistically significant and highly negative.

The five-year, exclusion WGI regression *Table 10* further solidifies the findings from the previous regression sets. The spending ratio coefficients are slightly higher but still comparable to the effect of spending on growth rates found with the inclusive regime regression in *Table 5*. Controlling for each of the six WGI variables reports that for every one percent increase in spending as a percentage of GDP, recipient countries see an increase of 0.39 percent to five-year

Table 10

Foreign Aid Spending and 5-Year Average Economic Growth Rates (A) — No Outliers — Fixed Effects							
	Spending Ratio and World Governance Indicators						
	Effect on 5-Year Average Growth Rates						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Past 5 Lag	0.070** (0.029)	-0.033 (0.036)	-0.027 (0.036)	-0.007 (0.036)	-0.015 (0.036)	-0.020 (0.035)	-0.023 (0.035)
Spending Ratio	0.233* (0.132)	0.328** (0.163)	0.320* (0.163)	0.299* (0.161)	0.327** (0.161)	0.390** (0.156)	0.398** (0.156)
Voice and Accountability		1.378*** (0.484)	1.566*** (0.511)	1.649*** (0.505)	1.637*** (0.502)	2.222*** (0.499)	2.068*** (0.526)
Political Stability			-0.290 (0.254)	-0.038 (0.261)	-0.104 (0.261)	0.272 (0.263)	0.286 (0.263)
Regulatory Quality				-1.801*** (0.520)	-2.445*** (0.591)	-1.508** (0.599)	-1.578*** (0.604)
Government Effectiveness					1.332** (0.587)	1.937*** (0.580)	1.782*** (0.604)
Rule of Law						-3.816*** (0.725)	-3.952*** (0.740)
Control of Corruption							0.578 (0.620)
HDI	-3.830* (2.070)	-10.215*** (2.652)	-10.717*** (2.687)	-10.357*** (2.653)	-10.461*** (2.640)	-6.572** (2.662)	-6.333** (2.675)
Observations	642	479	479	479	479	479	479
R ²	0.017	0.063	0.066	0.092	0.104	0.161	0.163
Adjusted R ²	-0.114	-0.093	-0.092	-0.063	-0.053	0.012	0.012
F Statistic	3.194** (df = 3; 566)	6.853*** (df = 4; 410)	5.748*** (df = 5; 409)	6.914*** (df = 6; 408)	6.721*** (df = 7; 407)	9.729*** (df = 8; 406)	8.741*** (df = 9; 405)

Note:

*p<0.1; **p<0.05; ***p<0.01

average GDP growth. Both the accountability and government effectiveness variables demonstrate a strong positive relationship with five-year average economic growth. Consistent with the previous period and inclusive regression set, the regulatory quality and rule of law coefficients in *Table 10* report a distinct negative relationship to medium-term economic growth. Finally, the effect of HDI values on growth in each regression iteration are negative at around 6.5 percent for every single point change in HDI. The five-year period inclusive regression HDI coefficients in *Table 7* match closely with these findings as well. The effect of HDI is the most significant and negative at the five-year period of average economic growth rates.

Table 11 examines the effect of WGI indicators on ten-year economic growth when using the fixed effects model and exclusive data set. Interestingly, the effect of the lagged dependent variable becomes significant again, although this time the correlation coefficients are negative. In

Table 11

Foreign Aid Spending and 10-Year Average Economic Growth Rates (A) — No Outliers — Fixed Effects							
	Spending Ratio and World Governance Indicators						
	Effect on 10-Year Average Growth Rates						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Past 10 Lag	-0.203*** (0.023)	-0.307*** (0.024)	-0.288*** (0.024)	-0.277*** (0.024)	-0.278*** (0.024)	-0.265*** (0.024)	-0.265*** (0.024)
Spending Ratio	-0.019 (0.078)	-0.023 (0.086)	-0.029 (0.083)	-0.019 (0.082)	-0.010 (0.083)	0.007 (0.081)	0.007 (0.081)
Voice and Accountability		0.393 (0.243)	0.773*** (0.248)	0.780*** (0.246)	0.774*** (0.246)	1.155*** (0.258)	1.161*** (0.277)
Political Stability			-0.748*** (0.157)	-0.663*** (0.161)	-0.668*** (0.161)	-0.565*** (0.159)	-0.564*** (0.159)
Regulatory Quality				-0.617** (0.289)	-0.739** (0.309)	-0.413 (0.312)	-0.413 (0.313)
Government Effectiveness					0.378 (0.346)	0.497 (0.338)	0.500 (0.343)
Rule of Law						-1.631*** (0.406)	-1.626*** (0.415)
Control of Corruption							-0.020 (0.343)
HDI	7.549*** (1.564)	1.566 (2.078)	-0.850 (2.068)	-1.488 (2.077)	-1.610 (2.079)	-1.580 (2.027)	-1.594 (2.046)
Observations	521	358	358	358	358	358	358
R ²	0.157	0.410	0.453	0.461	0.463	0.492	0.492
Adjusted R ²	0.018	0.276	0.326	0.334	0.335	0.368	0.366
F Statistic	27.761*** (df = 3; 446)	50.508*** (df = 4; 291)	47.959*** (df = 5; 290)	41.218*** (df = 6; 289)	35.525*** (df = 7; 288)	34.737*** (df = 8; 287)	30.770*** (df = 9; 286)

Note: *p<0.1; **p<0.05; ***p<0.01

fact, using these models, the lagged variable coefficients consistently decreased from the one- to ten-year periods for their effect on average economic growth. In the long-term, a one percent higher historical ten-year average growth rate leads to a 0.26 percent decrease in future ten-year average growth in the studied country-year pairs. After this long period, the effect of the spending ratio variable on growth has all but disappeared. This result was expected and underscores the findings from Larsen (2007) along with other “repeated donations” scholars. However, the massive variability in results across different regressions and data sets should not discount Chatterjee and Turnovsky (2007), who argue that excessive, undirected aid funding can inundate foreign economies and dissuade future growth.

Through this analysis, I spent no time discussing R-squared values for each regression iteration because none of the regressions explain more than about 49 percent of the variation in economic growth due to the included variables. Though the variables incorporated into the regression models aimed to capture as much of the effect of political, social, and economic

trends on future growth, countries are far too complex to model effectively with current data and model limitations. These variables do not capture, for example, social interactions, individual behavior, detailed macroeconomic statistics, or a litany of other important factors that may influence the effects of foreign aid on economic growth. The R-squared values at some ten-year intervals only approach .5 because in the long-term, small behaviors and inconsistencies tend to cancel themselves out. Relatively stable institutional factors determine growth at longer periods. The extremely low R-squared values at both the one- and five-year intervals demonstrate this short-term variability.

Except for the two ten-year regime regressions, HDI is not positively correlated with economic growth. This suggests that income convergence is occurring for the country-year pairs in the data set, with poorer nations experiencing higher growth rates compared to wealthier nations. Although the economic literature and theory behind this relationship is conflicting, I argue that country-year pairs with lower human development in this data set undoubtedly have better economic outcomes. The figures on the following page show a slight downward trend for one-year growth rates. The data in *Figure 1* has relatively low variance, but because random political or economic events can influence short-term trends, the regression line is nearly flat. However, as the periods for measuring growth get longer, the regression line becomes steeper in the negative direction, showing that higher human development is associated with lower medium- and long-term economic growth. The variance in these models gets larger as the period studied lengthens, which suggests that other variables (previously controlled for in the regression models) play a large role in determining non-immediate economic growth.

Figure 1

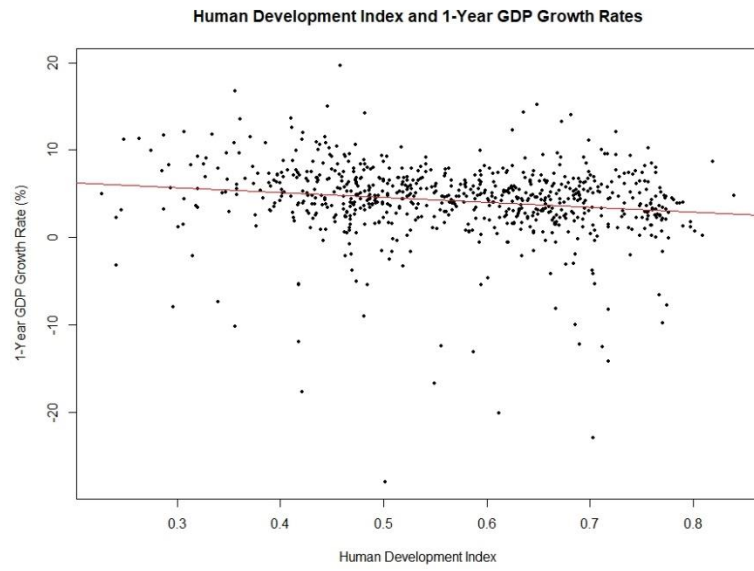


Figure 2

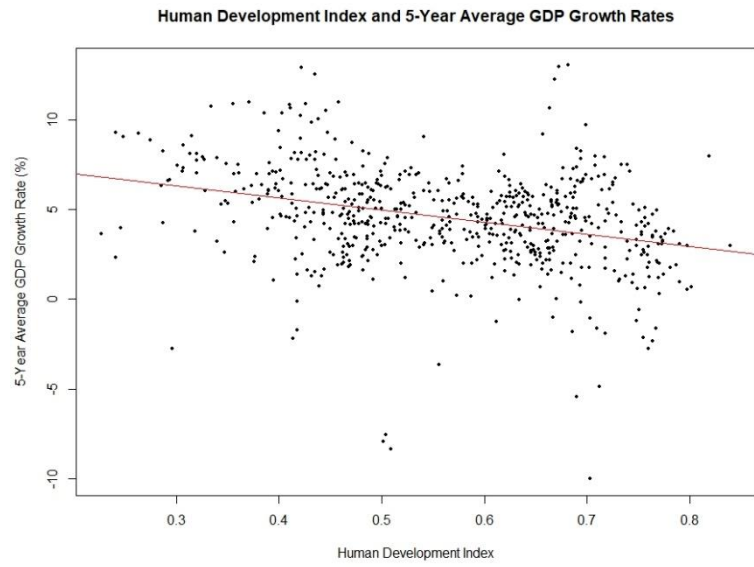
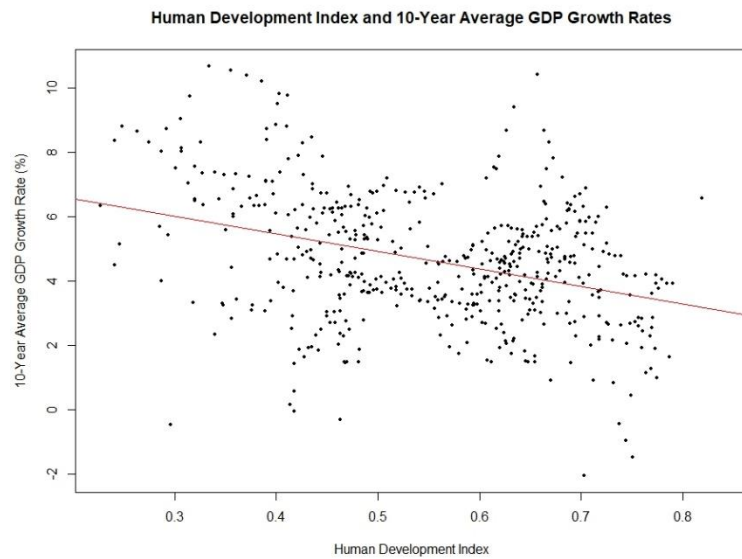


Figure 3



Discussion and Concluding Thoughts

As expected, this statistical analysis did not reach a definitive conclusion on the effects of foreign aid on economic growth. One finding is clear: the political, social, and institutional track records of countries do heavily factor into future rates of economic growth. Interestingly, the recipient country institutional effects depend greatly on the period in question. When considering the exclusive, fixed effects WGI models—the most robust findings in the regression analysis—American foreign aid funding is extremely influential at predicting growth rates for the subsequent year and had some effect on average five-year growth trends. But when considering ten-year growth, the effect is near zero. This confirms literature that argues for repeated foreign aid distributions as a tool to achieve long-term economic growth in developing countries (Larsen 2007) and underscores the importance of continued policy homogeneity and specific research (Dutta and Williamson 2019).

In nearly every regression model, higher WGI scores for the rule of law and regulatory quality variable led to decreased prospects for economic growth. Again, this aligns with the political theory that excessive regulation can quash small businesses and discourage investment. Conversely, the other four WGI variables were positive or near zero influence on economic growth across spending variables, political controls, and measured growth intervals. These findings confirm broader political science research that argues that effective, stable, and accountable governments create more attractive investment opportunities not just for their citizens but also for international partners like the United States.

Countries with severely deficient human development do not offer strong opportunities for economic growth. Humanitarian assistance would be the most valuable tool for rebuilding countries from war, famine, or other hardship, but in general, extremely poor countries only see

high growth rates because they cannot go anywhere but up in terms of GDP. Growth rates in low HDI countries also vary drastically from year to year, making foreign aid a less stable investment. Countries with mid-range social development present the best opportunities to inject foreign aid to create economic growth because at a basic level, market structures are likely place. Still individual welfare is low, and both human and physical capital investment massively improve outcomes. Mid-value HDI countries teeter on the inflection point of the S-curve for macroeconomic development. With outside investment and support from international partners, nothing prevents these countries from growing in the long-term. This contradicts the effects of HDI on growth in the regression models. But the statistical analyses do not control for wider income and HDI convergence among developing countries. The effect of the lagged dependent variable on future economic growth emphasizes the importance of the S-curve inflection point. Current year lag positively and significantly affects growth in nearly every regression model, especially in those using the exclusion data set. The positive effects of historical growth all but disappear when considering the five-year average growth rates and turn negative in most models at the ten-year growth period. This implies that recent, rapid economic improvements benefit future growth, but that older events or macroeconomic shifts are not deterministic and even contrarian to growth. Combined with larger effects of American foreign aid spending in shorter periods, the United States can capitalize on short-term growth by further contributing aid money. In theory, effective implementation and repeated donations can ensure long-term economic growth.

A major consideration for policymaking and future spending decisions in the United States surrounds the inclusive and exclusive data sets. The effects of nearly every variable (including spending ratio coefficients) immensely increase when using the exclusive data set that

eliminates “dependency countries.” Again, Israel-year pairs receive far more spending per capita than other country-year pairs, which reflects the influx of military funding to Israel. When considering spending ratios, Afghanistan simultaneously decreased production with higher American military and nation-building funds during its civil war. In essence, policymakers must think about median aid recipient countries in order to better characterize and understand the effects of foreign aid on economic growth.

The United States can and should drastically increase foreign aid spending in a way that benefits both recipient and domestic economies. Investing in relatively democratic, mid-range socially developed countries with very recent track records of economic growth present the most attractive opportunities for foreign aid distribution. Politicians should apply these results when considering future changes to aid distribution.

Most importantly, recipient countries have vastly different political and economic institutions that also change over time. A surefire way to achieve the effective implementation foreign aid is to specifically and wholistically analyze recipient country institutions (Edwards 2014). Every case of aid distribution will go to different programs and flow through different channels. If anything, this nuance should push academics in their future research to control for more specific variables and continue to standardize measurement in the future. Most importantly, this analysis shows that foreign aid funding leads to varying economic growth trends when controlling for slightly different measures of political and human development. Insignificance stems from many of the results because the variance in any specific variable to is too high to make assumptions about specific cases. Regardless of how or to whom foreign aid is distributed, researchers and policymakers alike must review each case individually to consider idiosyncratic institutions.

On a related note, the issues and limitations with this analysis are numerous. Over the course of research and writing, the size of the data set dwindled. First, I push back the starting year from 1950 until 1991. This choice reflected limited data and an overly complex Cold War history dotted with systemic foreign policy institutional changes and broader political shifts as well. It made more sense to cover a shorter period but may detract from the applicability of this analysis to other time periods. Regarding the finalized, shortened data set, many exclusions and replacements were made as well. Although this ensures statistical precision and completeness, it may alter the regression coefficients because the original cross-sectional data points had different values.

Fundamental to political science more broadly, everything from individual behavior to random events go unmeasured in regression analyses despite having a significant effect on variable outcomes. In this case, the lacking data combined with complex economic interactions means that the independent and control variables rarely account for more than 20 percent of variation in recipient country economic growth. The regressions lack sufficient explanatory power to make this analysis a definitive statement in the foreign aid literature. But that does not make it worthless. Although my paper does not aim to or ultimately discover the “ideal conditions” for foreign aid at creating economic growth, the results are telling for the literature. I hope that future political science research can build on this thesis by using more accurate, standardized, and objective measures of institutions and foreign aid spending to continually increase our nuanced understanding of these interactions and inform strong policymaking.

Appendix and Citations

Table 12

Foreign Aid Spending and Economic Growth Rates (Polity IV Regime Rankings)						
	Average Growth Rates					
	1-Year	2	3	5-Year	4	10-Year
	(1)	(2)	(3)	(4)	(5)	(6)
Current Lag	0.116*** (0.029)	0.118*** (0.029)				
Past 5 Lag			0.141*** (0.024)	0.142*** (0.024)		
Past 10 Lag					-0.029 (0.020)	-0.027 (0.020)
Spending Ratio	0.067*** (0.021)		0.016 (0.013)	0.002*** (0.001)	0.031** (0.012)	0.001* (0.001)
Spending PC		0.004** (0.002)				
Regime	0.081** (0.035)	0.062* (0.035)	0.001 (0.021)	-0.006 (0.020)	0.002 (0.016)	-0.007 (0.016)
HDI	-5.245*** (1.869)	-6.662*** (1.925)	-4.778*** (1.116)	-5.618*** (1.143)	-4.753*** (0.870)	-5.348*** (0.900)
EAO	-0.345 (0.795)	0.237 (0.837)	0.637 (0.469)	1.086** (0.495)	0.105 (0.363)	0.334 (0.391)
EU	-1.038 (0.633)	-0.333 (0.688)	0.119 (0.384)	0.620 (0.418)	-0.371 (0.307)	-0.063 (0.345)
SCA	-1.128 (0.734)	-0.354 (0.739)	0.281 (0.444)	0.659 (0.447)	0.101 (0.348)	0.376 (0.364)
SSA	-0.256 (0.688)	0.126 (0.708)	0.292 (0.424)	0.575 (0.435)	-0.134 (0.340)	0.005 (0.353)
WH	-1.535** (0.636)	-0.975 (0.672)	-0.863** (0.388)	-0.459 (0.410)	-1.593*** (0.307)	-1.352*** (0.334)
Constant	7.187*** (1.385)	7.578*** (1.385)	6.741*** (0.828)	6.834*** (0.823)	7.826*** (0.650)	7.989*** (0.648)
Observations	870	870	750	750	600	600
R ²	0.074	0.070	0.172	0.179	0.252	0.249
Adjusted R ²	0.064	0.060	0.162	0.169	0.240	0.237
Residual Std. Error	4.685 (df = 860)	4.695 (df = 860)	2.592 (df = 740)	2.581 (df = 740)	1.759 (df = 590)	1.763 (df = 590)
F Statistic	7.601*** (df = 9; 860)	7.184*** (df = 9; 860)	17.052*** (df = 9; 740)	17.898*** (df = 9; 740)	22.064*** (df = 9; 590)	21.699*** (df = 9; 590)

Note:

*p<0.1; **p<0.05; ***p<0.01

Table 13

Foreign Aid Spending and 1-Year Economic Growth Rates (A)							
	Spending Ratio and World Governance Indicators						
	Effect on 1-Year Growth Rates						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Current Lag	0.120*** (0.029)	0.078** (0.034)	0.076** (0.034)	0.075** (0.034)	0.061* (0.034)	0.061* (0.034)	0.056 (0.034)
Spending Ratio	0.060*** (0.021)	0.044** (0.020)	0.046** (0.020)	0.047** (0.020)	0.053*** (0.020)	0.052*** (0.020)	0.044** (0.020)
Voice and Accountability		-0.306 (0.319)	-0.479 (0.376)	-0.598 (0.447)	-0.798* (0.448)	-0.728 (0.463)	-0.815* (0.464)
Political Stability			0.218 (0.252)	0.196 (0.256)	0.126 (0.255)	0.190 (0.275)	0.199 (0.275)
Regulatory Quality				0.234 (0.470)	-1.428** (0.710)	-1.315* (0.733)	-1.145 (0.736)
Government Effectiveness					2.198*** (0.706)	2.380*** (0.765)	1.701** (0.829)
Rule of Law						-0.433 (0.801)	-1.261 (0.801)
Control of Corruption							1.574** (0.751)
HDI	-3.378** (1.685)	-3.227 (2.158)	-3.004 (2.174)	-3.445 (2.349)	-5.553** (2.430)	-5.571** (2.431)	-5.356** (2.428)
EA0	0.232 (0.756)	0.376 (0.789)	0.463 (0.796)	0.517 (0.804)	0.407 (0.799)	0.247 (0.840)	0.651 (0.860)
EU	-0.548 (0.597)	0.357 (0.615)	0.278 (0.622)	0.361 (0.644)	0.734 (0.651)	0.565 (0.706)	0.731 (0.709)
SCA	-0.560 (0.692)	0.353 (0.743)	0.453 (0.752)	0.512 (0.762)	0.017 (0.773)	-0.044 (0.780)	0.368 (0.802)
SSA	0.371 (0.633)	0.630 (0.705)	0.626 (0.705)	0.650 (0.707)	0.460 (0.705)	0.357 (0.725)	0.368 (0.723)
WH	-0.901 (0.574)	-0.843 (0.624)	-0.840 (0.624)	-0.824 (0.626)	-0.219 (0.651)	-0.449 (0.750)	-0.513 (0.749)
Constant	5.846*** (1.258)	5.777*** (1.699)	5.783*** (1.700)	6.033*** (1.773)	7.580*** (1.831)	7.672*** (1.838)	7.704*** (1.833)
Observations	870	690	690	690	690	690	690
R ²	0.068	0.071	0.072	0.072	0.085	0.086	0.092
Adjusted R ²	0.059	0.059	0.058	0.057	0.069	0.068	0.073
Residual Std. Error	4.697 (df= 861)	4.216 (df= 680)	4.217 (df= 679)	4.219 (df= 678)	4.192 (df= 677)	4.194 (df= 676)	4.184 (df= 675)
F Statistic	7.857*** (df= 8, 861)	5.759*** (df= 9, 680)	5.256*** (df= 10, 679)	4.795*** (df= 11, 678)	5.259*** (df= 12, 677)	4.879*** (df= 13, 676)	4.868*** (df= 14, 675)

Note:

*p<0.1; **p<0.05; ***p<0.01

Table 14

Foreign Aid Spending and 5-Year Average Economic Growth Rates (A)							
Spending Ratio and World Governance Indicators							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Past 5 Lag	0.142*** (0.024)	0.121*** (0.032)	0.120*** (0.032)	0.129*** (0.032)	0.124*** (0.031)	0.125*** (0.031)	0.122*** (0.031)
Spending Ratio	0.016 (0.012)	0.005 (0.013)	0.005 (0.013)	0.001 (0.013)	0.008 (0.013)	0.008 (0.013)	0.004 (0.013)
Voice and Accountability		-0.198 (0.210)	-0.232 (0.252)	0.064 (0.301)	-0.308 (0.298)	-0.293 (0.312)	-0.356 (0.313)
Political Stability			0.042 (0.171)	0.087 (0.172)	0.028 (0.167)	0.038 (0.178)	0.047 (0.177)
Regulatory Quality				-0.575* (0.322)	-2.616*** (0.454)	-2.597*** (0.470)	-2.479*** (0.474)
Government Effectiveness					2.845*** (0.459)	2.877*** (0.501)	2.484*** (0.552)
Rule of Law						-0.076 (0.468)	-0.504 (0.532)
Control of Corruption							0.845* (0.501)
HDI	-4.753*** (1.017)	-4.993*** (1.449)	-4.939*** (1.467)	-3.860** (1.584)	-6.445*** (1.590)	-6.453*** (1.592)	-6.465*** (1.589)
EAO	0.645 (0.443)	0.929* (0.518)	0.950* (0.525)	0.788 (0.532)	0.731 (0.515)	0.702 (0.547)	0.923 (0.561)
EU	0.126 (0.357)	0.693* (0.408)	0.678 (0.413)	0.460 (0.430)	0.993** (0.425)	0.963** (0.464)	1.049** (0.466)
SCA	0.289 (0.416)	0.667 (0.507)	0.688 (0.515)	0.508 (0.524)	-0.118 (0.517)	-0.131 (0.524)	0.096 (0.540)
SSA	0.300 (0.393)	0.453 (0.491)	0.457 (0.492)	0.384 (0.492)	0.153 (0.478)	0.131 (0.497)	0.099 (0.497)
WH	-0.854** (0.346)	-0.849** (0.426)	-0.843** (0.427)	-0.896** (0.427)	-0.135 (0.432)	-0.177 (0.506)	-0.228 (0.506)
Constant	6.722*** (0.753)	6.860*** (1.137)	6.850*** (1.139)	6.245*** (1.186)	8.067*** (1.186)	8.086*** (1.192)	8.193*** (1.192)
Observations	750	570	570	570	570	570	570
R ²	0.172	0.175	0.176	0.180	0.233	0.233	0.237
Adjusted R ²	0.163	0.162	0.161	0.164	0.216	0.215	0.218
Residual Std. Error	2.590 (df=741)	2.571 (df=560)	2.573 (df=559)	2.568 (df=558)	2.486 (df=557)	2.488 (df=556)	2.484 (df=555)
F Statistic	19.209*** (df=8; 741)	13.240*** (df=9; 560)	11.902*** (df=10; 559)	11.153*** (df=11; 558)	14.102*** (df=12; 557)	12.996*** (df=13; 556)	12.311*** (df=14; 555)

Note:

*p<0.1; **p<0.05; ***p<0.01

Table 15

Foreign Aid Spending and 10-Year Average Economic Growth Rates (A)							
Spending Ratio and World Governance Indicators							
Effect on 10-Year Average Growth Rates							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Past 10 Lag	-0.029 (0.020)	-0.038 (0.024)	-0.040* (0.024)	-0.041* (0.024)	-0.040* (0.024)	-0.047* (0.024)	-0.048** (0.024)
Spending Ratio	0.030** (0.012)	0.012 (0.012)	0.009 (0.012)	0.010 (0.012)	0.012 (0.012)	0.015 (0.012)	0.012 (0.012)
Voice and Accountability		-0.203 (0.160)	0.035 (0.197)	-0.005 (0.229)	-0.169 (0.236)	-0.395 (0.247)	-0.432* (0.249)
Political Stability			-0.277** (0.135)	-0.286** (0.138)	-0.299** (0.137)	-0.429*** (0.143)	-0.421*** (0.143)
Regulatory Quality				0.085 (0.245)	-0.589* (0.354)	-0.806** (0.359)	-0.738** (0.364)
Government Effectiveness					1.001*** (0.382)	0.534 (0.414)	0.303 (0.456)
Rule of Law						1.017*** (0.407)	0.791* (0.407)
Control of Corruption							0.477 (0.400)
HDI	-4.707*** (0.793)	-5.967*** (1.168)	-6.581*** (1.201)	-6.739*** (1.286)	-7.702*** (1.329)	-7.695*** (1.317)	-7.906*** (1.329)
EAO	0.120 (0.342)	0.316 (0.399)	0.093 (0.412)	0.114 (0.417)	0.185 (0.415)	0.574 (0.434)	0.695 (0.445)
EU	-0.355 (0.280)	-0.212 (0.322)	-0.165 (0.321)	-0.132 (0.335)	0.114 (0.346)	0.533 (0.374)	0.590 (0.377)
SCA	0.118 (0.321)	0.117 (0.405)	-0.118 (0.419)	-0.088 (0.428)	-0.303 (0.433)	-0.101 (0.435)	0.008 (0.444)
SSA	-0.117 (0.314)	-0.308 (0.404)	-0.451 (0.408)	-0.443 (0.410)	-0.527 (0.408)	-0.195 (0.421)	-0.266 (0.425)
WH	-1.573*** (0.267)	-1.534*** (0.331)	-1.649*** (0.334)	-1.639*** (0.336)	-1.340*** (0.353)	-0.747* (0.408)	-0.782* (0.409)
Constant	7.790*** (0.588)	8.868*** (0.916)	9.178*** (0.924)	9.263*** (0.958)	9.884*** (0.980)	9.673*** (0.975)	9.874*** (0.988)
Observations	600	420	420	420	420	420	420
R ²	0.252	0.307	0.314	0.314	0.325	0.338	0.341
Adjusted R ²	0.242	0.291	0.297	0.295	0.305	0.317	0.318
Residual Std. Error	1.757 (df = 591)	1.676 (df = 410)	1.669 (df = 409)	1.671 (df = 408)	1.659 (df = 407)	1.645 (df = 406)	1.644 (df = 405)
F Statistic	24.862*** (df = 8; 591)	20.148*** (df = 9; 410)	18.697*** (df = 10; 409)	16.971*** (df = 11; 408)	16.350*** (df = 12; 407)	15.965*** (df = 13; 406)	14.941*** (df = 14; 405)

Note:

*p<0.1; **p<0.05; ***p<0.01

Table 16

Foreign Aid Spending and 1-Year Economic Growth Rates (B)							
Spending Per Capita and World Governance Indicators							
Effect on 1-Year Growth Rates							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Current Lag	0.121*** (0.029)	0.077** (0.034)	0.074** (0.034)	0.074** (0.034)	0.062* (0.034)	0.062* (0.035)	0.058* (0.035)
Spending PC	0.004** (0.002)	0.004** (0.002)	0.004** (0.002)	0.004** (0.002)	0.004** (0.002)	0.004** (0.002)	0.003 (0.002)
Voice and Accountability		-0.462 (0.321)	-0.721* (0.388)	-0.742 (0.454)	-0.914** (0.456)	-0.809* (0.468)	-0.856* (0.468)
Political Stability			0.306 (0.258)	0.301 (0.263)	0.230 (0.263)	0.335 (0.285)	0.301 (0.285)
Regulatory Quality				0.040 (0.468)	-1.484** (0.711)	-1.306* (0.734)	-1.146 (0.737)
Government Effectiveness					1.996*** (0.704)	2.289*** (0.765)	1.668** (0.832)
Rule of Law						-0.682 (0.696)	-1.408* (0.796)
Control of Corruption							1.464* (0.781)
HDI	-5.200*** (1.738)	-4.331** (2.180)	-4.145* (2.185)	-4.221* (2.360)	-6.150** (2.444)	-6.187** (2.445)	-5.828** (2.448)
EAO	0.917 (0.795)	0.917 (0.844)	1.125 (0.862)	1.132 (0.867)	1.003 (0.864)	0.772 (0.895)	0.975 (0.900)
EU	0.055 (0.652)	0.946 (0.681)	0.922 (0.681)	0.935 (0.698)	1.258* (0.704)	1.007 (0.749)	1.020 (0.748)
SCA	0.057 (0.702)	0.968 (0.748)	1.172 (0.768)	1.182 (0.778)	0.753 (0.789)	0.655 (0.795)	0.883 (0.803)
SSA	0.622 (0.650)	0.961 (0.732)	1.012 (0.733)	1.014 (0.734)	0.821 (0.734)	0.672 (0.749)	0.577 (0.750)
WH	-0.475 (0.610)	-0.354 (0.677)	-0.273 (0.680)	-0.272 (0.680)	0.259 (0.702)	-0.088 (0.787)	-0.276 (0.792)
Constant	6.507*** (1.245)	5.927*** (1.696)	5.929*** (1.696)	5.974*** (1.775)	7.405*** (1.836)	7.542*** (1.842)	7.623*** (1.839)
Observations	870	690	690	690	690	690	690
R ²	0.067	0.070	0.072	0.072	0.083	0.084	0.089
Adjusted R ²	0.058	0.058	0.058	0.057	0.067	0.067	0.070
Residual Std. Error	4.700 (df= 861)	4.218 (df= 680)	4.216 (df= 679)	4.220 (df= 678)	4.198 (df= 677)	4.198 (df= 676)	4.190 (df= 675)
F Statistic	7.677*** (df= 8, 861)	5.689*** (df= 9, 680)	5.263*** (df= 10, 679)	4.778*** (df= 11, 678)	5.095*** (df= 12, 677)	4.777*** (df= 13, 676)	4.703*** (df= 14, 675)

Note:

*p<0.1; **p<0.05; ***p<0.01

Table 17

Foreign Aid Spending and 5-Year Average Economic Growth Rates (B)							
	Spending Per Capita and World Governance Indicators						
	Effect on 5-Year Average Growth Rates						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Past 5 Lag	0.142*** (0.023)	0.119*** (0.031)	0.118*** (0.031)	0.126*** (0.032)	0.124*** (0.031)	0.124*** (0.031)	0.122*** (0.031)
Spending PC	0.002*** (0.001)	0.002 (0.001)	0.002* (0.001)	0.002* (0.001)	0.002* (0.001)	0.002* (0.001)	0.001 (0.001)
Voice and Accountability		-0.246 (0.209)	-0.355 (0.260)	-0.056 (0.308)	-0.405 (0.303)	-0.382 (0.316)	-0.410 (0.317)
Political Stability			0.126 (0.177)	0.176 (0.178)	0.103 (0.173)	0.120 (0.184)	0.106 (0.184)
Regulatory Quality				-0.573* (0.317)	-2.610*** (0.452)	-2.578*** (0.469)	-2.489*** (0.474)
Government Effectiveness					2.804*** (0.457)	2.858*** (0.500)	2.556*** (0.554)
Rule of Law						-0.124 (0.464)	-0.444 (0.528)
							0.665 (0.523)
Control of Corruption							
HDI	-5.748*** (1.045)	-5.448*** (1.465)	-5.348*** (1.472)	-4.233*** (1.594)	-6.771*** (1.598)	-6.785*** (1.600)	-6.703*** (1.601)
EAO	1.041** (0.467)	1.263*** (0.556)	1.369*** (0.576)	1.211** (0.581)	1.099* (0.563)	1.054* (0.589)	1.138* (0.592)
EU	0.579 (0.391)	1.030** (0.456)	1.029** (0.456)	0.806* (0.471)	1.299*** (0.464)	1.251** (0.497)	1.244** (0.497)
SCA	0.619 (0.423)	0.883* (0.512)	0.981* (0.530)	0.779 (0.541)	0.170 (0.533)	0.147 (0.540)	0.245 (0.546)
SSA	0.529 (0.402)	0.671 (0.508)	0.712 (0.512)	0.645 (0.512)	0.378 (0.498)	0.344 (0.514)	0.265 (0.517)
WH	-0.510 (0.369)	-0.553 (0.463)	-0.496 (0.470)	-0.548 (0.470)	0.166 (0.470)	0.098 (0.534)	-0.011 (0.541)
Constant	6.933*** (0.742)	6.810*** (1.134)	6.775*** (1.135)	6.152*** (1.184)	7.967*** (1.184)	7.997*** (1.191)	8.105*** (1.193)
Observations	750	570	570	570	570	570	570
R ²	0.179	0.179	0.180	0.185	0.236	0.236	0.239
Adjusted R ²	0.170	0.166	0.165	0.169	0.220	0.219	0.219
Residual Std. Error	2.579 (df = 741)	2.565 (df = 560)	2.566 (df = 559)	2.561 (df = 558)	2.481 (df = 557)	2.483 (df = 556)	2.481 (df = 555)
F Statistic	20.150*** (df = 8; 741)	13.588*** (df = 9; 560)	12.269*** (df = 10; 559)	11.496*** (df = 11; 558)	14.367*** (df = 12; 557)	13.246*** (df = 13; 556)	12.429*** (df = 14; 555)

Note:

*p<0.1; **p<0.05; ***p<0.01

Table 18

Foreign Aid Spending and 10-Year Average Economic Growth Rates (B)							
Spending Per Capita and World Governance Indicators							
Effect on 10-Year Average Growth Rates							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Past 10 Lag	-0.028 (0.020)	-0.038 (0.024)	-0.039 (0.024)	-0.040 (0.024)	-0.038 (0.024)	-0.044* (0.024)	-0.046* (0.024)
Spending PC	0.001* (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.0002 (0.001)
Voice and Accountability		-0.241 (0.160)	-0.004 (0.207)	-0.029 (0.238)	-0.187 (0.244)	-0.400 (0.254)	-0.419 (0.255)
Political Stability			-0.258* (0.144)	-0.264* (0.147)	-0.278* (0.146)	-0.404*** (0.152)	-0.414*** (0.152)
Regulatory Quality				0.052 (0.240)	-0.616* (0.353)	-0.833** (0.359)	-0.756** (0.364)
Government Effectiveness					0.982** (0.382)	0.529 (0.414)	0.280 (0.459)
Rule of Law						0.974*** (0.359)	0.735* (0.406)
							0.519 (0.415)
Control of Corruption							
HDI	-5.492*** (0.831)	-6.415*** (1.193)	-6.776*** (1.207)	-6.879*** (1.300)	-7.829*** (1.343)	-7.835*** (1.332)	-7.983*** (1.337)
EAO	0.275 (0.365)	0.526 (0.436)	0.199 (0.471)	0.211 (0.475)	0.274 (0.473)	0.641 (0.488)	0.692 (0.490)
EU	-0.122 (0.315)	0.028 (0.369)	-0.057 (0.371)	-0.035 (0.385)	0.204 (0.393)	0.606 (0.418)	0.599 (0.417)
SCA	0.317 (0.335)	0.319 (0.422)	0.003 (0.456)	0.023 (0.466)	-0.186 (0.470)	0.017 (0.472)	0.060 (0.473)
SSA	-0.054 (0.323)	-0.186 (0.418)	-0.393 (0.433)	-0.388 (0.434)	-0.476 (0.432)	-0.163 (0.444)	-0.289 (0.455)
WH	-1.421*** (0.290)	-1.338*** (0.367)	-1.555*** (0.386)	-1.548*** (0.387)	-1.259*** (0.401)	-0.694 (0.449)	-0.799* (0.456)
Constant	8.109*** (0.580)	8.928*** (0.912)	9.207*** (0.922)	9.263*** (0.959)	9.878*** (0.982)	9.682*** (0.977)	9.916*** (0.994)
Observations	600	420	420	420	420	420	420
R ²	0.248	0.308	0.313	0.313	0.324	0.336	0.339
Adjusted R ²	0.238	0.293	0.297	0.295	0.305	0.315	0.316
Residual Std. Error	1.761 (df = 591)	1.674 (df = 410)	1.669 (df = 409)	1.671 (df = 408)	1.660 (df = 407)	1.647 (df = 406)	1.646 (df = 405)
F Statistic	24.423*** (df = 8; 591)	20.277*** (df = 9; 410)	18.669*** (df = 10; 409)	16.936*** (df = 11; 408)	16.288*** (df = 12; 407)	15.838*** (df = 13; 406)	14.839*** (df = 14; 405)

Note:

*p<0.1; **p<0.05; ***p<0.01

Table 19

Foreign Aid Spending and Economic Growth Rates (Polity IV Regime Rankings) — No Outliers						
	Average Growth Rates					
	1-Year		5-Year		10-Year	
	(1)	(2)	(3)	(4)	(5)	(6)
Current Lag	0.451*** (0.032)	0.447*** (0.032)				
Past 5 Lag			0.179*** (0.024)	0.164*** (0.025)	-0.013 (0.021)	-0.027 (0.021)
Past 10 Lag						
Spending Ratio	0.303** (0.143)		0.483*** (0.098)		0.309*** (0.077)	
Spending PC		0.023** (0.010)		0.022*** (0.007)		0.009 (0.006)
Regime	0.076** (0.030)	0.070** (0.030)	0.002 (0.020)	-0.005 (0.021)	0.017 (0.016)	0.014 (0.017)
HDI	-0.814 (1.792)	-2.194 (1.681)	-2.385* (1.220)	-4.534*** (1.164)	-2.819*** (1.024)	-4.229*** (0.980)
EAO	0.696 (0.726)	1.109 (0.780)	2.113*** (0.497)	2.277*** (0.541)	0.819* (0.418)	0.693 (0.456)
EU	-0.147 (0.625)	0.146 (0.642)	1.242*** (0.440)	1.452*** (0.456)	0.026 (0.379)	0.009 (0.395)
SCA	0.695 (0.682)	1.012 (0.724)	1.895*** (0.474)	1.950*** (0.507)	0.936** (0.403)	0.764* (0.433)
SSA	0.872 (0.607)	1.248* (0.644)	1.648*** (0.431)	1.893*** (0.462)	0.645* (0.373)	0.592 (0.402)
WH	-0.207 (0.597)	0.037 (0.612)	0.356 (0.420)	0.516 (0.435)	-1.045*** (0.358)	-1.082*** (0.371)
Constant	1.894 (1.320)	2.384* (1.228)	3.470*** (0.900)	4.762*** (0.844)	5.721*** (0.759)	6.797*** (0.712)
Observations	743	743	642	642	521	521
R ²	0.268	0.268	0.239	0.222	0.242	0.222
Adjusted R ²	0.259	0.259	0.228	0.211	0.229	0.208
Residual Std. Error	3.773 (df = 733)	3.771 (df = 733)	2.396 (df = 632)	2.422 (df = 632)	1.741 (df = 511)	1.764 (df = 511)
F Statistic	29.763*** (df = 9; 733)	29.875*** (df = 9; 733)	22.059*** (df = 9; 632)	20.025*** (df = 9; 632)	18.114*** (df = 9; 511)	16.179*** (df = 9; 511)

Note:

* p<0.1; ** p<0.05; *** p<0.01

Table 20

Foreign Aid Spending and 1-Year Economic Growth Rates (A) — No Outliers							
	Spending Ratio and World Governance Indicators						
	Effect on 1-Year Growth Rates						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Current Lag	0.459*** (0.032)	0.438*** (0.040)	0.438*** (0.040)	0.441*** (0.040)	0.427*** (0.041)	0.428*** (0.041)	0.426*** (0.041)
Spending Ratio	0.277* (0.144)	0.534*** (0.155)	0.535*** (0.158)	0.528*** (0.159)	0.561*** (0.159)	0.595*** (0.162)	0.593*** (0.162)
Voice and Accountability		-0.260 (0.266)	-0.255 (0.330)	-0.140 (0.393)	-0.258 (0.396)	-0.129 (0.413)	-0.141 (0.415)
Political Stability			-0.005 (0.228)	0.011 (0.230)	-0.053 (0.232)	0.022 (0.241)	0.019 (0.241)
Regulatory Quality				-0.226 (0.419)	-1.049* (0.589)	-0.899 (0.604)	-0.873 (0.609)
Government Effectiveness					1.207** (0.608)	1.488** (0.659)	1.379* (0.723)
Rule of Law						-0.673 (0.610)	-0.783 (0.680)
						0.244 (0.664)	0.244 (0.664)
Control of Corruption							
HDI	0.658 (1.699)	1.902 (1.938)	1.901 (1.939)	2.193 (2.015)	1.167 (2.075)	1.257 (2.076)	1.302 (2.082)
EAO	1.215* (0.699)	1.720** (0.718)	1.717** (0.726)	1.686** (0.728)	1.593** (0.728)	1.398* (0.749)	1.435* (0.756)
EU	0.336 (0.596)	0.938 (0.605)	0.939 (0.607)	0.890 (0.614)	1.041* (0.617)	0.817 (0.649)	0.821 (0.650)
SCA	1.210* (0.653)	2.115*** (0.690)	2.113*** (0.695)	2.055*** (0.704)	1.818** (0.712)	1.789** (0.712)	1.825** (0.720)
SSA	1.408** (0.570)	1.812*** (0.611)	1.812*** (0.611)	1.798*** (0.612)	1.687*** (0.613)	1.545** (0.627)	1.533** (0.628)
WIH	0.390 (0.549)	0.592 (0.581)	0.591 (0.583)	0.602 (0.583)	0.873 (0.598)	0.552 (0.665)	0.520 (0.671)
Constant	0.811 (1.252)	-0.466 (1.511)	-0.470 (1.521)	-0.656 (1.561)	0.145 (1.608)	0.117 (1.608)	0.150 (1.612)
Observations	743	580	580	580	580	580	580
R ²	0.261	0.266	0.266	0.266	0.271	0.273	0.273
Adjusted R ²	0.253	0.254	0.253	0.252	0.256	0.256	0.255
Residual Std. Error	3.787 (df = 734)	3.264 (df = 570)	3.266 (df = 569)	3.269 (df = 568)	3.260 (df = 567)	3.259 (df = 566)	3.262 (df = 565)
F Statistic	32.466*** (df = 8; 734)	22.895*** (df = 9; 570)	20.569*** (df = 10; 569)	18.702*** (df = 11; 568)	17.561*** (df = 12; 567)	16.310*** (df = 13; 566)	15.131*** (df = 14; 565)

Note:

* p<0.1; ** p<0.05; *** p<0.01

Table 21

Foreign Aid Spending and 5-Year Average Economic Growth Rates (A) — No Outliers							
	Spending Ratio and World Governance Indicators						
	Effect on 5-Year Average Growth Rates						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Past 5 Lag	0.179*** (0.024)	0.096*** (0.033)	0.096*** (0.033)	0.102*** (0.033)	0.092*** (0.032)	0.089*** (0.032)	0.086*** (0.032)
Spending Ratio	0.482*** (0.097)	0.619*** (0.122)	0.611*** (0.126)	0.602*** (0.126)	0.623*** (0.123)	0.609*** (0.124)	0.606*** (0.124)
Voice and Accountability		-0.303 (0.204)	-0.352 (0.262)	-0.078 (0.315)	-0.389 (0.314)	-0.460 (0.332)	-0.491 (0.333)
Political Stability			0.055 (0.183)	0.082 (0.184)	-0.017 (0.180)	-0.045 (0.186)	-0.052 (0.186)
Regulatory Quality				-0.515 (0.332)	-2.007*** (0.440)	-2.078*** (0.453)	-2.009*** (0.458)
Government Effectiveness					2.308*** (0.461)	2.171*** (0.507)	1.898*** (0.568)
Rule of Law						0.316 (0.484)	0.074 (0.534)
							0.561 (0.526)
Control of Corruption							
HDI	-2.348** (1.165)	-2.096 (1.516)	-2.078 (1.518)	-1.370 (1.583)	-3.287** (1.591)	-3.283** (1.592)	-3.214** (1.593)
EAO	2.128*** (0.475)	2.895*** (0.558)	2.928*** (0.570)	2.808*** (0.574)	2.637*** (0.561)	2.740*** (0.583)	2.805*** (0.587)
EU	1.257*** (0.414)	2.085*** (0.481)	2.081*** (0.481)	1.925*** (0.491)	2.228*** (0.483)	2.333*** (0.510)	2.317*** (0.510)
SCA	1.910*** (0.451)	2.749*** (0.549)	2.776*** (0.557)	2.602*** (0.567)	2.102*** (0.562)	2.133*** (0.564)	2.202*** (0.568)
SSA	1.663*** (0.407)	2.345*** (0.501)	2.356*** (0.503)	2.297*** (0.503)	2.079*** (0.493)	2.170*** (0.512)	2.108*** (0.515)
WH	0.374 (0.383)	0.751 (0.469)	0.772 (0.474)	0.750 (0.474)	1.221*** (0.472)	1.383*** (0.534)	1.283** (0.542)
Constant	3.442*** (0.855)	2.978** (1.172)	2.992** (1.174)	2.591** (1.201)	4.062*** (1.207)	4.046*** (1.208)	4.161*** (1.213)
Observations	642	479	479	479	479	479	479
R ²	0.239	0.267	0.267	0.271	0.308	0.309	0.311
Adjusted R ²	0.229	0.253	0.252	0.254	0.291	0.290	0.290
Residual Std. Error	2.394 (df = 633)	2.322 (df = 469)	2.324 (df = 468)	2.320 (df = 467)	2.263 (df = 466)	2.264 (df = 465)	2.264 (df = 464)
F Statistic	24.854*** (df = 8; 633)	19.004*** (df = 9; 469)	17.080*** (df = 10; 468)	15.792*** (df = 11; 467)	17.314*** (df = 12; 466)	15.995*** (df = 13; 465)	14.939*** (df = 14; 464)

Note:

*p<0.1; **p<0.05; ***p<0.01

Table 22

Foreign Aid Spending and 10-Year Average Economic Growth Rates (A) — No Outliers							
Spending Ratio and World Governance Indicators							
Effect on 10-Year Average Growth Rates							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Past 10 Lag	-0.010 (0.021)	-0.057** (0.025)	-0.060** (0.025)	-0.063** (0.025)	-0.066*** (0.025)	-0.080*** (0.025)	-0.082*** (0.025)
Spending Ratio	0.305*** (0.077)	0.467*** (0.098)	0.503*** (0.099)	0.510*** (0.100)	0.514*** (0.098)	0.454*** (0.099)	0.449*** (0.099)
Voice and Accountability		-0.007 (0.168)	0.321 (0.226)	0.206 (0.266)	-0.037 (0.275)	-0.378 (0.288)	-0.402 (0.289)
Political Stability			-0.358** (0.166)	-0.370** (0.167)	-0.391** (0.165)	-0.495*** (0.166)	-0.501*** (0.166)
Regulatory Quality				0.225 (0.272)	-0.493 (0.361)	-0.768** (0.364)	-0.708* (0.368)
Government Effectiveness					1.211*** (0.406)	0.608 (0.436)	0.363 (0.487)
Rule of Law						1.353*** (0.393)	1.147*** (0.433)
Control of Corruption							0.489 (0.435)
HDI	-2.514*** (0.981)	-3.716*** (1.326)	-4.217*** (1.339)	-4.509*** (1.386)	-5.628*** (1.421)	-5.815*** (1.400)	-5.960*** (1.405)
EAO	0.953*** (0.398)	1.467*** (0.480)	1.059** (0.514)	1.125** (0.520)	1.232** (0.516)	1.767*** (0.531)	1.806*** (0.532)
EU	0.177 (0.351)	0.408 (0.419)	0.307 (0.420)	0.393 (0.433)	0.709 (0.441)	1.268*** (0.463)	1.247*** (0.464)
SCA	1.082*** (0.377)	1.447*** (0.487)	1.072** (0.515)	1.180** (0.531)	1.013* (0.528)	1.255*** (0.525)	1.284** (0.525)
SSA	0.776** (0.351)	0.924** (0.452)	0.640 (0.468)	0.681 (0.471)	0.638 (0.466)	1.148** (0.482)	1.029** (0.493)
WH	-0.877*** (0.319)	-0.666* (0.403)	-0.951** (0.422)	-0.916** (0.424)	-0.534 (0.439)	0.288 (0.493)	0.181 (0.502)
Constant	5.463*** (0.717)	6.302*** (1.025)	6.625*** (1.031)	6.766*** (1.046)	7.478*** (1.061)	7.420*** (1.045)	7.662*** (1.066)
Observations	521	358	358	358	358	358	358
R ²	0.240	0.334	0.343	0.344	0.361	0.382	0.384
Adjusted R ²	0.228	0.317	0.324	0.323	0.338	0.358	0.359
Residual Std. Error	1.741 (df = 512)	1.637 (df = 348)	1.628 (df = 347)	1.629 (df = 346)	1.611 (df = 345)	1.586 (df = 344)	1.586 (df = 343)
F Statistic	20.240*** (df = 8; 512)	19.386*** (df = 9; 348)	18.092*** (df = 10; 347)	16.494*** (df = 11; 346)	16.207*** (df = 12; 345)	16.346*** (df = 13; 344)	15.280*** (df = 14; 343)

Note:

*p<0.1; **p<0.05; ***p<0.01

Table 23

Foreign Aid Spending and 1-Year Economic Growth Rates (B) — No Outliers							
	Spending Per Capita and World Governance Indicators						
	Effect on 1-Year Growth Rates						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Current Lag	0.455*** (0.032)	0.441*** (0.039)	0.439*** (0.040)	0.443*** (0.040)	0.427*** (0.041)	0.428*** (0.041)	0.426*** (0.041)
Spending PC	0.024** (0.010)	0.035*** (0.011)	0.034*** (0.011)	0.034*** (0.011)	0.038*** (0.011)	0.039*** (0.011)	0.039*** (0.011)
Voice and Accountability		-0.280 (0.266)	-0.346 (0.327)	-0.219 (0.392)	-0.353 (0.396)	-0.272 (0.411)	-0.283 (0.413)
Political Stability			0.079 (0.225)	0.095 (0.226)	0.027 (0.228)	0.081 (0.240)	0.079 (0.240)
Regulatory Quality				-0.248 (0.419)	-1.158* (0.591)	-1.060* (0.606)	-1.035* (0.610)
Government Effectiveness					1.337*** (0.613)	1.520** (0.662)	1.414* (0.726)
Rule of Law						-0.442 (0.602)	-0.549 (0.674)
							0.236 (0.665)
Control of Corruption							-1.675 (2.004)
HDI	-0.733 (1.562)	-0.772 (1.801)	-0.715 (1.809)	-0.359 (1.907)	-1.684 (1.996)	-1.725 (1.997)	-1.675 (2.004)
EAO	1.631** (0.749)	2.232*** (0.778)	2.268*** (0.785)	2.228*** (0.788)	2.212*** (0.786)	2.085*** (0.805)	2.119*** (0.811)
EU	0.604 (0.613)	1.444** (0.629)	1.425** (0.632)	1.366** (0.640)	1.592** (0.646)	1.453** (0.674)	1.455** (0.674)
SCA	1.532** (0.690)	2.413*** (0.731)	2.444*** (0.736)	2.378*** (0.745)	2.183*** (0.748)	2.158*** (0.749)	2.192*** (0.756)
SSA	1.766*** (0.606)	2.273*** (0.649)	2.274*** (0.649)	2.254*** (0.650)	2.197*** (0.649)	2.108*** (0.660)	2.095*** (0.662)
WH	0.602 (0.563)	0.960 (0.603)	0.968 (0.604)	0.975 (0.605)	1.325** (0.624)	1.119 (0.684)	1.087 (0.690)
Constant	1.271 (1.133)	0.713 (1.408)	0.733 (1.410)	0.510 (1.460)	1.433 (1.516)	1.482 (1.518)	1.510 (1.521)
Observations	743	580	580	580	580	580	580
R ²	0.263	0.264	0.264	0.264	0.270	0.271	0.271
Adjusted R ²	0.255	0.252	0.251	0.250	0.255	0.254	0.253
Residual Std. Error	3.783 (df = 734)	3.268 (df = 570)	3.270 (df = 569)	3.272 (df = 568)	3.261 (df = 567)	3.263 (df = 566)	3.265 (df = 565)
F Statistic	32.747*** (df = 8; 734)	22.684*** (df = 9; 570)	20.397*** (df = 10; 569)	18.553*** (df = 11; 568)	17.515*** (df = 12; 567)	16.196*** (df = 13; 566)	15.025*** (df = 14; 565)

Note:

*p<0.1; **p<0.05; ***p<0.01

Table 24

Foreign Aid Spending and 5-Year Average Economic Growth Rates (B) — No Outliers							
Spending Per Capita and World Governance Indicators							
Effect on 5-Year Average Growth Rates							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Past 5 Lag	0.164*** (0.025)	0.119*** (0.031)	0.098*** (0.033)	0.104*** (0.033)	0.091*** (0.033)	0.087*** (0.033)	0.084*** (0.033)
Spending PC	0.022*** (0.007)	0.002 (0.001)	0.028*** (0.008)	0.028*** (0.008)	0.033*** (0.008)	0.032*** (0.008)	0.031*** (0.008)
Voice and Accountability		-0.246 (0.209)	-0.496* (0.262)	-0.219 (0.317)	-0.546* (0.315)	-0.657** (0.331)	-0.687** (0.332)
Political Stability			0.197 (0.182)	0.223 (0.182)	0.116 (0.179)	0.063 (0.185)	0.056 (0.185)
Regulatory Quality				-0.520 (0.337)	-2.088*** (0.445)	-2.202*** (0.457)	-2.134*** (0.462)
Government Effectiveness					2.441*** (0.469)	2.211*** (0.515)	1.940*** (0.577)
Rule of Law						0.521 (0.484)	0.284 (0.536)
Control of Corruption						0.552 (0.531)	
HDI	-4.629*** (1.095)	-5.448*** (1.465)	-4.914*** (1.448)	-4.155*** (1.527)	-6.340*** (1.544)	-6.226*** (1.547)	-6.138*** (1.550)
EAO	2.240*** (0.517)	1.263** (0.556)	3.298*** (0.627)	3.159*** (0.633)	3.119*** (0.616)	3.279*** (0.633)	3.336*** (0.636)
EU	1.416*** (0.430)	1.030** (0.456)	2.503*** (0.507)	2.333*** (0.518)	2.736*** (0.510)	2.896*** (0.531)	2.874*** (0.532)
SCA	1.913*** (0.483)	0.885* (0.512)	2.913*** (0.599)	2.724*** (0.611)	2.320*** (0.599)	2.370*** (0.601)	2.432*** (0.604)
SSA	1.858*** (0.439)	0.671 (0.508)	2.684*** (0.542)	2.611*** (0.543)	2.485*** (0.529)	2.625*** (0.544)	2.558*** (0.548)
WH	0.473 (0.398)	-0.553 (0.463)	1.105*** (0.498)	1.072** (0.498)	1.646*** (0.497)	1.902*** (0.551)	1.798*** (0.560)
Constant	4.837*** (0.784)	6.810*** (1.134)	4.586*** (1.108)	4.169*** (1.139)	5.685*** (1.146)	5.594*** (1.149)	5.702*** (1.153)
Observations	642	570	479	479	479	479	479
R ²	0.222	0.179	0.248	0.252	0.293	0.295	0.297
Adjusted R ²	0.212	0.166	0.232	0.235	0.275	0.275	0.275
Residual Std. Error	2.421 (df = 633)	2.565 (df = 560)	2.354 (df = 468)	2.350 (df = 467)	2.287 (df = 466)	2.287 (df = 465)	2.287 (df = 464)
F Statistic	22.554*** (df = 8; 633)	13.588*** (df = 9; 560)	15.464*** (df = 10; 468)	14.316*** (df = 11; 467)	16.118*** (df = 12; 466)	14.973*** (df = 13; 465)	13.983*** (df = 14; 464)

Note:

*p<0.1; **p<0.05; ***p<0.01

Table 25

Foreign Aid Spending and 10-Year Average Economic Growth Rates (B) — No Outliers							
Spending Per Capita and World Governance Indicators							
	Effect on 10-Year Average Growth Rates						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Past 10 Lag	-0.025 (0.021)	-0.062** (0.026)	-0.064** (0.026)	-0.067** (0.026)	-0.072*** (0.026)	-0.086*** (0.026)	-0.089*** (0.026)
Spending PC	0.009 (0.006)	0.018** (0.008)	0.018** (0.008)	0.019** (0.008)	0.023*** (0.008)	0.018** (0.008)	0.018** (0.008)
Voice and Accountability		-0.006 (0.173)	0.206 (0.231)	0.102 (0.272)	-0.168 (0.281)	-0.534* (0.292)	-0.559* (0.293)
Political Stability			-0.232 (0.169)	-0.242 (0.169)	-0.269 (0.167)	-0.400** (0.168)	-0.408** (0.168)
Regulatory Quality				0.205 (0.282)	-0.582 (0.370)	-0.882** (0.371)	-0.812** (0.375)
Government Effectiveness					1.360*** (0.421)	0.646 (0.454)	0.369 (0.505)
Rule of Law						1.522*** (0.442)	1.287*** (0.442)
Control of Corruption							0.556 (0.444)
HDI	-3.967*** (1.276)	-6.075*** (1.379)	-6.515*** (1.314)	-6.818*** (1.423)	-8.163*** (1.397)	-7.987*** (1.400)	-8.128*** (1.400)
EAO	0.806* (0.435)	1.414*** (0.544)	1.132* (0.581)	1.214** (0.592)	1.461** (0.589)	1.964*** (0.593)	2.008*** (0.594)
EU	0.133 (0.365)	0.578 (0.451)	0.513 (0.453)	0.605 (0.471)	1.031** (0.483)	1.576*** (0.495)	1.550*** (0.495)
SCA	0.887*** (0.407)	1.223** (0.536)	0.955* (0.570)	1.071* (0.592)	1.007* (0.585)	1.216** (0.576)	1.251** (0.576)
SSA	0.700* (0.380)	0.900* (0.497)	0.703 (0.517)	0.757 (0.523)	0.805 (0.516)	1.306** (0.523)	1.171** (0.534)
WH	-0.944*** (0.332)	-0.645 (0.432)	-0.836* (0.454)	-0.792* (0.458)	-0.297 (0.477)	0.557 (0.519)	0.433 (0.528)
Constant	6.575*** (0.659)	7.866*** (0.976)	8.166*** (0.999)	8.298*** (1.016)	9.029*** (1.027)	8.793*** (1.010)	9.052*** (1.030)
Observations	521	358	358	358	358	358	358
R ²	0.221	0.301	0.305	0.306	0.327	0.354	0.357
Adjusted R ²	0.209	0.283	0.285	0.284	0.303	0.329	0.331
Residual Std. Error	1.763 (df= 512)	1.676 (df= 348)	1.674 (df= 347)	1.675 (df= 346)	1.653 (df= 345)	1.622 (df= 344)	1.620 (df= 343)
F Statistic	18.127*** (df= 8; 512)	16.686*** (df= 9; 348)	15.244*** (df= 10; 347)	13.888*** (df= 11; 346)	13.948*** (df= 12; 345)	14.490*** (df= 13; 344)	13.589*** (df= 14; 343)

Note:

*p<0.1; **p<0.05; ***p<0.01

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